



The United Republic of Tanzania

KILOLO DISTRICT COUNCIL SOCIO-ECONOMIC PROFILE, 2013



June, 2013



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Jointly prepared

Ministry of Finance,
National Bureau of Statistics

and

Kilolo District Council



**National Bureau of Statistics
Dar es Salaam**



**Kilolo District Council
Iringa Region**

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Foreword

The goals of Tanzania's Development Vision 2025 are in line with United Nation's Millenium Development Goals (MDGs) and are pursued through the National Strategy for Growth and Reduction of Poverty (NSGRP) or MKUKUTA II. The major goals are to achieve a high-quality livelihood for the people, attain good governance through the rule of law and develop a strong and competitive economy. To monitor the progress in achieving these goals, there is need for timely and accurate data and information at all levels.

Problems especially in rural areas are many and demanding. Social and economic services require sustainable improvement. The high primary school enrolment rates recently attained have to be maintained and so is the policy of making sure that all pupils who pass standard seven examinations join Form One. The food situation is still precarious; infant and maternal mortality rates are still high and unemployment triggers mass migration of youths from rural areas to the overcrowded urban centres.

Moreover, there is the menace posed by HIV/AIDS, which hinders our efforts to advance into the 21st century of science and technology. The pandemic has been quite severe among the economically active population leaving in its wake an increasing number of orphans, broken families and much suffering. AIDS together with environmental deterioration are the new developmental problems which can not be ignored.

Our efforts to meet both the new and old challenges are hampered by many factors including ill prepared rural development programmes followed by their weak implementation, monitoring and supervision. The shortcomings in policy formulation, project identification, design and implementation due to the lack of reliable and adequate data and information on the rural development process have to be addressed too. The availability of reliable, adequate and relevant qualitative and quantitative data and information at district level is a prerequisite for the success of the

formulating, planning, implementation, monitoring and evaluation of districts' development programmes.

Kilolo is the fourth district to prepare its Socio-Economic Profile in the country by using its own funds. The publication of the Kilolo District Social-Economic Profile series by the Ministry of Finance in collaboration with the National Bureau of Statistics and District Management Team should be viewed as a modest attempt towards finding solutions to the existing problem of data and information gap at district level.

The District Profile covers a wide range of statistics and information on geography, population, social-economic parameters, social services, economic infrastructure, productive sectors and crossing cutting issues. Such data are vital to many policy makers, planners, researchers, donors and functional managers.

This Kilolo District Socio Economic Profile has taken advantage of the experience gained in the production of the first Kilolo District Socio Economic Profile produced by the Ministry of Planning in 1997. It provides valuable information to our clients. Constructive views and criticisms are invited from readers to enable a profile like this become a better tool in the implementation of the country's policies.

I would like to take this opportunity to acknowledge with thanks, the contribution made by the Kilolo District Council Director's Office, Bureau of Statistics and staff of Kilolo District who devoted their time to ensure the successful completion of this assignment.



Mohamed S. Ngwalima

District Executive Director

June, 2013

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Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ARI	Acute Respiratory Infections
BCG	Bacillus Calmet Guerin (TB Vaccine)
CBO	Community Based Organization
CBPP	Contagious Bovine Plural Pneumonia
CFR	Crude Fertility Rate
CPR	Classroom Pupil Ratio
DPR	Desk Pupil Ratio
DPT3/HB3	Diphtheria Pertusis Tetanus 3 rd Doze/ Haemoglobin Level
ECF	East Coast Fiver
RVF	Rift Valley Fever
Govt.	Government
HIV	Human Immune Virus
IGAs	Income Generating Activities
IMR	Infant Mortality Rate
MMR	Maternal Mortality Rate
NCD	New Castle Disease
OPV3	Oral Polio Vaccine 3 rd Doze
PLHA	People Living with HIV/AIDS
PMTCT	Prevention Mother to Child Transmission
PR	Pass Rate
SACCOS	Savings and Credit Cooperative Societies
Sq. Km.	Square Kilometre
TB	Tuberculosis
TBAs	Traditional Birth Attendants
TPR	Toilet Pupil Ratio /Teacher Pupil Ratio
TT2	Tetanus Toxoid 2 nd Doze
U5MR	Under Five Mortality Rate
VCT	Voluntary Counselling and Testing
VHC	Village Health Committee

VHWs	Village Health Workers
VWC	Village Water Committee
VWF	Village Water Fund
WUG	Water User Group

CHAPTER ONE

Land, Climate, Agro-Ecological Zones and People

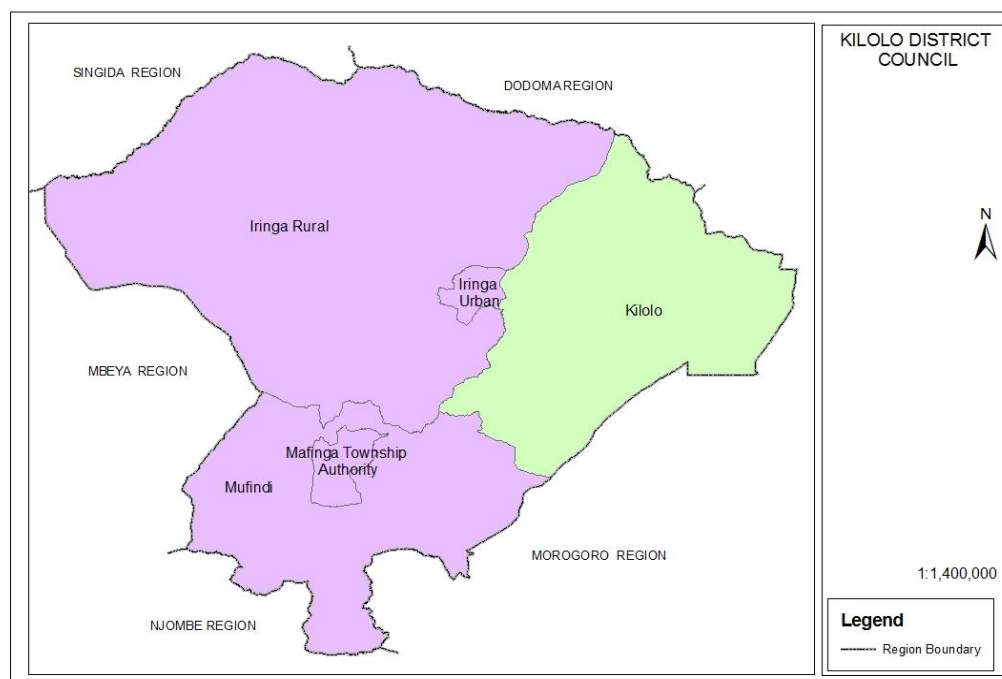
1.0 An Overview

Chapter one gives information about the geographical location, land area, administrative units, climate and agro-ecological zones of Kilolo District. Moreover, information about ethnic groups, population distribution, size and other demographic characteristics is also given.



The headquarters of the Kilolo District Council

Map 1: Geographical Location of Kilolo District Council; 2012



Source: National Bureau of Statistics, 2013

Kilolo District Council is located at the north eastern end of Iringa Region, about 37 kms from the regional headquarters. It also lies adjacent to the eastern borders of Iringa Rural and Iringa Municipal Council.

The District Council, however shares borders with Mpwapwa District (Dodoma Region) in the North, Kilosa district (Morogoro Region) in the North East, Kilombero District (Morogoro Region) on the East, while Mufindi District is on the south with Iringa Rural District on the west. In terms of international identification, the district lies between 7° and $8^{\circ}30'$ south of the Equator and between 34° and 37° east of Greenwich with a total surface area of 6,804 sq. kms.

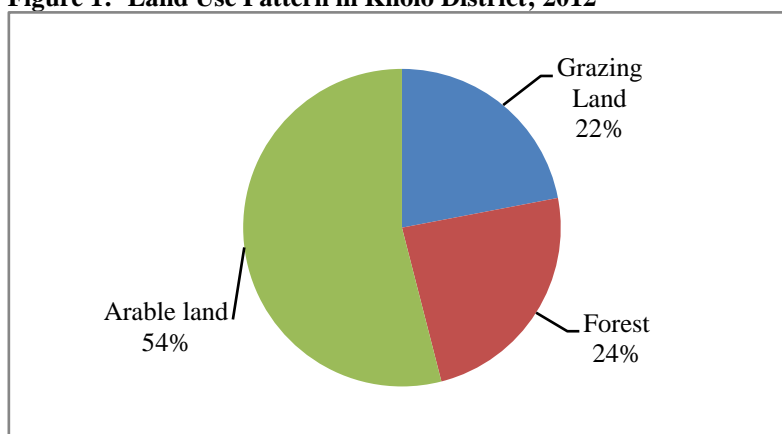
1.2 Land Area, Land Use Pattern and Administrative Units



Kilolo District is endowed with many rivers and springs

Kilolo District Council has a total land area of 7,874.6 sq. km most of which is mountainous with steep hills, ridges, valleys and escarpments. The arable land available for agricultural production is 4,181.8 sq. km. Of the arable land in the district, only 1,278.9 sq. km is actually cultivated annually leaving the remaining 2,902.9 sq. km either lying idle due to infertility, used for grazing or being edges and river beds and forests cover about 1,902.9 sq. km. Figure 1 shows land use pattern of the district.

Figure 1: Land Use Pattern in Kilolo District; 2012

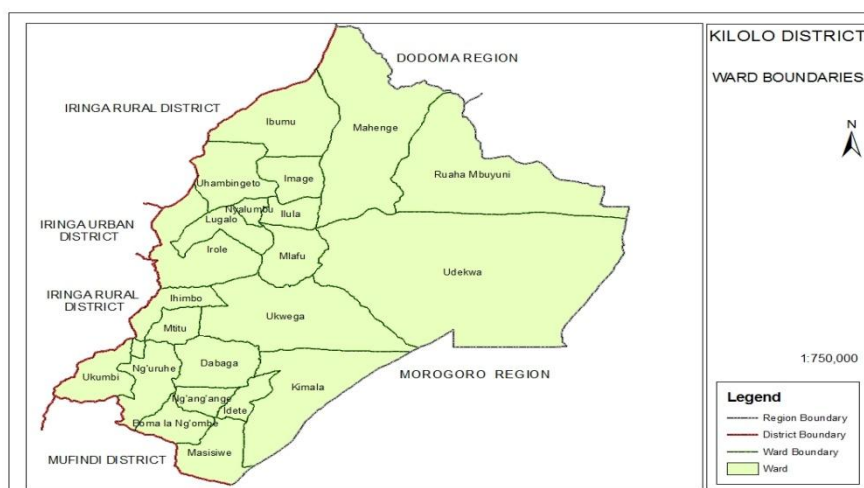


Source: Kilolo District Executive Director's Office –Land, Natural Resources and Environment Department, 2012

Administratively, Kilolo District Council is divided into 3 divisions and 22 wards and a total of 106 villages distributed unevenly as shown in Table 1.1

and Figure 2. Mazombe Division covers about 51 percent of total land area of the district followed by Kilolo Division (33 percent of the total land area). Mahenge Division has the smallest land area in the district constituting only 16 percent of the total land area.

Map 2: Map of Kilolo District Council showing Ward Boundaries; 2012

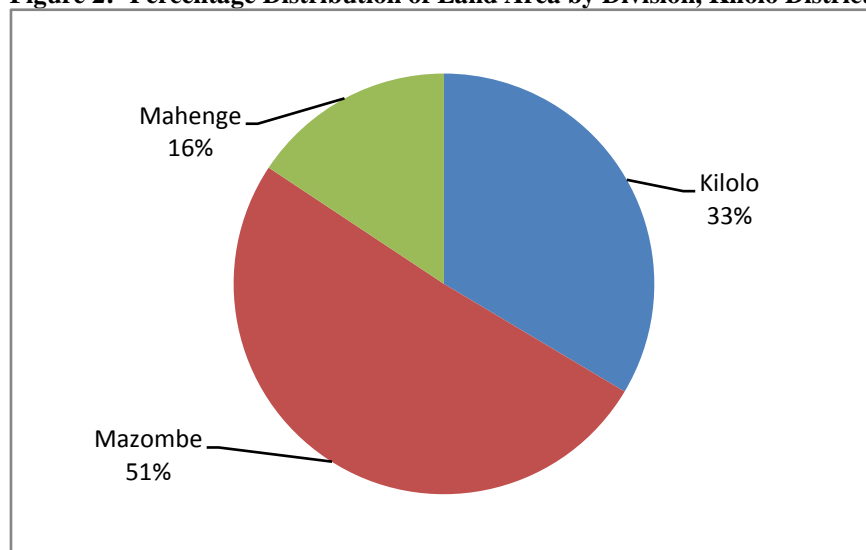


Source: National Bureau of Statistics, 2013

Table 1.1: Total Area and Administrative Units by Division, Kilolo District, 2012

Division	Area Sq. Kms.	Wards	Villages	Hamlets
Kilolo	2,642.5	11	53	293
Mazombe	3,997.2	08	40	194
Mahenge	1,234.9	03	13	68
Total	7,874.6	22	106	555

Source: Kilolo District Executive Director's Office –Land, Natural Resources and Environment Department, 2012

Figure 2: Percentage Distribution of Land Area by Division, Kilolo District, 2012

Source: Kilolo District Executive Director's Office -Land Natural Resources and Environment Department, 2012

1.3 Climate, Soil and Topography

With the exception of a few plateaus, the district is mountainous with Udzungwa Mountains and several steep slopes and lies at an altitude of between 900 metres to 2,700 metres above sea level, covered by alluvial soil. Udzungwa Mountain Ranges is a common feature of Kilolo District and divide the district into East and West. Udzungwa Mountains separate Kilolo district and Kilosa district of Morogoro Region in the east. The northern parts of the district are relatively flat, high plain cut by the eastern arm of the Great Rift Valley in which the Great Ruaha River runs. Because of the high altitude the district experiences temperate climate with low temperatures below 15°C and long rainy seasons. However, temperatures and rainfall vary with the altitude. High altitudes between 1,500 – 2,700 metres above sea level fall under cold zones with temperatures ranging between 8⁰ – 10⁰ Centigrade and rainfall vary from 1,000 – 1,600 mm. per annum. Areas at low altitude such as Mahenge plains experience high temperatures of 15⁰ – 27⁰ Centigrade with unreliable rainfall normally ranging between 500 – 600 mm. per annum.



Because of the high altitude, Kilolo District experiences temperate climate

1.4 Drainage System

The steep sides of Udzungwa Mountains are characterised by small numerous streams which join to form major rivers such as Lukosi, Ibongwe and Mgowero. These rivers are joined by other small streams which at the end all pour water into little and Great Ruaha Rivers. Lukosi River flows northwards through Ilula, Udekwa and Mahenge wards into the Msosa valleys while Little Ruaha River flows through Ukumbi and Mtitu wards into Mtera Dam. Ibongwe River which pours its water into Little Ruaha flows via Mtitu and Ukumbi wards. Other small rivers also pour their water into Little Ruaha through Ukwega, and Dabaga wards.



Lukosi River flows along the low lands of Kilolo district

1.5 Agro – Ecological zones (AEZ)

Basically the district has three distinctive agro-ecological zones, namely, High lands, Mid lands and Low lands.

1.5.1 High Lands Zone

These are a continuation of the Udzungwa Mountain Ranges which as we mentioned earlier have high altitude ranging from 1,600 – 2,700 metres above sea level. The zone is characterised by a mountainous and undulating topography with temperate temperatures and heavy rainfall per annum and occupies the greatest part of the district, (11wards). The temperature here is below 15⁰C.

The terrain of the zone is characterised by high hills, steep slopes and valleys covered with volcanic potash soil which is moderately suitable for agriculture. The main food crops grown in this zone are wheat, maize, peas, bananas, round potatoes and tea. Pyrethrum, coffee and temperate fruits are also grown as cash crops. Rainfall here is between 1,000 and 1,600 mm per annum. Livestock kept here include dairy cattle, pigs and sheep. There is no pasture land, hence animals graze within the farm areas, and are normally few in number.

1.5.2 Mid Lands Zone

The mid land zone lies on the rift valley of Mazombe plains and portion of northern part of the district especially Image ward, covered with sand clay soils. The zone is characterised by undulating topography and plateau at an altitude of between 1200 and 1600 meters above sea level. It has moderate temperatures ranging between 15⁰– 20⁰ centigrade and characterised with moderate rainfall.

Agriculture in this zone depends mainly on rain and involves the cultivation of maize, sweet potatoes, sunflower, onions, tomatoes, cowpeas, beans and tropical fruits such as mangoes, guava and pawpaw. Due to its temperatures the greatest part of the area is used for grazing cattle and dairy farming, sheep, pigs, goats and chicken.

1.5.3 Low Lands Zone

The low land zone lies in the rift valley of Mahenge plains and portion of northern part of the district especially Ruaha Mbuyuni ward, covered with sand red soils. The zone has hot temperatures ranging between 15⁰– 29⁰ centigrade and characterised by unreliable rainfall. This zone is characterised by lowlands with altitude between 900 and 1200 meters above sea level. Due to its low mean rainfalls it is known as the marginal area and rainfalls here range between 500 and 600 mm and quite unreliable. This zone has very rich soils, but there is always crop failure due to unreliable rainfall.

Agriculture in this zone depends mainly on irrigation and involves the cultivation of drought resistant crops such as paddy, cassava, bananas, vegetables, sorghum, groundnuts, millet, tomatoes, onions, beans and tropical fruits such as oranges, pawpaw, mangoes and guava. However, due to its temperatures the greatest part of the area is used for grazing animals like indigenous cattle, goats, sheep and donkeys, and chicken.

1.6 Population

1.6.1 Ethnic Groups

The District has three main ethnic groups namely: Hehe, Kinga and Bena. The three ethnic groups occupy most parts of the district. However, there are other ethnic groups found in the district. These are Maasai in Mahenge ward and Mang'ati in Ruaha Mbuyuni ward. In addition to that, the district is also occupied by very small groups of Safwa in Uhambingeto ward and Sagala in Ruaha Mbuyuni and Mahenge wards. Table 1.2 portrays ethnicity of indigenous people by ward in Kilolo District.

Table 1.2: Ethnicity of Indigenous People by Wards, Kilolo District, 2010

Ward	Number of Ethnicity Group	List of Five Major Ethnicity Groups
Ilula	3	Hehe, bena, kinga
Mtitu	3	Bena, hehe, kinga
Uhambingeto	4	Hehe, Bena, Kinga, Safwa
Masisiwe	3	Hehe, Kinga
Dabaga	3	Hehe, Bena, Kinga
Mlafu	3	Hehe, Bena, Kinga
Mahenge	6	Hehe, Bena, Kinga, Sagala, Maasai, Mang'ati
Kimala	3	Hehe
Ibumu	3	Hehe
Ng'ang'ange	3	Hehe
Ukumbi	3	Hehe
Ukwega	3	Hehe
Lugalo	3	Hehe
Nyalumbu	3	Hehe
Image	3	Hehe
Ihimbo	3	Hehe
Ruahambuyuni	6	Hehe, Bena, Kinga, Sagala, Maasai, Mang'ati
Irole	3	Hehe
Ng'uruhe	3	Hehe
Idete	3	Hehe
Udekwa	3	Hehe
Bomalang'ombe	3	Hehe

Source: Kilolo District Executive Director's Officer- District Planning Office, 2011

1.6.2 Population Size and Growth

Unlike other districts in Iringa Region, the population of Kilolo District has experienced an insignificant growth. The district average rates of intercensal population growth showed a drastic decrease from 1.2 percent in the 1978 –

1988 to 0.2 percent in 1988 – 2002 period. According to the 2012 Population and Housing Census the district had 218,130 people compared to 204,372 inhabitants counted in 2002 Population Census resulting in a slight increase of 13,758 people only (0.7 annual growth rate) during intercensal period. The 2012 district population of 218,130 puts females at 51.5 percent. Table 1.3 shows population size and growth of Iringa region by district for the census years of 2002 and 2012.

Table 1.3: Population Size and Growth by District, Iringa Region, 2002 and 2012 Censuses

District	Land Area (Sq. kms.)	2002 Pop. Census		2012 Pop. Census		Growth Rate	
		Number	Percent	Number	Percent	1988 - 2002	2002 - 2012
Iringa Urban	329.70	106,371	7.1	151,345	16.1	1.7	4.2
Iringa Rural	19,735.48	245,033	16.4	254,032	27.0	2.2	0.4
Kilolo	6,796.60	204,372	13.7	218,130	23.2	0.2	0.7
Mufindi	6,177.00	282,071	18.9	317,731	33.8	1.5	1.3
Total	33,038.78	1,490,892	100.0	941,238	100.0	1.6	1.1

Source: National Bureau of Statistics, Computed Data from 2002 and 2012 Population Censuses Reports.

Compared to other district councils of Iringa region, Kilolo is the third smallest rural district council in terms of land area and was the least populous rural district according to the 2002 census results. Also, according to the 2012 Population and Housing Census, Kilolo District is again the least populous rural district in the region and contributed only 23.2 percent of the regional population. Between 1988 and 2002 the growth rate could not be calculated as the district did not exist.

1.6.3 Population Density

Kilolo District, with an average population density of 32 persons per sq. km in 2012 is considered to be moderate densely populated district compared to other rural districts of Iringa region. The Population density of Kilolo District which was slightly above the regional average of 28 persons per sq. km was

the second largest among the rural districts in the region. Among other reasons, the relatively large population density of Kilolo District is caused by its number of residents rather than the relative small land area. Moreover, the decline of population growth has caused the population density of the district to remain almost the same as it was in 2002 (30 persons per sq. km). When we look at the 2012 population densities for Iringa region, we can see that unlike the 2002 densities, Kilolo District at 32 people per square kilometre, is the second least densely populated district just after Iringa Rural. Also unlike the 2002 population density, the Kilolo District density is above the regional density (Table 1.4).

Table 1.4: Population Density by District, Iringa Region, 2002 and 2012 Censuses

District	Land Area	2002 Population	2012 Population	Population Density		
				1988	2002	2012
Iringa Urban	329.70	106,371	151,345	530	664	944
Iringa Rural	19,735.48	245,033	254,032	14	12	13
Kilolo	6,796.60	204,372	218,130	*	26	28
Mufindi	6,177.00	282,071	317,731	37	46	51
Total Region	33,038.78	837,847	941,238	25	28	18

* Included under Iringa Rural District

Source: National Bureau of Statistics, Computed Data from 1988, 2002 and 2012 Population Censuses Reports.

Table 1.5 gives the population density at division level for the census years of 2002 and 2012. In 2002, Mazombe division with a population density of 59 persons per sq. km was the most densely populated division in the district, followed by Mahenge with 28 persons per sq. km and Kilolo (22 persons per sq. km).

In 2012, Mazombe again was the most densely populated division with 65 persons per sq. km while Kilolo division (21 persons per sq. km) was the least densely populated division in the district followed by Mahenge division with 32 persons per sq. km (Table 1.5). People are much more concentrated in a

few divisions due to various reasons including availability of arable land, economic infrastructure and social services. At division level, density rose from 26 persons per sq. km in 2002 to 28 persons per sq. km in 2012.

Table 1.5: Population Density by Division, Kilolo District, 2002 and 2012

Division/Ward	Land Area (Sq. Km)	2002 Population	2012 Population	Persons/Kms ²	
				2002	2012
Kilolo	4,636.44	103,686	106,643	22	21
Mazombe	1,288.00	76,540	83,494	59	65
Mahenge	872.16	24,146	27,993	28	32
Total District	6,796.60	204,372	218,130.00	30	32

Source: National Bureau of Statistics, Computed Data from 1988, 2002 and 2012 Population Censuses Reports.

1.6.4 Population Trend

Table 1.6 shows that in 2002 and 2012 censuses the district population increased slightly by about 13,758 people from 204,372 in 2002 to 218,130 in 2012. However, at divisional level there were significant differences in the nature and level of population change with one division registering population increase of more than 10 percent while population increase in the remaining 2 divisions was less than 10 percent. This could be attributed to the fact that the area is famous for irrigation scheme and also it received a few migrants from Kilosa district who come there with flocks of cattle.

Table 1.6: Population Trend by Division, Kilolo District, 2002 and 2012 Censuses

Division	Land Area (Sq. Km)	2002 Population	2012 Population	Population Change 2002 to 2012	
				Number	Percent Difference
Kilolo	4,636.44	103,686	106,643	2,957	2.9
Mazombe	1,288.00	76,540	83,494	6,954	9.1
Mahenge	872.16	24,146	27,993	3,847	15.9
Total District	6,796.60	204,372	218,130	13,758	6.7

* Included in Matamba Division

Source: National Bureau of Statistics, Computed Data from 1988 and 2002 Population Censuses Reports.

1.6.5 Dependency Ratio

The Age Dependency Ratio is defined as the ratio of youths less than 15 years of age plus persons aged 65 years and above to adults aged 15 – 64 years. In other words it gives the number of dependants for every 100 persons aged 15 – 64 years. Table 1.7 shows the dependency ratio in Iringa Region. Unfortunately Kilolo District was not born in 1988 and data for 2012 are not yet out hence no comparison can be made. Looking at the 2002 data, dependency ratio in Kilolo district was the highest, estimated at 100 persons compared to 67 people in Iringa Urban and 98 in Iringa Rural and Mufindi districts. Also its dependency ratio was above the regional average at 94 persons and national average at 51 persons.

Table 1.7: The Dependency Ratios by District, Iringa Region, 1988 and 2002

District	1988 Population			2002 Population		
	Number of		Dependency Ratio	Number of		Dependency Ratio
	Dependants	Economically Active		Dependants	Economically Active	
Iringa Urban	40,410	44,101	92	42,710	63,661	67
Iringa Rural	187,063	174,852	107	121,489	123,544	98
Kilolo	*	*	*	102,321	102,051	100
Mufindi	117,627	111,271	106	139,893	142,177	98
Region	345,100	330,224	105	406,413	431,433	94

* Included under Iringa Rural District

Source: National Bureau of Statistics, Computed Data from 1988 and 2002 Population Censuses Reports.

Table 1.8 gives the magnitude of dependence ratio of each ward in Kilolo District based on the 2002 population census results. Mahenge ward had the lowest Dependency Ratio at 80 persons, followed by Ilula and Udekwa at 86 and 94 persons, respectively. Table 1.8 also shows that as many as six wards had less labour force to support the dependent group.

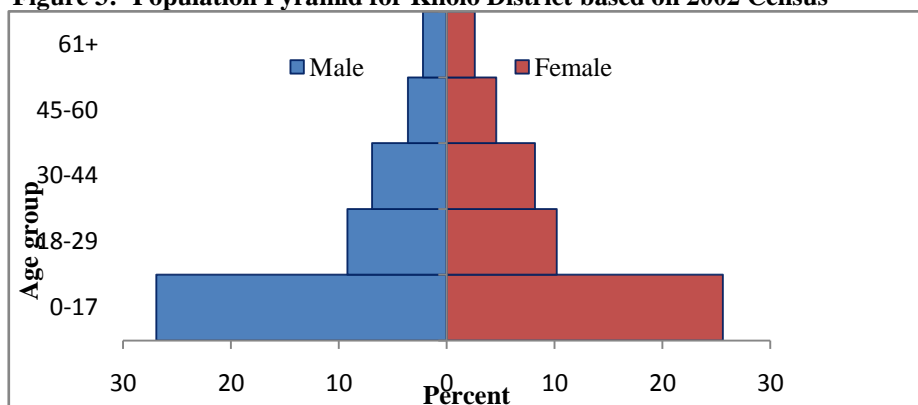
Table 1.8: The Dependency Ratios by Ward, Kilolo District, 2002

Ward	2002 Population		
	Number of		Dependency Ratio
	Dependants	Economically Active	
Image	7,122	6,900	103
Irole	12,139	11,734	103
Ilula	12,908	15,021	86
Uhambingeto	5,110	5,239	98
Mazombe Division	37,279	38,894	96
Udekwa	2,609	2,788	94
Mahenge	8,604	10,750	80
Mahenge Division	11,213	13,538	83
Mtitu	10,445	9,506	110
Dabaga	6,142	6,248	98
Ukumbi	12,444	12,732	98
Ukwega	5,337	4,814	111
Boma la Ngo'mbe	11,024	9,584	115
Idete	8,437	6,735	125
Kilolo Division	53,829	49,619	108
Total District	102,321	102,051	100

Source: National Bureau of Statistics, Computed Data from 2002 Population Censuses Report

1.6.6 Population Distribution and Sex Ratio

When the population of Kilolo District of 1988 and 2002 are distributed by age and sex, they show similar features. Figure 3 is the district 2002 Population Pyramid with a broad base indicating high fertility rates, mortality rates and youth aged structure of a district population. The 2002 Regional Profile of Iringa reveals that Kilolo has the highest Sex Ratio in the region being 95 males for every 100 females. This is partly due to the fact that, traditionally, males in Kilolo District are less mobile as females as mentioned earlier that the majority of the inhabitants of Kilolo do concentrate in farming, especially vegetables and fruits. This habit makes many of them to stay in their areas.

Figure 3: Population Pyramid for Kilolo District based on 2002 Census

Source: NBS, the 2002 Village/Street Statistics Report for Kilolo District Council

Furthermore, the 2002 population of Kilolo District as depicted by its pyramid above, is considered as young population, made up of children under 18 years who were 107,320 (55,078 males and 52,242 females) or 52.2 percent of the total population, followed by the young population aged between 18 – 29 years estimated to be 39,534 persons (18,745 males and 20,789 females) or 19.3 percent of total population. Persons aged 61 years and above were for 9,819 (4,421 males and 5,398 females) or 4.8 percent of the total population. Table 1.9 shows the 2002 population of Kilolo District distributed by broad age groups and sex as well as the 2012 projections.

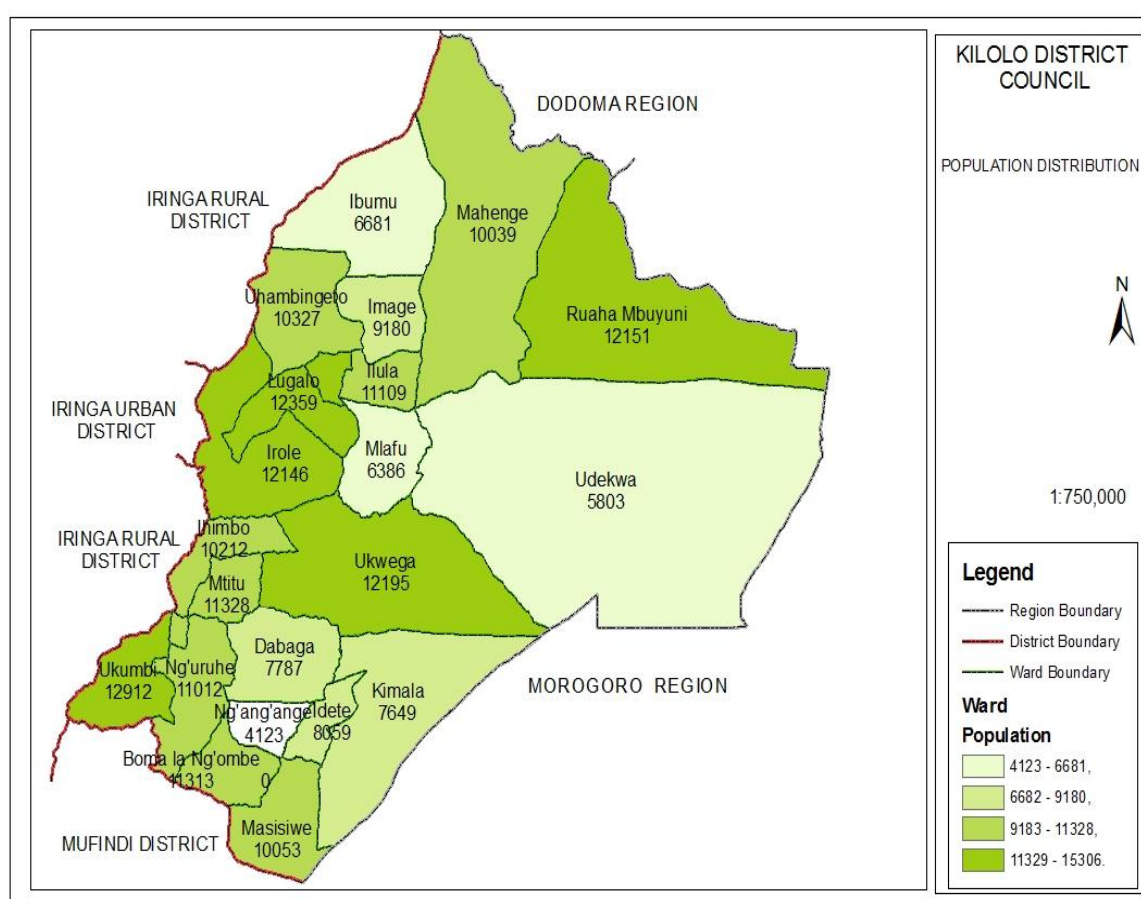
Table 1.9: Population Distribution by Broad Age Group and by Sex, Kilolo District, 2002 and 2012 Censuses

Age Group	2002			Percent of Total	2012			Percent of Total
	Male	Female	Total		Male	Female	Total	
0 – 17	55,078	52,242	107,320	52.5	57,307	53,507	110,814	47.4
18 – 29	18,745	20,789	39,534	19.3	28,342	24,939	53,281	22.8
30 – 44	14,135	16,690	30,825	15.1	18,458	21,274	39,732	17
45 – 60	7,377	9,497	16,874	8.3	8,945	10,460	19,405	8.3
61 +	4,421	5,398	9,819	4.8	4,508	5,987	10,495	4.5
District.	99,756	104,616	204,372	100	117,560	116,167	233,727	100

Source: NBS Computed data from the 2002 Population and Housing Census Report and Regional and District Projections Vol.XII December 2006.

The most populous ward was Nyalumbu with 15,306 persons (7 percent) followed by Ukumbi at 12,912 (5.9 percent) and Lugalo at 12,359 (5.7 percent). The least populous ward according to the 2012 census was Ngángáŋge having 4,123 persons (1.9 percent). The uneven distribution of Kilolo residents is mostly influenced by the availability of natural resources including arable land that is suitable for cultivation and irrigation and also accessibility of infrastructure. Table 1.9a gives the population distribution by ward according to the 2012 Population Censuses.

Map 3: Map of Kilolo District Council showing Population Distribution by Ward, 2012 Census



Source: National Bureau of Statistics (2012 Census data)

Table 9.1a: The 2012 Census Population Distribution by Ward, Kilolo District Council

Ward	Population, 2012		
	Male	Female	Total
Image	4,404	4,776	9,180
Irole	5,734	6,412	12,146
Ilula	5,264	5,845	11,109
Uhambingeto	5,100	5,227	10,327
Lugalo	6,004	6,355	12,359
Nyalumbu	7,406	7,900	15,306
Mlafu	3,190	3,196	6,386
Ibumu	3,252	3,429	6,681
Mazombe Division	40,354	43,140	83,494
Udekwa	2,949	2,854	5,803
Mahenge	5,074	4,965	10,039
Ruaha Mbuyuni	6,144	6,007	12,151
Mahenge Division	14,167	13,826	27,993
Mtitu	5,558	5,770	11,328
Dabaga	3,700	4,087	7,787
Ukumbi	6,352	6,560	12,912
Ukwega	5,913	6,282	12,195
Bomalang'ombe	5,358	5,955	11,313
Idete	3,791	4,268	8,059
Masisiwe	4,729	5,324	10,053
Ng'uruhe	5,339	5,673	11,012
Ng'ang'ange	1,942	2,181	4,123
Ihimbo	4,978	5,234	10,212
Kimala	3,675	3,974	7,649
Kilolo Division	51,335	55,308	106,643
Total District	105,856	112,274	218,130

Source: NBS, 2012 Census General Report.

1.6.7 Households and Household Size

Kilolo District had the second smallest number of households perhaps due to its relative small geographical area and population size. With a population of 204,372 people given by the 2002 census, there were 45,337 private households, equivalent to 23.5 percent of the total 192,589 private households of the region. However, Kilolo district had the highest average household size of 4.5 in the region, even higher than the regional average of 4.3. As Table 1.10 shows, 1988 census data for Kilolo district are not available as it was part of Iringa Rural district.

Table 1.10: Distribution of Households and Average Households Size by District, Iringa Region, 1988 and 2002 Censuses

District	1988 Census		2002 Census		
	Number of Households	Average Household size	Total Population	Number of Households	Average Household size
Iringa Urban	18,283	4.6	106,371	24,512	4.3
Iringa Rural	72,665	5.0	245,033	56,682	4.3
Kilolo	*	*	204,372	45,337	4.5
Mufindi	47,327	4.8	282,071	66,058	4.3
Total Region	138,275	4.9	837,847	192,589	4.3

* Included under Iringa Rural District

Source: National Bureau of Statistics, Computed Data from 1988 and 2002 Population Censuses Reports.

Table 1.11 indicates the distribution of households and average household size by ward, Kilolo District based on 2002 census data. At division level, Kilolo division with 21,223 households lead followed by Mazombe (18,504). Kilolo division with an average household size of 4.9 was above the district average of 4.5 persons per household.

Table 1.11: Population, Households and Average Household Size by Ward, Kilolo District, 2002.

Ward	Total Population	Total Households	Average Household Size
Image	14,022	3,273	4.3
Irole	23,873	5,938	4.0
Ilula	27,929	6,786	4.1
Uhambingeto	10,349	2,507	4.1
Mazombe Division	76,173	18,504	4.1
Udekwa	5,397	1,263	4.3
Mahenge	19,354	4,347	4.5
Mahenga Division	24,751	5,610	4.4
Mtitu	19,951	4,344	4.6
Dabaga	12,390	2,367	5.2
Ukumbi	25,176	5,226	4.8
Ukwega	10,151	2,091	4.9
Bomalng'ombe	20,608	4,247	4.9
Idete	15,172	2,948	5.1
Kilolo Division	103,448	21,223	4.9
Total District	204,372	45,337	4.5

Source: National Bureau of Statistics, Computed Data from 1988 and 2002 Population Censuses Reports.

CHAPTER TWO

District Economy

2.0 Introduction

This chapter discusses the economy of Kilolo District. The economic indicators used include Gross Domestic Product (GDP), Per Capita Gross Domestic Product and main source of income for the residents of Kilolo district. The non income poverty indicators cover demographic characteristics, health, and education status, access to drinking water and housing conditions.

2.1 GDP and Per capita GDP at Current Prices.

Kilolo district, like other districts of Iringa region computed its GDP and Per Capita GDP early in 2011. It is evident that Kilolo district makes significant contribution to the Regional GDP (10.2 percent) and per Capita GDP (42.1 percent). The Iringa Region GDP Report of 2008 shows that Iringa region's share of the national GDP for 2008 was 5.84 percent equivalent to Tshs. 793,673 million while Per Capita income of regional residents was estimated at Tshs. 861,564, (equivalent to US \$ 637) which was 37 percent higher than that of the Mainland. Similar situations were observed in years 2006 and 2007, of which the Regional GDPs were Tshs. 575,923 million and 672,731 million respectively (Tables 2.1 and 2.2).

Table 2.1: Iringa GDP by District, 2006, 2007 and 2008

District		2007	Million Tshs. 2008
Iringa MC	43,884	51,166	60,479
Iringa DC	201,288	235,057	274,839
Mufindi	279,897	327,081	377,612
Kilolo	50,854	59,427	80,743
Total	575,923	672,731	793,673

Source: NBS, Iringa Region GDP Report 2008

The Iringa Region GDP report of 2008 which came out in May 2011 puts Kilolo district at number three above Iringa Urban districts in contributing to the regional GDP in the agricultural sector. For the Industrial sector, Kilolo district stands at the bottom of all the districts of the current Iringa Region.

Table 2.2: Iringa per Capita GDP by District, 2006, 2007 and 2008

District	2006	2007	TShs. 2008
Iringa MC	340,346	379,485	429,440
Iringa DC	776,361	893,960	1,031,508
Mufindi	924,953	1,062,436	1,206,917
Kilolo	235,583	271,014	362,841
Regional GDP Per Capita	647,697	742,431	861,564
National GDP Per Capita	478,100	547,081	627,787

Source: NBS, Iringa Region GDP Report 2008

2.2 Poverty Indicators

As stated earlier, beside GDP and per capita GDP, there are a number of indicators that portray the poverty level in the district. These indicators include Gini Coefficient, Poverty Gap, percent of households below basic needs Poverty Line, main source of Cash Income, food consumption patterns, net enrolment, adult literacy rate, health indicators, access to drinking safe water. They also include housing conditions in terms of type of toilets, roofing materials, household's assets, and source of lighting energy as well as source of cooking energy.

2.2.1 Income Poverty Rate, Poverty Gap and Gini Coefficient

Kilolo was not among the best 20 districts on the Mainland in having least people living below the Poverty Line, but at regional level, it is considered to be the second best district according to the 2005 Poverty and Human Development Report. The Report indicates that only 29 percent of Kilolo people were living below the Poverty Line. The best district was Iringa Urban where only 18.2 percent of its people lived below the Poverty Line whereas

Iringa Rural had 31.0 percent and Mufindi was the least with 32.3 percent (Table 2.3).

With respect to rate of Poverty Gap, Kilolo is the second best district by having only seven percent after Iringa urban (five percent) then Iringa rural and Mufindi with eight and nine percent each. The situation is different in regard to the Gini Coefficient Rate. At 43 percent, Kilolo had the best uneven distribution of income among its people in Iringa region. It was followed by Iringa rural (32 percent) then Iringa urban and Mufindi districts (35 percent each) as indicated in Table 2.3.

Table 2.3: Selected Poverty Indicators by District, Iringa Region, 2005

District	Percent of People living below the Poverty Line	Poverty Gap	Gini Coefficient Rate	Number of Poor Per Sq. Km.
Iringa (U)	18.2	5	35	132
Mufindi	32.3	9	35	11
Kilolo	29.0	7	31	7
Iringa (R)	31.0	8	32	4
Total	31.0			

Source: Poverty and Human Development Report, 2005 * give regional figures on shaded row

2.2.2 Main Source of Cash Income

The 2007/08 National Census of Agriculture shows that Kilolo as a rural district has vast economic opportunities. Agriculture sector ranked first with about 70 percent of the agricultural households reporting sales of food crops as the main source of cash income. The second important source of cash income as reported by the agricultural households was other casual cash earnings (11 percent), sales of cash crops and business income (6 percent each), sales of livestock and wages and salaries (2 percent each), while cash remittance was the list with 1 percent.



Selling Tomatoes has become the third economic activity in Kilolo District

2.2.3 Health Indicators

Though the residents of Kilolo district are said to have relatively good accessibility to social services like health, education and water; the HIV/AIDS pandemic is among the diseases that have a negative impact to morbidity and mortality but the orphaned and widowed rates recorded in the district at 1.82 percent and 5.6 percent, respectively are not the highest in the region. The health situation of the Kilolo people can also be observed through other proxy health indicators in Table 2.4 which include: Infant Mortality Rate (103 per 1,000 infants), Children Under Five Years Mortality Rate (170 per 1,000 U5 children), HIV/AIDS prevalence rate (12.4 percent), Doctor/Population Ratio (27,266 people per doctor) and Hospital Bed/Population Ratio (1,124 patients per bed). Surprising enough, the Health Department of Kilolo district put their current IMR at 5 which is above the WHO rate of 50 for many districts.

Table 2.4 : Selected Health Indicators for Kilolo District - a Comparison, 2012.

Indicator	Kilolo District	Regional Average
Orphaned Rate (percent)	1.82	2.58
Widowed Rate (percent)	5.6	6.5
Infant Mortality Rate (IMR)	103	102
Children Under Five Mortality Rate (U5MR)	170	166
HIV/AIDS Prevalence Rate (percent)	12.4	13.4
Doctor/Population Ratio	27,266	26,203
Hospital Bed/Population Ratio	1,124	664

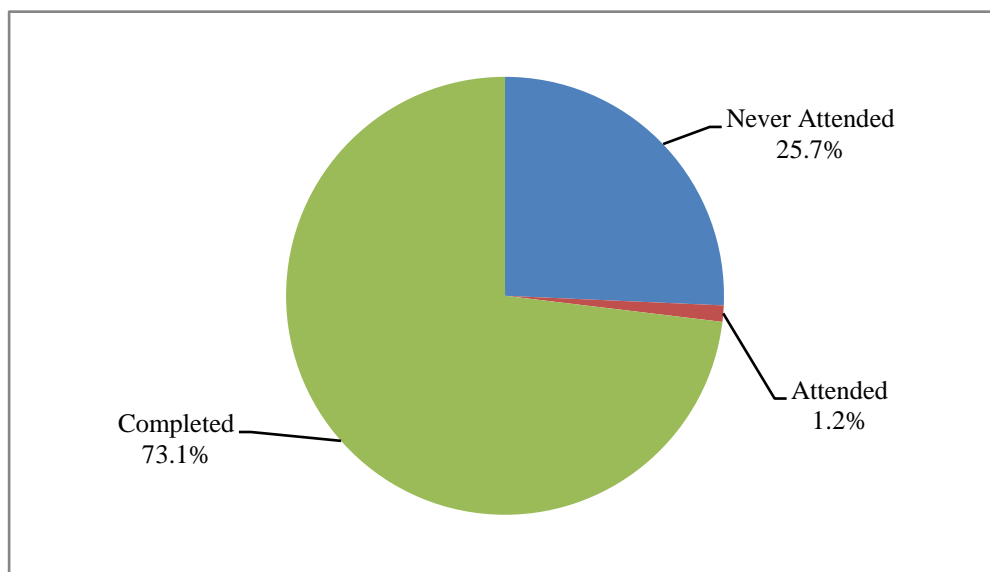
Source: NBS Compiled Data Based on: Demographic and Health Survey; Agriculture Survey 2002/03; the 2002 Population Census Results; and Kilolo District Council Reports.

2.2.4 Literacy Rate and Level of Education

According to the 2002 Census Results, the literacy rate for individuals aged five years and above in Kilolo district was 70 percent putting it at the third position in Iringa region. Literacy rate among male heads of households was higher (75 percent) than that of females heads (65 percent).

With regard to education status, the National Sample Census of Agriculture 2007/08 reveals that about 1.2 percent of the heads of household were attending school, 73.1 percent had completed school while about 25.7 percent have never attended school. Figure 4 shows the percentage distribution of heads of households in Kilolo district by educational status.

Figure 4: Percentage Distribution of Heads of Households by Education Status, Kilolo District, 2007/08



Source: NBS, National Sample Census of Agriculture, Iringa Region, 2007/08.

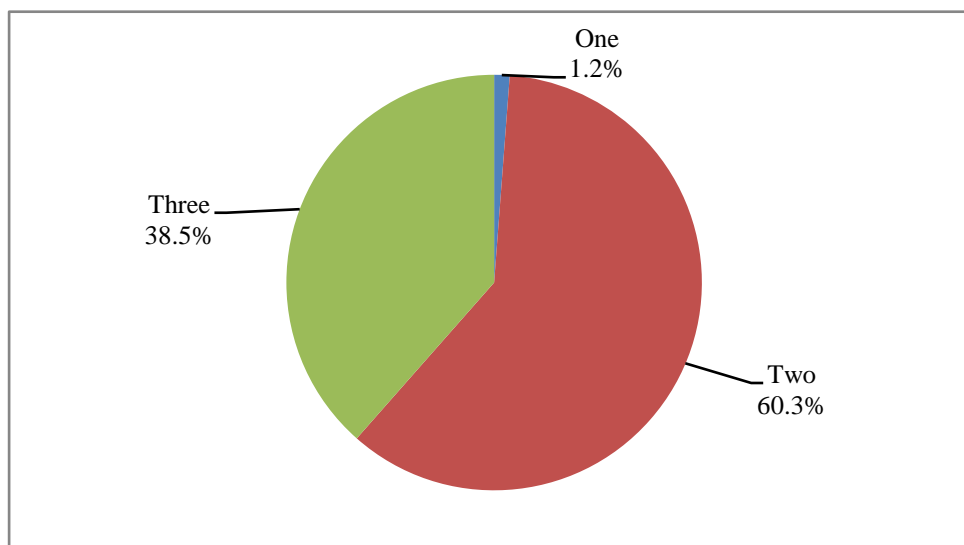
2.2.5 Food Consumption Patterns

Level of food consumption is also an indicator of poverty level of the households. Number of meals consumed in a day and frequencies of protein intake per week particularly meat and fish are most superior in measuring poverty levels of the households in the country.

2.2.5.1 Number of Meals per Day

The National Sample Census of Agriculture 2007/08 reveals that majority of rural agricultural households in Kilolo district normally have one meal per day (18,914 households or 43 percent), while 11,152 households (25 percent) have two meals. Moreover, the results also indicate that very few households have four meals (1,640 households or 4 percent). A good number of them have either three or no meal at all per day (5,904 households or 13 percent and 6,451 households or 15 percent respectively). This result shows that food insufficiency affects a small proportion of rural households in the district.

Figure 5: Percentage Distribution of Rural Agricultural Households and Meals Taken per Day, Kilolo District, 2007/08

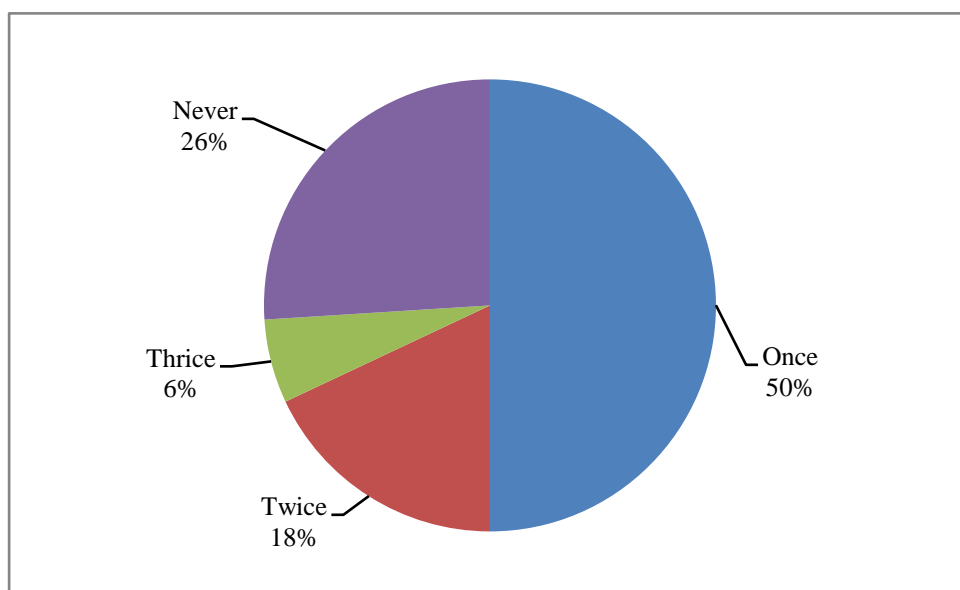


Source: NBS, National Sample Census of Agriculture, Iringa Region, 2007/08.

2.2.5.2 Protein (Fish) Consumption Frequencies

Kilolo district has a relatively small number of households that do not eat fish as reported during the Agricultural Sample Census in 2007/08. Figure 6 shows that most households ate fish once per week (22,304 households or 50 percent), followed by those who never ate fish (11,699 households or 26 percent) than those who ate fish two times (7,763 households or 18 percent). About 2,405 households (6 percent) ate fish three times a week while a very small number (109 households) ate fish four times a week.

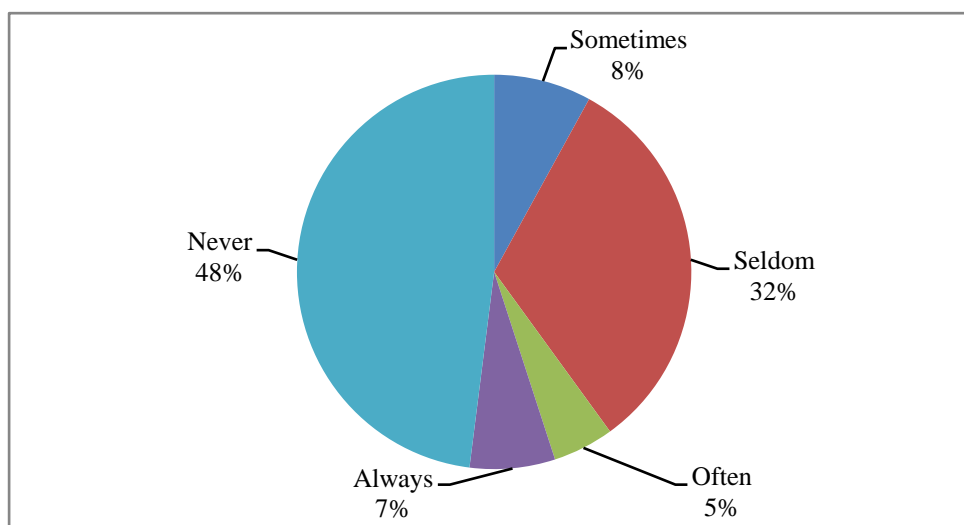
Figure 6: Percentage Distribution of Rural Agricultural Households by Frequency of Fish Consumption per Week by Households, Kilolo District, 2007/08



Source: NBS, National Sample Census of Agriculture, Iringa Region, 2007/08.

On food satisfaction, about half (about 48 percent) of households did not have food shortage during the preceding year prior to the enumeration. However, as Figure 6a shows, about 32 percent seldom had food shortages and 8 percent of households said they sometimes had shortage of food and 7 percent always had food shortages, respectively and the remaining 5 percent of households often had food shortage.

Figure 6a: Percentage Distribution of Rural Agricultural Households by frequency of food shortage by Household during the preceding year, Kilolo District, 2007/08



Source: NBS, National Sample Census of Agriculture, Iringa Region, 2007/08

2.2.6 Access to Clean Drinking Water

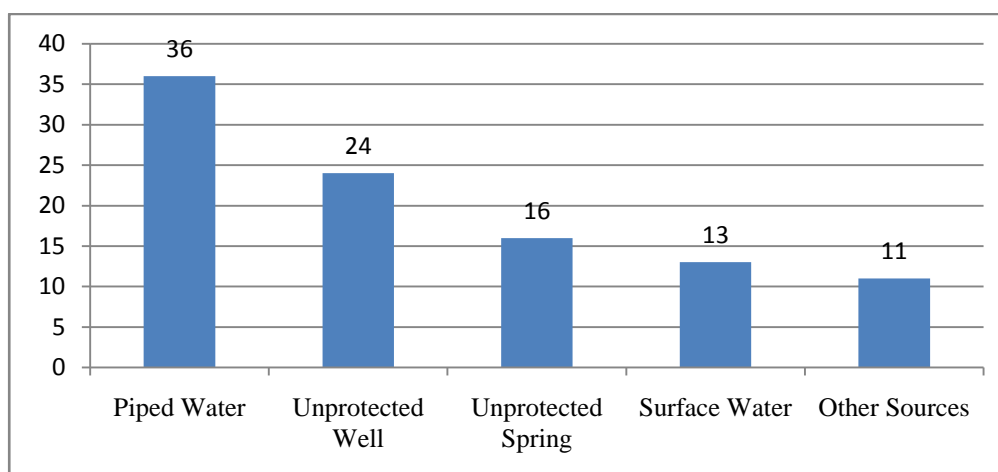


The topography of the district should act as the reliable sources of water

The topography and existence of permanent drainage system are the main reasons for the reliable sources of water in the district. Figure 7 shows that there is insignificant variation in the sources of water during the dry season. For example, the National Sample Census of Agriculture 2007/08 reveals that the proportion of households that used piped water in the dry season was 36

percent while 24 percent who used unprotected as the main source of drinking water in Kilolo district. They were followed by unprotected spring (16 percent), surface water (13 percent) and other sources (11 percent).

Figure 7: Percentage of Households by Type of Water Source during Dry Season, Kilolo District, 2007/08



Source: NBS, National Sample Census of Agriculture, Iringa Region, 2007/08

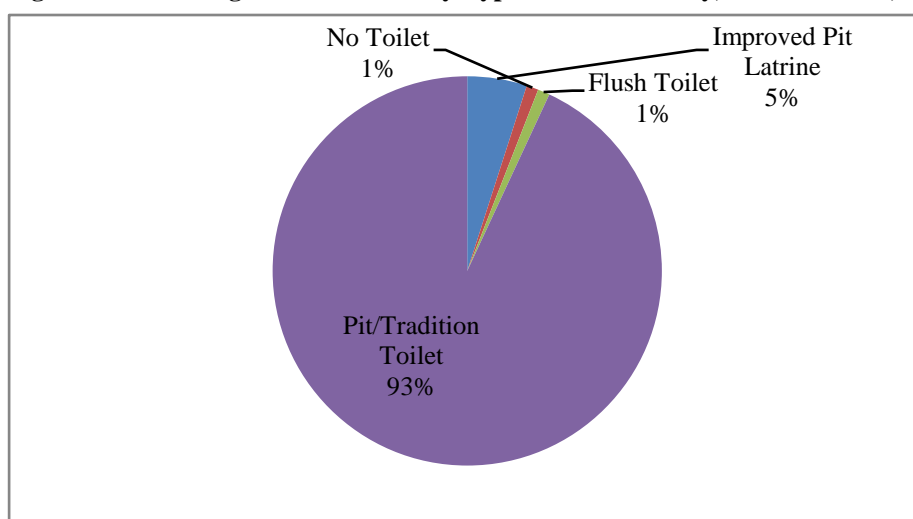
2.2.7 Types of Toilets



Almost all households in Kilolo district use traditional pit latrines

With respect to availability of toilets, the National Sample Census of Agriculture 2007/08 indicates that almost all households in Kilolo district (94 percent) use traditional pit latrines followed by improved pit latrines (5 percent). The percentages of households without toilets and those who used flush toilets were insignificant accounting for only 1 percent of the households each.

Figure 8: Percentage of Households by Type of Toilet Facility, Kilolo District, 2007/8



Source: NBS, National Sample Census of Agriculture, Iringa Region, 2007/08

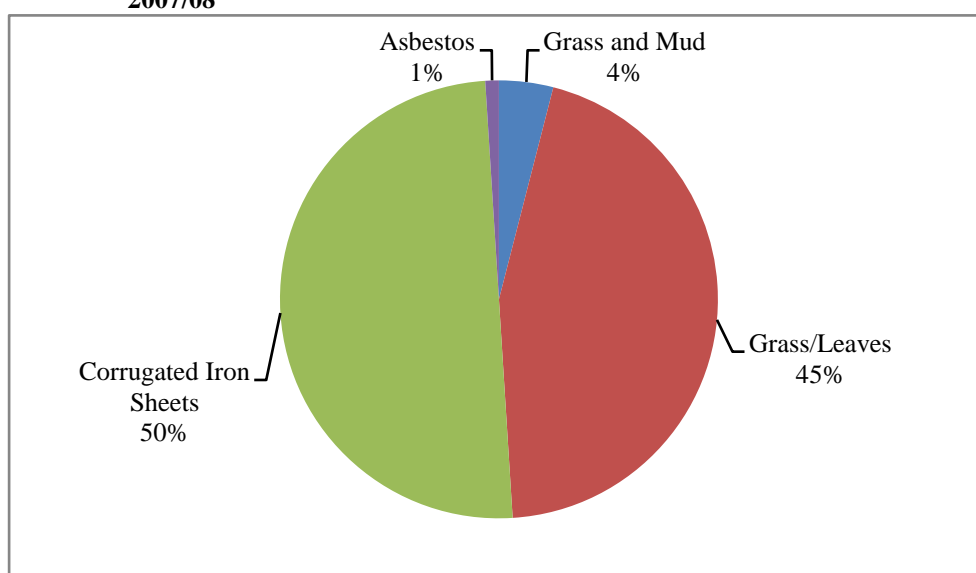
2.2.8 Roofing Materials



Iron sheets are the common roofing materials in Kilolo rural areas

The National Sample Census of Agriculture 2002/03 indicates that grass and leaves are the most common roofing materials in rural areas in the country. The situation is slightly different in Kilolo district where 50 percent of households have iron sheets roofing, followed by grass or leaves (44 percent) and grass and mud (5 percent). However, none of the households have either concrete or asbestos roofing, while only about one percent of the households' dwellings are roofed with tiles. Figure 9 shows percentage of households by type of roofing material.

Figure 9: Percentage of Households by Type of Roofing Material, Kilolo District, 2007/08



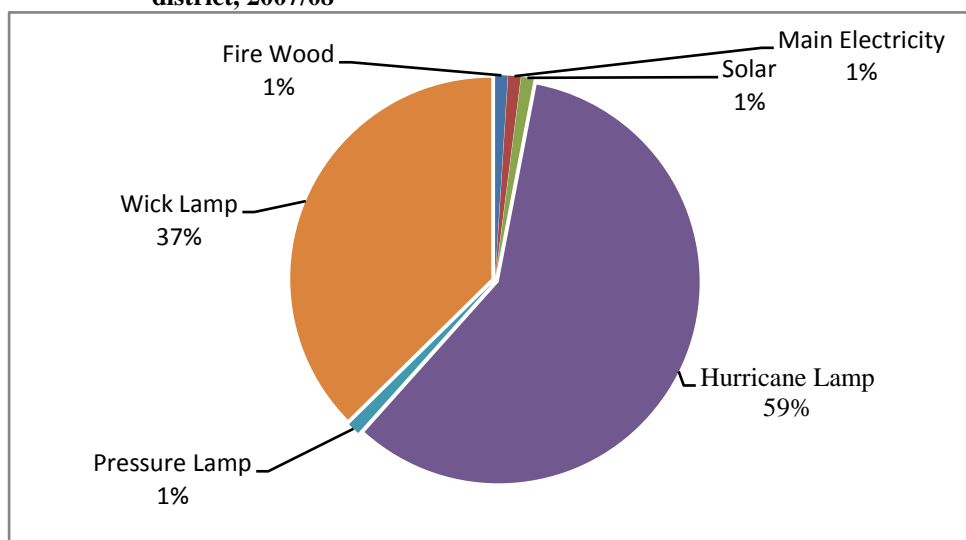
Source: NBS, National Sample Census of Agriculture, Iringa Region, 2007/08

2.2.9 Source of Lighting Energy

Because of the lack of electricity in rural areas, the National Sample Census of Agriculture 2007/08 reveals that only 1 percent of households use it for lighting. Hurricane lamp was the main sources of lighting energy in Kilolo district where by about 58 percent of total households used this source of energy. Wick lamp was used by about 37 percent and pressure lamp (1 percent), other sources such as solar and firewood was used by very few

households in the district (1 percent). Figure 10 shows the percentage of households by main source of energy for lighting in Kilolo district.

Figure 10 : Percentage of Households by Main Source of Energy for Lighting, Kilolo district, 2007/08

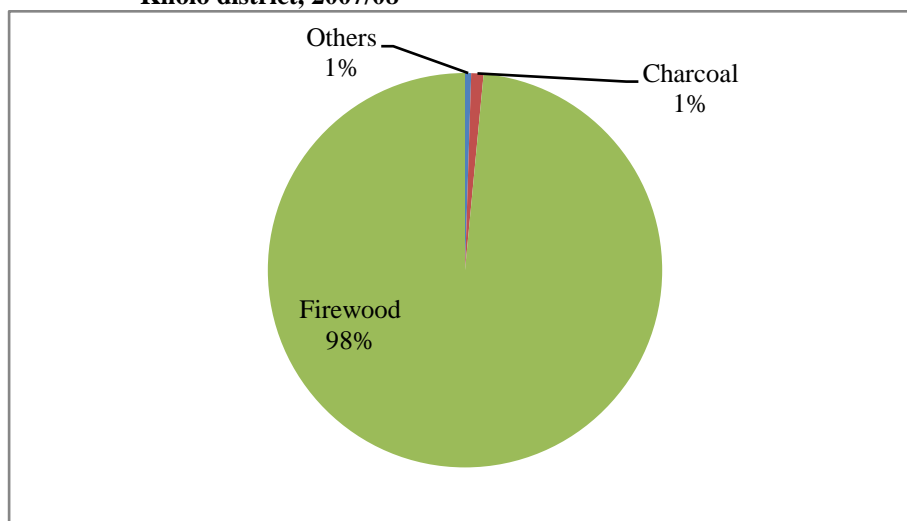


Source: NBS, National Sample Census of Agriculture, Iringa Region, 2007/08

2.2.10 Source of Energy for Cooking

The 2007/08 National Sample Census of Agriculture shows that firewood was the most prevalent source of energy for cooking as 98 percent of the households in Kilolo district use firewood, followed by charcoal (one percent). An insignificant number of households use crop residues and livestock dung as a source of energy for cooking. None of the households reported using modern and/or environmental friendly sources of energy for cooking such as electricity, solar energy, and biogas. If the current practice continues deforestation and depletion of natural vegetation will destroy the nature and ecology of Kilolo district.

Figure 11: Percentage of Households by Main Source of Energy for Cooking, Kilolo district, 2007/08



Source: NBS, National Sample Census of Agriculture, Iringa Region, 2007/08

2.2.11 Land Development

Land use planning is a key aspect for development of both urban and rural areas of any district in the country. The land needs in urban areas are dominated by the demand for building plots for residential, commercial, institutional and industrial purposes. In rural areas agricultural and other production activities are the major needs for land.



Grazing area is available for both indigenous and improved cattle in Kilolo District

The demand for surveyed land plots in urban centres has exceeded the supply for the last two years in Kilolo district. By the end of 2011 the cumulative number of building plots surveyed was 37 in Kilolo urban centre which is the Kilolo district headquarters although the demand was 60 plots. Other urban centres of Ilula and Ruaha Mbuyuni although had demands for plots, had one or no surveyed plots (Table 2.5). By the end of 2012 however, there were more surveyed plots than demanded for plots in Kilolo centre while for Ilula and Ruaha Mbuyuni it was the opposite.. It is obvious that lack of surveyed building plots in most cases create a problem of crowded environment and mushrooming of slums or shanty town at the end.

Table 2.5: The Demand and Supply of Building Plots in Urban Centres by Ward, Kilolo District, 2011 and 2012

Ward	1 st Jan. to 31 st Dec.2011				1 st Jan. to 31 st Dec.2012			
	No. of Urban Centres	Demand for Plots	Plot Surveyed	Plot Allocated as 31. 12. 2012	No. of Urban Centres	Demand for Plots	Plot Surveyed	Plot Allocated as 31.12.2013
Mtiti	1	60	37	37	1	105	478	478
Ilula	1	20	-	-	1	60	2	2
R/Mbuyuni	1	10	1	1	1	25	1	1
Total	3	90	38	38	3	68	481	481

Source: Kilolo District Executive Director's Office –Land, Natural Resources and Environment Department, 2013

In the planning of farms, grazing areas and human settlements in rural areas, the village is the first step. By the end of 2012, Kilolo district had managed to survey 83 villages out of 106 villages. 57 villages have been offered village land certificates (Table 2.6).

Table 2.6: Village Land Planning in Rural Areas by Ward, Kilolo District, 2012

Ward	Number of Villages	Number of Villages surveyed	Percentage of Villages Already surveyed	Villages offered certificate	Percentage of villages offered certificate
Image	5	3	60	2	3.3
Irole	6	6	100	3	3.0
Ilula	5	3	60	-	-
Uhambingeto	5	5	100	3	3.0
Udekwa	3	2	66.7	2	3.0
Mahenge	6	5	83.3	5	6.0
Mtitu	5	4	80.0	2	2.5
Dabaga	5	4	80.0	3	3.8
Ukumbi	5	4	80.0	3	3.5
Ukwega	6	5	83.3	4	4.8
Bomalangómbe	5	4	80.0	1	1.3
Idete	4	4	100.0	4	4.0
Masisiwe	5	4	80.0	3	3.8
Ngúruhe	5	4	80.0	4	5.0
Ngángáge	3	1	33.3	1	3.0
Ihimbo	5	4	80.0	4	5.0
Lugalo	4	4	100.0	2	2.0
Nyarumbu	8	2	25.0	-	-
Mlafu	3	3	100.0	2	2.0
Ibumu	4	3	75.0	2	2.7
Ruaha Mbuyuni	4	4	100.0	4	4.0
Kimala	5	5	100.0	3	3.0
Total	106	83	78.3	57	73.1

Source: Kilolo District Executive Director's Office –Land, Natural Resources and Environment Department, 2013

CHAPTER THREE

Productive Sectors

3.0 Overview

Chapter three explains the productive sectors performance in the district. These economic activities include agriculture, livestock, natural resources, mining, industrial development and the land sector development.

3.1 Agriculture

Agriculture has continued to be the main source of livelihood for the residents of Kilolo district, employing about 90 percent of the district workforce. Moreover, most of agricultural households ranked annual crop farming as an activity that provides most of their cash income followed by permanent crop farming, livestock and forestry.

The district produces maize, paddy, beans, round potatoes, wheat, sorghum, sweet potatoes, finger millet, garden peas, cassava and pigeon peas as food crops while coffee and pyrethrum are produced as cash crops. However, Kilolo people also use food crops as cash crops to enhance their incomes and ensure food availability throughout the year. Nevertheless, crop production levels are still very low mainly due to usage of inferior agricultural implements, the usage of outdated agricultural methods, pest problems, soil exhaustion and increasingly soil infertility.

3.1.1 Contribution of Agriculture

According to 2007/2008 Agricultural Sample Census, the district contribution to the regional agriculture production is observed in regard to food and cash crops. The district contributes very significantly to the regional production of maize, onions, tomatoes, beans and sunflower. The production of maize was about 55,891 tonnes, tomatoes (22,280 tonnes), onions (2,798 tonnes), beans (6,100 tonnes) and sunflower (2,961 tonnes). Though small, the area planted per tomato growing household (0.5 ha) was largest in Kilolo and the total production was 22,279 tonnes (69.3% of regional production). Other vegetables such as okra, spinach and pumpkins are grown in small quantities. Compared to other districts in the region, Kilolo has the smallest area under permanent crops which was dominated by banana. Small quantities of mango and coffee are also grown.

3.1.2 Arable Land Distribution

Arable land is the land suitable for growing crops. Thus, arable land in Kilolo district covers 650,282.2 hectares (82.6 percent) compared with the total district land area of 787,456 hectares (Table 3.1). A total of 127,889 hectares (19.7 percent of the arable land) were under cultivation and the remaining 522,393.2 hectares (80.3 percent of arable land) were under forest reserves, forest plantation and other human activities.

Table 3.1: Distribution of Total Arable Land by Ward in Kilolo District, 2011/12

Ward	Total LandArea (Ha)	Arable LandArea (Ha)	Arable land Under Cultivation (Ha)	% of Arable land under cultivation
Image	36,718	26,115.00	10,181.00	39.0
Irole	44,585	35,319.00	8,844.00	25.0
Ilula	9,023	4,559.20	4,041.00	88.6
Uhambingeto	40,163	30,288.00	9,453.00	31.2
Udekwa	25,093	20,170.00	4,501.00	22.3
Mahenge	62,967	59,135.00	3,410.00	5.8
Mtitu	19,537	12,750.00	6,365.00	49.9
Dabaga	58,705	53,710.00	4,573.00	8.5
Ukumbi	29,721	14,181.00	15,118.00	106.6
Ukwega	45,266	39,777.00	5,067.00	12.7
Bomalang'ombe	20,433	13,321.00	6,690.00	50.2
Idete	20,789	19,568.00	799	4.1
Masisiwe	47,198	41,763.00	5,013.00	12.0
Ng'uruhe	20,127	10,147.00	9,558.00	94.2
Ng'ang'ange	15,221	10,956.00	3,843.00	35.1
Ihimbo	24,321	15,636.00	8,263.00	52.8
Lugalo	50,914	45,308.00	5,184.00	11.4
Nyalumbu	6,325	4,348.00	1,555.00	35.8
Mlafu	33,065	27,770.00	4,873.00	17.5
Ibumu	36,373	30,301.00	5,650.00	18.6
Ruahambuyuni	100,598	96,837.00	3,339.00	3.4
Kimala	40,314	38,323.00	1,569.00	4.1
Total	787,456	650,282.20	127,889.00	19.7

Source: District Executive Director's Office (Agriculture Department) 2013

3.1.3 Irrigation Prospects

According to its topography and availability of natural drainage systems, Kilolo district is well endowed with large potential area for irrigation, but only a limited area has been developed for irrigation. Out of the total arable land area of 650,282.2 hectares, the potential area for irrigated agriculture is estimated to be 4,735 hectares of which only 1,810 hectares are under irrigation which occupies 38 percent of the total potential area. The most common source of water for irrigation is from rivers using gravity.



The majority of farmers in Kilolo district grow onions as cash crop.

The irrigatable land areas in Kilolo district were found in the following wards: Mahenge, Ruahambuyuni, Ihimbo, Ukumbi, Ng'uruhe, Ilula, Image, Lugalo, Irole, Mlafu and Udekwa as shown in the Table 3.2.

Table 3.2: Irrigation Prospects by Ward in Kilolo District, 2011/12

Ward	Estimated Potential Area (Ha)	Area Under Irrigation (Ha)	Major crops
Mahenge	2,825	756	onions, maize, paddy, tomatoes and vegetable crops
Ruahambuyuni	930	576	onions, maize, paddy, tomatoes and vegetable crops
Ihimbo	190	12	maize, beans, tomatoes and vegetable crops.
Ukumbi	490	272	maize, garden peas, beans, tomatoes and vegetable crops
Ng'uruhe	45	17	maize, garden peas, beans, tomatoes and vegetable crops
Ilula	20	15	tomatoes and vegetable crops
Ibumu	35	12	tomatoes, onion and beans
Image	45	35	tomatoes and beans
Lugalo	50	25	maize, tomatoes and onions
Irole	30	25	tomatoes and vegetable crops
Mlafu	40	35	tomatoes and vegetable crops
Udekwa	35	30	vegetable crops and beans
Total	4,735	1,810	

Source: District Executive Director's Office (Agriculture Department) 2013

3.1.4 Farm Inputs

Although soil fertility has considerable potential to support different varieties of crops, many areas in the district are occupied by less fertile soils especially those in high rainfall zones. The soils in these zones require routine application of fertilizer, otherwise crop yield becomes poor. Thus, for better production of crops in the district large quantity of industrial fertilizers are required. Agriculture inputs are readily available in the district supplied to farmers by different Agro-dealers. However, it is still clear that in many cases the demand always exceed the supply (Table 3.3).

With reference to Table 3.3, DAP/MRP/TSP recommended for application at planting time for crops such as maize, round potatoes and horticulture crops (tomatoes, cabbage and onions) whereas CAN/UREA fertilizer are recommended for maize, paddy and horticulture crops and applied as top dressing.

Table 3.3: Availability of Chemical Fertilizers (tonnes) in Kilolo District 2011/12

Type of Fertilizers	2010/11			2011/12		
	Demand	Supplied	Distributed	Demand	Supplied	Distributed
DAP	3,590	3350	3,570	7015	3,957	3,901
TSP	120	485	395	945	463	402
MRP	9,543	1270	1,480	4504	1,395	1322
NPK	560	150	70	803	102	87
UREA	12,963	8,750	7,850	15678	6,112	5,942
CAN	6,725	1,650	1,530	4010	1,279	1,186
Total	33,501	15,655	14,895	32,955	13,308	12,840

Note: TSP: Triple Super Phosphate; DAP: Double Ammonium Phosphate CAN: Calcium Ammonium Nitrate; MRP: Minjingu Rock Phosphate

Source: District Executive Director's Office (Agriculture Department) 2013

3.1.5 Insecticides

The availability of insecticides in the district to a great extent has improved the development of agriculture in the district whereby 74 percent of the supplied insecticides were applied during farming activities. Table 3.4 reveals the availability of various insecticides particularly Thionex, Actellic super Dust, Selecron, Karate, Shumba Super Dust, Actellic Super EC Marathion, Dusbarn, and Decis.

Table 3.4: Availability of Insecticides (Litres/kgs/tones) in Kilolo District, 2010/11 and 2011/12

Type Insecticides	2010/11			2011/12		
	Demand	Supplied	Distributed	Demand	Supplied	Distributed
Thionex	90,402	75,500	38,360	90,243	70,853	45,241
Selecron	12,653	2,485	1,843	12,854	2945	1544
Actellic Super EC	235	202	64	212	150	85
Actellic Super Dust	12,650	13,050	12,188	12,975	12,033	11,985
Shumba Super Dust	13,430	13,800	13,050	13,657	12,324	11,545
Marathion	9,860	6,345	5,230	9,889	6,543	6123
Dusbarn	569	420	310	522	178	132
Decis	304	134	97	357	210	156
Karate	19,895	15,764	12,100	20,320	14,350	12,090
Total	159,998	127,700	83,242	161,029	119,586	88,901

Source: District Executive Director's Office (Agriculture Department) 2013

3.1.6 Fungicide

The availability of fungicides has contributed to the development of agriculture in the district. Four types of fungicides were supplied in the district and these included Redomil, copper oxychloride, mangozeb, and bayfidan. However out of 4,298 tonnes of fungicides supplied only 3,566 fungicides were distributed to the farmers as shown in the Table 3.5.

Table 3.5: Availability of Fungicides (in litres/kgs/tones).in Kilolo District, 2010/11and 2011/12

Type of Fungicides	2010/11			2011/12		
	Supplied	Distributed		Demand	Supplied	Distributed
Redomil	3360	2745	2300	3287	2944	2314
Copper oxychloride	2150	854	705	2467	659	612
Mangozeb	2690	502	428	2637	492	451
Bayfidan	640	215	150	618	203	189
Total	8,840	4,316	3,583	9,009	4,298	3,566

Source: District Executive Director's Office (Agriculture Department) 2013

The use of improved seeds has contributed to the increased of production of food and cash crops in the district. From Table 3.6 the improved seeds used by the farmers in Kilolo district were maize Hybrid, Composite varieties (OPV) and improved varieties of paddy, wheat, sorghum, and sunflower. Table 3.6 shows that the supply in tonnes of improved seeds is in many cases higher than the demand. This is anticipation of the knowledge given to the farmers on the importance of using the improved seeds. However, Table 3.6 shows that in 2011/2012 a total of 2,102 tonnes of improved seeds supplied to the farmers but only 780 tonnes (37 percent of the total were distributed to the targeted farmers).

Table 3.6: Availability of Improved seeds (tonnes) in Kilolo District, 2010/11 and 2011/12

Type of Improved Seeds	2010/11			2011/12		
	Demand	Supplied	Distributed	Demand	Supplied	Distributed
Maize Hybrid	739	850	648	452	1,150	598
Maize OPVs	846	560	361	199	869	123
Paddy	8	9	3	3.8	10	8
Wheat	9	15	13	12	24	15
Sorghum	3	4	3.5	2	6	4
Sunflower	20	30	28	25	43	32
Total	1,625	1,468	1056.5	693.8	2,102	780

Source: District Executive Director's Office (Agriculture Department) 2013

3.1.7 Agro- Mechanisation

Kilolo District farmers are used to such farm implements as ox- plough, ox-harrow, ox- Bridge, ox-cart, ox-cultivator, ox-chain, ox-shares, tractors, and power tillers. However the most common farm implements used in Kilolo District were ox-plough, ox-shares, ox-hallow and ox-cart. Other farm implements are found in a small numbers compared to the demand (Table 3.7) due to low purchasing power for the majority of farmers.

Table 3.7: Availability of Agricultural Implements in Kilolo District, 2011/12

No.				Shortfall/Excess
	Type	Demand	Available	
1	Ox plough	2137	1854	283
2	Ox harrow	2137	100	2037
3	Oxbridge	2137	94	2043
4	Oxcart	2574	179	2395
5	Ox cultivator	2137	15	2122
6	Ox chain	2137	18	2119
7	Ox shares	2137	1854	283
8	Tractors	210	56	154
9	Power tillers	316	62	254
10	Ox ripper	2137	5	2132
11	Ox planter	2137	5	2132
12	Tractor Ridgers	70	22	48
13	Tractor Harrow	210	25	185
14	Tractor Trailers	210	77	133
15	Tractor Planter	210	5	205

Source: District Executive Director's Office (Agriculture Department) 2013

3.1.8 Status of Agricultural Staff

The availability of sectoral personnel is one of the key factors necessary for agricultural development in the country. The status of agricultural sector personnel in Kilolo District in 2011/12 had a total number of 78 personnel, of which all 66 were agricultural field officers and 12 were Agricultural officers (Table 3.8).

Table 3.8: Availability of Agricultural Personnel by Ward, Kilolo District, 2011/12

Ward	Agricultural Officers					Field Officers and Assistant Field Officers			
	Demand	Available			Deficit	Demand	Available		Deficit
		Total	Male	Female			Male	Female	
Image	0	0	0	0	0	5	2	2	1
Irole	1	0	0	0	-1	6	2	1	3
Ilula	0	1	0	1	0	5	2	0	3
Uhambingeto	0	0	0	0	0	5	3	0	2
Udekwa	0	0	0	0	0	3	2	0	1
Mahenge	0	0	0	0	0	6	4	0	2
Mtitu	10	10	8	2	0	5	1	1	3
Dabaga	0	0	0	0	0	5	3	1	1
Ukumbi	0	0	0	0	0	5	3	0	2
Ukwega	0	0	0	0	0	6	4	0	2
Bomalang'ombe	0	0	0	0	0	5	2	1	2
Idete	0	0	0	0	0	4	2	0	2
Masisiwe	0	0	0	0	0	5	2	0	3
Ng'uruhe	0	0	0	0	0	5	5	0	0
Ng'ang'ange	0	0	0	0	0	3	1	0	2
Ihimbo	0	0	0	0	0	5	1	1	3
Lugalo	0	1	0	1	-1	4	1	3	0
Nyalumbu	0	0	0	0	0	8	3	1	4
Mlafu	0	0	0	0	0	3	2	0	1
Ibumu	0	0	0	0	0	4	3	0	1
Ruaha Mbuyuni	0	0	0	0	0	4	3	1	0
Kimala	0	0	0	0	0	5	3	0	2
Total	11	12	8	4	-2	106	54	12	40

Source: District Executive Director's Office (Agriculture Department) 2013

3.1.9 Land under Cultivation



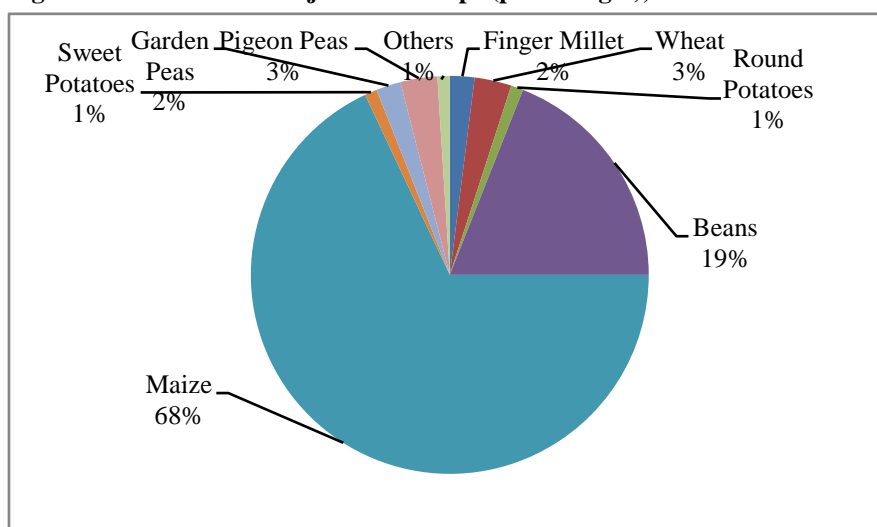
Crop farming is the main economic activity in Kilolo District

Table 3.9 give the estimated areas that was used to produce major food crops in the district. The Table shows that maize was the dominant crop grown in Kilolo district utilising 57,946 ha of the arable land during the 2011/12 rainy seasons.

Table 3.9: Area (Ha) under Major Food Crops, Kilolo District, 2006/07 to 2011/12

Crop	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Maize	54,179	46,732	45,018	53,141	53,008	57,946
Beans	12,379	6,494	6,477	13,074	10,563	16,435
Paddy	670	239	161	269	281	295
Round Potatoes	2,426	3,788	3,035	1,022	1,113	1,172
Wheat	1,149	2,348	2,129	2,601	2,718	2,814
Sorghum	84	89	87	93	95	381
Finger millet	743	383	257	3,172	3,315	1,564
Sweet potatoes	1,409	5,805	4,315	751	818	792
Garden peas	1,789	1,706	1,628	1,900	1,986	1,976
Cassava	847	631	305	292	305	219
Pigeon peas	4,842	4,320	2,606	3,475	3,632	3,011
Total	80,517	72,535	66,018	79,790	77,834	86,605

Source: District Executive Director's Office (Agriculture Department) 2013

Figure 12: Area under Major Food Crops (percentages), Kilolo district 2012

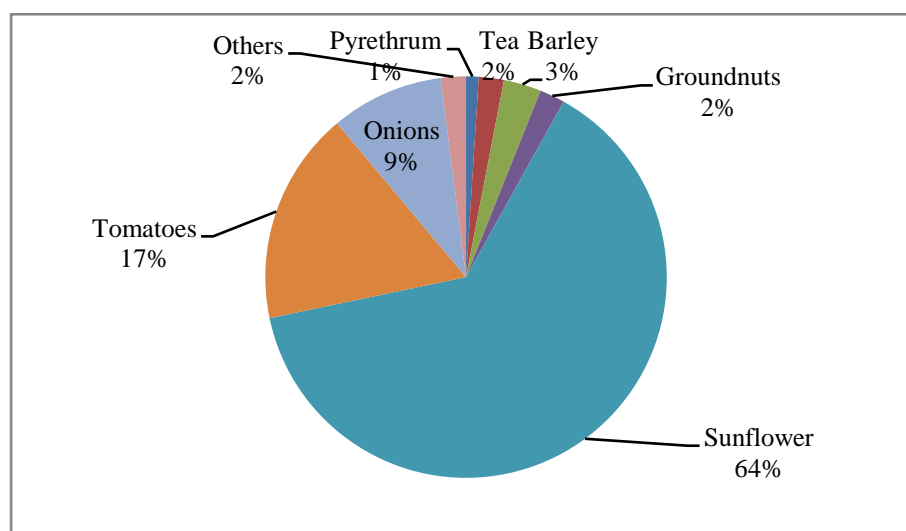
Source: District Executive Director's Office (Agriculture Department) 2013

Regarding cash crops, 8,664 hectares of arable land were used to grow sunflower in 2011/12 while tomatoes occupied an average area of 2,341 hectares. These were followed by onions (1,298 ha), barley (420 ha), tea (320 ha) and Groundnuts (289 ha).

Table 3.10: Area (Ha) under Major Cash Crops, Kilolo District, 2006/07 to 2011/12

Crop	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Sunflower	8,709	6,618	7,378	8,481	7,930	8,664
Tomatoes	3,549	2,662	2,671	3,142	3,287	2,341
Onions	635	615	515	623	1,156	1,298
Garlic	8	8	9	15	20	23
Pears	25	30	35	36	39	41
Peaches	35	37	40	40	42	44
Apples	5	6	8	10	12	12
Avocado	4	6	7	8	10	10
Mangoes	30	31	34	34	35	35
Pawpaw	5	5	6	6	7	8
Cabbage	67	65	74	81	88	51
Coffee	42	42	37	57	54	57
Pyrethrum	32	56	151	137	100	178
Paprika	36	38	27	49	0	0
Tea	201	201	222	252	11.4	320
Barley	0	0	261	300	548	420
Groundnuts	206	195	231	263	250	289
Total	13,589	10,615	11,706	13,534	13,589.40	13,791

Source: District Executive Director's Office (Agriculture Department) 2013

Figure 12a: Area under Major Cash Crops (percentages), Kilolo District, 2012

Source: District Executive Director's Office (Agriculture Department) 2013

3.2 Crop Production

3.2.1 Food Crops

There was a satisfactory production of food crops to meet the district requirement. Maize was the major food crop produced in the District. In 2011/12 about 104,715 tonnes of maize were produced followed by 10,829 tonnes of beans and 10,118 tonnes of Round potatoes. The production of Sorghum was the least in the district at about 52 tonnes. Cases of food shortage in the district do not frequently arise as people use the food crops interchangeably.

a) Maize production



Maize is the major food and cash crop grown in Kilolo District

The majority of farmers in Kilolo District used to grow maize as both food and cash crop; hence the crop is also a major source of revenue. Over the period of six years 2006/07-2011/12 the district had an average annual maize production of 104,715 tonnes which was the highest production compared to other major food crops shown in Table 3.11.

Table 3.11: The Production in tonnes of Major Food Crops in Kilolo District, 2006/07 to 2011/12

Crop	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	Annual average
Maize	94,211	102,896	112,547	106,282	106,016	106,337	104,715
Beans	7,157	12,153	11,335	13,074	10,874	10,381	10,829
Paddy	243	559	565	309	844	1,035	593
Round potatoes	9,576	10,180	11,104	10,220	11,130	8,496	10,118
Wheat	4,400	8,800	3,726	2,991	5,150	2,704	4,629
Sorghum	34	32	47	53	95	52	52
Finger millet	484	338	448	2,538	4,143	2,061	1,669
Sweet potatoes	4,244	5,250	3,503	5,633	6,134	4,682	4,908
Garden peas	4,304	3,191	2,441	6,650	4,964	3,325	4,146
Cassava	853	930	915	898	984	1,578	1,026
Pigeon peas	2,166	2,009	3,562	2,085	3,539	3,613	2,829
Total	127,672	146,338	150,193	150,733	153,873	144,264	145,512

Source: District Executive Director's Office (Agriculture Department) 2013

b) Beans

Beans are also an important food crop grown in Kilolo district. Like maize, beans are grown in small acreages for domestic consumption but also as a source of cash earnings. On the average the district ranks second in beans production in the region according to the Agriculture sample Census of 2007/2008. Over the period 2006/7 – 2011/12, the average annual production of beans was 10,829 tonnes (Table 3.11). All wards in the district are good producers of beans.

c) Round Potatoes

Round potatoes also contribute to staple food of the indigenous people in Kilolo District. It is grown for both food and cash earnings. According to Table 3.11, the average annual production of round potatoes was 10,118 tonnes. The major producing areas of round potatoes were Mtitu, Ihimbo, Ukumbi, Ng'uruhe, Bomalang'ombe, Masisiwe, Dabaga, Ng'ang'ange, Kimala and Idete.

3.2.2 Cash Crops

Principal traditional cash crops which have contributed significantly to the district economy include sunflower, tomatoes, onions, garlic, pears, coffee, peaches, apples, avocado, mangoes, pawpaw, cabbage, and pyrethrum (Table 3.12). Horticulture crops were mainly vegetables such as tomatoes, cabbage and onions which although they had no organized market outlets; they provided the peasant farmers with significant and regular income. These vegetables were grown mainly in most of the wards. With reference to Table 3.12, 79,916 ha were under cash crops in the season of 2011/12.

Table 3.12: Production in Tonnes of Major Cash Crops, Kilolo District, 2006/07 to 2011/12

Crop	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Sunflower	5,079	6,619	8,162	7,840	7,347	11,217
Tomatoes	59,444	66,560	71,123	69,124	68,508	50,542
Onions	5,080	8,813	6,440	7,577	10,953	11,727
Garlic	34	34	39	65	86	99
Pears	803	964	1,124	1,156	1,253	1,317
Peaches	1,489	1,574	1,702	1,702	1,787	1,872
Apples	33	40	53	66	79	79
Avocado	78	118	137	157	196	196
Mangoes	1,455	1,504	1,649	1,649	1,698	1,698
Pawpaw	83	83	100	108	116	133
Cabbage	2,514	2,804	2,425	2,820	293	415
Coffee	6	11	10	15	10	8.3
Pyrethrum	18	21	53	55	35	22
Paprika	44	56	46	57	0	0
Tea	0	0	0	0	0	0
Barley	0	0	1,088	1,250	1,370	316
Groundnuts	188	204	267	303	273	275
Total	76,348	89,405	94,418	93,944	94,004	79,916

Source: District Executive Director's Office (Agriculture Department) 2013

3.2.3 Crop marketing

It has been observed that crop marketing in Kilolo district is in terms of traditional food and cash crops. The Table below reveals that a total of 56,996 tonnes of food crops worth Tshs 32.5 billion were sold in 2011/2012, of these, maize had the highest contribution of about 34,337 tonnes (60 percent) followed by beans 6,524 tonnes (11 percent) and round potatoes 5,496 tonnes (9.6 percent). The smallest contribution came from the sales of sorghum which contributed only 10 tonnes (0.02 percent).

Table 3.13: Amount and Value of Food Crops Sold in Kilolo District, 2011/12

Crop	Amount Sold (tonnes)	Price per Kg (Tshs.)	Total Value in Tshs('000')
Maize	34,337	350	12,017,950
Beans	6,524	1,200	7,828,800
paddy	150	1,700	255,000
Round potatoes	5,496	350	1,973,600
Wheat	2,050	1,200	2,460,000
Sorghum	10	500	5,000
Finger millet	1,450	1,000	1,450,000
Garlic	1,227	300	368,100
Garden peas	3,300	1,200	3,960,000
cassava	492	350	172,200
Pigeon peas	1,960	1,000	1,960,000
Total	56,996		32,450,650

Source: District Executive Director's Office (Agriculture Department) 2013

Table 3.14 shows that a total of 77,517 tonnes of cash crops worth Tshs 31.9 billion were sold in Kilolo District in 2011/2012. Tomatoes had the largest amount at 50,200 tonnes (65 percent) followed by onions 11,627 tonnes (15 percent) and sunflower 10,217 tonnes (13 percent). The contribution of other cash crops was seven percent.

(a) Onions

Onions being sold along the road in Kilolo district

Table 3.14: Amount and Value of Cash Crops Sold in Kilolo District, 2011/12

Crop	Amount Sold (Kgs)	Price per Kg (Tshs.)	Total Value in Tshs ('000')
Sunflower	10,217	700	7,151,900
Tomatoes	50,200	300	15,060,000
Onions	11,627	600	6,976,200
Garlic	99	2000	198,000
Cabbage	234	500	117,000
Pears	1,310	150	196,500
Peaches	1,800	300	540,000
Apples	79	2,500	197,500
Avocado	100	1,500	150,000
Mangoes	1,200	600	720,000
Pawpaw	80	500	40,000
Coffee	83	4,500	37,350
Pyrethrum	22	1,600	35,200
Barley	316	1,000	316,000
Groundnuts	150	1,000	150,000
Total	77,517		31,885,650

Source: District Executive Director's Office (Agriculture Department) 2013

3.2.4 Livestock

Livestock keeping is an important economic activity for the residents of Kilolo district. However, to a large extent, livestock keeping is still traditional and involves mostly indigenous cattle (96 percent) and the exotic breeds (dairy and beef cattle) account for the remaining 4 percent of the total cattle population in the district. Apart from cattle, as can be observed in Table 3.15, goats, pigs, sheep, donkeys and poultry are other common livestock found in the district. The livestock sub sector has a big contribution to food security and poverty alleviation at household level. Besides, the sub sector is an important source of food protein principally in the form of meat, milk and poultry products. Thus, it does contribute to GDP and poverty reduction. The district has a large number of poultry, cattle, goats and pigs while donkeys and sheep were in small numbers. Table 3.15 shows the distribution of livestock by ward in Kilolo District in 2012.

Table 3.15: Livestock Population by Ward in Kilolo District, 2012

	Cattle	Goats	Sheep	Donkeys	Pigs	Poultry
Image	6,408	2,952	980	542	2,432	17,600
Irole	6,580	2255	944	36	1,028	25,175
Ilula	906	764	418	36	305	6,070
Uhambingeto	7,040	3,500	200	360	1,150	20,480
Udekwa	340	785	80	42	346	12,864
Mahenge	8,327	7,890	1,930	78	407	17,213
Mtitu	3,755	977	68	20	1,170	29,371
Dabaga	380	336	67	2	2,910	21,880
Ukumbi	7,800	440	346	52	2,381	34,992
Ukwega	283	517	212	0	1,800	17,670
Bomalang'ombe	438	171	36	3	3,624	22,168
Idete	35	115	26	2	760	8,944
Masisiwe	75	184	12	10	2,928	16,408
Ng'uruhe	4,397	706	349	9	1,206	14,135
Ng'ang'ange	145	60	0	0	2,042	12,035
Ihimbo	2,585	531	750	12	4,740	16,371
Lugalo	3,264	1,610	339	48	451	24,175
Nyalumbu	1,272	1,012	224	135	378	2,406
Mlafu	195	268	71	22	250	9,785
Ibumu	5,504	3,520	1,400	700	2,660	14,532
Ruaha Mbuyuni	4,178	4,780	1,140	28	242	13,664
Kimala	15	671	53	0	1,137	7,934
Total	63,922	34,044	9,645	2,137	34,347	365,872

Source: District Executive Director's Office (Livestock Department) 2013

From the Table above, Mahenge wards recorded the largest number of cattle with 13.03 percent followed by Ukumbi (12.20 percent), Uhambingeto (11.01 percent), Irole (10.29 percent) and Image (10.02 percent). Idete and Kimala wards recorded the smallest percentage of cattle in district accounting only 0.05 percent and 0.02 percent, respectively. However, as compared to other livestock, poultry is highly visible in the district, with the largest number recorded in Ukumbi (9.6 percent), Mtitu (8.0 percent), Irole (6.9 percent), Lugalo (6.6 percent), Bomalang'ombe (6.1 percent) and Dabaga (6.0 percent). Other wards had smaller percentages (Table 3.15).

3.2.5 Cattle Population.



Indigenous cattle are the most common livestock found in Kilolo District

According to the 2007/2008 Agriculture Census results, the number of cattle in Kilolo District, was 52,589 (11.1 percent of the total number of cattle in the region), of which 51,933 were indigenous cattle (98.8 percent of total heads of cattle in the district), 328 (0.6 percent) were improved dairy breeds and 328 (0.6 percent) were improved beef cattle.

Table 3.16: Number of Cattle by District, Iringa Region, 2007/08

District	Indigenous	Improved Beef	Improved Dairy	Total
Iringa Rural	58,941	0	973	59,914
Mufindi	101,938	0	5,248	107,186
Makete	35,125	359	3,735	39,219
Njombe	131,397	507	1,015	132,919
Ludewa	36,326	264	1,450	38,040
Iringa Urban	295	0	155	450
Kilolo	51,933	328	328	52,589
Njombe urban	43,320	40	1,354	44,714
Total	459,275	1498	14258	475,031

Source: NBS, Agriculture Sample Census - Iringa Region, 2007/2008

Table 3.17: Cattle Distribution by Type and Ward, Kilolo District, 2012

Ward	Indigenous Cattle	Improved Daily Cattle	Improved Beef Cattle	Total
Image	6,402	6	0	6,408
Irole	6,575	5	0	6,580
Ilula	872	34	0	906
Uhambingeto	7,000	40	0	7,040
Udekwa	334	6	0	340
Mahenge	8,327	0	0	8,327
Mtitu	3,443	312	0	3,755
Dabaga	260	120	0	380
Ukumbi	7,200	340	260	7,800
Ukwega	236	47	0	283
Bomalang'ombe	346	92	0	438
Idete	30	5	0	35
Masisiwe	35	40	0	75
Ng'uruhe	4,004	53	340	4,397
Ng'ang'ange	102	43	0	145
Ihimbo	1,800	785	0	2,585
Lugalo	3,252	12	0	3,264
Nyalumbu	1,200	72	0	1,272
Mlafu	130	65	0	195
Ibumu	5,500	4	0	5,504
Ruahambuyuni	4,178	0	0	4,178
Kimala	0	15	0	15
Total	61,226	2,096	600	63,922

Source: District Executive Director's Office (Livestock Department) 2013

3.2.6 Livestock Farms

In Kilolo District, cattle were kept in large and small scale farms. Large scale farms found in Ukumbi and Ng'uruhe wards keep beef cattle only. A total of 600 beef cattle were kept in both wards, out of which 260 beef cattle were in Rutuba Farm, Ukumbi Ward and 340 were kept in Mtanga Farm, Ng'uruhe Ward (Table 3.18). Dairy cattle were kept on small scale farms found in Ukumbi, Ihimbo and Mtitu wards with a total of 1,082 dairy cattle kept in different farms as shown in Tables 3.18 below.

Table 3.18: Distribution of Large Scale Farms of Beef Cattle by Ward in Kilolo District, 2012

Ward	Name of Beef Farm	Number of Beef Cattle
Ukumbi	Rutuba Farm	260
Ng'uruhe	Mtanga Farm	340
Total		600

Source: District Executive Director's Office (Livestock Department) 2013

Dairy cattle



Dairy cattle as seen at Ndoto Farm in Kilolo district, 2012

Table 3.19: Distribution of Small Scale Farms of Dairy Cattle by Ward, Kilolo District, 2012

Ward	Name of Dairy Farm	Number of Dairy Cattle
Ukumbi	Rutuba Farm	235
Sihimbo	Tommy Dairy	379
Ohimbo	Muhesa Farm	68
Uhimbo	Ndoto Farm	281
Mr Mtitu	Stambuli Farm	57
Mr Mtitu	S.L.I Brothers	62
Total		1,082

Source : District Executive Director's Office (Livestock Department) 2013

Table 3.20 shows that there were only two small scale farms in Ihimbo Ward, keeping a total of 191 dairy goats out of which 65 were kept at Tommy Dairy Farm and 123 kept at Ndoto Dairy Farm.

Table 3.20: Distribution of Small Scale Farms of Dairy Goats by Ward, Kilolo District, 2012

Ward	Name of Dairy Goats Farm	Number of Dairy Goats
Ihimbo	Tommy Dairy	65
himbo	Ndoto Farm	126
Total		191

Source: District Executive Director's Office (Livestock Department) 2013

3.2.7 Grazing Area

The grazing area is the land for rearing livestock. It excludes all tsetse fly infected areas, wildlife and forest reserves as well as tree plantations but includes game controlled areas and overlap arable land. Based on this understanding, Kilolo District has 114,394.18 hectares of grazing land, equivalent to 14.35 percent of total land area of the district. Out of the 114,394.18 hectares of grazing land, only 15,968.07 hectares of land are used for grazing. It was reported further that there is no hectare of land affected by tsetse flies in the year 2012. Agriculture land put under crop production annually normally gets used for grazing after crop harvest. Such dual purpose land use provides additional grazing area near household compounds especially during the dry seasons.

Table 3.21: Estimated Area of Grazing Land by Ward, Kilolo District, 2012

Ward	Land fit for Grazing (Ha)	Land Used for Grazing (Ha) (80 percent)
Image	6,787.13	1,357.43
Irole	7,167.64	1,075.15
Ilula	497.52	49.75
Uhambingeto	8,947.76	894.78
Udekwa	3,640.91	364.09
Mahenge	14,694.55	1,469.45
Mtitu	4,178.93	626.84
Dabaga	3,762.53	75.25
Ukumbi	6,320.32	1,264.06
Ukwega	5,478.03	547.8
Bomalang'ombe	2,133.87	42.68
Idete	798.7	15.97
Masisiwe	4,208.08	84.16
Ng'uruhe	6,200.87	1,240.17
Ng'ang'ange	985.91	19.72
Ihimbo	6,163.14	1,232.63
Lugalo	7,959.51	1,591.90
Nyalumbu	559.7	27.99
Mlafu	5,379.95	806.99
Ibumu	4,650.37	930.07
Ruahambuyuni	10,964.48	2,192.90
Kimala	2,914.29	58.29
Total	114,394.18	15,968.07

Source: District Executive Director's Office (Livestock Department) 2013

3.2.8 Livestock Extension Services

The delivery of livestock health services depends on facilities such as dips, veterinary health centres and water sources. The numbers of primary livestock health facilities as shown in Table 3.22 show their distribution in Kilolo District. About 37 dips were found in the district out of which 29 dips were working and located in Image, Irole, Ilula, Uhambingeto, Mahenge, Mtitu, Ukumbi, Ng'uruhe, Ihimbo, Lugalo, Ibumu and Ruahambuyuni wards. Veterinary health centres are vital for disease diagnosis and control. Their

availability is necessary to combat diseases like tick borne, and food and mouth diseases. The district had only two veterinary centres and both were not working thus hindering the health delivery of service in the district.

Table 3.22: Distribution of Livestock Infrastructure by Ward in Kilolo District, 2012

Ward	Dispensary			Veterinary Centres			Crushes	Hides /Skins Sheds	Abattoirs /Slaughter Houses	Livestock Market/ Auction	Charco dams
	W	NW	Total	W	NW	Total					
Image	3	-	3	-	-	-	-	-	-	-	2
Irole	1	-	1	-	-	-	-	-	-	-	-
Ilula	1	-	1	-	1	1	-	1	1	1	-
Uhambingeto	2	1	3	-	-	-	-	-	-	-	3
Udekwa	-	-	-	-	-	-	-	-	-	-	-
Mahenge	2	-	2	-	-	-	-	-	-	1	1
Mtitu	3	-	3	-	1	1	-	-	-	-	-
Dabaga	-	1	1	-	-	-	-	-	-	-	-
Ukumbi	5	-	5	-	-	-	-	-	-	-	-
Ukwega	-	2	2	-	-	-	-	-	-	-	-
Bomalang'ombe	-	2	2	-	-	-	-	-	-	-	-
Idete	-	-	-	-	-	-	-	-	-	-	-
Masiwiwe	-	-	-	-	-	-	-	-	-	-	-
Ng'uruwe	4	-	4	-	-	-	-	-	-	-	-
Ng'ang'ange	-	-	-	-	-	-	-	-	-	-	-
Ihimbo	4	1	5	-	-	-	-	1	1	-	-
Lugalo	2	-	2	-	-	-	-	-	-	1	1
Nyalumbu	-	-	-	-	-	-	-	-	-	-	-
Mlafu	-	-	-	-	-	-	-	-	-	-	-
Ibumu	1	-	1	-	-	-	-	-	-	-	-
Ruahambuyuni	1	1	2	-	-	-	-	1	-	1	-
Kimala	-	-	-	-	-	-	-	-	-	-	-
Total	29	8	37	0	2	2	0	3	2	4	7

W=working; NW= not working

Source: District Executive Director's Office (Livestock Department) 2013

3.2.9 Major Livestock Diseases

Livestock quality improvement is limited by access to facilities capable for controlling or preventing animals diseases, Diseases affect animal health and reduce the quality of both meat and milk as well as the produced quantity and in some cases bring death to animals affected.

3.2.9.1 Cattle Diseases

The most common diseases that caused high cattle morbidity and mortality in the district were East Coast Fever (ECF), Anaplasmosis, Trypanosomiasis, Helminths and Rift Valley Fever (RVF). To a large extent, the district authority has not yet managed to reduce the number of morbidity of cattle. Helminthiasis was the main cause of morbidity in 2010, 2011 and 2012 when 1,394, 955 and 4,816 heads of cattle were affected, respectively.

Table 3.23 also confirms that TRYPONOSOMIASIS was the first killer disease in three years accounted for 31 deaths in 2010, 11 in 2011 and 63 in 2012, while ANAPLASMOSIS was the second killer disease and ECF was the third. Most encouraging was the effort made to control mortality though morbidity was very high in the district. However despite the efforts made, there was an increase of mortality cases in 2012 which was due to inefficiency in reporting cases due to the decrease in the number of livestock personnel.

Table 3.23: Five Major Cattle Diseases Reported in Kilolo District, 2010, 2011 and 2012

Disease	Morbidity Cases Reported			Mortality Cases Reported		
Year	2010	2011	2012	2010	2011	2012
ECF	699	847	1,055	9	8	41
Anaplasmosis	972	611	1,359	13	17	56
Trypanosomiasis	741	507	987	31	11	63
Helminths	1394	955	1415	-	-	-
RVF	-	-	-	-	-	-
Total cases	3,806	2,920	4,816	53	36	160

Source: District Executive Director's Office (Livestock Department) 2013

Table 3.24 shows that Helminths was the most troubling disease in Kilolo district that caused goat morbidity of 1354 in 2010, 1716 in 2011 and 7733 in year 2012, while mange was the second cause of goat morbidity and CCPP was the third.

Table 3.24: Three Major Goat Diseases Reported in Kilolo District, 2010, 2011 and 2012

Disease	Morbidity cases reported			Mortality cases reported		
	2010	2011	2012	2010	2011	2012
CCPP	1189	535	711	2	7	21
Helminths	1354	1716	7733	-	-	-
Mange	1139	884	4555	-	-	-
Total cases	3682	3135	12999	2	7	21

Source: District Executive Director's Office (Livestock Department) 2013

From the table above CCPP is the only disease reported to have mortality cases over the period 2010 – 2012. The mortality cases were 2, 7, and 21 as reported in 2012.

On morbidity for sheep, CCPP was the most troubling cause in Kilolo District. As there were no reported cases of mortality, the veterinary department to a large extent had managed to control sheep diseases in the district (Table 3.25).

Table 3.25: Three Major Sheep Diseases Reported in Kilolo District, 2010, 2011 and 2012

Disease	Morbidity cases reported			Mortality cases reported		
	2010	2011	2012	2010	2011	2012
CCPP	374	867	642	-	-	-
Helminths	137	119	72	-	-	-
Total cases	511	986	714	-	-	-

Source: District Executive Director's Office (Livestock Department) 2013

New Castle Disease was the major cause of poultry morbidity in 2010, and 2011 whereas, Poultry Fowl Typhoid was the second major disease in 2010, 2011 and 2012. On the other hand, Fowl Typhoid Disease was the only cause

of mortality in 2010 and 2011 with 188 cases in 2010 and 47 cases in 2011 while in 2012 the 23 reported cases of mortality were caused by COCCIDIOSIS.

Table 3.26: Four Major Poultry Diseases Reported in Kilolo District, 2010, 2011 and 2012

Disease	Morbidity Cases Reported			Mortality Cases Reported		
	2010	2011	2012	2010	2011	2012
New Castle	72,142	47,811	n.a	14,428	9562	n.a
Fowl Typod	1,148	4,267	433	188	47	n.a
Infectious Coryza	27	n.a	200	n.a	n.a	n.a
Coccidiosis	n.a	n.a	747	n.a	n.a	23
Total cases	73,317	52,078	1,380	188	47	23

Source: District Executive Director's Office (Livestock Department) 2013

Looking at cases of mortality, the veterinary department to a large extent had managed to control poultry diseases in the district.

3.3. Marketing Livestock and their Products

At present livestock keepers in Kilolo district market their livestock through the established livestock markets. There are about four established livestock market in the district located in Ruahambuyuni, Mahenge, Lugalo and Ilula wards. The marketing of livestock in the region level has traditionally taken place once in the middle of every month. All livestock brought to authorized livestock markets are auctioned and have their prices determined by bidding. Table 3.27 gives the number and value of livestock marketed in 2010, 2011, and 2012.

Table 3.27: Marketing of Major Livestock in Kilolo District, 2010, 2011 and 2012

Type of Livestock	Livestock Market			Total Value (TShs)		
	2010	2011	2012	2010	2011	2012
Indigenius Cattle	3,285	3,987	3,532	821,550,000	1,116,360,000	1,589,400,000
Dairy Cattle	0	0	0	0	0	0
Beef Cattle	0	0	0	0	0	0
Goats	5,684	6,688	5,519	198,940,000	267,520,000	275,950,000
Poultry	0	0	0	0	0	0
Pig	17,358	22,721	23,533	1,128,270,000	1,704,075,000	1,764,975,000
Sheep	1,805	2,124	1,356	59,565,000	78,588,000	67,800,000
Total	28,132	35,520	33,940	2,208,325,000	3,166,543,000	3,698,125,000

Source: District Executive Director's Office (Livestock Department) 2013

From the table above, the number of livestock marketed in 2010 was 28,132; in 2011 the number increased to 35,520 and in 2012 dropped to 33,940. Contrary to the fluctuating number of units marketed, the value of marketed units in respective years increased as shown in the table above.

(a) Hides and skins

In Table 3.28, the increase in hides and skins should reflect the increase in number of livestock slaughtered, but the increase of the hides and skins in 2012 was due to the efficiency in reporting cases compared to the past because of increase in number of livestock field officers at ward level. Units of hides and skins increased to 5,231 in 2012. This trend also is portrayed by the value or revenue received by farmers in the district. The revenue increased from Tshs 4.5 millions in 2010 to 5.9 millions in 2011 and went up Tshs 16.0 millions in 2012.

Table 3.28: Marketing of Livestock Hides and Skins in Kilolo District, 2010, 2011 and 2012

Type of Livestock	Number of Units Marketed			Total Value in T. Shs.		
Year	2010	2011	2012	2010	2011	2012
Cattle Hides/Skins	872	949	2815	3,488,000	3,796,000	11,260,000
Goat Skins	1,479	1,426	1,669	739,500	1,426,000	3,338,000
Sheep Skins	512	713	747	256,000	713,000	1,494,000
Total	2,863	3,088	5,231	4,483,500	5,935,000	16,092,000

Source: District Executive Director's Office (Livestock Department) 2013

(b) Milk Production

Table 3.29 highlights the trend of milk production in Kilolo District. The table shows that the production of milk was about 883,718 litres in 2010, of which about 80 percent were produced by dairy cattle. The quantity increased to 2,072,642 litres in 2011 and increased further to about 2,188,595 litres in 2012. Likewise, revenue collected was Tshs. 58.4 million, 635.5 million in 2010, 2011 and Tsh. 2.1 billion in 2012. The production of milk has proved to be beneficial among persons in the district. Therefore, it is the duty of the District Authorities to advocate and help people to change their attitude towards dairy cattle in order to increase milk production as shown in Table 3.29.

Table 3.29: Production of Milk, in Kilolo District, 2010, 2011 and 2012

Milk From	No. of Litres			Total Value in TZS.		
	2010	2011	2012	2010	2011	2012
Indeginous	117,158	120,064	175,273	58,579,000	60,032,000	87,636,500
Dairy Cattle	709,226	1,845,920	2,506,911	496,458,200	522,144,000	1,993,427,100
Dairy Goats	57,334	106,658	165,569	28,667,000	53,329,000	82,784,500
Total	883,718	2,072,642	2,847,753	583,704,200	635,505,000	2,163,848,100

Source: District Executive Director's Office (Livestock Department) 2013

3.3.1 The Status of Livestock Staff

The quality of extension services received by livestock keepers reflects the status of livestock staff in the district. The district experienced shortage of livestock personnel as shown in Table 3.29. Serious shortages are observed among livestock field officers at ward level. Veterinary and livestock officers are at Mtitu Ward working in Kilolo District headquarters.

Table 3.30: Availability of Livestock Personnel by Ward in Kilolo District, 2012

Ward	Veterinary Officers	Livestock Officers	Livestock Field Officers	Pests and Tsetse Field Officers	Livestock Auxiliary	Total
Image	-	-	2	-	-	2
Irole	-	-	2	-	-	2
Ilula	-	-	1	-	-	1
Uhambingeto	-	-	1	-	-	1
Udekwa	-	-	0	-	-	0
Mahenge	-	-	2	-	-	2
Mtitu	1	4	5	-	-	10
Dabaga	-	-	1	-	-	1
Ukumbi	-	-	2	-	-	2
Ukwega	-	-	1	-	-	1
Bomalang'ombe	-	-	1	-	-	1
Idete	-	-	0	-	-	0
Masisiwe	-	-	0	-	-	0
Ng'uruhe	-	-	1	-	-	1
Ng'ang'ange	-	-	0	-	-	0
Ihimbo	-	-	1	-	-	1
Lugalo	-	-	1	-	-	1
Nyalumbu	-	-	1	-	-	1
Mlafu	-	-	0	-	-	0
Ibumu	-	-	0	-	-	0
Ruahambuyuni	-	-	2	-	-	2
Kimala	-	-	0	-	-	0
Total	1	4	24	0	0	29

Source: District Executive Director's Office (Livestock Department) 2013

3.3.2 Investment Opportunities in Livestock Production

Provision of credit facilities will enable the households to acquire dairy cattle for increasing milk production and hence increase farmers' income. Extension services should be improved to go hand in hand with the increase of dairy cattle.

3.3.3 Natural Resources



Kilolo District has Conducive ecologic for natural forest

Forests play an important role in maintaining ecological balance, soil protection from erosion and conservation of water, wildlife and our livelihood. Moreover, forests are a source of industrial raw materials and provide wood and non-wood products such as honey and beeswax. Thus, failure to maintain or improve forest resources eventually lead to problems of unsustainable livelihood. As regards to the allocation of staff at ward level, experience was observed in this sub sector where 7 out of 8 forest personnel were located into different wards as shown in Table 3.31 below shows beekeeping sub-sector had only one staff located at Ilula division, where by fisheries and wildlife sub-sectors had no staff. Table reveals that of the seven staff available, six were males and only one was a female.

Table 3.31: Availability of Natural Resources Personnel by Ward in Kilolo District; 2012

Ward	Forest		Beekeeping		Fisheries		Wildlife		Total
	Male	Female	Male	Female	Male	Female	Male	Female	
Image	1	0	0	0	0	0	0	0	1
Irole	1	0	0	0	0	0	0	0	1
Ilula	0	0	0	1	0	0	0	0	1
Mahenge	1	0	0	0	0	0	0	0	1
Mtitu	0	0	0	0	0	0	0	0	
Dabaga	1	0	0	0	0	0	0	0	1
Ukwega	1	0	0	0	0	0	0	0	1
Bomalang'ombe	1	0	0	0	0	0	0	0	1
Total	6	0	0	1	0	0	0	0	7

Source: District Executive Director's Office (Land Natural Resources and Env. Department) 2013

3.3.4 Forestry



Natural forest found in Kilolo district, 2012

Kilolo District has one of the best forest covers – forth in terms of area - in the region. It occupies 28 percent of the total land area. Until 2012, out of 778,171.2 hectares of the district land area, about 321,185.81 hectares is covered by natural and planted forest and 135,533 hectares are covered by forest reserves. These forest reserves are owned by the district council or villages. Unfortunately, though the government has imposed protection measures against forest depletion, the district is suffering from illegal

harvesting of wood trees and encroachment due to land demand for agricultural activities. Table 3.32 shows the status of forest reserves and the effect of illegal harvesting and land encroachment.

Table 3.32: Status of Forest Reserves by Ward, in Kilolo District, 2012

Ward	Name of Forest Reserve	Size in Hectares	Illegal Harvesting level*	Size of Encroached Area (Ha)
Image	Image	1,025.00	Severe	-
	Kitonga kihulula	1,952.00	Severe	-
Irole	Kising'alugalo	3,257.50	Severe	12
Ilula	Kitonga Kihulula	2,928.00	Severe	-
Udekwa	Kilombero Nature Reserve	41,600.00	Severe	-
Mahenge	Kitonga Kihulula	4,880.00	Severe	-
Mtitu	New Dabaga Ulongambi	300	Insignificant	-
Dabaga	New Dabaga Ulongambi	3,400.00	Insignificant	-
Ukwega	New Dabaga Ulongambi	28	Insignificant	-
	Kising'alugalo	28,326.00	Fair	-
	Kilombero Nature Reserve	32,240.00	Severe	-
Idete	Kawemba	69	Insignificant	-
Ihimbo	Kising'alugalo	14,163.00	Severe	109
Kimala	Kitemele	273	Fair	-
	Kilanzi Kitungulu	1,092.00	Fair	-
Total		135,533.50		121

Source: District Executive Director's Office (Natural Resources) 2013

The ward with the largest area of forest reserve was Ukwega which had 60,594 hectares or 44.7 percent of the area under forest reserves in the district followed by Udekwa 41,600 hectares or 31 percent. Encroachment and illegal harvesting are problems which threaten the sustainability of these areas. Also from the table Ihimbo and Irole wards were vulnerable to deforestation with about 121 hectares of forests affected.

3.3.5 Forest Plantation



Development partners have motivated people in engaging in planting trees

Apart from natural forests, the district is also covered with plantations of trees. The people of Kilolo district have developed a tradition of planting of trees and various groups have been involved in raising and planting trees. These groups include the central government, the district council, village governments, individuals, schools, military forces and other forest companies. Kilolo district has managed to raise about 12,858,995 tree seedlings in 2010/2011 and 22,992,538 seedlings in 2011/2012 (Table 3.34 and Table 3.35).

3.3.6 Forest Cover

Kilolo is one of the districts in the Iringa region endowed with significant forest covers with 195,737.4 hectares being natural forest and 21,886.3 ha planted forest. By the end of 2012 Kilolo division had the largest size of both natural and forest plantations at 90.555.5 and 21.789 ha respectively. It was followed by Mahenge (87,007.8 ha of natural forest and Mazombe had the smallest hectares of 18,174.1 and 97.3 ha (Table 3.33).

Table 3.33: Status of Forest Cover by Division, Kilolo District, 2012

Division	Natural Forest Reserve Area (ha)	Forest Plantation Area (ha)	Game Reserve Area (ha)	Game Controlled Area (ha)	Forest Cover on Public/Village Land (ha)
Kilolo	90,555.5	21,789	0	0	271.7
Mazombe	18,174.1	97.3	0	0	204.0
Mahenge	87,007.8	0	0	0	301.8
Total	195,737.4	21,886.3	0	0	777.5

Source: District Executive Director's Office (Natural Resources) 2013

The main development partners who were directly involved in raising and distribution of tree seedlings during the period of 2011/12 were the central government, district councils, village government, schools, NGO's, Magereza and other new forest companies (Table 3.34). Common tree species normally planted include Cyprus, Pine and Eucalyptus. A total of 3,428,687 tree seedlings were raised by institutions portrayed in Table 3.34 while 12,858,995 seedlings were raised by wards over the period of 2010/11 and 2011/12 (Table 3.35).

Table 3.34: Number of Tree Seedlings Raised by Institutions, Kilolo District, 2011/12

Institution	2011/12	Percent Contribution
Village Govt	235,147	6.9
Schools	463,142	13.5
NGO's	78,519	2.3
New Forest Companies	2,300,000	67.1
Magereza	351,879	10.3
Total	3,428,687	100.0

Source: District Executive Director's Office (Natural Resources) 2013

Table 3.35: Number of Tree Seedlings Raised by Ward in Kilolo District 2010/11 and 2011/12

Ward	2010/11	2011/12
Image	1,013	2,028
Irole	0	1,075
Udekwa	96,014	106,561
Mahenge	0	75
Mtitu	319,002	252,500
Dabaga	984,259	11,150,000
Ukumbi	251,784	208,147
Ukwega	1,687,294	1,155,966
Bomalang'ombe	6,231,089	6,523,170
Idete	489,151	377,844
Masisiwe	882,219	721,318
Ng'uruhe	0	305,107
Ng'ang'ange	918,532	497,732
Ihimbo	107,983	58,119
Lugalo	1,481	816
Nyalumbu	581	0
Mlafu	119,281	156,718
Ibumu	0	5,310
Ruahambuyuni	0	52
Kimala	769,312	1,470,000
Total	12,858,995	22,992,538

Source: District Executive Director's Office (Natural Resources) 2013

3.3.7 Forest Products

Kilolo, like other rural district councils of Iringa, is endowed with forest products including timber, wood logs and wood fuels such as fire wood and charcoal. But as reported earlier, it is very difficult to get reliable data on the exploitation of forest potentials due to the ban of tree cutting in natural forests though there is a significant level of forest depletion due to illegal harvesting and encroachments. To minimise the depletion of natural forests, the district among other measures, imposed a ban of cutting and selling of natural trees from forest reserves and public land and in turn the District, put more effort in establishing community based forests, which are later declared and gazetted as

forest reserves. This is among prioritizing initiative to protect water catchments areas and prevent or at least reduce the speed of forest depletion.

Timber being one of the forest products makes a significant contribution to the revenue of the people of Kilolo District. Table 3.36 shows the number of timber sold and its value in 2011/12. A total of 87,270 pieces of timber were sold and fetched about TZS 204.4 millions with the highest sale of about 26 percent being in Bomalang'ombe Ward followed by Dabaga Ward at 16 percent, Ukwega Ward at 14 percent and the smallest value of timber sold were 0.15 percent in Irole Ward.

Table 3.36: Quantity and Value of Timber Sold (Tshs) by Ward, Kilolo District, 2011/12

Ward	Number of Timber sold	Total Values TZS
Image	291	873,000
Irole	101	303,000
Udekwa	1,079	3,228,000
Mahenge	219	657,000
Mtitu	5,163	12,907,500
Dabaga	12,974	32,435,000
Ukumbi	2,091	5,227,500
Ukwega	11,123	27,807,500
Bomalang'ombe	27,223	53,057,500
Idete	9731	24,327,500
Masisiwe	7,029	17,572,500
Ng'uruhe	1,713	4,282,500
Ihimbo	3,760	9,400,000
Mlafu	561	1,683,000
Ibumu	302	906,000
Kimala	3,910	9,775,000
Total	87,270	204,442,500

Source: District Executive Director's Office (Natural Resources) 2013

3.3.8 Charcoal

Charcoal activity is one of the economic activities that provide income to the people of Kilolo District. Table 3.37 shows the number of bags sold and value in 2011/12.

Table 3.37: Quantity (bags) and Value of Charcoal sold by Ward in Kilolo District, 2011/12

Ward	Number of Bags Sold	Price (TShs.)	Total Value Tshs
Image	4,018	9000	36,162,000
Irole	1,765	10000	17,650,000
Ilula	6,395	12000	76,740,000
Uhambingeto	5,057	9000	45,513,000
Udekwa	4,186	9000	37,674,000
Mahenge	350	10000	3,500,000
Mtitu	850	7000	5,950,000
Dabaga	1,200	7000	8,400,000
Bomalang'ombe	561	6500	3,646,500
Idete	412	6000	2,472,000
Masisiwe	315	6000	1,890,000
Ng'uruwe	1,701	7500	12,757,500
Ihimbo	2,701	9000	24,309,000
Lugalo	2,169	7000	15,183,000
Nyalumbu	3,500	12000	42,000,000
Mlafu	4,691	9000	42,219,000
Ibumu	3,078	9000	27,702,000
Ruahambuyuni	3,809	10000	38,090,000
Kimala	81	7000	567,000
Total	46,839		442,425,000

Source: District Executive Director's Office (Natural Resources) 2013

3.3.9 Wildlife

Kilolo district council borders with Udzungwa National Park that covers an area of 2,100 hectares. Community participation in wildlife management through Wildlife Management Areas (WMA) for the purpose of protecting wildlife from poachers, illegal settlements and other human activities has managed to increase the number of wildlife within these areas. The diversity of wildlife species found in these areas including elephants, buffalos, leopards, monkeys and bush pigs, which mostly found in Udzungwa Mountains National Park.

3.3.8 Beekeeping



The district has vast and potential areas for beekeeping due to the availability of forests

The district has high potential for beekeeping although little has been done so far to adequately exploit this resource. So far potential areas identified for beekeeping are Image, Udekwa, Mtitu, Dabaga, Idete, Ng'ang'ange and Kimala wards. Other wards do produce much though found with the potential for beekeeping. The production of honey and wax are still low due to the use of traditional methods and community disinclination towards beekeeping. The modern bee hives are still very few in number as can be seen in Table 3.38.

Table 3.38: Number of Traditional and Modern Beehives in Kilolo District, 2009/2010

Ward	Number of Beehives					
	Traditional			Modern		
	2009	2010	2012	2009	2010	2012
Image	289	346	456	0	32	75
Irole	9	23	54	5	12	23
Ilula	81	189	204	23	73	101
Uhambingeto	18	61	95	0	12	34
Udekwa	174	204	239	42	131	200
Mahenge	4	9	13	67	145	143
Mtitu	216	528	706	289	407	438
Dabaga	89	190	264	38	127	157
Ukumbi	13	22	30	29	76	97
Ukwega	12	57	81	17	89	101
Bomalang'ombe	19	31	40	78	81	115
Idete	103	184	206	119	176	209
Masisiwe	219	317	328	11	65	90
Ng'uruwe	11	21	37	63	87	129
Ng'ang'ange	137	256	282	0	21	32
Ihimbo	10	38	54	21	31	31
Lugalo	0	5	5	0	0	6
Nyalumbu	0	0	0	7	15	28
Mlafu	6	32	39	5	12	25
Ibumu	7	39	46	17	29	36
Ruahambuyuni	21	103	199	10	18	27
Kimala	67	93	161	27	38	48
District	3,514	4,758	5,551	2,877	3,687	4,157

Source: District Executive Director's Office (Natural Resources) 2013

It may be observed from the table above that in 2009, 2010 and 2011 there were fewer modern bee-hives than traditional bee-hives. This means many people still use traditional bee-hives and this could be the reason why the production of honey and wax are very low.

Table 3.39: Beekeeping Products and Value Harvested in Kilolo District, 2010 - 2012

Year	Honey		Bee-wax	
	Kgs.	T.shs.	Kgs.	T.shs.
2010	667	4,000,000	115	345,000
2011	802	4,812,000	143	429,000
2012	1017	6,102,000	209	1,227,000

Source: District Executive Director's Office (Natural Resources) 2013

3.9 Fisheries



Fishing activities and fish rising as were seen at Idete village in Kilolo district

Fishing provides employment to the people living near or alongside the fishing area in the district. In Kilolo district fishing takes place in the Great Ruaha, Little Ruaha and fish ponds. According to the 2007/08 Agricultural Sample Census, fishing was a livelihood activity of a percent of rural households. There are 460 persons in the district who are involved in fishing. These are located in three wards as follows: Ukwega (30), Idete (230) and Ruahambuyuni (200).

Generally the fishing activities in the district is carried out entirely at artisanal level and the fish which are caught by fisherman weigh 1250gms on average.

Table 3.40: Fishery Resources and Production by Ward, in Kilolo District, January to December, 2012

Ward	No. of Fishermen	No. of Registered Fishing Vessels	Weight of Catch (kg)	Value
Ukwega	30	n.a	350	n.a
Mahenge	25	n.a	1,000	na
Mtitu	10	n.a	250	na
Idete	78	n.a	1,056	n.a
Ruahambuyuni	35	n.a	4,800	n.a
Dabaga	10	n.a	260	n.a
Total	188	n.a	7,716	n.a

Source: District Executive Director's Office (Natural Resources) 2013.

3.4.0 Industrial Sector

Kilolo district council is basically a producer of primary products. Efforts have been made to establish industries which can process these primary products. These industries are characterized by small and medium sized establishments located into seven wards. Whereby Ilula had 6 establishments 5 being for food processing and 1 for timber; Mtitu had 2 for timber; Bomalang'ombe had also 2 establishments being for food processing and timber. In total there are 22 establishments in the district, one of which was medium sized involved in water processing and packaging. The small scale establishments are engaged in food processing, timber and pole treatment. The table below shows the distribution of establishments by type and ward. In a nutshell Kilolo still has a long way to go in establishing agro-based industries which could add value and increase the per capita income of the people.

Table 3.41: Type of Small Scale Industries by Ward in Kilolo District, 2012

Ward	Type of Industry	Number of Establishments
Ilula	Food Processing (Oil Pressing Machine)	6
Nyalumbu	Food Processing (Oil Pressing Machine)	3
Ilula	Timber Industry	3
Image	Water Processing Industry	1
Irole	Pole Treatment Plant	1
Mtitu	Food Processing (Oil Pressing Machine)	1
Mtitu	Timber Industry	2
Dabaga	Timber Industry	1
Bomalang'ombe	Food Processing	1
Bomalang'ombe	Timber Industry	1
Lugalo	Food Processing (Oil Pressing Machine)	1
Nyalumbu	Timber Industry	1
Total		22

Source: District Executive Director's Office (Commerce and Industries Dept.) 2013

3.4.1 Mining Sector

The district council has yet to play a significant role in mineral production, though there are number of mineral deposits. Kilolo district is endowed with lime spotted in Ilula Ward, aggregates in Uhambingeto Ward, and fine sand in Ihimbo Ward. Nevertheless, little is known about the actual potential of the minerals at these sites. As a result, its contribution to the district economy is still negligible compared to agriculture and livestock activities. However mineral potentials in the district are shown in Table 3.42.

Table 3.42: Distribution of Existing Mineral Deposits and Scale of Mining by Ward in Kilolo District 2012

Ward	Type of Mineral Deposit	Small Scale	Medium Scale
Ilula	Lime		Medium Scale
Uhambingeto	Aggregates	Small scale	-
Ihimbo	Fine sand	Small scale	-
Total	3	2	1

Source: District Executive Director's Office (Mining Department) 2013

3.4.2 Environmental Conservation

Kilolo district, like other districts in Iringa Region face problems of depletion of its forests cover due to demand for fuelwood for domestic uses and commercial purposes. The district has embarked upon afforestation by involving a number of NGO's and other development partners to assist in planting of tree seedling in order reducing the rate of deforestation. There about four NGO's involved in environment conservation, two located at Mtitu Ward, and others being at Dabaga and Ng'uruhe Wards.

3.4.3 Eco-tourism

The number of accommodation facilities in Kilolo District increasing every year due to the increase in the number of economic activities. People migrate from different areas within and outside the region for business, farming activities and tour business.

To date there are 23 restaurants and 8 guest houses in the district. The restaurants are distributed as follows: 8 at Nyalumbu; 4 each at Ruahambuyuni and Mtitu wards; 3 at Ilula; Dabaga and Idete wards having 2 each. The Restaurants are located at Ruahambuyuni, Nyalumbu, and Mahenge wards.

3.4.2 Tourism

The district is potentially rich and has beautiful historical sites that can be seen by different people around the world. There are about five historical sites which are found in Kilolo District.

a. Caves



This is a unique cave with a total of 8 rooms. The cave has been used by local natives as hideout against enemies. It has been used also by local community as a sacred site which reflects cultural belief of the indigenous community of Hehe where sacrifices of goats and cows were given to gods to stop curse erupting in the community. This cave is found in Udekwa ward 143 km from the district headquarters. There are also other caves found at Dabaga 45 km and Irole caves 63 km from headquarters. All of these caves have similar traditional beliefs.

b. Swamp



The swamp is used by the community for two purposes; spiritual and medical. For spiritual purpose, sacrifices of goats and cows were given to gods to stop problem erupting in the community. For medical purpose, water from the swamp and herbs growing in the swamp are mixed with other traditional medicine to cure epilepsy, leprosy and mental diseases and the water is only fetched by a select person. The swamp is at Ukumbi ward 47 kms from the headquarters.

c. House



It represents the culture of the dominant ethnic group inhabiting the district. The place is one of indigenous knowledge of housing making that withstand wind blow and hot weather, located at Mtitu Ward 1 km from the headquarters.

d. Stone



This is a huge stone covering a total of 12 acres at 2,500 metres above sea level. It is used for two major activities which are spiritual and medical. For spiritual purposes, sacrifices of goats, and cows were given to gods to stop problems erupting in the community and sacrifice giving depended on the nature of the problem meaning the bigger the problem the bigger the sacrifice to be given. For medical purpose, herbs growing on top of the stone which scientifically are called *syzgium* spp, but in Hehe language are called Mafwelefwenzi are mixed with other traditional medicine to cure asthma and coughing diseases. Also there are two rivers which flow nearby the site called Ifwenga and Mtitu. The stone is found at the border of two villages of Kihesa-Mgagao (Ng'uruhe ward) and Masege (Ukumbi ward) 42 kms from headquarters.

e. Grave



Popularly referred as ‘Nyundo grave’ or ‘Zelewisky grave’ reflects cultural conflict between two ethnic groups of Germans and Hehe. This is a monument where 300 Germany soldiers were buried after being killed by Mkwawa soldiers in 1898. This grave is located at Irole 63 kms from the municipal headquarters.

CHAPTER FOUR

Economic Infrastructures

4.0 Introduction

Chapter four describes the existing economic infrastructure in Kilolo District. The existing infrastructure covers road network development in terms of road classification, type of road surface, passability and density. Others are air services, postal services including radio calls and television facilities. Energy sector development including hydro-electricity, biogas, solar power, fuel wood and these are fossil fuels are discussed exhaustively in this chapter.

4.1 Road Network



Most of the road network is earth surface types which are not passable in the wet season.

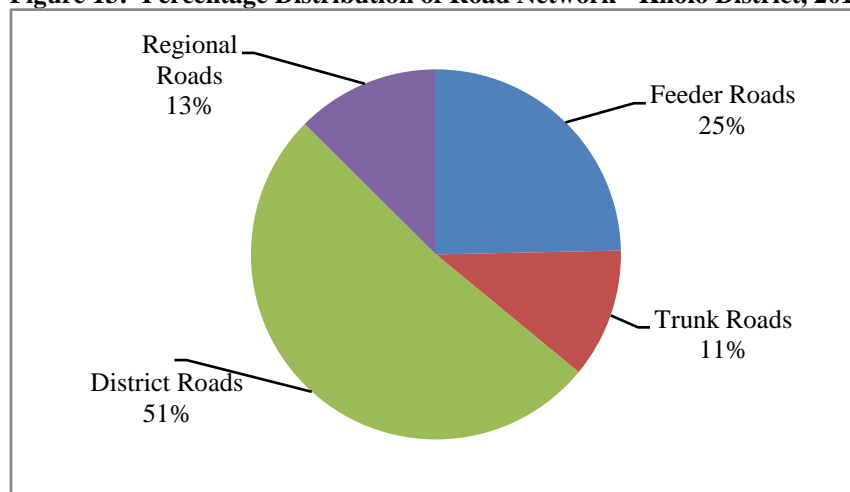
Road transport is the basic mode of transport for goods and people in the district of Kilolo. Therefore, road transport is one of the key sub-sectors responsible for the sustainable development and poverty reduction in the district. Kilolo district has a total road network of 884.1kms. The road network in the district that are maintained by the central government through the Tanzania Road Agency (TANROAD) are classified as Trunk and Regional Roads; and are about 211 kms, and those that are maintained by the district council are called district and feeder roads; and are about 455 kms and 218.1

km respectively (Table 4.1 and Figure 13). Most of the roads in Kilolo district are district roads and feeder roads which are maintained by the District Authority.

Table 4.1: Length (km) of Road Network by Ward and by Grade, Kilolo District, 2012

Ward	Grade (Km)				
	Trunk	Regional	District	Feeder	Total
Image	0	0	15	7	22
Irole	11	0	13	3	27
Ilula	8	0	4	12	24
Uhambingeto	0	0	38	4	42
Udekwa	0	7	40	10	57
Mahenge	24	0	14	28	66
Mtitu	0	19	4	0	23
Dabaga	0	18	10	4	32
Ukumbi	0	1	26	28	55
Ukwega	0	22	28	8	58
Bomalang'ombe	0	0	43	0	43
Idete	0	10	20	20	50
Masisiwe	0	0	38	0	38
Ng'uruhe	0	0	22	8	30
Ng'ang'ange	0	0	11	10	21
Ihimbo	0	8	28	22	58
Lugalo	7	0	0	4	11
Nyalumbu	10	0	0	0	10
Mlafu	0	26	10	3	39
Ibumu	0	0	8	0.6	8.6
Ruahambuyuni	40	0	20	6.5	66.5
Kimala	0	0	63	40	103
Total	100	111	455	218.1	884.1

Source: District Executive Director's Office - Kilolo District, 2013

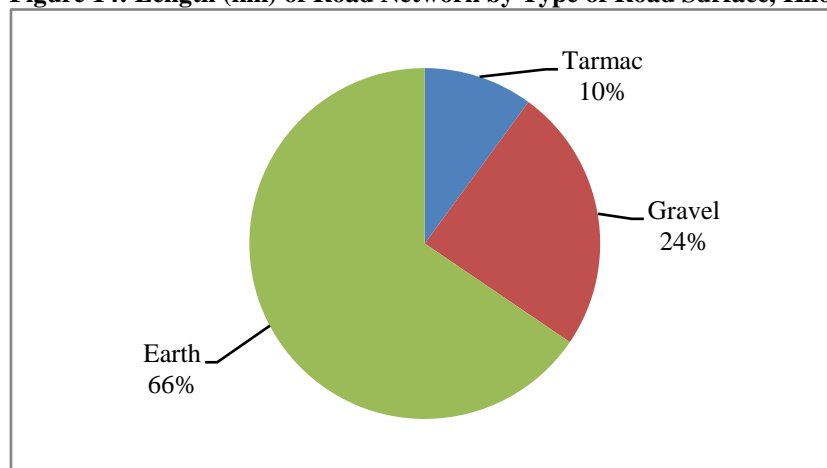
Figure 13: Percentage Distribution of Road Network - Kilolo District, 2012

Source: District Executive Director's Office - Kilolo District, 2013

4.1.1 Road Classification and Type of Road Surfaces

The type of road surface to a large extent determines the durability of the road. Earth surfaces tend to last in shortest duration after grading. They soon get corrugated or even rutted, rendering them difficult for traffic to negotiate and even totally impassable. The absence of bridges and culverts also renders roads unusable during the rainy season because of floods. Where significant river water flows are permanent, no traffic can cross except by bridge or by culvert.

Figure 14 quantifies the quality of road surface available in Kilolo district and shows that, only 89 kms or 10 percent of the network was surfaced by tarmac; 216 kms or 24 percent of the network was surfaced by gravel, while 579.1 kms or 66 percent was earth surfaced which tends to last the shortest duration after grading. Since a greater part of the road network was surfaced by earth, a greater part of the district was impassable during rainy seasons and makes it difficult for the transportation of goods and particularly agriculture products to the market.

Figure 14: Length (km) of Road Network by Type of Road Surface, Kilolo District, 2012

Source: District Executive Director's Office - Kilolo District, 2013

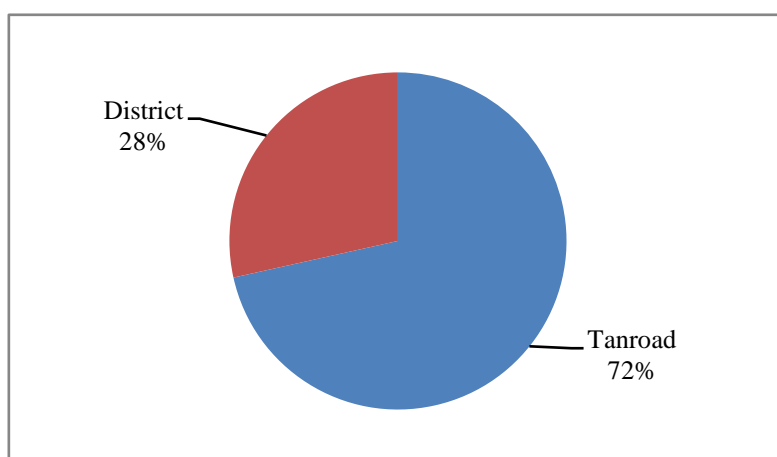
As for the major road connections and road links, a greater part of the road links in Kilolo District is maintained by TANROAD and the quality of road surface is mostly gravel and the road condition is good or fair (Table 4.2).

Table 4.2: Major Road Connections and Road Links, Kilolo District, 2012

Major Inter - District Road Connections	Road Links	Length of Road Link (kms).	Quality of Road Surface	Type of Road
Kitowo – Ukumbi- Masege	Kilolo and Mufindi District	22	Gravel+Earth	District
Ihemi – Ihimbo	Iringa and Kilolo Districts	60	Gravel+Earth	Regional
Kidabaga – Bomalang'ombe	Ng'ang'ange , Dabaga, and Bomalang'ombe wards	18.5	Gravel+Earth	District
Iringa – Idete	Iringa and Kilolo Districts	70	Surface dress +Gravel+Earth	Regional
Ilula - Kilolo	Ukwega, Mtitu, Udekwa, Mlafu, and Ilula ward	80	Gravel+Earth	Regional
Ilula, Kitono , Uhambingeto	Iringa District and Kilolo District	25	Gravel+Earth	District
Ihimbo – kising'a	Ihimbo and Ukwega wards	24	Gravel+Earth	District
Msonza – kimala	Dabaga and kimala wards	18	Earth	District
Ilula – Ibumu	Ilula, Image and Ibumu wards	22	Gravel+Earth	District
Ruaha mbuyuni – Iringa	Kilosa, Kilolo and Iringa Municipal	100	Tarmac	TANZAM

Source: District Executive Director's Office –Kilolo District, 2013

Figure 15: Major Road Connections and Road Links (km), Kilolo District, 2012



Source: District Executive Director's Office -Kilolo District, 2013

4.1.2 Road Network Condition



Kilolo District has only 89 km, or 10% of tarmac surfaced roads

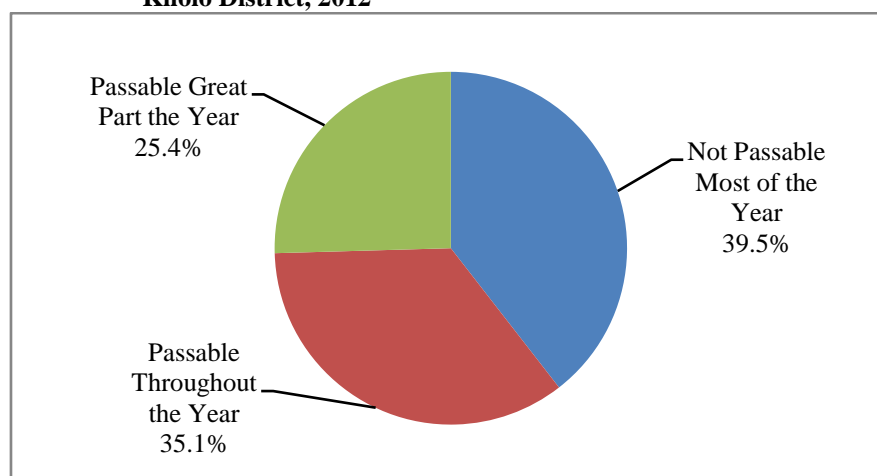
The district is located at the periphery, north-east side of the region. Its topography and weather had influenced the road network condition to the greater part being poor with high degree of roughness, potholing and erosion. Table 4.3 and Figure 16 show that only 35.1 percent of the road network was passable throughout the year and 25.4 percent was passable in greater part of the year; while 39.5 percent of the total road network was not passable most of the year.

Table 4.3: Condition of Road Network Throughout the Year by Ward, Kilolo District, 2012

Ward	Condition of Network Throughout the Year in km				
	Passable Throughout the Year	Passable a Greater Part of the Year	Not Passable Most of the Year	Total Road Network	Percentage Passable (Columns 2+3)
Image	15	7	0	22	68
Irole	11	13	3	27	40
Ilula	8	0	16	24	33
Uhambingeto	38	4	0	42	90
Udekwa	0	17	40	57	29
Mahenge	24	14	28	66	36
Mtitu	23	0	0	23	100
Dabaga	18	10	4	24	50
Ukumbi	27	28	0	55	96
Ukwega	2	5	51	58	3
Bomalang'ombe	20	13	10	43	13
Idete	10	20	20	50	20
Masisiwe	0	0	38	38	0
Ng'uruhe	0	22	8	30	73
Ng'ang'ange	0	11	10	21	52
Ihimbo	8	28	22	58	18
Lugalo	7	0	4	11	63
Nyalumbu	10	0	0	10	100
Mlafu	26	10	3	39	94
Ibumu	5	3	0.6	8.6	58
Ruahambuyuni	40	20	6.5	66.5	60
Kimala	18	0	85	103	17
Total	310	225	349.1	884.1	60.5

Source: District Executive Director's Office , Kilolo District, 2013

Figure 16 : Condition of Road Network throughout the Year (Percentage), Kilolo District, 2012



Source: District Executive Director's Office , Kilolo District, 2013

4.1.3 Potential Improvement of Road Network

The economy of Kilolo District which is mainly agriculture, livestock keeping depends much on the improvement of the road network. Improvements made to trunk, regional, district and feeder roads would go a long way towards opening up of agriculture potential areas in the district.

The major connections and road networks that link the district with other districts are either of gravel or earth surfaces (Table 4.3). These types of road surfaces become an impediment to the economic development of the district since they are not easily passable particularly in the rain seasons. It is therefore advised that all major roads be improved. The following roads which are crucial for the economic development of the district will be opened at the level of earth surface to support the existing roads:

- (i) Kimala to Idete via Kiwalamo, about 16kms. It will link Kimara and Idete wards;
- (ii) Ibumu to Ilambo, about 18 kms. It will link Ibumu and Ilambo wards;
- (iii) Ikokoto to Mtakuja, about 12km. It will link ikokoto and Mtakuja ward; and
- (iv) Kitelewasi to Ihimbo, about 20km. It will link Ilole and Ihimbo wards.

4.2 Railway Services

There is no railway service in Kilolo district.

4.3 Telecommunications

Kilolo District is moderately served with reliable communication networks such as land line telephones and mobile phones. By the end of 2012, the district was being served by 5 cellular phone companies namely: Vodacom, Airtel, Zantel, Tigo and TTCL. TTCL provides land line telephone services, and radio calls. Radio, television services and cable television providers such as TV and radio channels, including Radio One, Radio Tanzania, and Radio Free Africa are accessible in the district; but there are no TV and radio stations in the district. There is one post office and internet centre in the district.

Table 4.4: Accessibility of Mobile Phone Services in Kilolo District, 2012

Name of Service	Estimated Coverage (Percent)
Tigo	55
Vodacom	79
Airtel	85
TTCL (Mobile)	25
ZANTEL	30

Source: District Executive Director's Office, Kilolo District, 2013

4.4 Energy Sector Development

Source of energy utilized in Kilolo District for both industrial and domestic use come from various sources such as hydro and thermal electricity, firewood, diesel, petrol and kerosene. Almost the entire rural population depends on firewood/charcoal as their main source of power. Some institutions and few individuals in the district use solar energy as their source of electricity.

4.4.1 Electricity

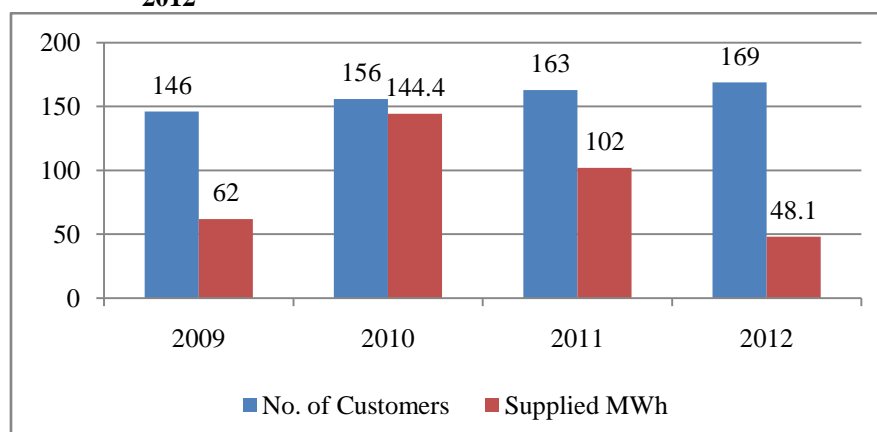
The 2002 census results shows that only 1 percent of the population were using electricity as the main source of light. TANESCO has continued to be the principle supplier of electricity in the district, though there was tremendous increase of utilization of solar and generators. Efforts have been made to rescue the situation. In 2001 the CEFA - The European Committee for Education and Agriculture (Comitato Europeo per la Formazione e l'Agricoltura) in collaboration with the Government of Tanzania built a hydropower at Ifinga River, in Bomalang'ombe Village to supply electricity to the village. The hydropower station is supplying about 250 kilowatts and serving a population of about 5,253 people. In 2010, TANESCO extended its services by installing a line from Tagamende to Dabaga village, via Kilolo Village which serves population of about 7,152 people. Since the demand for electricity is still high deliberate efforts are needed to increase the supply of electricity in the district.

Table 4.5 and Figure 17 show that in 2012 a total of 48.1 MWh produced by CEFA Bomalang'ombe had been used to electrify the district, serving about 169 customers, whereby commercial customers were 63 and domestic were 106, consuming 27.2 MWh and 20.8 MWh respectively. Production of electricity was low in 2011 and 2012 due to the malfunctioning of the hydropower plant machine. Efforts are being made to restore its functioning.

Table 4.5: Electricity Supplied by CEFA Bomalang'ombe in Kilolo District, 2009-2012

Year	Electricity Supply (MWh)			No. of Customers		
	Domestic	Commercial	Total	Domestic	Commercial	Total
2009	27.3	34.7	62	93	53	146
2010	97.2	47.2	144.4	99	57	156
2011	57.5	44.5	102	102	61	163
2012	20.8	27.2	48.1	106	63	169
Total	202.8	153.6	356.4	400	234	634

Source: District Executive Director's Office, Kilolo District, 2013

Figure 17: Electricity Supply CEFA and Customers at Bomang'ombe, Kilolo District, 2012

Source: District Executive Director's Office, Kilolo District, 2013

Table 4.6 shows supply of electricity from TANESCO. Data provided show supply of electricity in the Iringa TANESCO's district, which include Iringa Municipal, Iringa Rural and Kilolo districts. Customers were also aggregated, including domestic and commercial customers together. In the Kilolo District, TANESCO supplies electricity in Mtitu, Ilula, Ihimbo, Dabaga, Ilole, Lugalo, Nyarumbo, Mahenge and Ruahambuyuni; serving most villages and trade centres along Morogoro to Mbeya road and Iringa to Kilolo road.

Table 4.6: Electricity Supply in Iringa District, 2010-2012

	2010	2011	2012
Electricity Supply (MWH)	39,978.50	40,299.40	42,367.80
Number of Customers	21,879	22,459	25,536

Source: TANESCO Iringa, 2013

4.4.2 Fuel Wood

Fuel wood is a dominant source of energy for domestic consumption, since most of the households in the district have no electricity. The main use of fuel wood is for cooking and heating and this makes wood consumption very high in the district. Although Kilolo district has enormous reserves of fuel wood, the current consumption creates an alarm as it is getting more significant and

threatens the depletion of forests. Alternatives to fuel wood had better be found soon if the district forests are to be saved from depletion.

4.4.3 Fossil Fuels

Kilolo District as it is the case with other districts in the region in consumes large quantities of kerosene for lighting both in urban and rural areas. Also, diesel and petrol fuels continue to be used in order to run the district economy, particularly the industrial, commercial, transport, and service sectors.

4.4.4 Biogas and Solar Energy

Biogas has not yet been fully exploited in the district, but can be used as an alternative source of energy in order to reduce the excessive use of fuel wood for heating purposes. Likewise, solar energy which was previously used only in government health facilities and schools is now used as an alternative source of energy in most parts of Kilolo District. To date, though there is no accurate data for the number of solar users, it is estimated that there is at least a solar panel privately owned in each ward of Kilolo District. Nevertheless, the district authorities should continue encouraging people to use these sources of energy as an alternative for fuel wood in order to reduce the pressure being exerted on forests by the local people.

4.4.5 Investment Opportunities.



Kifunga falls at Lukosi River in Kilolo District

With the growing demand for electricity energy in the villages and the unreliability of the power from TANESCO, the government should look at instituting a law that will make production of electricity an open market. Kilolo District is endowed with lots of water falls like Kifungá at Ndengisivili village, Lukosi/Kitonga; Uzungwa which if exploited well could solve the problem of electricity in the district as well as in the nearby districts. Currently, there is one religious institution which is producing electricity using a waterfall at Madege for its own use and the neighboring villages.

CHAPTER FIVE

Social Services

5.0 Introduction

This chapter discusses the status of social services in Kilolo District and covers the development of health sector in terms of morbidity, mortality and reportable communicable diseases. It also covers HIV/AIDS prevalence, tuberculosis, mother and child health as well as health facilities. Moreover, education sector, water and sanitation are also discussed.

5.1 Health Sector



Improvement of the health sector is important in reducing mortality in a locality

5.1.1 Health Facilities

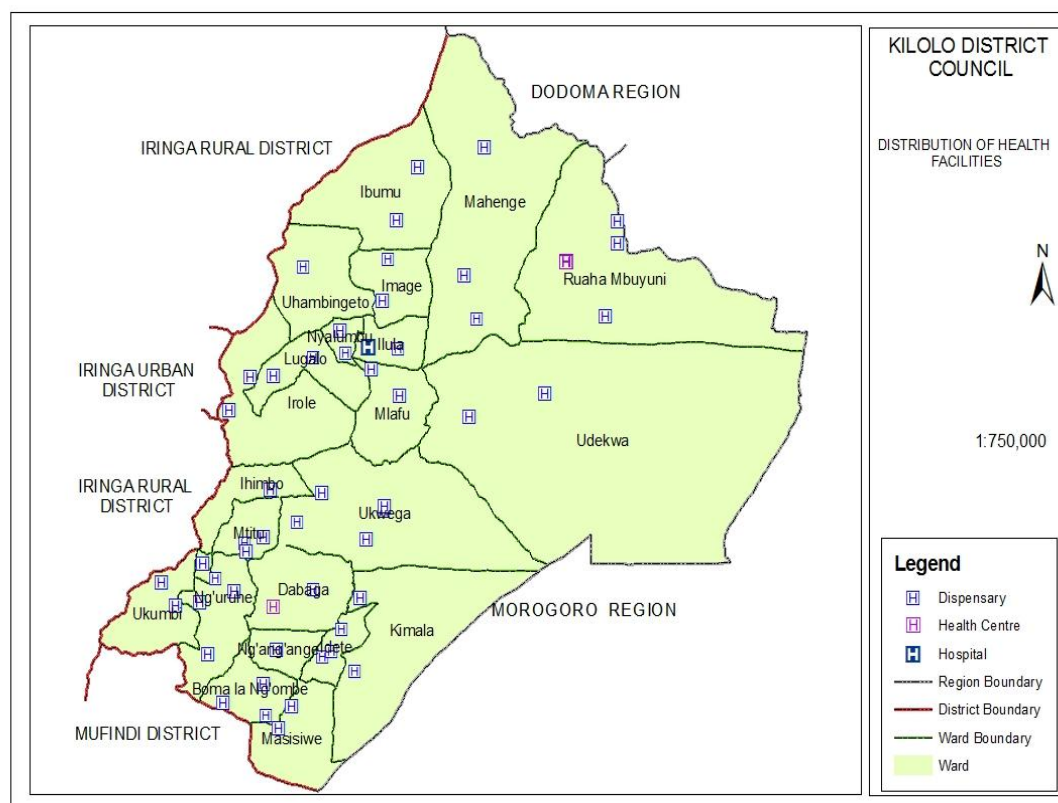


The district has been experiencing shortages of health infrastructures and practitioners

The status of public health services in any district can be visualised through the health infrastructure, availability and commitment of health practitioners, implementation of preventive and curative measures and availability of medicine. Kilolo district has managed to create health infrastructure both government and non-government in all 22 wards, though some of them are not in good condition due to lack of regular maintenance.

However, the district faces shortages of health practitioners and medicine which in turn cause unnecessary loss of peoples' lives from preventable diseases. The major killer diseases in Kilolo District include: Clinical AIDS, Pneumonia, Malaria, Tuberculosis and Diarrhoea. As Table 5.1 shows, the health facilities in the district consist of 1 hospital, 2 health centres and 50 dispensaries. The fact that most of the health facilities are publically owned is an indication of the government awareness of the need for health services.

Map 4 : Map of Kilolo District Council showing Distribution of Selected Health Facilities by Ward; 2012



Source: District Executive Director's Office (District Medical's Office), Kilolo District, 2013

Table 5.1: Availability of Health Facilities by Ownership and by Ward, Kilolo District, 2012

Division/ Ward	Type of Facility					
	Hospitals		Health Centres		Dispensaries	
	Public	Priv.	Public	Private	Pub.	Priv.
Image	0	0	0	0	1	1
Irole	0	0	0	0	1	1
Ilula	0	1	0	0	1	0
Uhambigeto	0	0	0	0	0	1
Lugalo	0	0	0	0	2	0
Nyalumbu	0	0	0	0	0	2
Mlafu	0	0	0	0	2	0
Ibumu	0	0	0	0	2	0
Mazombe Division	0	1	0	0	9	6
Udekwa	0	0	0	0	2	0
Mahenge	0	0	0	0	3	0
Ruaha Mbuyuni	0	0	0	1	1	3
Mahenge Division	0	0	0	1	6	3
Mtitu	0	0	0	0	2	1
Dabaga	0	0	1	0	1	0
Ukumbi	0	0	0	0	1	1
Ukwega	0	0	0	0	3	1
Bomalangómbé	0	0	0	0	2	1
Idete	0	0	0	0	1	2
Masisiwe	0	0	0	0	2	0
Ngúruhe	0	0	0	0	3	1
Ngángáŋge	0	0	0	0	1	0
Ihimbo	0	0	0	0	1	1
Kimala	0	0	0	0	2	0
Kilolo Division	0	0	1	0	19	8
District	0	1	1	1	34	16

Source: District Executive Director's Office (District Medical's Office), Kilolo District, 2013

Table 5.2 shows that in Kilolo district there is a significant shortage of health facilities (excluding dispensaries). There was significant increase of health facilities from 30 in 2002 to 33 in 2006 and an insignificant increase of one facility between 2006 and 2012. Looking at division level, Mazombe Division although had gained one dispensary between 2002 and 2006 the number

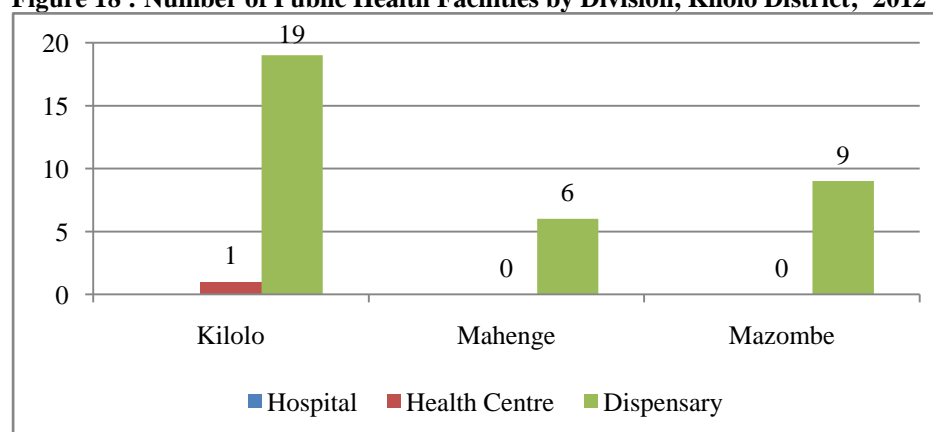
remained the same between 2006 and 2012. There was no change in Mahenge Division while in Kilolo Division there was an increase of three dispensaries between 2002 and 2012. The distribution of health facilities is seen to be more in favour of Kilolo Division.

Table 5.2: Growth Status and Distribution of Government Health Facilities by Division, Kilolo District; 2002, 2006 and 2012

Division	Number of Hospitals			Number of Health Centres			Number of Dispensaries		
	2002	2006	2012	2002	2006	2012	2002	2006	2012
Mazombe	0	0	0	0	0	0	8	9	9
Mahenge	0	0	0	0	0	0	6	6	6
Kilolo	0	0	0	1	1	1	16	18	19
Total	0	0	0	1	1	1	30	33	34

Source: District Executive Director's Office (District Medical's Office), Kilolo District, 2013

Figure 18 : Number of Public Health Facilities by Division, Kilolo District; 2012



Source: District Executive Director's Office (District Medical's Office), Kilolo District, 2013

5.1.1.1 Health Facility Ratios

According to WHO standards, the availability of health facilities in Kilolo District falls below standard, in both 2002 and 2012. The district had 45 health facilities in 2002 which increased to 53 in 2012, while the population increased from 204,372 in 2002 to 218,130 in 2012.

The average coverage of the population by health facilities in Kilolo District was 2 facilities per 10,000 people in 2002 and it was still the same in 2012. At divisional level, Table 5.3 shows that the best population coverage for 2002 was in Mahenge Division and in 2012 it was still Mahenge. Looking at health facilities per 10,000 people in 2002, the best average was 4 facilities per 10,000 people recorded at Mahenge Division followed by Kilolo and Mazombe with 2 each. In 2012, Mahenge Division had best average at 4 facilities per 10,000 people followed by Kilolo (3) and Mazombe (2) (Table 5.3).

Table 5.3: Relating Health Facilities (Public and Private) to the Population by Division, Kilolo District, 2002 and 2012

Division	2002				2012			
	Total Population	Total Number of h.f.s	Mean Average Population Per h.f.s	H.f.s per 10,000 people	Total Population	Total Number of h.f.s	Mean Average Population Per h.f.s	H.f.s per 10,000 people
Mazombe	76,173	13	5,888	2	83,494	15	5,566	2
Mahenge	24,751	11	2,260	4	27,993	10	2,799	4
Kilolo	103,448	21	4,937	2	106,643	28	3,809	3
Total	204,372	45	4,557	2	218,130	53	4,116	2

Source: District Executive Director's Office (District Medical's Office), Kilolo District, 2013

5.1.1.2 Population per Doctor and Hospital Beds Ratios



The proportion of beds per population gives an indication of health facility availability

Table 5.4 shows the distribution of doctors for the years 2002 and 2012. The district average population per doctor was 68,124 people in 2002 and significantly decreased to 27,266 people in 2012. Thus the situation has improved between 2002 and 2012. Although this trend shows a good picture the government should increase the number of doctors in this district because the present ratio is still not good.

Table 5.4: Number of Doctors by Division and Average Population per Doctor, Kilolo District, 2002 and 2012

Division	2002			2012		
	Total Population	Total Doctors	Average Population Per Doctor	Total Population	Total Doctors	Average Population Per Doctor
Mazombe	76,173	2	38,087	83,494	5	16,699
Mahenge	24,751	1	24,751	27,993	1	27,993
Kilolo	103,448	0	*	106,643	2	53,322
Total	204,372	3	68,124	218,130	8	27,266

* There was no Doctor at Kilolo Division at that year

Source: District Executive Director's Office (District Medical's Office), Kilolo District, 2013

Table 5.5 shows average population per hospital bed. It shows that there was a tremendous improvement between 2002 and 2012 whereby the population per

bed had decreased at the district level, from 2,044 persons per bed in 2002 to 1,124 persons in 2012. This situation is encouraging as the improvement has been 54 percent better. In 2002 Mahenge and Kilolo divisions had the worst access to the hospital bed as there was no hospital bed at all. In 2012 however, the situation had improved. Kilolo division had the worst rate of 3,333 people per bed while Mahenge division was better with 452 people per bed.

Table 5.5: The Number of Hospital Beds by Division and Average Population per Bed, Kilolo District, 2002 and 2012

Division	2002			2012		
	Total Population	Total Number of Beds	Average Population Per Bed	Total Population	Total Number of Beds	Average Population Per Bed
Mazombe	76,173	100	762	83,494	100	835
Mahenge	24,751	0	0	27,993	62	452
Kilolo	103,448	0	0	106,643	32	3,333
Total	204,372	100	2,044	218,130	194	1,124

Source: District Executive Director's Office (District Medical's Office), Kilolo District, 2013

As the available official health facilities were not enough to serve the ever growing population of Kilolo District, the District Authority established primary rural health centers in all 106 villages to complement the existing facilities. These centers were operated by Village Health Workers (VHWs) assisted by Traditional Birth Attendants (TBAs) under supervision of Village Health Committees (VHCs). Table 5.6 shows that by 2012, the district had 122 trained Traditional Birth Attendants, 212 Village Health Workers and 46 Village Health Committees.

Table 5.6 shows that the average number per village for 2012 was trained Traditional Birth Attendants (1), Village Health Workers (2) and Village Health Committee (0) per village. The table also shows the average number of carders per village for each ward.

Table 5.6: Distribution of Complementary Rural Health Facilities by Ward, Kilolo District, 2012

Ward	Number of Villages	Total Trained TBAs	TBAs per Village	Total VHWs	VHWs per Village	Total VHCs	VHCs per Village	Number of TMP (Registered)	TMPs per Village
Image	5	6	1	10	2	2	0	0	0
Irole	6	4	1	12	2	2	0	0	0
Ilula	5	9	2	10	2	2	0	0	0
Uhambingeto	5	4	1	10	2	1	0	3	1
Lugalo	4	4	1	8	2	2	1	2	1
Nyalumbu	8	3	0	16	2	1	0	2	0
Mlafu	3	5	2	6	2	2	1	0	0
Ibumu	4	3	1	8	2	2	1	0	0
Udekwa	3	5	2	6	2	2	1	3	1
Mahenge	6	3	1	12	2	3	1	0	0
R/Mbuyuni	4	7	2	8	2	3	1	0	0
Masisiwe	5	4	1	10	2	2	0	0	0
B/Ngómbe	5	10	2	10	2	3	1	2	0
Ukumbi	5	8	2	10	2	2	0	0	0
Ngúruhe	5	9	2	10	2	3	1	0	0
Ngángáge	3	2	1	6	2	1	0	0	0
Dabaga	5	3	1	10	2	2	0	1	0
Idete	4	5	1	8	2	2	1	0	0
Kimala	5	5	1	10	2	2	0	0	0
Ukwega	6	8	1	12	2	2	0	1	0
Mtitu	5	9	2	10	2	3	1	0	0
Ihimbo	5	6	1	10	2	2	0	2	0
District	106	122	1	212	2	46	0	16	0

Source: District Executive Director's Office (District Medical's Office), Kilolo District, 2013

5.1.1.3 Status of Health Personnel

There has been a significant shortage of health personnel in the district particularly specialized doctors, radiographers, radiologist and Dental Surgeon. In 2012 health personnel were dominated by Medical Attendants (74) and Training nurses (57) followed by clinical officers (37). There were only three Medical Doctors and five Assistant Medical Officers.

Table 5.7: Type and Number of Medical Personnel in Kilolo District, 2012

Medical Personnel	Male	Female	Total
Specialist Doctors	0	0	0
Medical doctors	3	0	3
Ass. Medical Officers	5	2	7
Clinical Officers	31	6	37
Ass. Clinical Officers	12	2	14
Dental Surgeon	0	0	0
Ass. Dental Officer	1	0	1
Dental Therapist	3	3	6
Pharmacists	1	0	1
Pharmaceutical Technicians	1	2	3
Pharmaceutical Assistant	0	0	0
Laboratory Technicians	3	0	3
Laboratory Ass.	5	2	7
Radiologist	0	0	0
Radiographer	0	0	0
Radiographic Assistant	0	0	0
Nursing Officers	1	17	18
Trained Nurse/NM/PHN	3	54	57
MCHA	0	3	3
Medical Attendants	2	72	74
Health Officers	5	0	5
Health Assistants	1	2	3
Health Secretaries	1	1	2
Other Medical Carders	2	2	4
Total	80	168	248

Note: Specialist doctors: Doctor of Medicine and Minimum three years training in a Medical Speciality

Source: District Executive Director's Office (District Medical's Office), Kilolo District, 2013

5.1.2 Morbidity



Malaria was ranked first cause of morbidity in Kilolo District

The health sector aims at solving the problem of morbidity or sicknesses along with mortality and these are the key targets of any health service development effort. In order to take care of morbidity, the government must have an inventory of these health problems. The inventory shows that the ten most commonly reported causes of illnesses are those given in Table 5.8.

Out-patients

Out of 131,655 out patients recorded in 2010, about 79.3 percent were suffering from one or the other of the first five illnesses. In 2012 the first five causes of morbidity accounted for 79.7 percent of recorded 103,981 out-patients. In 2010 Malaria ranked first as a cause of morbidity in Kilolo District. Acute Respiratory Infections (ARI) ranked second and the third disease in ranking was Pneumonia. The fourth was Diarrhoea and the fifth was Intestinal Worms.

Observations made in 2012 were not similar to those of 2010 in regard to the first five diseases. The report reveals that in 2012 ARI ranked first with a total of 28,871 (27.8 percent) of out patients, followed by Malaria (23.8 percent of

out patients) and Pneumonia (11.4 percent of out patients) ranked third. The fourth was Diarrhoea (10.0 percent of cases) and the fifth was Skin Infections (6.7 percent of cases).

Table 5.8: List of the Ten Most Commonly Reported Causes of Morbidity (Out Patients), Kilolo District, 2010 and 2012

Disease	2010		Disease	2012	
	Cases	Percent Share of Top Ten Diseases		Cases	Percent Share of Top Ten
Malaria	36,187	27.5	ARI	28,871	27.8
ARI	34,031	25.8	Malaria	24,731	23.8
Pneumonia	13,325	10.1	Pneumonia	11,816	11.4
Diarrhoea	11,954	9.1	Diarrhoea	10,390	10
Intestinal Worm	8,924	6.8	Skin Infection	6,992	6.7
Skin Infection	8,400	6.4	worms	7,016	6.7
Minor Surgical	6,489	4.9	Defined Symptoms	4,998	4.8
Urinary Tract Infect	5,245	4.0	Minor Surgical	4,582	4.4
Non-Infection Gastro	4,483	3.4	Non-Infection	2,410	2.3
Eye Infection	2,617	2.0	Gastro	2,175	2.1
Total	131,655	100	Total	103,981	100

Source: District Executive Director's Office (District Medical's Office), Kilolo District, 2013

In-patients

Table 5.9 shows that malaria was the main cause of morbidity for inpatients in Kilolo District in 2010 followed Pneumonia and Diarrhoea. The fourth and fifth diseases were Anaemia and Non-Infection GIT. Other illnesses were pregnancy, UTI, Skin Infections, Asthma, Burn and Peptic Ulcers

Table 5.9: List of the Ten Most Commonly Reported Causes of Morbidity (In Patients), Kilolo District, 2010 and 2012

Disease	2010		Disease	2012	
	Cases	Percent Share		Cases	Percent Share
Malaria	1,155	33.5	Malaria	960	28.3
Pneumonia	769	22.3	Pneumonia	1,170	34.5
Diarrhoea	597	17.3	Diarrhoea	566	16.7
Anaemia	254	7.4	PID	205	6
Non-Infection GIT	195	5.7	Anaemia	116	3.4
UTI	189	5.5	UTI	93	2.7
Skin Infection	77	2.2	Pregnancy	96	2.8
Asthma	75	2.2	ARI	89	2.6
Burn	70	2	Peptic Ulcer	55	1.6
Peptic Ulcer	69	2	Poisoning	45	1.3
Total	3,450	100	Total	3,395	100

Source: District Executive Director's Office (District Medical's Office), Kilolo District, 2013

In 2012, Malaria was still the main cause of illnesses in the district. The variations were in regard to magnitude. For example, while Malaria had 1,155 cases in 2010, it had only 960 cases in 2012. Like in 2010, Pneumonia was the second main illness in Kilolo District followed by Diarrhoea. While Anaemia ranked fourth in 2010 it ranked fifth in 2012.

5.1.3 Mortality



Malaria is continuing to be the number one killer disease.

The dominant cause of mortality for inpatients of all ages in 2010 was Malaria (Table 5.10). Table 5.10 shows that out of 149 reported deaths in 2010, about 52 (equivalent to 34.9 percent) were caused by Malaria, followed by Respiratory Diseases (19.5 percent), Pneumonia (16.1 percent), Anaemia (8.7 percent), Diarrhoea (5.4 percent) and Peptic Ulcer (4.7 percent).

Likewise, among the causes of mortality for inpatients of all ages in 2012 was Malaria (48.2 percent) followed by Pneumonia (21.1 percent), Anaemia (9.6 percent), Diarrhoea (7.9 percent), PID, Complication of Pregnancy and TB (2.6 percent each), Poisoning and Severe PM (1.8 percent each).

Table 5.10: List of the Ten Most Commonly Reported Causes of Mortality, Kilolo District, 2010 and 2012

Disease	2010		Disease	2012	
	Cases	Percent Share		Cases	Percent Share
Malaria	52	34.9	Malaria	55	48.2
Respiratory Diseases	29	19.5	Pneumonia	24	21.1
Pneumonia	24	16.1	Anaemia	11	9.6
Anaemia	13	8.7	Diarrhoea	9	7.9
Diarrhoea	8	5.4	PID	3	2.6
Peptic Ulcer	7	4.7	Complication of Pregnancy	3	2.6
Malnutrition	6	4	TB	3	2.6
Insect Bite	5	3.4	Respiratory Disease	2	1.8
TB	3	2	Poisoning	2	1.8
ARI	2	1.3	Severe Protein Malnutrition	2	1.8
Total	149	100	Total	114	100

Source: District Executive Director's Office (District Medical's Office), Kilolo District, 2013

HIV/AIDS Infections

Though there are a number of ways that can be used to measure the extent and trend of the HIV prevalence among the people, the ones used in Kilolo District are testing family blood donors, prevalence among VCT volunteers and expected mothers participating in the PMTCT service.

Though family blood donation is not a reliable indicator of the extent and the trend of the problem, Table 5.11 shows that out of 247 blood donors screened in 2010, 65 (26 percent) were identified to be HIV positive, but the number increased to 85 (36 percent) in 2011 from 233 blood donors tested. However, the absence of enough blood banks in most parts of the district makes it difficult to make a firm conclusion on HIV/AIDS on the results of blood donors. Testing family blood donors has been stopped since 2012 because of the availability of safe blood from the zonal blood banks.

Looking at new AIDS cases, Table 5.11 shows that there has been an increase in the number of new AIDS in 2011. The district total reached 430 new cases in 2010 and increased to 475 new cases by 2011 giving a 10 percent increase between 2010 and 2011.

Table 5.11: HIV Infections among Family Blood Donors and New AIDS Cases, Kilolo District, 2010 and 2011

Year	Family Blood Donors								New AIDS Cases		
	No. of Blood Donors			No. of HIV+			% of HIV+		No. of New Cases		
	M	F	Total	M	F	Total	M	F	M	F	Total
2010	117	130	247	29	36	65	25	28	29	36	430
2011	109	124	233	34	51	85	31	41	34	51	475
Total	226	254	480	63	87	150	56	69	63	87	905

Source: District Directors Office (Medical Department) 2013



Before you are tested for HIV/AIDS at Kilolo DD Hospital, one has to be counseled.

For Kilolo District the total number of Male screened for HIV in 2011 was 3,726 but the number increased abruptly to 8,659 in 2012. 380 of the males screened in 2012 were found to be HIV+ and 194 (51.1 percent of the infected males) were treated with ARV. The number of females volunteering for testing decreased from 3,290 in 2011 to 2,531 in 2012. Among screener in 2012, 313 females (12.4 percent) were found to be HIV+ and 174 (55.6 percent) were treated with ARV.

Table 5.12 shows HIV/AIDS prevalence among males and females in Kilolo District. It shows that for 2012 more women were infected than men in all the wards. In 2011 the ward with the highest percent of infection was Ilula with 22 percent for females and 11 percent for males. In 2012 Ilula was still the most affected with 9.87 percent for males and 11.3 percent for females.

Table 5.12: Group of VCT Volunteers Who were Screened for HIV and Those Subsequently Treated with ARV by Sex and by Ward Kilolo District, 2012

Ward	Sex	No. Screened		No. of HIV+		Percent HIV+		No. Treated with ARV	
		2011	2012	2011	2012	2011	2012	2011	2012
Image	Male	208	700	18	39	9	5.57	10	14
	Female	160	195	26	29	16	14.87	16	14
Irole	Male	188	-	18	-	10	-	2	-
	Female	148	-	22	-	15	-	7	-
Ilula	Male	236	912	25	90	11	9.87	20	28
	Female	176	301	38	34	22	11.3	26	21
Uhambingeto	Male	132	-	17	-	13	-	1	-
	Female	159	-	19	-	12	-	9	-
Udekwa	Male	128	-	14	-	11	-	5	-
	Female	148	-	14	-	9	-	10	-
Mahenge	Male	188	740	13	38	7	5.14	7	16
	Female	149	192	29	27	19	14.06	8	12
Mtitu	Male	211	750	15	12	7	0.13	6	12
	Female	148	190	18	22	12	11.58	9	16
Dabaga	Male	204	768	18	30	9	3.9	2	20
	Female	155	230	23	30	15	13.04	8	10
Ukumbi	Male	168	711	18	40	11	5.63	9	12
	Female	160	188	12	24	7	12.77	5	8
Ukwega	Male	204	-	21	-	10	-	2	-
	Female	137	-	13	-	9	-	10	-
Bomalang'ombe	Male	168	765	19	30	11	3.92	4	13
	Female	176	200	26	23	15	11.5	8	14
Idete	Male	100	-	17	-	17	-	4	-
	Female	140	-	19	-	14	-	14	-
Masisiwe	Male	148	633	14	28	9	4.42	2	15
	Female	120	290	18	33	15	11.38	8	12
Ng'uruhe	Male	162	660	16	15	10	2.27	8	21
	Female	123	186	17	24	14	12.9	10	28
Ng'ang'ange	Male	130	-	12	-	9	-	4	-
	Female	120	-	18	-	15	-	4	-
Ihimbo	Male	152	-	16	-	11	-	5	-
	Female	156	-	12	-	8	-	8	-
Lugalo	Male	183	604	15	15	8	2.48	4	17
	Female	156	190	18	28	12	14.74	10	10

Ward	Sex	No. Screened		No. of HIV+		Percent HIV+		No. Treated with ARV	
		2011	2012	2011	2012	2011	2012	2011	2012
Nyalumbu	Male	191	768	12	31	6	4.04	2	13
	Female	147	180	15	23	10	12.78	4	15
Mlafu	Male	117	-	13	-	11	-	3	-
	Female	176	-	10	-	6	-	5	-
Ibumu	Male	199	648	15	12	7	1.85	7	13
	Female	136	189	19	16	14	13.76	9	14
Ruahambuyuni	Male	184	-	22	-	12	-	9	-
	Female	160	-	24	-	15	-	10	-
Kimala	Male	125	-	14	-	11	-	2	-
	Female	140	-	12	-	9	-	6	-
District Total	Male	3,726	8,659	362	380	9.7	4.5	118	194
	Female	3,290	2,531	422	313	12.8	12.4	204	174

NB: In the non filled data shows there is no VCT service in particular health facilities

Source: District Executive Director's Office (District Medical's Office), Kilolo District, 2013

The prevalence of HIV/AIDS can also be learnt from report on PMTCT service. The report of district medical office reveals that out of 7,483 expectant mothers who participated in that service, 5,246 were screened and 419 (7.98 percent) of them were found to be HIV positive and 262 (62.5 percent) were given Niverapine.

Table 5.13: Expectant Mothers who participated in the PMTCT Service by District, 2012

	No. of ANC Attendants	No. Screened	No. HIV+	Percent of HIV+	Number Given Niverapine	Percent of Given Niverapine
District	7483	5246	419	7.98	262	62.5

Source: District Executive Director's Office (District Medical's Office), Kilolo District, 2013

5.1.4 The Impact of HIV/AIDS

The socio-economic assessment of Kilolo District is not complete without discussing the extreme challenges caused by the HIV/AIDS and the effect of efforts so far made by various local and international organisations in combating the epidemic. HIV/AIDS is highlighted in this document, because it is a major health problem and a leading cause of mortality since its advent at the end of 1987. The other reason for discussing the epidemic stems from the role it plays in impoverishing families and generating widows, orphans and vulnerable children due to the loss of bread-winners in their families.

The reasons include the traditional practice of prolonged drinking and unsafe sexual practices as well as poverty. The poor, especially young girls who migrate to urban centres end up being domestic workers for sometime before resorting to prostitution for survival.

The report from the District Medical Office (DMO) qualifies Kilolo as among few districts with ever increasing rates of HIV/AIDS prevalence in the region.

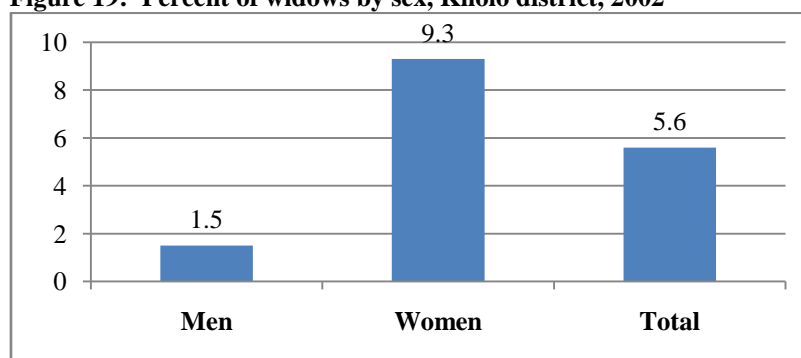
(i) The Increase of Widows

One of the indication of a high prevalence rate in the district is the increasing number of widows. The data gathered in the 2002 Population Census shows that the number of person widowed was 7,725 (5.6 percent). The proportion of the widowed is more for women than men (9.3 percent of the women were widowed compared 1.5 percent of the men). There is a need of conducting a study that will gather information from the widowed and their problems in order to come up with appropriate measures and solutions.

Table 5.14: Marital Status and Total Population 10 Years and Above by 5 years Age Group, Kilolo District, 2002

Marital Status	2002		
	Men	Women	Total
Single/Never Married	37,035	27,941	64,976
Married/Living Together	28,313	35,650	63,963
Divorced/Separated	700	1,918	2,618
Widowed	1,032	6,693	7,725
Total	67,000	72,202	139,282
Percent Widowed	1.5	9.3	5.6

Source: Population and housing census 2002

Figure 19: Percent of widows by sex, Kilolo district, 2002

Source: Population Census data 2002, NBS

(ii) The Increase of Orphaned Children

Orphans are persons for whom both parents (mother and father) are dead or those with a single parent (father or mother). Data on survival of parents collected in 2012 through the Kilolo District Census were used to determine the extent of orphanhood in Kilolo District (Table 5.15). The ward with the largest number of orphans was Nyalumbu with 1,218 orphans of whom girls were 618 (51 percent) and boys were 600 (49 percent) followed by Irole ward 817 orphans with 417 girls (51 percent) and 400 boys (49 percent), Uhambingeto 779 orphans (61 percent girls and 39 percent boys) and Mahenge 675 orphans (68 percent girls, 32 percent boys). Data for non orphans are not available.

Table 5.15: Number of Orphans by Ward, Kilolo District, 2012

Ward	No. of Girls	Percent	No. of Boys	Percent	Total
Image	86	55	70	45	156
Irole	417	51	400	49	817
Ilula	373	69	169	31	542
Uhambingeto	479	61	300	39	779
Udekwa	59	44	75	56	134
Mahenge	458	68	217	32	675
Mtitu	37	51	35	49	72
Dabaga	40	51	38	49	78
Ukumbi	85	53	75	47	160
Ukwega	72	55	59	45	131
Bomalang'ombe	54	52	48	46	102
Idete	240	52	220	48	460
Masisiwe	70	53	63	47	133
Ng'uruhe	302	60	202	40	504
Ng'ang'ange	83	55	69	45	152
Ihimbo	20	50	20	50	40
Lugalo	307	76	99	24	406
Nyalumbu	618	51	600	49	1,218
Mlafu	314	78	89	22	403
Ibumu	190	61	123	39	313
Ruahambuyuni	278	58	200	42	478
Kimala	79	53	70	47	149
Total	4,661	59	3,241	41	7,902

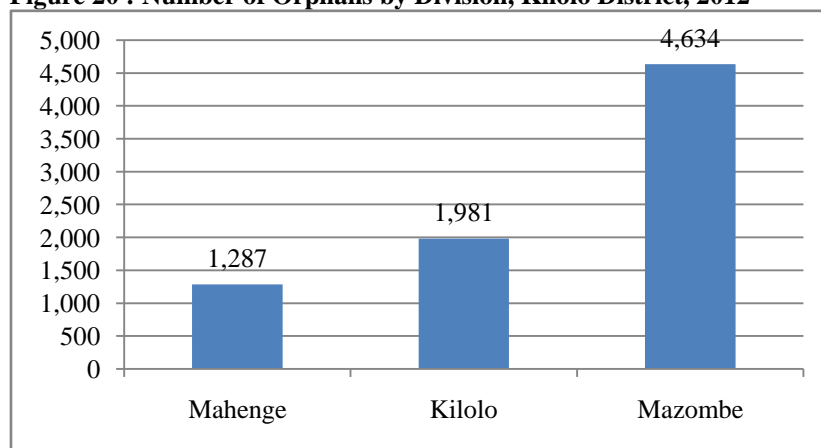
Source: District Director's Office Kilolo District 2013

However, Table 5.16 reveals that Mazombe division had the highest number of orphans (4,634) followed by Kilolo Division (1,981 orphans)) and the last was Mahenge with 1,287 orphans. The number of most vulnerable children was not reported.

Table 5.16: Number of Orphans by Division, Kilolo District, 2012

Division	No. of Boys	Percent	No. of Girls	Percent	Total
Mahenge	492	38	795	61.8	1,287
Kilolo	899	45	1,082	54.6	1,981
Mazombe	1,850	40	2,784	59.9	4,634
District	3,241	41	4,661	59	7,902

Source: District Executive Director's Office, Kilolo District, 2013

Figure 20 : Number of Orphans by Division, Kilolo District, 2012

Source: District Executive Director's Office, Kilolo District, 2013

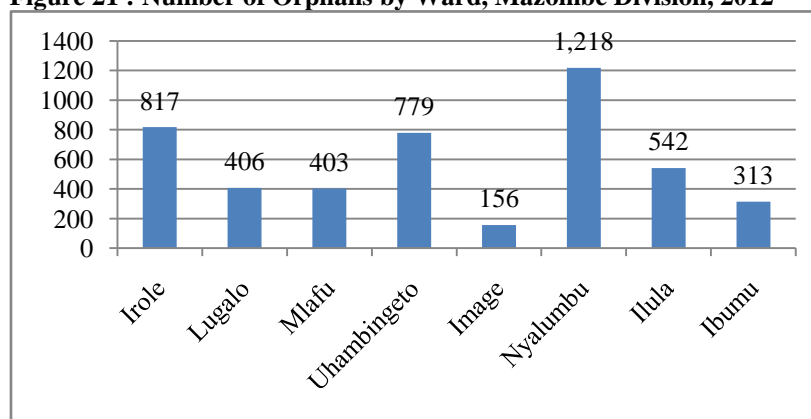
(i) Mazombe Division

Mazombe Division has unique characteristics among the other divisions in Kilolo District. It has a busy urban centre of Ilula which is a stopping area for Lorries that travel from upcountry and from countries in the southern part of Africa to Dar es Salaam. Table 5.17 shows that 40 percent of the 4,634 orphans found in Mazombe Division were boys while 60 percent were girls. Nyalumbu Ward had the largest number of orphans (1,218, 26.3 percent of all orphans in the division) followed by Uhambingeto (779, 16.8 percent) and Ilula Ward (542, 11.7 percent).

Table 5.17: Number of Orphans by Ward, Mazombe Division; 2012

Ward	Number			Percent		
	Boys	Girls	Total	Boys	Girls	Total
Irole	400	417	817	49	51	100
Lugalo	99	307	406	24	76	100
Mlafu	89	314	403	22	78	100
Uhambingeto	300	479	779	39	61	100
Image	70	86	156	45	55	100
Nyalumbu	600	618	1218	49	51	100
Ilula	169	373	542	31	69	100
Ibumu	123	190	313	39	61	100
Total	1850	2784	4634	40	60	100

Source: District Executive Director's Office, Kilolo District, 2013

Figure 21 : Number of Orphans by Ward, Mazombe Division, 2012

Source: District Executive Director's Office, Kilolo District, 2013

(ii) Kilolo Division

Kilolo Division is the district headquarters and has the largest number of wards in the district (11 wards). This division had a total of 1,981 orphans among whom girls were 1,082 (54.6 percent) and boys were 899 (45.4 percent). The largest number of orphans were in Ng'uruhe Ward with 504 (25.4 percent) orphans of whom girls were 302 (59.9 percent) and boys were 202 (40.1 percent) followed by Idete 460 (23.2 percent) orphans with 240 girls (52.2 percent) and 220 boys (47.8 percent). The least number of orphans were

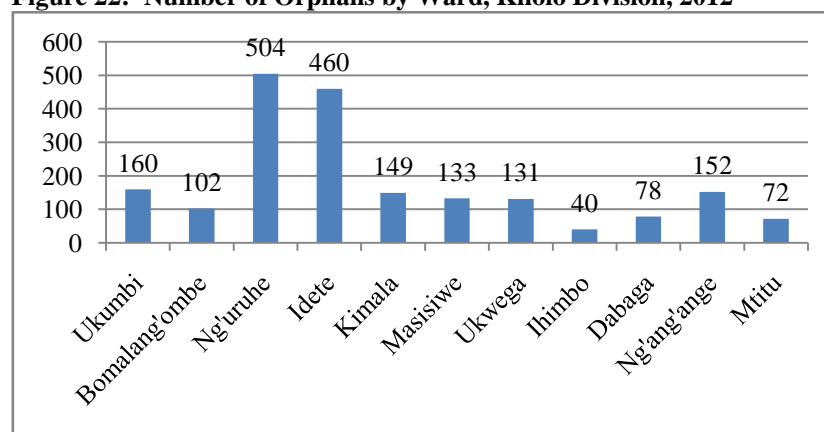
in Ihimbo Ward with 40 (2.0 percent) orphans where girls were 20 (50 percent) and boys were 20 (50 percent).

Table 5.18: Number of Orphans (0 – 17 Years) by Ward, Kilolo Division, 2012

Ward	Number			Percent		
	Boys	Girls	Total	Boys	Girls	Total
Ukumbi	75	85	160	46.9	53.1	100
Bomalang'ombe	48	54	102	47.1	52.9	100
Ng'uruhe	202	302	504	40.1	59.9	100
Idete	220	240	460	47.8	52.2	100
Kimala	70	79	149	47.0	53.0	100
Masisiwe	63	70	133	47.4	52.6	100
Ukwega	59	72	131	45.0	55.0	100
Ihimbo	20	20	40	50.0	50.0	100
Dabaga	38	40	78	48.7	51.3	100
Ng'ang'ange	69	83	152	45.4	54.6	100
Mtitu	35	37	72	48.6	51.4	100
Total	899	1082	1981	45.4	54.6	100

Source: District Executive Director's Office, Kilolo District, 2013

Figure 22: Number of Orphans by Ward, Kilolo Division, 2012



Source: District Executive Director's Office, Kilolo District, 2013

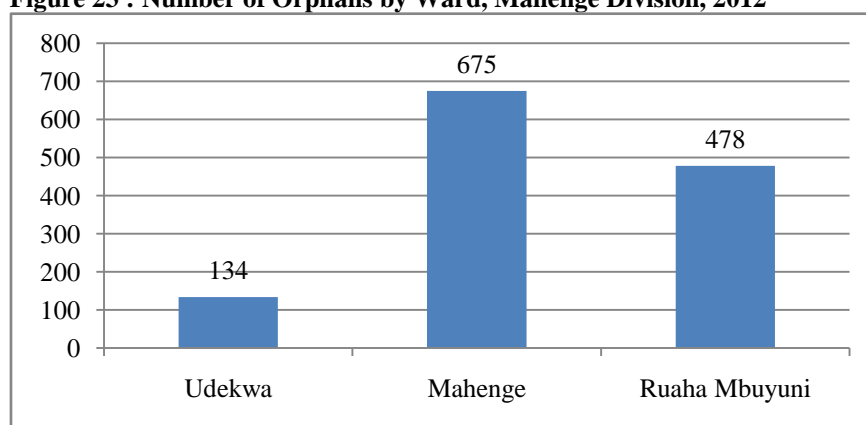
(iii) Mahenge Division

Table 5.19 indicates that in 2012, Mahenge Division had 1,287 orphans aged between 0 and 17, of whom 38 percent were boys and 62 percent were girls. Distribution among wards show that, Mahenge Ward had the largest number (675, 52.4 percent) followed by Ruaha Mbuyuni (37.1 percent). Udekwa Ward had the least number of orphans in the division (Table 5.19 and Figure 23).

Table 5. 19: Number of Orphans (0 – 17 Years) by Ward, Mahenge Division; 2012

Ward	Number			Percent		
	Boys	Girls	Total	Boys	Girls	Total
Udekwa	75	59	134	56.0	44.0	100
Mahenge	217	458	675	32.1	67.9	100
Ruaha Mbuyuni	200	278	478	41.8	58.2	100
Division Total	492	795	1287	38.2	61.8	100

Source: District Executive Director's Office, Kilolo District, 2013

Figure 23 : Number of Orphans by Ward, Mahenge Division, 2012

Source: District Executive Director's Office, Kilolo District, 2013

5.1.5 Child Nutrition



Nutritional food intake is associated with child health

Children, from the stage of foetuses to under - five years and their mothers are the most vulnerable group in the society. Therefore, reproductive and child health services are the most vital services in the district. Besides vaccination programme, children are also weighed to reveal how prevalent is underweight among them and hence the extent of child malnutrition. Nutritional food intake is associated with child health and therefore, poor diet can result into severe malnutrition which manifests itself in high infant and child mortality rates.

Though records indicate that the problem of severe malnutrition in Kilolo District was slightly reduced to 0.3 percent in 2012. However, the results also show that the proportion of moderately malnourished dropped slightly to 1.0 percent in 2011 before rising abruptly to 7.7 percent in 2012. The picture would have been clear if data disaggregated by division and wards were available.

Table 5.20 : Severe Malnutrition for Children Under One Year by District, 2010, 2011 and 2012

District	2010			2011			2012		
	Total Weighed	Percent of Moderately Underweight	Percent of Severely Underweight	Total Weighed	Percent of Moderately Underweight	Percent of Severely Underweight	Total Weighed	Percent of Moderately Underweight	Percent of Severely Underweight
Kilolo	6,612	1.5	0.4	7436	1	0.4	9,462	7.7	0.3

Source: District Executive Director's Office (District Medical's Office), Kilolo, 2013

5.1.5.1 Mother and Child Health Care



A Child is getting drops as a measure to reduce infant mortality in Kilolo District

Protection of expectant/lactating mothers and children from measles, tuberculosis through immunisation programme (CSPD) supported by development partners has to large extent reduced the risk of their being infected.

Reduction of deaths among children and their mothers is attributed to the massive coverage of immunisation campaigns done in the district. In 2010, a total of 4,042 or 62.3 percent of targeted expectant mothers were vaccinated with TT2 in the district. In 2011, about 4,199 or 63.7 percent of targeted pregnant women were vaccinated and 4,216 expectants or 61.8 percent of the targeted were vaccinated with TT2 in 2012.

TT2

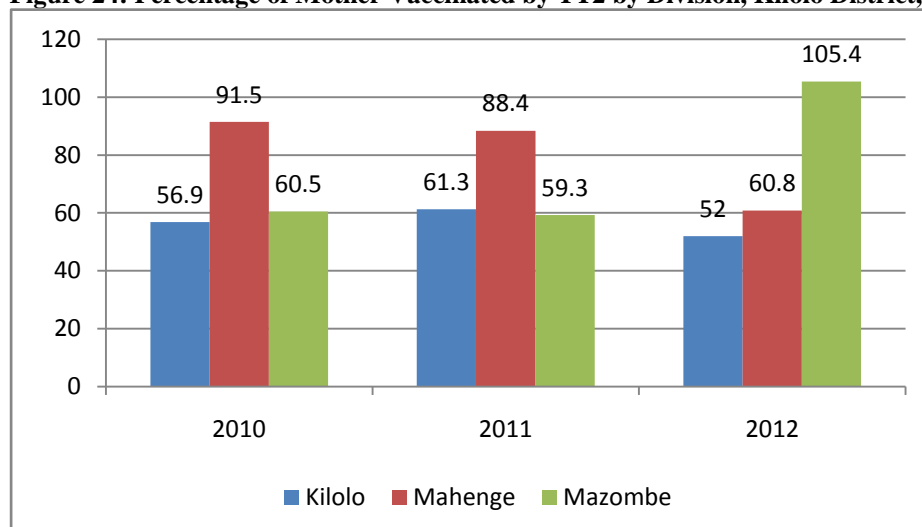
The success of immunisation depends mostly on the awareness of its benefits by women. District Authorities should put more efforts on sensitization campaigns to motivate voluntary immunisation of expectant mothers in all wards in order to have good coverage in future.

Comparing among Division Mahenge had the highest number of vaccinated mother in all years compared to other divisions, followed by Mazombe Division and Kilolo division is the last in all the years as illustrated by Figure 24.

Table 5.21: Vaccinated mother TT2 by Division, Kilolo District, 2010 - 2012.

Division	2010		2011		2012	
	Target	Percent Vaccinated	Target	Percent Vaccinated	Target	Percent Vaccinated
Kilolo	3,175	56.9	3,226	61.3	3,319	52
Mahenge	757	91.5	769	88.4	801	60.8
Mazombe	2,556	60.5	2,597	59.3	2,703	105.4
District	6,488	62.3	6,592	63.7	6,640	61.8

Source: District Executive Director's Office (District Medical's Office), Kilolo District, 2013

Figure 24: Percentage of Mother Vaccinated by TT2 by Division, Kilolo District, 2012

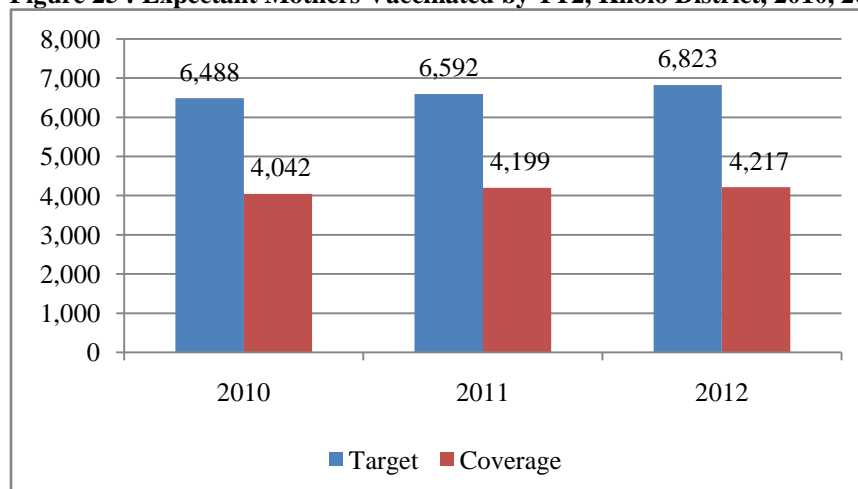
Source: District Executive Director's Office (District Medical's Office), Kilolo District, 2013

At ward level, in 2010 Ruaha Mbuyuni, Mahenge and Mlafu wards had the best coverages of 107, 94 and 93 percent respectively. In 2011 Ruaha Mbuyuni, Image and Mlafu wards reported the best vaccination coverage of 105, 103 and 102 percent respectively. In 2012 the wards with the best coverage were Ruaha Mbuyuni, 147 percent, Nguruhe 115 percent and Mlafu 111 percent. The wards with the lowest percentage of vaccination are Kimala 14 percent, Irole 17 percent and Masisiwe 22 percent. The success of immunisation depends mostly on the awareness of its beneficiaries. The authorities should look at this matter seriously so that wards like Kimala, Irole and Masisiwe can raise their percentages.

Table 5.22: Expectant Mothers Vaccinated TT2 by Ward Kilolo District, 2010, 2011 and 2012

District	2010		2011		2012	
	Total Targeted	Percent Coverage	Total Targeted	Percent Coverage	Total Targeted	Percent Coverage
Image	355	88.7	361	103	367	95.4
Irole	393	15.8	399	32.1	446	17.5
Ilula	456	66.7	463	64.1	471	82
Uhambingeto	195	64.6	198	31.3	224	40.2
Udekwa	145	53.8	147	57.8	149	44.3
Mahenge	294	93.9	299	85.3	324	91
Mtitu	435	55.2	442	64	449	54.1
Dabaga	174	47.7	177	42.9	180	34.4
Ukumbi	388	64.4	394	67.5	441	48.5
Ukwega	321	62.3	326	69.6	331	65.9
Bomalang'ombe	320	72.5	325	66.5	330	78.5
Idete	289	52.9	294	47.3	299	47.2
Masisiwe	326	23.6	331	50.2	336	22.3
Ng'uruhe	217	86.2	221	99.1	225	114.7
Ng'ang'ange	135	83	137	83.9	139	65.5
Ihimbo	334	39.5	339	43.7	345	38.3
Lugalo	228	63.6	232	59.1	236	47.9
Nyalumbu	616	55.2	626	46.3	636	59.1
Mlafu	189	93.1	192	102.1	195	110.8
Ibumu	124	62.9	126	46.8	128	27.3
Ruahambuyuni	318	106.6	323	105.3	328	147.3
Kimala	236	59.3	240	51.3	244	14.3
Total	6,488	62.3	6,592	63.7	6,823	61.8

Source: District Directors office (Medical Department) Kilolo District

Figure 25 : Expectant Mothers Vaccinated by TT2, Kilolo District, 2010, 2011 and 2012

Source: District Directors office (Medical Department) Kilolo District

DPT3/HB3

The trend of DPT3/HB3 vaccination for children less than one year shows a decrease in the number of children vaccinated between 2010 and 2012. At the district level the percentages of targeted children under one year who were vaccinated in 2010 and 2012 were 91.6 percent, and 85.5 percent, respectively. Again this matter should be looked at seriously so that the percentage does not drop again but rise.

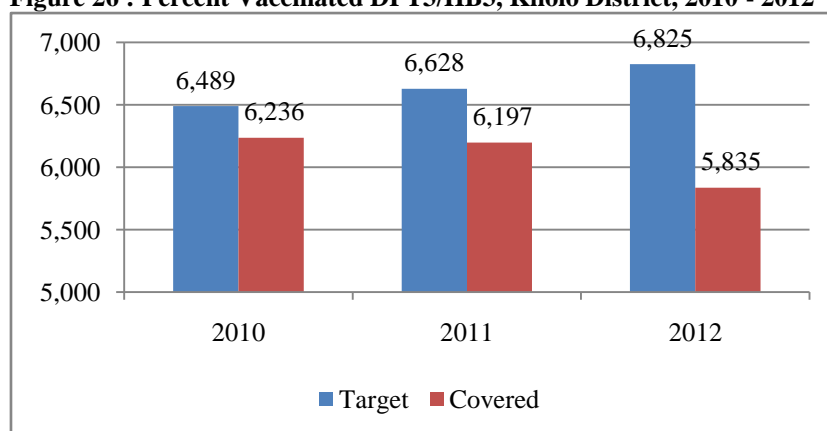
There has been a steady decrease in the number of children under one year who have received DPT3 vaccination in the district. The proportion of vaccinated children decreased from 96.1 percent of 6,489 targeted children in 2010 to 85.5 percent of 6,825 children in 2011 in 2012. Although the number targeted in 2012 is higher than that of 2011, the percentage should not be allowed to fall.

Table 5.23 illustrates that Mahenge had the highest proportion of the target population vaccinated mothers in all the years compared to other divisions. Mahenge Division exceeded the targeted number of children. Mazombe ward had 92.2 percent in 2010, about 93.9 percent in 2011 and 82.3 percent in 2012.

Table 5.23: Percent Vaccinated DPT3/HB3 by Division, Kilolo District, 2010 - 2012

Division	2010		2011		2012	
	Target	Percent Vaccinated	Target	Percent Vaccinated	Target	Percent Vaccinated
Kilolo	3,175	96.1	3,226	90.7	3,319	83.0
Mahenge	757	109.0	769	104.0	801	106.6
Mazombe	2,556	92.2	2,603	93.9	2,703	82.3
Total	6,489	96.1	6,628	93.5	6,825	85.5

Source: District Directors office (Medical Department) Kilolo District, 2013

Figure 26 : Percent Vaccinated DPT3/HB3, Kilolo District, 2010 - 2012

Source: District Directors office (Medical Department) Kilolo District, 2013

In regard to DPT3 vaccination for the under one year children, Table 5.24 reveals that in 2010, Udekwa, Ukumbi, Ruaha Mbuyuni, Ng'uruhe, Bomalang'ombe and Mahenge wards the number of vaccinated children exceeded the number of targeted children. The percentages of vaccinated children in these wards were Udekwa (121 percent), Ukumbi (113 percent), Ruahambuyuni (111 percent), Ng'uruhe (110 percent), Bomalang'ombe (103 percent) and Mahenge (101 percent). In 2011 the wards that exceeded the targets were Ruaha Mbuyuni (105 percent), Mahenge and Udekwa (103 percent each). In 2012 the wards that provided vaccination above the targeted number were Udekwa (130) Ng'uruhe (120), Ukwega (113) Bomalang'ombe (108) and Ruaha Mbuyuni (105).

Table 5.24: Children Under One Year Vaccinated DPT3/HB3 by Ward, Kilolo District, 2010, 2011 and 2012

Ward	2010		2011		2012	
	Total Targeted	Percent Coverage	Total Targeted	Percent Coverage	Total Targeted	Percent Coverage
Image	355	84.8	361	86.4	367	80.1
Irole	393	90.6	399	90.7	446	67.3
Ilula	456	98.2	463	98.3	471	98.3
Uhambingeto	195	76.4	198	82.8	224	59.8
Udekwa	145	121.4	147	102.7	149	129.5
Mahenge	294	101	299	103.3	324	97.8
Mtitu	435	97.0	442	94.3	449	81.5
Dabaga	174	80.5	177	91.5	180	71.1
Ukumbi	388	112.9	394	94.7	441	69.6
Ukwega	321	99.4	326	98.2	331	113.3
Bomalang'ombe	320	102.5	325	97.8	330	108.5
Idete	289	90.3	294	70.4	299	67.9
Masisiwe	326	89.0	331	82.5	336	78.3
Ng'uruhe	217	109.7	221	92.3	225	119.6
Ng'ang'ange	135	90.4	137	92.0	139	84.9
Ihimbo	334	92.5	339	91.7	345	67.8
Lugalo	228	96.9	232	97.4	236	91.1
Nyalumbu	616	96.1	626	99.5	636	83.5
Mlafu	189	92.6	192	94.8	195	86.2
Ibumu	124	92.7	126	94.4	128	93.8
Ruahambuyuni	318	110.7	323	105.3	328	104.9
Kimala	236	78.4	240	89.6	244	54.9
Total	6489	91.6	6628	93.5	6825	85.5

Source: District Directors office (Medical Department) Kilolo District 2013

BCG

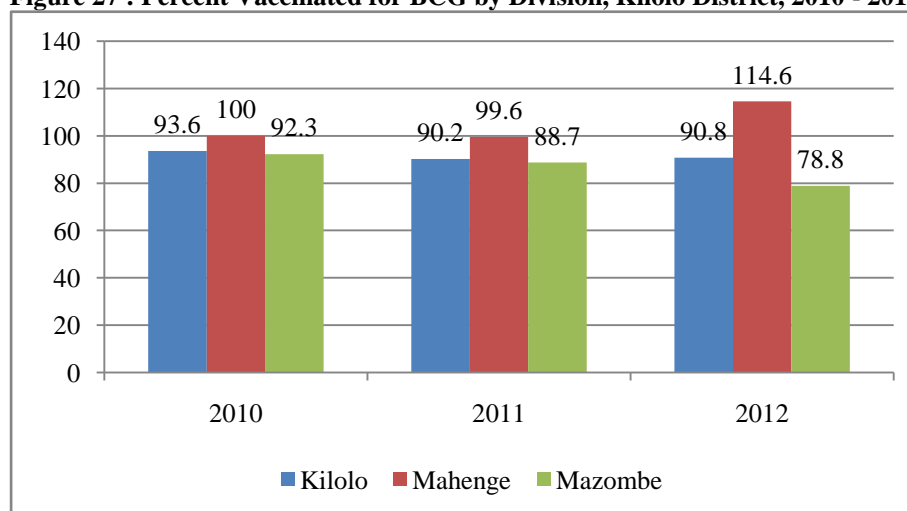
There has been stagnation in the number of children under one year who receive BCG vaccination in the district. The number of vaccinated children decreased from 6,086 in 2010 to 5,978 children in 2011 and then increased to 6,059 in 2012. At the district level vaccination coverage was 93.8 percent in 2010 and 88.4 percent in 2012.

Table 5.25: Children Under One Year Vaccinated for BCG by Division, Kilolo District, 2010 – 2012

Division	2010		2011		2012	
	Target	Percent Vaccinated	Target	Percent Vaccinated	Target	Percent Vaccinated
Kilolo	3,175	93.6	3,225	90.2	3,319	90.8
Mahenge	757	100	769	99.6	801	114.6
Mazombe	2,556	92.3	2,597	88.7	2,703	78.8
Total	6,488	93.8	6,591	90.7	6,823	88.8

Source: District Directors office (Medical Department) Kilolo District

At Division level, the best response in vaccination exercise was as usual in Mahenge Division with 114.6 percent in 2012 when Kilolo had 90.8 percent and Mazombe had 78.8 percent. For the year 2011 the percentage was 90.2 for Kilolo 99.6 for Mahenge and 88.7 for Mazombe (Figure 27).

Figure 27 : Percent Vaccinated for BCG by Division, Kilolo District, 2010 - 2012

Source: District Directors office (Medical Department) Kilolo District

At ward level, Ng'uruhe had the best coverage (144 percent) in 2012, Mlafu (107 percent) was the best in 2011 and Ruaha Mbuyuni (107 percent of targeted children) was the best in 2010. Other wards with good coverages in 2012 were Image (140 percent), Mahenge (120 percent), Udekwa and Mlafu (117 percent each).

Table 5.26: Children Under One Year Vaccinated for BCG by Ward, Kilolo District, 2010 - 2012

Ward	2010		2011		2012	
	Total Targeted	Percent Coverage	Total Targeted	Percent Coverage	Total Targeted	Percent Coverage
Image	355	98	361	105.3	367	139.5
Irole	393	86.3	399	73.7	446	54
Ilula	456	104.4	463	101.5	471	101.9
Uhambingeto	195	106.2	198	97.5	224	88.8
Udekwa	145	97.9	147	103.4	149	116.8
Mahenge	294	93.9	299	96.3	324	119.8
Mtitu	435	93.8	442	93.2	449	89.8
Dabaga	174	89.7	177	92.1	180	100
Ukumbi	388	101	394	101.8	441	101.8
Ukweka	321	100.3	326	101.2	331	109.1
Bomalang'ombe	320	101.3	325	89.2	330	92.4
Idete	289	85.5	294	86.7	299	79.6
Masisiwe	326	79.1	331	75.2	336	75.3
Ng'uruwe	217	92.2	221	97.7	225	144
Ng'ng'ange	135	105.2	137	75.2	139	61.9
Ihimbo	334	90.1	339	75.5	345	63.8
Lugalo	228	85.5	232	62.5	236	35.2
Nyalumbu	616	88.6	626	83.2	636	80.7
Mlafu	189	96.8	192	107.3	195	116.9
Ibumu	124	52.4	126	75.4	128	57.8
Ruaha Mbuyuni	318	106.6	323	100.9	328	108.5
Kimala	236	93.6	240	97.1	244	79.1
Total	6,488	93.8	6,592	90.7	6,823	88.8

Source: District Executive Director's Office (Medical Department) Kilolo District

Measles

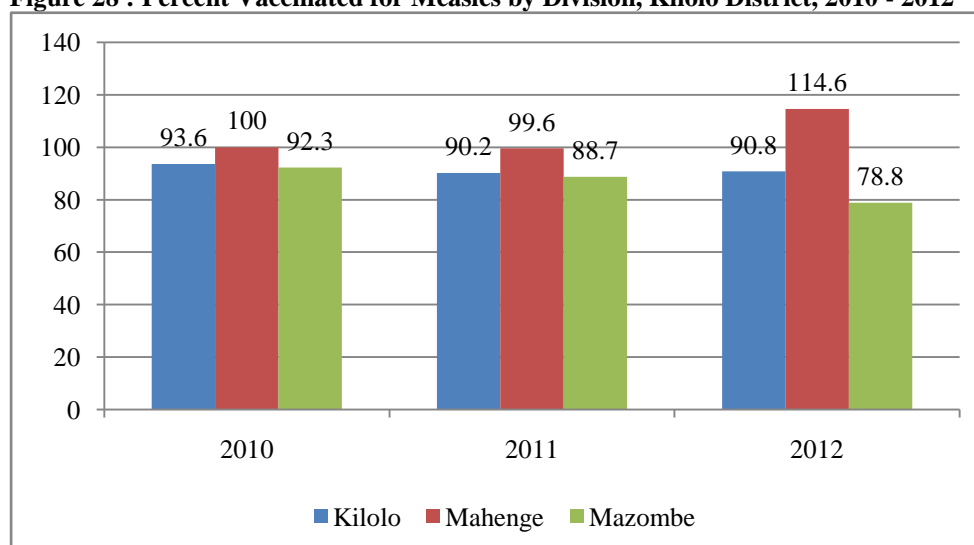
Measles vaccination for children aged less than one year in the district undertaken in order to protect those children against measles. At the district level coverage was 93.8 percent in 2010, 90.5 in 2011 and 91.7 percent in 2012 of the targeted children. Vaccination coverage in all three years was the best in Mahenge division with percentage coverage of 100, 99.6 and 114.6 of the targeted children.

Table 5.27: Children Under One Year Vaccinated for Measles by Division, Kilolo District, 2010 - 2012.

Division	2010		2011		2012	
	Target	Percent Vaccinated	Target	Percent Vaccinated	Target	Percent Vaccinated
Kilolo	3,175	93.6	3,225	90.2	3,319	90.8
Mahenge	757	100	769	99.6	801	114.6
Mazombe	2,556	92.3	2,597	88.7	2,703	78.8
Total	6,488	93.8	6,591	90.5	6,823	91.7

Source: District Executive Director's Office (Medical Department) Kilolo District

Mahenge Division is still doing better in terms of vaccinated children with 114.6 percent in 2012 as compared to 99.6 percent in 2011 and 100 percent in 2010. Kilolo Division had 90.8 in 2012, 90.2 percent in 2011 and 93.6 in 2010. Mazombe had 78.8 percent in 2012, 88.7 percent in 2011 and 92.3 percent in 2010 (Figure 28).

Figure 28 : Percent Vaccinated for Measles by Division, Kilolo District, 2010 - 2012

Source: District Directors office (Medical Department) Kilolo District, 2013

Table 5.28 shows that for Measles vaccination, with coverage of 147.6 percent, Ng'uruhe, was the best ward in 2012 followed by Ruaha Mbuyuni 141.8 percent. Ruaha Mbuyuni was the best in 2010 and in 2011 with 116.4 percent and 129.7 percent respectively.

Table 5.28: Children Under One Year Vaccinated Measles by Ward Kilolo District, 2010, 2011 and 2012

Ward	2010		2011		2012	
	Total Targeted	Percent Coverage	Total Targeted	Percent Coverage	Total Targeted	Percent Coverage
Image	355	96.3	361	97.8	367	108.7
Irole	393	89.3	399	87.2	446	78.9
Ilula	456	100.9	463	104.1	471	101.1
Uhambingeto	195	86.2	198	88.9	224	84.8
Udekwa	145	102.1	147	122.4	149	138.3
Mahenge	294	105.4	299	101	324	100
Mtitu	435	100	442	95.5	449	97.6
Dabaga	174	75.9	177	68.4	180	84.4
Ukumbi	388	77.1	394	80.7	441	81.4
Ukwega	321	95	326	105.8	331	118.7
Bomalang'ombe	320	92.2	325	108.3	330	113.3
Idete	289	96.9	294	94.2	299	71.9
Masisiwe	326	79.1	331	84.9	336	82.7
Ng'uruhe	217	101.4	221	109.5	225	147.6
Ng'ang'ange	135	94.1	137	94.2	139	98.6
Ihimbo	334	82.3	339	81.4	345	76.2
Lugalo	228	76.8	232	42.2	236	46.2
Nyalumbu	616	87.5	626	86.6	636	88.1
Mlafu	189	94.2	192	105.2	195	115.4
Ibumu	124	82.3	126	73.8	128	68.8
Ruahambuyuni	318	116.4	323	129.7	328	141.8
Kimala	236	68.6	240	77.9	244	79.9
Total	6,488	93.8	6,592	90.5	6,823	91.7

Source: District Directors office (Medical Department) Kilolo District

OPV3

Regarding the OPV3 vaccination of the under one year, Ng'uruhe Ward had the best performance in 2012 with 120 percent coverage, followed by Ukwega (113 percent). 2011 Ruaha Mbuyuni was the best ward with 105 percent followed by Udekwa ward at 103 percent. But in 2010, Udekwa Ward was the best with 121 percent followed by Ukumbi Ward at 113 percent.

Table 5.29: Children Under One Year Vaccinated for OPV3 by Ward, Kilolo District, 2010, 2011 and 2012

Ward	2010		2011		2012	
	Total Targeted	Percent Coverage	Total Targeted	Percent Coverage	Total Targeted	Percent Coverage
B/Ng'ombe	320	103	325	98	330	108
Dabaga	174	80	177	92	180	71
Idete	289	90	294	70	299	68
Ilula	456	98	463	98	471	98
Image	355	85	361	86	367	80
Irole	393	91	399	91	446	67
Mahenge	294	101	299	103	324	98
Mtitu	435	97	442	94	449	82
Ukumbi	388	113	394	95	441	70
Udekwa	145	121	147	103	149	130
U/Ngeto	195	76	198	83	224	60
Ukwega	321	99	326	98	331	113
Ng'uruhe	217	110	221	92	225	120
Nyalumbu	616	96	626	100	636	83
Kimala	236	78	240	90	244	55
Ihimbo	334	93	339	92	345	68
Ibumu	124	93	126	94	128	94
Ng'ang'ange	135	90	137	92	139	85
R/Mbuyuni	318	111	323	105	328	105
Masisiwe	326	89	331	82	336	78
Mlafu	189	93	192	95	195	86
Lugalo	228	97	232	97	236	91
Total	6,488	95.6	6,592	93.2	6,823	86.8

Source: District Directors office (Medical Department) Kilolo District 2013

5.1.6 Investment Opportunities in the Health Sub-Sector

This sub-sector faces many problems including prevalence of diseases such as pneumonia, malaria, diarrhoea, clinical Aids; the shortage of workers and drugs. Investment is needed in regards to the construction of more health facilities, provision of instruments/drugs and training of health and medical personnel.

5.2 EDUCATION SECTOR

An Overview

The formal education system that is set by the Ministry of Education and Vocational Training starts with pre-primary and primary school, secondary educational to colleges/universities. Informal education is mainly provided by vocational training schools/centres.

5.2.1 Pre -Primary Education

According to the Ministry of Education and Vocational Training, formal education starts with pre-primary school. However, by knowing importance of pre-primary education the government orders each government primary school need to have pre-primary classrooms so as to meet the increasing demand of enrolment. Table 5.30 shows that Kilolo district council has increased its number of pre-primary schools from 52 in 2009 to 96 in 2010 and 2011 and then reached 101 in 2012.

Table 5.30: Number of Pre-Primary Schools by Ward, Kilolo District, 2009 - 2012

Ward	2009	2010	2011	2012
Mahenge	5	9	6	6
Irole	7	12	6	6
Ukumbi	8	11	2	4
Idete	5	10	5	5
Mtitu	6	9	5	5
Bomalang'ombe	6	9	5	5
Dabaga	3	8	5	5
Ilula	4	8	3	4
Image	2	7	4	4
Uhambingeto	2	4	6	6
Udekwa	1	3	3	3
Ukwega	3	6	6	6
Ibumu	*	*	3	3
Ihimbo	*	*	3	4
Kimala	*	*	5	5
Lugalo	*	*	5	5
Masisiwe	*	*	5	5
Mlafu	*	*	3	3
Ng'ang'ange	*	*	3	3
Ng'uruhe	*	*	7	7
Nyalumbu	*	*	2	3
Ruaha Mbuyuni	*	*	4	4
Total	52	96	96	101

* Included in other wards as the ward was not in existence

Source: District Executive Director's Office (Education Department) 2013

On average each village had pre-primary school in the district. This is evidently in Table 5.31 as the district had village per pre-primary school ratio of 1.1 in 2011 and 1.0 respectively. With village per pre-primary school ratio of 1.7 which was the highest among the villages, Nyalumbu had the best access of pre-primary education while Idete and Uhambingeto wards by having lowest village per pre-primary school ratio of 0.8 had poor access of such education.

Table 5.31: Number of Villages per Pre-Primary School by Ward, Kilolo District, 2011 and 2012

Ward	Total Number of Villages	Number of Pre-Schools		Number of Villages per Pre-School	
		2011	2012	2011	2012
Mahenge	6	6	6	1.0	1.0
Irole	6	6	6	1.0	1.0
Ukumbi	5	2	4	2.5	1.3
Idete	4	5	5	0.8	0.8
Mtitu	5	5	5	1.0	1.0
Bomalang'ombe	5	5	5	1.0	1.0
Dabaga	5	5	5	1.0	1.0
Ilula	5	3	4	1.7	1.3
Image	5	4	4	1.3	1.3
Uhambingeto	5	6	6	0.8	0.8
Udekwa	3	3	3	1.0	1.0
Ukwega	6	6	6	1.0	1.0
Ibumu	3	3	3	1.0	1.0
Ihimbo	4	3	4	1.0	1.0
Kimala	3	5	5	1.3	1.0
Lugalo	6	5	5	1.0	1.0
Masisiwe	5	5	5	1.2	1.2
Mlafu	3	3	3	1.0	1.0
Ng'ang'ange	3	3	3	1.0	1.0
Ng'uruhe	7	7	7	1.0	1.0
Nyalumbu	2	2	3	2.5	1.7
Ruaha Mbuyuni	4	4	4	1.0	1.0
Total	106	96	101	1.1	1.0

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.2.3 Pre-primary Enrolment

The enrollment in pre-primary schools increased about six times from 2009 to 2010 in Kilolo District (Table 5.32). This may be due to parents' awareness and the increase in the number of pre-primary schools in the District. As From Table 5.32 and Table 5.33 it can be seen that as the number of schools increase the enrollment also increases.

Table 5.32: Pre-Primary Schools Total Enrolment by Ward, Kilolo District, 2009 - 2012.

Ward	2009	2010	2011	2012
Mahenge	68	641	246	386
Irole	118	728	396	410
Ukumbi	198	759	280	320
Idete	46	496	342	432
Mtitu	125	653	312	351
Bomalang'ombe	72	567	351	398
Dabaga	53	452	286	277
Ilula	142	952	243	204
Image	45	692	358	315
Uhambingeto	58	344	273	528
Udekwa	31	195	162	176
Ukwega	69	348	480	457
Ibumu	*	*	130	132
Ihimbo	*	*	343	244
Kimala	*	*	269	331
Lugalo	*	*	284	313
Masisiwe	*	*	367	243
Mlafu	*	*	164	184
Ng'ang'ange	*	*	218	198
Ng'uruhe	*	*	406	564
Nyalumbu	*	*	462	512
Ruaha Mbuyuni	*	*	174	216
Total	1,025	6,827	6,546	7,191

* Included in other wards as the ward was not in existence

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.2.4 Primary Education



Improvement of Primary school in Kilolo District has influenced transition rate for Secondary school

The Tanzanian Government set a policy that every child of age (7-13) has a right to achieve primary education, to make this possible the central government collaborates with local government authorities to mobilize communities to play part in providing this education. The first task was to have enough primary schools that would make increased enrollment possible. To ensure this, the central government has put primary school education under the control of local government so as to make the involvement of the community effective.

There is uneven increase in the number of primary schools in Kilolo district from 96 schools in 2009 to 111 schools in 2012. Ng'ang'ange, Udekwa and Ibumu wards are the wards with the least number of primary schools (Table 5.33). The fact that there is no private primary school in the district gives challenge for private sector to endow with more primary schools in Kilolo District.

The numbers of primary schools that are provided in Table 5.33 seem to be virtually equivalent to the number of pre-primary schools. This is because of the policy of the Government that in every primary school there should be a pre primary school. This is why pre primary schools are infrequently locate by themselves in Kilolo District.

Table 5.33: Number of Primary Schools by Ownership and Ward, District, 2009 – 2012

Ward	2009	2010	2011	2012	Changes in Number 2009 - 2012	Percent Change 2009 - 2012
Ukumbi	11	6	6	6	-5	-45.5
Mtitu	9	6	6	6	-3	-33.3
Dabaga	8	5	5	5	-3	-37.5
Ukwega	6	6	6	6	0	0.0
Idete	10	5	5	5	-5	-50.0
Bomalang'ombe	9	5	5	5	-4	-44.4
Dimage	7	4	4	4	-3	-42.9
Irole	12	6	6	6	-6	-50.0
Uhambingeto	4	6	6	6	2	50.0
Ilula	8	4	4	4	-4	-50.0
Mahenge	9	7	7	7	-2	-22.2
Udekwa	3	3	3	3	0	0.0
Masisiwe	0	5	5	5	5	100.0
Ng'ang'ange	0	3	3	3	3	100.0
Kimala	0	5	5	5	5	100.0
Ng'uruhe	0	7	7	7	7	100.0
Ebumbu	0	3	3	3	3	100.0
Nyalumbu	0	3	5	5	5	100.0
Ruaha Mbuyuni	0	4	4	4	4	100.0
Ihimbo	0	6	6	6	6	100.0
Lugalo	0	6	6	6	6	100.0
Total	96	105	111	111	15	15.6

ve DirectDistrict Executive Office (Education Department), Kilolo District, 2013

5.2.5 Coverage of Education System

The average number of schools per ward for the year 2012 in Kilolo district is four (Table 5.34), and the average number of schools per 100 square km is 3. Nyalumbu ward which has the smallest area of 41.501 square kilometers has the best average of the number of schools per 100 sq km of 12 which implies that pupils in Nyalumbu ward walk a shorter distance to reach schools than other wards. Masisiwe ward has on average one school per village but the ward has the worst average of zero number of schools per 100 sq km which means the pupils in this ward walk longer distance to reach a school.

Table 5.34: Proportions of Primary Schools by 100 Sq. kms by Ward and Village, Kilolo District, 2012

Ward	Land Area (sq.kms.)	No. of Villages	No. of Schools 2012	Average Schools Per		No. of Schools per 100 Sq.kms.
				Ward	Village	
Image	367.18	5	4	4	1	2
Irole	445.85	6	6	6	1	3
Ilula	90.23	5	4	5	1	6
Uhambingeto	401.63	5	6	6	1	2
Udekwa	250.93	3	3	3	1	2
Mahenge	629.67	6	7	7	1	1
Mtitu	195.37	5	6	6	1	4
Dabaga	587.05	5	5	5	1	1
Ukumbi	297.21	5	6	6	1	2
Ukwega	452.66	6	6	6	1	2
Boma la	204.33	5	5	5	1	3
Ng'ombe						
Idete	207.89	4	5	5	1	6
Masisiwe	471.98	5	5	5	1	0
Ng'uruhe	201.27	5	7	7	1	4
Ng'ang'ange	152.21	3	3	3	1	3
Ihimbo	243.21	5	6	6	1	3
Lugalo	509.14	4	6	6	2	2
Nyalumbu	63.25	8	5	5	1	12
Mlafu	330.65	3	3	3	1	1
Ibumu	363.73	4	3	3	1	0
Ruaha Mbuyuni	1,005.98	4	4	4	1	1
Kimala	403.14	5	5	5	1	3
Total	7,874.6	90	93	4	1	3

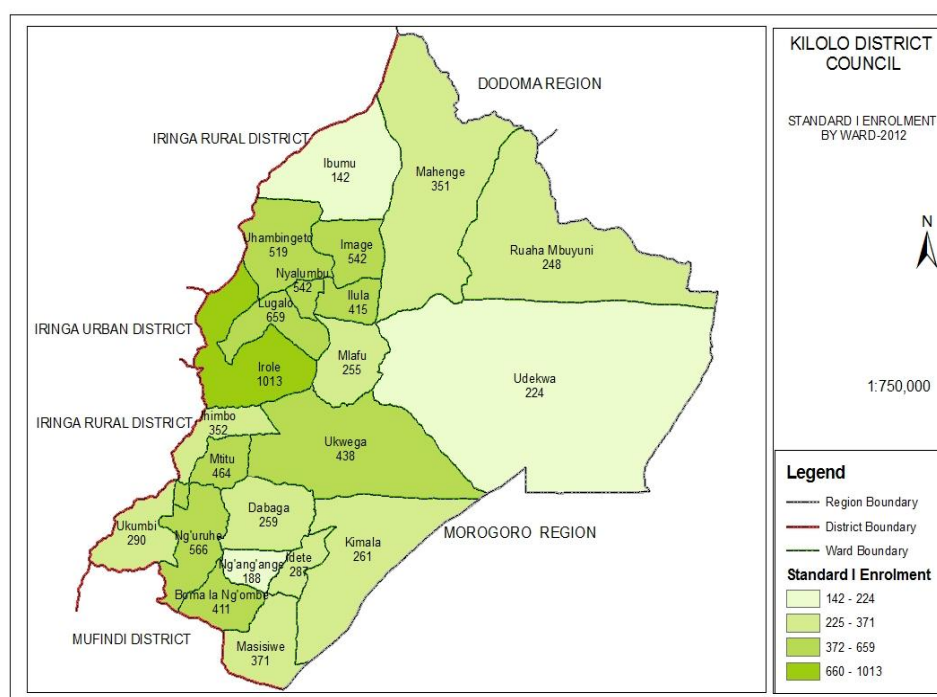
Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.2.6 Standard One Enrollment

In 2009 Kilolo District which had 12 wards divided some of them to form ten more wards, but despite this increase in wards the enrollment has not increased remarkably. This may be due to the little increase in schools. The enrollment for the new wards for the years 2009, 2010 and 2011 are included in the parent wards. The new wards started enrolling pupils by themselves in 2012 so that caused a fall in enrolment in pre-existing wards.

Table 5.35 shows that the enrollment in Kilolo district increased from 8,078 in 2009 to 8,616 in 2010 but dropped to 7,403 in 2011 before rising to 8,797 in 2012. Therefore, Kilolo District managed to increase enrolment of 719 pupils (8.9 percent) between 2009 and 2012.

Map 5: Map of Kilolo District Council showing Standard I Enrolment by Ward; 2012



Source: District Executive Director's Office (Education Department), Kilolo District, 2013

Table 5.35: Standard I Enrolment by Ward, Kilolo District, 2009 - 2012.

Ward	2009	2010	2011	2012	Changes 2009 - 2012	
					Number	Percent
Mahenge	719	761	759	351	-368	-51.2
Irole	1022	976	1003	1013	-9	-0.9
Ukumbi	751	926	892	290	-461	-61.4
Idete	540	535	527	287	-253	-46.9
Mtitu	812	747	701	464	-348	-42.9
Bomalang'ombe	836	731	632	411	-425	-50.8
Dabaga	457	491	413	259	-198	-43.3
Ilula	1240	1246	963	415	-825	-66.5
Image	652	788	527	542	-110	-16.9
Uhambingeto	395	835	302	519	124	31.4
Udekwa	251	211	217	224	-27	-10.8
Ukwega	403	369	467	438	35	8.7
Ibumu	*	*	*	142	142	100.0
Ihimbo	*	*	*	352	352	100.0
Kimala	*	*	*	261	261	100.0
Lugalo	*	*	*	659	659	100.0
Masisiwe	*	*	*	371	371	100.0
Mlafu	*	*	*	255	255	100.0
Ng'ang'ange	*	*	*	188	188	100.0
Ng'uruhe	*	*	*	566	566	100.0
Nyalumbu	*	*	*	542	542	100.0
Ruaha Mbuyuni	*	*	*	248	248	100.0
Total	8,078	8,616	7,403	8,797	719	8.9

* Elsewhere as the Ward was not in existence or had not started

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

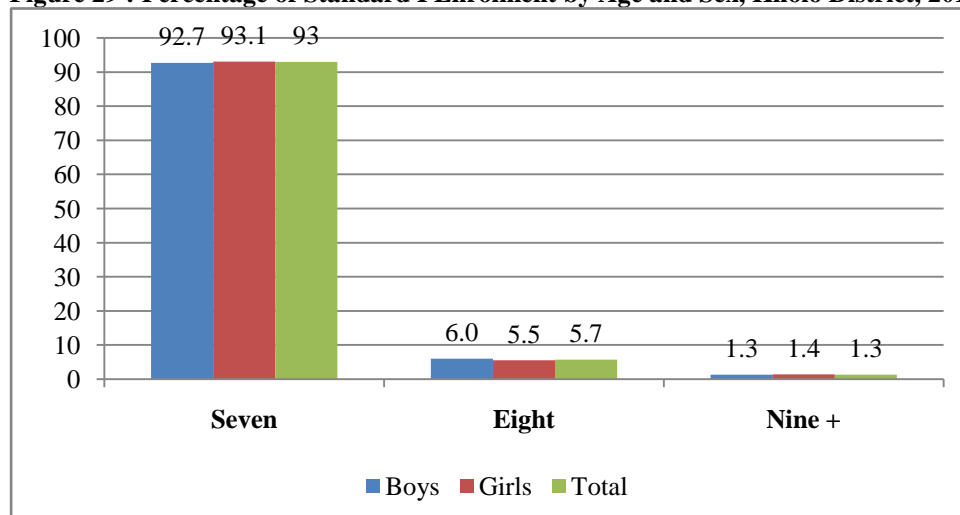
According to Universal Primary Education (UPE), school going age is seven years. Based on Table 5.36, in 2012 the children enrolling in Standard one at the age of seven years were 6,879 (93.0 percent) followed by those enrolled at eight years (424, 5.7 percent). Only 97 (1.3 percent) started Standard One at the age of more than eight years. Table 5.36 also indicates that in 2012 primary schools in the district managed to enroll more boys than girls.

Table 5.36: Standard I Enrolment by Age and Sex, Kilolo District, 2012

Sex	Seven		Eight		More Than Eight		Total
	Number	Percent	Number	Percent	Number	Percent	
Boys	3,441	92.7	221	6	47	1.3	3,709
Girls	3,438	93.1	203	5.5	50	1.4	3,691
Total	6,879	93.0	424	5.7	97	1.3	7,400

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

Figure 29 shows that the enrolment of boys was slightly higher than that of girls for age eight years, while enrolment of girls was slightly higher than boys for age seven and nine years and above.

Figure 29 : Percentage of Standard I Enrolment by Age and Sex, Kilolo District, 2012

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

It may be observed in Table 5.37 that in 2012 the enrolment of girls was slightly higher than that of boys in all the wards except in six wards (Dabaga, Mahenge, Ukumbi, Idete, Ngángáge and Ruaha Mbuyuni) where the enrolment of boys appeared to be slightly higher than girls.

Table 5.37: Total (STD I - VII) Enrolment by Sex and by Ward, Kilolo District, 2009 - 2012.

Ward	2009		2010		2011		2012	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Image	1,841	1,901	1,974	2,128	1,112	1,145	1,133	1,147
Irole	3,056	3,151	3,144	3,147	1,392	1,452	1,367	1,465
Ilula	3,411	3,582	3,513	3,597	1,407	1,470	1,423	1,479
Uhambingeto	1,193	1,268	1,268	1,255	1,125	1,254	1,139	1,261
Udekwa	679	738	813	735	633	652	637	665
Mahenge	2,425	2,020	2,482	2,720	1,403	1,414	1,433	1,431
Mtitu	2,665	2,719	2,559	2,828	1,781	1,886	1,798	1,897
Dabaga	1,540	1,598	1,693	1,623	1,498	1,450	1,501	1,465
Ukumbi	2,885	2,839	2,952	2,942	1,621	1,642	1,651	1,637
Ukwega	1,404	1,402	1,516	1,498	1,564	1,617	1,595	1,620
Bomalang'ombe	2,372	2,684	3,436	2,733	990	1,063	1,006	1,075
Idete	1,978	2,041	2,119	2,141	1,970	1,911	2,012	1,926
Masisiwe	*	*	*	*	1,206	1,249	1,227	1,261
Ng'uruhe	*	*	*	*	1,554	1,603	1,575	1,616
Ng'ang'ange	*	*	*	*	950	945	978	943
Ihimbo	*	*	*	*	1,601	1,595	1,583	1,588
Lugalo	*	*	*	*	1,534	1,876	1,518	1,854
Nyalumbu	*	*	*	*	1,312	1,531	1,290	1,519
Mlafu	*	*	*	*	1253	1,295	1,233	1,288
Ibumu	*	*	*	*	662	791	670	805
Ruaha mbuyuni	*	*	*	*	1,299	1,269	1,271	1,250
Kimala	*	*	*	*	1,114	1,133	1,121	1,124
Total	25,449	25,943	27,469	27,347	28,981	30,243	29,161	30,316

* Elsewhere as the Ward was not in existence or had not started

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.2.9 Primary School Completion Rate

The completion rate is an indicator of the efficiency of the school system which shows the extent to which a cohort of pupils admitted in class one complete primary education cycle irrespective of whether they sit for the final examination or not.

Table 5.38 shows that within a cohort of 3,756 boys who were enrolled in Standard One in 2005 only 2,956 (78.7 percent) completed in 2011, and among the 4,078 girls who were enrolled in the same year 3,396 (83.3 percent) completed. For those enrolled in 2006 boys were 3,289 of whom 2,465 (74.9 percent) completed and among the 3,473 girls who enrolled, 2,982 (85.9 percent) completed. In total the completion rate remained the same at 81 percent in 2011 and 2012 (Tables 5.38 and (5.38a)). Among the wards Ng'uruhe ward had the least completion rate in both years whereby in 2011 about 40.6 percent of the 500 who enrolled completed Standard Seven and in 2012 only 277 pupils completed Standard Seven among 441 who enrolled which is only 62.8 percent, followed by Mahenge ward which had the lowest total completion rate of 61.1 percent. Parents' unawareness of the importance of education and traditional livestock keeping involving shifting from place to place are the reasons for poor completion rates for the two wards particularly Mahenge ward.

Table 5.38: Primary School Completion Rate (2005 – 2011 Cohort) by Ward Kilolo District, 2011

Ward	Enrolled in 2005 (Number)			Completed in 2011 (Number)			Completion Rate (Percent)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Image	136	140	276	130	150	280	95.6	107.1	101.4
Irole	239	276	515	213	184	379	89.1	66.7	73.6
Ilula	157	193	350	147	203	350	93.6	105.2	100.0
Uhambingeto	165	202	367	130	174	304	78.8	86.1	82.8
Udekwa	79	100	179	68	75	143	86.1	75.0	79.9
Mahenge	151	188	339	111	96	207	73.5	51.1	61.1
Mtitu	133	179	312	122	172	294	91.7	96.1	94.2
Dabaga	158	142	300	124	155	279	78.5	109.2	93.0
Ukumbi	250	245	495	180	161	341	72.0	65.7	68.9
Ukwega	185	186	371	192	213	405	103.8	114.5	109.2
Bomalang'ombe	164	197	361	135	130	265	82.3	66.0	73.4
Idete	168	159	327	142	160	302	84.5	100.6	92.4
Masisiwe	175	193	368	136	190	326	77.7	98.4	88.6
Ng'uruhe	249	251	500	101	189	290	40.6	75.3	58.0
Ng'ang'ange	82	109	191	74	85	159	90.2	78.0	83.2
Ihimbo	244	283	527	160	199	359	65.6	70.3	68.1
Lugalo	228	188	416	195	167	362	85.5	88.8	87.0
Nyalumbu	176	236	412	148	204	352	84.1	86.4	85.4
Mlafu	217	198	415	123	143	266	56.7	72.2	64.1
Ibumu	97	103	200	66	63	129	68.0	61.2	64.5
Ruahambuyuni	186	168	354	142	149	291	76.3	88.7	82.2
Kimala	117	142	259	117	134	251	100	94.4	96.9
Total	3,756	4,078	7,834	2,956	3,396	6,334	78.7	83.3	80.9

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

Table 5.38a: Primary School Completion Rate (2006 – 2012 Cohort) by Ward, Kilolo District, 2012

Ward	Enrolled in 2006 (Number)			Completed in 2012 (Number)			Completion Rate (Percent)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Image	138	152	290	115	141	256	83.3	92.8	88.3
Irole	199	206	405	125	152	277	62.8	73.8	68.4
Ilula	193	157	350	135	141	276	69.9	89.8	78.9
Uhambingeto	154	150	304	88	133	221	57.1	88.7	72.7
Udekwa	79	99	178	52	70	122	65.8	70.7	68.5
Mahenge	146	168	314	92	111	203	63.0	66.1	64.6
Mtitu	207	184	391	168	172	340	81.2	93.5	87.0
Dabaga	125	111	236	116	105	221	92.8	94.6	93.6
Ukumbi	172	167	339	144	140	284	83.7	83.8	83.8
Ukwega	126	196	322	118	182	300	93.7	92.9	93.2
Bomalang'ombe	137	196	333	102	181	283	74.5	92.3	85.0
Idete	140	134	274	126	132	258	90.0	98.5	94.2
Masisiwe	168	176	344	126	161	287	75.0	91.5	83.4
Ng'uruhe	213	228	441	110	167	277	51.6	73.2	62.8
Ng'ang'ange	69	72	141	64	72	136	92.8	100.0	96.5
Ihimbo	149	159	308	132	133	265	88.6	83.6	86.0
Lugalo	175	201	376	104	120	224	59.4	59.7	59.6
Nyalumbu	225	215	440	198	228	426	88.0	106.0	96.8
Mlafu	143	142	285	83	108	191	58.0	76.1	67.0
Ibumu	108	110	218	49	95	144	45.4	86.4	66.1
Ruahambuyuni	114	110	224	112	105	217	98.2	95.5	96.9
Kimala	109	140	249	106	133	239	97.2	95.0	96.0
Total	3,289	3,473	6,762	2,465	2,982	5,447	74.9	85.9	80.6

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.3.0 Primary School Dropout Rate

The dropout rate seems to vary from year to year. It was highest in 2010 at 0.2 percent of total enrolment of that particular year and was of 0.1 percent in 2011 and 2012 respectively. Generally the dropout rate was higher among boys than girls in all years. Truancy was seen as the leading source of dropouts followed by other reasons and deaths. However, pregnancy was the least cause of dropouts over the period under consideration.

Table 5.39: Drop Outs by Reasons Kilolo District, 2010-2012

Reason	2010	2011			2012		
	Total	Boys	Girls	Total	Boys	Girls	Total
Truancy	96	32	15	47	23	10	33
Pregnancy	2	-	1	1	-	2	2
Death	5	2	-	2	-	1	1
Other	7	4	2	6	1	2	3
Total	110	38	18	56	24	15	39
Total Enrolment	54,816	28,981	30,243	59,224	29,161	30,316	59,477
Percent	0.2	0.1	0.1	0.1	0.1	0	0.1

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.3.1 Pass Rate

Passing national standard VII examination is the criteria for joining Form One. Table 5.40 shows at least the district managed to have equal number of boys and girls who were selected to join Form One in public secondary schools. Of the total pupils who were selected to join Form One in 2011 and 2012, girls were at a proportion of 50.8 and 54.1 percent versus 49.2 and 45.9 percent of boys. There was an increment of 1,083 pupils (40 percent) in 2012 compared to those who were selected to join Form One in 2011.

Table 5.40: Number of Students Who Joined Form I in Public Secondary Schools, Kilolo District, 2011 and 2012

Year	Student Selected					Percent Increase in Selection
	Boys		Girls		Total	
	Number	Percent	Number	Percent	Number	
2011	1,332	49.2	1,375	50.8	2,707	
2012	1,741	45.9	2,049	54.1	3,790	40

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.3.2 Primary School Facilities

A school is not only a structural building but it is a combination of many facilities like teachers, classrooms, libraries, toilets, books, furnitures and staff houses e.t.c. In that sense, the government and the community have to insure all these facilities are in place.

5.3.2 Classrooms

Kilolo District had a total of 59,477 pupils who were accommodated in 854 classrooms (CPR 70) showing the deficit of classrooms in the District as 646 classrooms (43 percent deficit). No ward adhered to the national standard of 1:40. Idete Ward was the most deprived ward in terms of classrooms with a CPR of 127(68 percent deficit) followed by Ihimbo 104, Mlafu 98 and Ng'ang'ange 91. The wards that were better off are Irole (50 CPR), Image (55 CPR), Ng'uruhe (57 CPR), Masisiwe (58 CPR) and Bomalang'ombe (58 CPR).

Table 5.41: Availability of Classrooms in Primary Schools by Ward, Kilolo District, 2012

Ward	No. of Schools	Total Pupils	Available Classrooms	Classroom Pupils Ratio (CPR)	Required Classrooms	Deficit of Classrooms	
						Number	Percent
Image	4	2015	37	55	51	14	27
Irole	6	2708	55	50	68	13	19
Ilula	5	2462	40	62	62	22	35
Uhambingeto	6	2400	29	83	60	31	52
Udekwa	3	1612	21	77	41	20	49
Mahenge	7	2847	41	70	72	31	43
Mtitu	6	3695	52	71	93	41	44
Dabaga	5	3057	41	76	77	36	47
Ukumbi	6	3935	56	70	98	42	43
Ukwega	6	3278	52	63	82	30	37
Bomalang'ombe	5	2235	39	58	55	17	31
Idete	5	3931	31	127	98	67	68
Masisiwe	5	2308	40	58	58	18	31
Ng'uruhe	7	4311	76	57	113	37	33
Ng'ang'ange	3	1990	22	91	50	28	56
Ihimbo	6	3111	30	104	78	48	62
Lugalo	6	2781	48	58	70	22	31
Nyalumbu	5	2609	33	79	66	33	50
Mlafu	3	1861	19	98	47	28	60
Ibumu	3	1485	24	62	38	14	37
Ruahambuyuni	4	2491	35	72	63	28	44
Kimala	5	2355	33	72	59	26	44
Total	111	59477	854	70	1499	646	43

Source:District Executive Director's Office (Education Department), Kilolo District, 2013

5.3.3 Toilets



One of the available toilet facility found in most of Primary Schools in Kilolo District

Table 5.42 shows that Kilolo district had 1,284 school toilet holes for 59,477 pupils. There was a deficit of 1,420 toilet holes (50 percent) to reach the required national standard of Toilet Pupil Ratio (TPR) of 1:20 for girls and 1:25 for boys. In 2012 the district had a general Toilet Pupil Ratio of 1:46 revealing a deficit of toilet holes. Again in toilets facilities all wards have TPR above the national average. The most affected wards in terms of toilet shortage were Ng'ang'ange, Kimala and Ibumu with TPR of 1:100 1:98 and 1:83 respectively.

Table 5.42: Availability of School Toilets by Ward, Kilolo District, 2012

Ward	Total Pupils	Available Toilet holes	Toilet Pupils Ratio	Required Toilet holes	Deficit of Toilet		Deficit of Toilets ⁺	
					Number	Percent	Number	Percent
Image	2,015	58	35	92	34	37	30	34
Irole	2,708	75	36	123	48	39	43	36
Ilula	2,462	48	51	112	64	57	59	55
Uhambingeto	2,400	89	27	109	20	18	15	15
Udekwa	1,612	32	50	73	41	56	38	54
Mahenge	2,847	80	36	129	49	38	44	35
Mtitu	3,695	70	53	168	98	58	91	56
Dabaga	3,057	68	45	139	71	51	65	49
Ukumbi	3,935	66	60	179	113	63	105	61
Ukwega	3,278	88	37	149	61	41	55	38
Bomalang'ombe	2,235	36	62	102	66	65	61	63
Idete	3,931	69	57	179	110	61	102	60
Masisiwe	2,308	42	55	105	63	60	58	58
Ng'uruhe	4,311	108	40	196	88	45	79	42
Ng'ang'ange	1,990	20	100	90	70	78	67	77
Ihimbo	3,111	66	47	141	75	53	69	51
Lugalo	2,781	80	35	126	46	37	41	34
Nyalumbu	2,609	59	44	119	60	50	54	48
Mlafu	1,861	34	55	85	51	60	47	58
Ibumu	1,485	18	83	68	50	73	47	72
Ruahambuyuni	2,491	54	46	113	59	52	54	50
Kimala	2,355	24	98	107	83	78	78	77
Total	59,477	1,284	46	2,704	1,420	53	1,302	50

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.3.4 Teachers



Teacher Pupil Ratio is a quality aspect to the provision of education in Kilolo District

Primary school Teacher Pupil Ratio (TPR) is the number of pupils enrolled divided by the number of primary school teacher available. The teacher pupil ratio is an important indicator to show the quality of education provided in schools. The standard requirement is that one teacher should serve a class of 45 pupils (1:45). Kilolo District has an average TPR of 1:54. Based on Table 5.43, Ng'ang'ange Ward had the critical deficit of teachers (63.0 percent deficit or TPR of 1:122) followed by Ibumu (55.0 percent, TPR of 1:99) and Dabaga (52.0 percent, TPR of 1:94). The wards of Nyalumbu, Ilula, Lugalo, Uhambingeto, Irole, Bomalang'ombe and Ukumbi had the TPR that is below the national standard requirement of 1:45.

Table 5.43: Availability of Primary School's Teachers (Grade A and B) by Ward, Kilolo District, 2012

Ward	Total Pupils	Actually Required	Available Teachers	Deficit	Percent of Deficit	Deficit Based on TPR	Percent Deficit Based on TPR	Teacher Pupils Ratio
Image	2,015	50	45	5	10	0	0	45
Irole	2,708	68	67	1	1	-7	-11	40
Ilula	2,462	62	73	-11	-18	-18	-33	34
Uhambingeto	2,400	60	64	-4	-7	-11	-20	38
Udekwa	1,612	40	21	19	48	15	41	77
Mahenge	2,355	59	47	12	20	5	10	50
Mtitu	3,695	92	75	17	18	7	9	49
Dabaga	4,311	108	46	62	57	50	52	94
Ukumbi	2,491	62	56	6	10	-1	-1	44
Ukwega	3,278	82	48	34	41	25	34	68
Bomalang'ombe	1,990	50	48	2	4	-4	-9	41
Idete	2,847	71	36	35	49	27	43	79
Masisiwe	2,308	58	32	26	45	19	38	72
Ng'uruhe	3,935	98	60	38	39	27	31	66
Ng'ang'ange	3,057	76	25	51	67	43	63	122
Ihimbo	3,111	78	57	21	27	12	18	55
Lugalo	2,781	70	75	-5	-7	-13	-21	37
Nyalumbu	2,609	65	83	-18	-28	-25	-43	31
Mlafu	1,861	47	38	9	19	3	8	49
Ibumu	1,485	37	15	22	59	18	55	99
Ruahambuyuni	3,931	98	60	38	39	27	31	66
Kimala	2,235	56	28	28	50	22	44	80
Total	59,477	1,487	1,099	388	26	223	17	54

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.3.6 Staff Quarters



Staff quarters is the major constrain for retention of teachers in Kilolo District

Teachers houses is an important incentive in inspiring the teaching practice of the teachers. Table 5.44 shows that Kilolo District had a total of 420 teacher houses compared to the total requirement of 1308 houses. The official House Teacher Ratio is 1:1 hence the district had a shortage of 1,043 (71 percent deficit) houses to reach the required HTR. Ilula ward which had urban characteristic has 73 teachers and only 3 houses are available implying that the deficit based on HTR is 96 percent. Ng'uruhe ward is better off in terms of teacher houses with only 33 percent deficit.

Table 5.44: Availability of Teachers' Houses by Ward, Kilolo District, 2012

Ward	Number of Available Teachers	Estimated Teachers	Actual Requirement of Houses	Available Houses	Deficit of Houses		Surplus/ Deficit Based on HTR	Percent of Deficit Based on HTR
					No.	Percent		
Image	45	57	57	17	40	70	40	70
Irole	67	71	71	21	50	70	50	70
Ilula	73	73	71	3	68	96	70	96
Uhambingeto	64	64	62	14	48	77	50	78
Udekwa	21	32	32	11	21	66	21	66
Mahenge	47	58	58	15	43	74	43	74
Mtitu	75	85	71	23	48	68	62	73
Dabaga	46	75	60	20	40	67	55	73
Ukumbi	56	75	75	34	41	55	41	55
Ukwega	48	88	68	32	36	53	56	64
Bomalang'ombe	48	48	48	27	11	23	21	44
Idete	36	98	56	23	33	59	75	77
Masisiwe	32	69	67	41	26	39	28	41
Ng'uruhe	60	61	61	41	20	33	20	33
Ng'ang'ange	25	44	32	12	20	63	32	73
Ihimbo	57	64	64	18	46	72	46	72
Lugalo	75	72	72	14	58	81	58	81
Nyalumbu	83	95	95	5	90	95	90	95
Mlafu	38	40	40	3	39	98	37	93
Ibumu	15	36	36	13	23	64	23	64
Ruahambuyuni	60	64	64	14	50	78	50	78
Kimala	28	94	48	19	29	60	75	80
Total	1099	1463	1308	420	880	67	1043	71

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.3.7 Furniture (Desks)

Table 5.45 reveals that in 2012 primary schools in Kilolo District had 13,612 desks for 59,477 pupils. With a Desk Pupil Ratio (DPR of 1:4) there was a 31 percent deficit. The required official standard of desk pupil ratio is 1:3. The only ward which meets the standard was Irole with DPR of 1:3. The remaining wards had DPR above the recommended official ratio of 1:3. Udekwa ward had a very bad situation of 10 pupils per desk (1:10 DPR) which means out 1,612 pupils 1,135 had to sit on the floor.

Table 5.45: Availability of Desks by Ward, Kilolo District, 2012

Ward	Total Pupils	Available Desks	Desk Pupil Ratio	Required Desks	Deficit of Desks		Deficit Based on DPR	Percent of Deficit Based on DPR
					No.	Percent		
Image	2,015	545	1:04	1008	463	46	127	19
Irole	2,708	903	1:03	1354	451	33	0	0
Ilula	2,462	698	1:04	1231	533	43	123	15
Uhambingeto	2,400	638	1:04	1200	562	47	162	20
Udekwa	1,612	159	1:10	806	647	80	378	70
Mahenge	2,847	577	1:05	1424	847	59	372	39
Mtitu	3,695	723	1:05	1848	1125	61	509	41
Dabaga	3,057	494	1:06	1529	1035	68	525	52
Ukumbi	3,935	1010	1:04	1968	958	49	302	23
Ukwega	3,278	920	1:04	1639	719	44	173	16
Bomalang'ombe	2,235	367	1:06	1118	751	67	378	51
Idete	3,931	694	1:06	1966	1272	65	616	47
Masisiwe	2,308	598	1:04	1154	556	48	171	22
Ng'uruhe	4,311	834	1:05	2156	1322	61	603	42
Ng'ang'ange	1,990	501	1:04	995	494	50	162	24
Ihimbo	3,111	531	1:06	1556	1025	66	506	49
Lugalo	2,781	618	1:03	1391	773	56	309	33
Nyalumbu	2,609	801	1:04	1305	504	39	69	8
Mlafu	1,861	520	1:04	931	411	44	100	16
Ibumu	1,485	238	1:06	743	505	68	257	52
Ruahambuyuni	2,491	512	1:05	1246	734	59	318	38
Kimala	2,355	731	1:03	1178	447	38	54	7
Total	59,477	13612	1:04	29739	16127	54	6214	31

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.3.8 Water Tanks

There is only one ward with water tank in Kilolo District. Uhambingeto ward had 3 tanks in 2012 and a deficit of 3 tanks. The construction of water tanks in Uhambingeto ward was financed by the Anglican Church which constructed three tanks but still there is a deficit of 3 tanks. The remaining wards have no water tanks. The wards with serious water shortage are the wards of Ilula which depend on seasonal spring water sources while as for Mahenge the main

source of water is river Lukosi therefore the availability of water tanks could serve the purpose of water storage for schools in this ward.

Table 5.46: Availability Water Tanks in Primary Schools by Ward Kilolo District, 2010 and 2012

Ward	2010			2012		
	Required	Available	Deficit	Required	Available	Deficit
Image	7	-	7	4	0	4
Irole	12	-	12	6	0	6
Ilula	8	-	8	5	0	5
Uhambingeto	4	1	3	6	3	3
Udekwa	3	-	3	3	0	3
Mahenge	9	-	9	7	0	7
Mtitu	9	-	9	6	0	6
Dabaga	8	-	8	5	0	5
Ukumbi	11	-	11	6	0	6
Ukwega	6	-	6	6	0	6
Bomalang'ombe	9	-	9	5	0	5
Idete	10	-	10	5	0	5
Masisiwe	-	-	-	5	0	5
Ng'uruhe	-	-	-	7	0	7
Ng'ang'ange	-	-	-	3	0	3
Ihimbo	-	-	-	6	0	6
Lugalo	-	-	-	6	0	5
Nyalumbu	-	-	-	5	0	5
Mlafu	-	-	-	3	0	3
Ibumu	-	-	-	3	0	3
Ruahambuyuni	-	-	-	4	0	4
Kimala	-	-	-	5	0	5
Total	96	1	95	111	3	108

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.3.9 Secondary Education

The government 'call' that each ward in the country should have a secondary school aims at increasing secondary schools enrolment both in urban and rural areas. However, to large extent this government call helps improving accessibility of secondary schools education especially in rural areas. Table 5.47 shows that the number of secondary schools in Kilolo district was 36 (61.1 percent public secondary schools and 38.9 percent private secondary

schools) schools in 2012. By the end of 2012 only three wards, Kimala, Ng'ang'ange and Mahenge had no secondary schools.

Table 5.47: Number of Secondary Schools by Ownership and Ward, Kilolo District, 2010 - 2012

Ward	2010		2011		2012	
	Public	Private	Public	Private	Public	Private
Image	2	1	2	-	2	-
Irole	3	1	2	1	2	1
Ilula	3	2	1	2	1	3
Uhambingeto	1	-	1	-	1	-
Udekwa	1	-	1	-	1	-
Mahenge	1	-	-	-	-	-
Mtitu	3	1	2	1	2	1
Dabaga	2	1	2	1	2	1
Ukumbi	3	2	2	1	2	1
Ukwega	1	2	1	2	1	2
Bomalang'ombe	1	1	-	1	-	1
Idete	1	1	1	1	1	1
Masisiwe	-	-	1	-	1	-
Ng'uruhe	-	-	1	1	1	1
Ng'ang'ange	-	-	-	-	-	-
Ihimbo	-	-	1	1	1	1
Lugalo	-	-	1	-	1	-
Nyalumbu	-	-	1	-	1	-
Mlafu	-	-	1	-	1	-
Ibumu	-	-	-	1	-	1
Ruahambuyuni	-	-	1	-	1	-
Kimala	-	-	-	-	-	-
Total	22	12	22	13	22	14
Percent	64.7	35.3	62.9	37.1	61.1	38.9

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

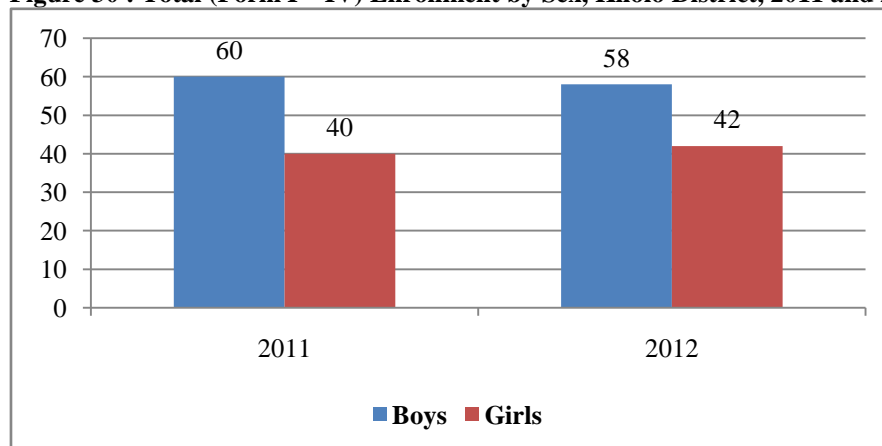
5.4 Total Form (I-IV) Enrollment

Table 5.48 shows total enrollment in Kilolo District for the year 2011 was 11,177 students whom, 6,729 (60 percent) were boys and 4,448 (40 percent) were girls. The difference in enrollment was also observed in 2012 whereby the enrollment of boys was 58 percent and girls (42 percent). This means that more boys than girls were enrolled in both years. Enrolment in 2012 was higher by 3 percent compared to the previous year (2011).

Table 5.48: Total (Form I – IV) Enrollment by Sex, Kilolo District, 2011 and 2012

Year	Boys		Girls		Total	Percent Increase
	Number	Percent	Number	Percent		
2011	6,729	60	4,448	40	11,177	
2012	6,694	58	4,770	42	11,464	3

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

Figure 30 : Total (Form I – IV) Enrollment by Sex, Kilolo District, 2011 and 2012

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.4.1 Form IV Completion

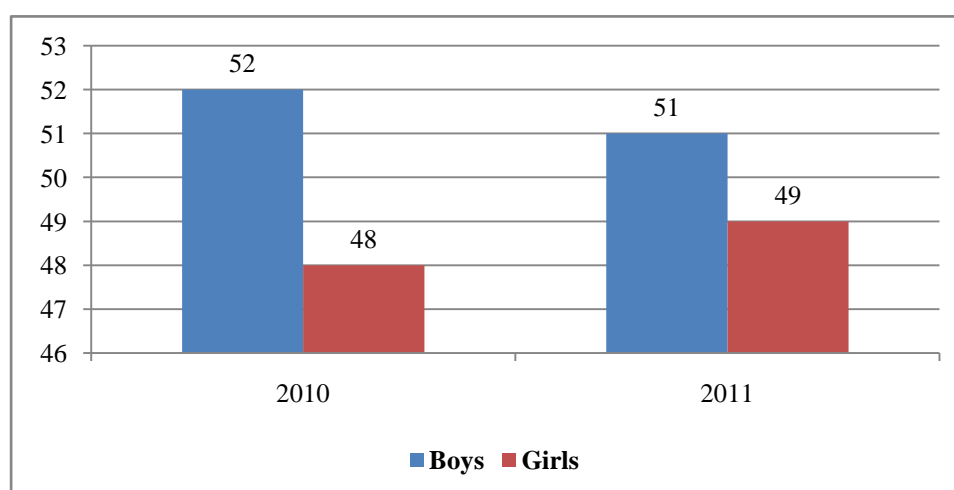
Table 5.49 shows Form IV completion trend in Kilolo District in 2010 and 2011. Those completed Form IV in 2011 was higher by 6 percent than of the year 2010. The percentage share of those completing was higher for boys than girls in both 2010 and 2011. The share was 52 percent for boys while that of girls was 48 percent in 2010. In 2011 the share of boys was 51 percent while that of girls was 49 percent.

Table 5.49: Number of Students Completing Form IV by Sex, Kilolo District, 2011 and 2012

Year	Boys		Girls		Total	Percent Increase
	Number	Percent	Number	Percent		
2010	1,499	52	1,357	48	2,856	
2011	1,530	51	1,489	49	3,019	6

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

The figure 31 shows the completion rate of Boys and Girls in Secondary schools in Kilolo District.

Figure 31 : Number of Students Completing Form IV by Sex, Kilolo District, 2010 and 2011

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

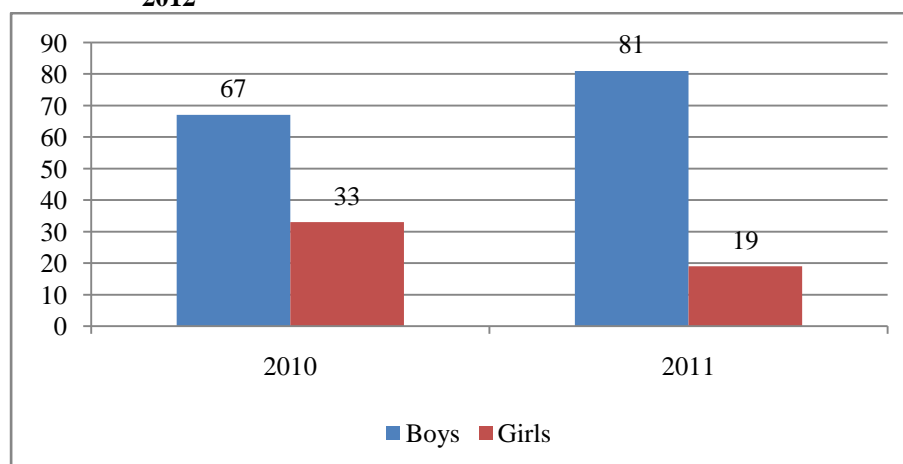
5.4.2 Form V-VI Enrollment

The total Form V-VI enrollment for Kilolo District was 264 and 277 in 2011 and 2012 respectively. The enrollment of boys was higher than that of girls in both years. In 2011 the enrollment of boys was 178 (67 percent) while that of girls was 86 (33 percent). The difference increased in 2012 when girls' enrolment was at a proportion of 19 percent compared to 81 percent of boys. In this regard, gender imbalance in high schools is higher in high schools than secondary schools.

Table 5.50: Total (Form V – VI) Enrolment “A” Level by Sex Kilolo District, 2011 and 2012

Year	Boys		Girls		Total	Percent Increase
	Number	Percent	Number	Percent		
2011	178	67	86	33	264	
2012	223	81	54	19	277	5

Source: District Executive Director’s Office (Education Department), Kilolo District, 2013

Figure 32 : Total (Form V – VI) Enrolment “A” Level by Sex Kilolo District, 2011 and 2012

Source: District Executive Director’s Office (Education Department), Kilolo District, 2013

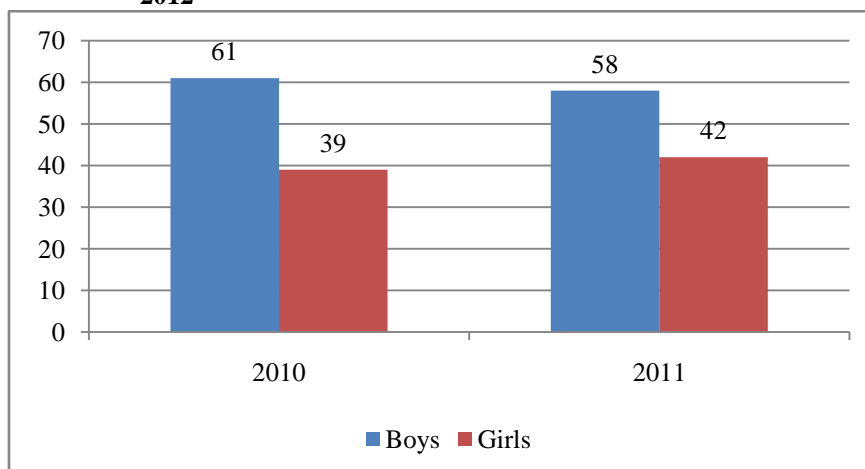
5.4.2 Form VI Completion

Table 5.51 shows the number of students who completed Form VI in 2010 and 2011. As it was in enrolments, more boys than girls completed form six in 2011 and 2012 (Table 5.51). Number of students completed form six in 2011 was higher by 26 percent compared to that of 2010.

Table 5.51: Number of students completing Form VI by Sex, Kilolo District, 2011 and 2012

Year	Boys		Girls		Total	Percent Increase
	Number	Percent	Number	Percent		
2010	92	61	60	39	152	
2011	110	58	81	42	191	26

Source: District Executive Director’s Office (Education Department), Kilolo District, 2013

Figure 33 : Number of students completing Form VI by Sex, Kilolo District, 2011 and 2012

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.4.3 Availability of Teachers



The Teacher's meeting in one of Secondary School in Kilolo District

In 2012 Kilolo district had 329 teachers for 22 secondary schools making a deficit of 310 teachers. Wards with the lowest School Teacher Ratio were Udekwa 1:6, Mtitu 1:6 and Mlufu1:8. On the other hand, wards with better School Teachers Ratio were Ilula (1:28), Dabaga (1:20), Nyalumbu (1:25) and Lugalo (1:21).

Table 5.52: Availability Teachers in Public Secondary Schools by Ward, Kilolo District, 2012

Ward	No. of School	Required Teachers	Available Teachers	Deficit of Teachers		Average Teachers per School
				Number	Percent	
Image	2	75	27	48	64	14
Irole	2	60	29	31	52	15
Ilula	1	34	28	7	21	28
Uhambingeto	1	21	16	5	24	16
Udekwa	1	21	6	15	71	6
Mahenge	0	0	0	0	0	0
Mtitu	2	65	12	27	42	6
Dabaga	2	60	39	21	35	20
Ukumbi	2	37	23	14	38	12
Ukwega	1	27	13	14	52	13
Bomalang'ombe	0	0	0	0	0	0
Idete	1	25	10	15	60	10
Masisiwe	1	37	10	27	73	10
Ng'uruhe	1	42	14	28	67	14
Ng'ang'ange	0	0	0	0	0	0
Ihimbo	1	29	12	17	59	12
Lugalo	1	29	21	8	28	21
Nyalumbu	1	41	25	16	39	25
Mlafu	1	16	8	8	50	8
Ibumu	0	0	0	0	0	0
Ruahambuyuni	1	20	11	9	45	11
Kimala	0	0	0	0	0	0
Total	22	639	329	310	49	15

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.4.4 Teacher Houses

Teacher houses are important facilities in retaining teachers especially in rural areas. Table 5.53 reveals that Kilolo District is not doing well in this area. By the end of 2012 418 teachers' houses were required to offset a deficit of 391 houses. Wards with no teachers' houses at all were Lugalo, Nyalumbu, Mlafu, Masisiwe, Uhambingeto and Udekwa.

Table 5.53: Availability of Teachers' Houses in Public Secondary Schools by Ward, Kilolo District, 2012

Ward	No. of Schools	Number of Houses			Percent Deficit	Rank
		Required	Available	Deficit		
Image	2	36	1	35	97	3
Irole	2	43	2	41	95	4
Ilula	1	34	2	32	94	5
Uhambingeto	1	17	0	17	100	1
Udekwa	1	5	0	5	100	1
Mahenge	0	0	0	0	0	n.a
Mtitu	2	30	1	29	97	3
Dabaga	2	49	9	40	82	8
Ukumbi	2	38	3	35	92	6
Ukwega	1	10	3	7	70	9
Bomalang'ombe	0	0	0	0	0	n.a
Idete	1	10	2	8	80	7
Masisiwe	1	21	0	21	100	1
Ng'uruhe	1	42	1	41	98	2
Ng'ang'ange	0	0	0	0	0	n.a
Ihimbo	1	10	1	9	90	7
Lugalo	1	30	0	30	100	1
Nyalumbu	1	8	0	8	100	1
Mlafu	1	15	0	15	100	1
Ibumu	0	0	0	0	0	n.a
Ruahambuyuni	1	20	2	18	90	7
Kimala	0	0	0	0	0	n.a
Total	22	418	27	391	94	

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.45 Availability of Classrooms



Availability of classrooms is the another constrain for provision of quality secondary education in Kilolo District

Kilolo District had 235 classrooms in 22 secondary schools with a deficit of 100 classrooms (30 percent) for the whole District. The wards with higher deficits were Ng'uruhe with one school and 8 classes (50 percent deficit) whereas Ilula had 17 classes for 1 school, Uhambingeto had 13 classes for 1 school and Idete ward had 13 classes for 1 school with a deficit of 19 percent each. Dagaba ward has the highest number of classrooms (28) for 2 schools with a deficit of 22 percent.

Table 5.54: Availability of Classrooms in Public Secondary Schools by Ward, Kilolo District, 2012

Ward	No. of Schools	Number of Classroom			Percent Deficit	Ranking of Deficit
		Required	Available	Deficit		
Image	2	30	20	10	33	6
Irole	2	32	21	11	34	5
Ilula	1	21	17	4	19	9
Uhambingeto	1	16	13	3	19	8
Udekwa	1	12	10	2	17	10
Mahenge	0	0	0	0	0	n.a
Mtitu	2	26	16	10	38	3
Dabaga	2	36	28	8	22	8
Ukumbi	2	28	18	10	36	4
Ukwega	1	16	10	6	38	3
Bomalang'ombe	0	0	0	0	0	n.a
Idete	1	16	13	3	19	9
Masisiwe	1	16	12	4	25	7
Ng'uruhe	1	16	8	8	50	1
Ng'ang'ange	0	0	0	0	0	n.a
Ihimbo	1	14	8	6	43	2
Lugalo	1	12	8	4	33	6
Nyalumbu	1	16	12	4	25	7
Mlafu	1	12	9	3	25	7
Ibumu	0	0	0	0	0	n.a
Ruahambuyuni	1	16	12	4	25	7
Kimala	0	0	0	0	0	n.a
Total	22	335	235	100	30	

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.4.6 Toilets Requirement



Availability of toilets is the another constrain for provision of quality secondary education in Kilolo District

Table 5.55 shows the status in number of school toilet holes by ward in Kilolo District in 2012. To eradicate a deficit of 221 toilet holes, the district required 532 toilet holes in 22 public secondary schools. Deficit was highest in Lugalo ward at 81 percent, followed by Nyalumbu (67 percent), Mtitu and Ilula wards (63 percent each) and Ruaha Mbuyuni and Ihimbo (60 percent each). The lowest deficits were observed in Dabaga (2 percent) and Mlafu wards (8 percent).

Table 5.55: Availability of Students' Toilets in Public Secondary Schools by Ward, Kilolo District, 2012

Ward	No. of Schools	Number of Toilets			Percent Deficit	Rank
		Required	Available	Deficit		
Image	2	45	45	0	0	0
Irole	2	56	26	30	54	6
Ilula	1	40	15	25	63	3
Uhambingeto	1	32	20	12	38	8
Udekwa	1	14	14	0	0	0
Mahenge	0	0	0	0	0	0
Mtitu	2	43	16	27	63	3
Dabaga	2	49	48	1	2	11
Ukumbi	2	45	31	14	31	10
Ukwega	1	18	12	6	33	9
Bomalang'ombe	0	0	0	0	0	0
Idete	1	23	10	13	57	5
Masisiwe	1	24	12	12	50	7
Ng'uruhe	1	13	8	5	38	8
Ng'ang'ange	0	0	0	0	0	0
Ihimbo	1	20	8	12	60	4
Lugalo	1	42	8	34	81	1
Nyalumbu	1	24	8	16	67	2
Mlafu	1	24	22	2	8	10
Ibumu	0	0	0	0	0	0
Ruahambuyuni	1	20	8	12	60	4
Kimala	0	0	0	0	0	0
Total	22	532	311	221	42	

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.4.7 Availability of Dormitories

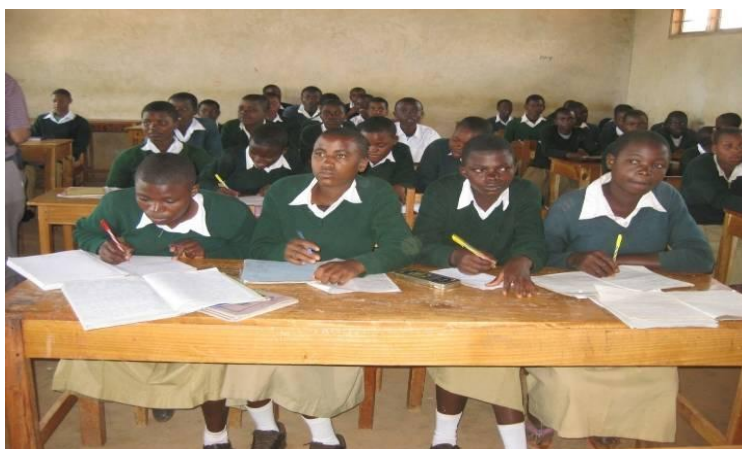
There was a high deficit of dormitories in Kilolo District. Out of the 101 dormitories required, only 24 dormitories were available thus a deficit of 77 percent. Lugalo, Nyalumbu and Mlafu wards had no dormitories at all hence a deficit of .As it was for the number of toilet holes and teachers, Dabaga ward was better off with the lowest deficit of 44 percent (Table 5.56).

Table 5.56: Availability of Dormitories in Public Secondary Schools by Ward, Kilolo District, 2012

Ward	No. of Schools	Number of Dormitories			Percent of Deficit	Rank
		Required	Available	Deficit		
Image	2	8	2	6	75	4
Irole	2	8	2	6	75	4
Ilula	1	11	1	10	91	3
Uhambingeto	1	4	1	3	75	4
Udekwa	1	4	1	3	75	4
Mahenge	0	0	0	0	0	n.a
Mtitu	2	12	1	11	92	2
Dabaga	2	9	5	4	44	7
Ukumbi	2	9	3	6	67	5
Ukwega	1	4	2	2	50	6
Bomalang'ombe	0	0	0	0	0	n.a
Idete	1	4	1	3	75	4
Masisiwe	1	4	1	3	75	n.a
Ng'uruhe	1	4	2	3	75	4
Ng'ang'ange	0	0	0	0	0	n.a
Ihimbo	1	4	1	3	75	4
Lugalo	1	4	-	4	100	1
Nyalumbu	1	4	-	4	100	1
Mlafu	1	4	-	4	100	1
Ibumu	0	0	0	0	0	n.a
Ruahambuyuni	1	4	1	3	75	4
Kimala	0	0	0	0	0	0
Total	22	101	24	78	77	

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

4.8 Availability of Desks



Availability of desks in secondary schools influenced provision of quality secondary education in Kilolo District

Kilolo required 10,768 desks in 2012 to meet a shortage of 979 desks in its 22 public secondary schools. According to Table 5.57, with a total of 979 desks deficit in its 22 schools, each secondary school in the district on average had a deficit of 44 desks.

Table 5.56: Availability of Desks in Public Secondary Schools by Ward, Kilolo District, 2012

Ward	No. of Schools	Number of Desks			Percent of Shortage	Rank
		Required	Available	Shortage		
Image	2	725	634	91	13	5
Irole	2	1,030	988	42	4	7
Ilula	1	889	750	139	16	4
Uhambingeto	1	395	395	0	0	9
Udekwa	1	181	181	0	0	9
Mahenge	0	0	0	0	0	n.a
Mtitu	2	980	1,006	0	0	9
Dabaga	2	1,440	1,282	158	11	6
Ukumbi	2	1,036	846	190	18	3
Ukwega	1	376	376	0	0	9
Bomalang'ombe	0	0	0	0	0	n.a
Idete	1	640	512	128	20	2
Masisiwe	1	450	450	0	0	9
Ng'uruhe	1	401	401	0	0	9
Ng'ang'ange	0	0	0	0	0	n.a
Ihimbo	1	450	510	0	0	9
Lugalo	1	370	280	90	24	1
Nyalumbu	1	775	638	137	18	3
Mlafu	1	220	360	0	0	9
Ibumu	0	0	0	0	0	n.a
Ruahambuyuni	1	410	406	4	1	8
Kimala	0	0	0	0	0	n.a
Total	22	10,768	10,015	979	9	

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.5.0 Availability of Laboratories.

Kilolo District had 13 laboratories and a deficit of 124 laboratories (91 percent). Wards with school laboratories were Ruaha Mbuyuni, Ukwega, Dabaga, Ilula and Image wards. Remaining wards had no school laboratories which make a deficit of 100 percent (Table 5.58). Dabaga with four laboratories had the largest number of laboratories than other wards.

Table 5.57: Availability of Laboratories in Public Secondary Schools by Ward, Kilolo District, 2012

Ward	No. of Schools	Number of Laboratories			Percent of Deficit	Rank
		Required	Available	Deficit		
Image	2	12	2	10	83	2
Irole	2	12	0	12	100	1
Ilula	1	11	2	9	82	3
Uhambingeto	1	6	0	6	100	1
Udekwa	1	6	0	6	100	1
Mahenge	0	0	0	0	0	n.a
Mtitu	2	12	0	12	100	1
Dabaga	2	12	4	8	67	4
Ukumbi	2	12	0	12	100	1
Ukwega	1	6	2	4	67	4
Bomalang'ombe	0	0	0	0	0	n.a
Idete	1	6	0	6	100	1
Masisiwe	1	6	0	6	100	1
Ng'uruhe	1	6	0	6	100	1
Ng'ang'ange	0	0	0	0	0	n.a
Ihimbo	1	6	0	6	100	1
Lugalo	1	6	0	6	100	1
Nyalumbu	1	6	0	6	100	1
Mlafu	1	6	0	6	100	1
Ibumu	0	0	0	0	0	n.a
Ruahambuyuni	1	6	2	4	67	4
Kimala	0	0	0	0	0	n.a
Total	22	137	13	124	91	

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.5.1 Colleges and Vocation Training Schools

Access to technical and vocational education/training is necessary for equipping youths with necessary skills which promote self employment. Kilolo District had no single college in 2012 but it is endowed with several vocational training centers. Most vocational training centers provide courses in carpentry, tailoring and masonry. Table 5.58 shows Mtitu ward, where the district headquarters is, has two vocational training centers which enrolled a total of 101 students in 2012. Other wards with vocational training centers were Ilula, Nyalumbu, Dabaga and Ng'uruhe. The total number of students enrolled in the listed vocational centers was 36 (Table 5.58).

Table 5.58: List of Vocational Training Centers by Ward, Kilolo District, 2012

Ward	Name of Centre	No. of students	Skills Taught
Ilula	Maria Goreth	75	Agriculture, Carpentry, Masonry and, Tailoring.
Nyalumbu	FDC- Ilula	82	Welding, carpentry, Tailoring, Cookery, Masonry and Electricity
Mtitu	Kilolo Star	89	Carpentry, Tailoring, and masonry
	Ihimbo	12	Carpentry
Dabaga	Nyota ya Asubuhi	86	Carpentry, Tailoring, and Masonry
Ng'uruhe	Pomerini	16	Carpentry, Tailoring and Cookery
Total	6	360	

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.5.2 Adult Education (AE)

Adult education program is a program of providing education to adults. Kilolo District is implementing this program by having 105 centers which are distributed in different wards. There was a small enrollment of 15 adults at these centers in 2010 and 2011. For MEMKWA the enrollment was in the wards of Nyalumbu and Ibumu with an enrollment of 62 students and 29 respectively for the year 2012. Nyalumbu ward enrolled 49 students in 2011.

Table 5.59: Number of Adult Education Centers and Total Enrolments by Ward, Kilolo District, 2011 and 2012

Ward	Number of centers		Centers enrolment		MEMKWA enrolment	
	2011	2012	2011	2012	2011	2012
Image	0	0	1	1	0	0
Irole	2	2	2	2	0	0
Ilula	0	0	0	0	0	0
Uhambingeto	3	3	0	0	0	0
Udekwa	1	1	2	2	0	0
Mahenge	3	3	0	0	0	0
Mtitu	3	3	1	1	0	0
Dabaga	1	1	2	2	0	0
Ukumbi	2	2	0	0	0	0
Ukwega	3	3	2	2	0	0
Bomalang'ombe	0	0	0	0	0	0
Idete	4	4	3	3	0	0
Masisiwe	4	4	0	0	0	0
Ng'uruhe	1	0	0	0	0	0
Ng'ang'ange	1	1	0	0	0	0
Ihimbo	3	3	0	0	0	0
Lugalo	3	3	0	0	0	0
Nyalumbu	1	1	0	0	49	62
Mlafu	0	0	0	0	0	0
Ibumu	1	1	0	0	0	29
Ruahambuyuni	1	0	0	0	0	0
Kimala	1	0	2	2	0	0
Total	38	35	15	15	49	91

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.5.3 Special Education



Availability of Special Schools for disabled children provides opportunity of studying for disabled children in the district

The issue of disability has gained recognition worldwide. This is due to the fact that the level of disability appears to be on the increase in most societies. Hence, it is important to prepare programme for the disabled pupils to get special education according to their type of impairment. According to Table 5.60 number of pupils who were visually impaired was 34 in 2012 which is an increase of 6 pupils from 2011. In this category there were a small number of blind pupils.

The Programme for the deaf started in 2011 with the enrollment of 12 pupils. The number increased to 22 in 2012. The percentage of the visually impaired pupils was higher than that of the deaf in both 2011 and 2012. In 2011 the percentage of the impaired was 70 while that of the deaf was 30. In 2012 the impaired were 61 percent and the percentage of deaf was 39.

Table 5.60: Number of Pupils Enrolled by Type of Impairment; Kilolo District; 2011 and 2012

Type of Impairment	Number of Pupils Enrolled							
	2011				2012			
	M	F	Total	Percent	M	F	Total	Percent
Visual impairment	18	10	28	70	21	13	34	61
Deaf	10	2	12	30	12	10	22	39
Total	28	12	40	100	33	23	56	100

Source: District Executive Director's Office (Education Department), Kilolo District, 2013

5.3 Water Supply and Sanitation

5.3.0 Introduction

Kilolo district is relatively well endowed with water resources. The sources include constructed or improved traditional shallow wells, pipe water schemes, streams and rivers, dams, springs, bore holes and harvested rain water. Unfortunately, most of the natural water sources are not safe because they are not protected. The 2002 Population Census shows that, 51 percent of the people accessed piped water and protected wells and springs as their main source of drinking water. A lot of work has been done to improve water supply in the district. Findings show that, at the end of 2012, about 57.9 percent of population accessed to piped water and protected wells and springs as their main source of drinking water.

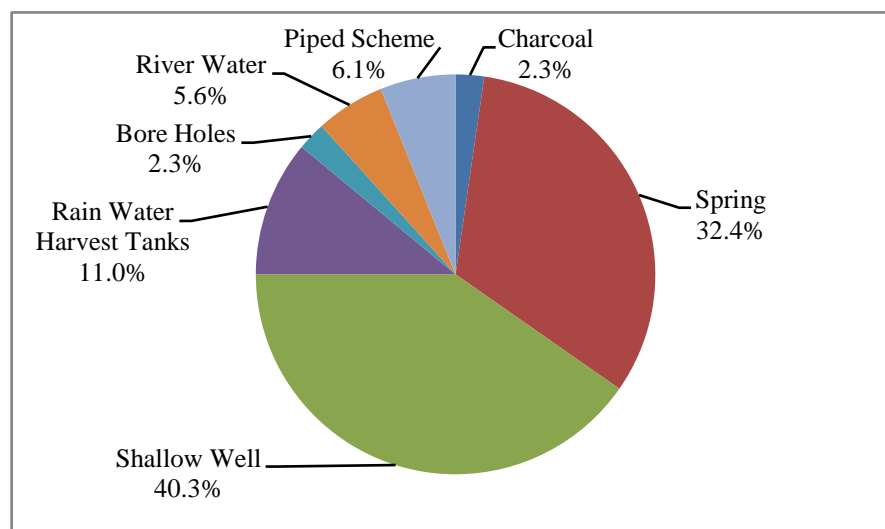
5.3.1 Rural Water Supply



Natural springs are among of major sources of water supply in the rural areas of Kilolo district.

River Ifinga is one of the natural spring water sources in the district.

Owing to the topographic nature and weather of Kilolo District, natural springs are second major sources of water supply in rural areas, used by 32.4 percent of all the households. Figure 34 shows that shallow wells was the leading water source utilized by 40.3 percent of the households followed by rain water harvest tanks (11 percent), piped water (6.1 percent), river water (5.6 percent) and others (Bore holes and water from charcoal dams) at a total of 4.6 percent.

Figure 34 : Percentage of Rural Water Sources by Types, Kilolo District, 2012

Source: District Executive Director's Office (Water Supply and Sanitation Department), Kilolo District, 2013

Table 5.61 shows number and type of rural water sources available by ward in Kilolo District. In 2012, the District had 403 different sources of water in rural areas, of which 19.6 percent of them were not working. The most affected source was bore holes (70 percent) shallow wells (40.4 percent) and piped schemes (19.2 percent).

Table 5.61: Number and Type of Rural Water Sources by Ward - Kilolo District, 2012

Ward	Charco Dam		Spring		Shallow Well		Rain Water Harvest Tanks		Bore Holes		River Water		Piped Scheme	
	W	NW	W	NW	W	NW	W	NW	W	NW	P	S	W	NW
Image	2	0	5	0	2	0	0	0	0	0	0	0	4	0
Irole	0	0	1	0	1	9	0	0	0	0	1	0	1	0
Ilula	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Uhambingeto	3	0	1	0	6	12	23	0	0	6	0	0	2	2
Udekwa	0	0	4	0	7	3	0	0	1	0	1	0	1	0
Mahenge	1	0	4	0	8	5	1	0	1	1	1	0	1	1
Mtitu	0	0	4	0	15	4	9	0	0	0	1	0	2	0
Dabaga	0	0	10	0	1	1	4	0	0	0	1	0	1	0
Ukumbi	0	0	4	0	10	8	1	0	0	0	2	0	2	0
Ukwega	0	0	6	0	6	2	0	0	0	0	1	0	0	0
Bomalang'ombe	0	0	12	0	0	0	1	0	0	0	3	0	1	0
Idete	0	0	14	0	0	0	2	0	0	0	2	0	0	0
Masisiwe	0	0	20	0	0	0	1	0	0	0	2	0	1	0
Ng'uruhe	0	0	5	0	21	15	0	0	1	0	1	0	1	1
Ng'ang'ange	0	0	6	0	0	0	0	0	0	0	1	0	0	0
Ihimbo	0	0	3	0	3	1	0	0	0	0	2	0	0	0
Lugalo	1	0	3	0	3	2	0	0	0	0	0	0	1	0
Nyalumbu	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mlafu	0	0	7	0	5	2	0	0	0	0	0	0	1	1
Ibumu	0	0	3	0	2	0	0	0	0	0	0	0	2	0
Ruahambuyuni	0	0	1	0	9	3	0	0	0	0	2	0	0	0
Kimala	0	0	15	0	0	0	1	0	0	0	2	0	0	0
Total	7	0	128	0	99	67	43	0	3	7	23	0	21	5
Total by Type	7		128		166		43		10		23		26	
Percent Working	1.7		31.8		41.2		10.7		2.5		5.7		6.5	

Note: W= Working, NW= Not Working, P=Permanent, S=Seasonal

Source: District Executive Director's Office (Water Supply and Sanitation Department), Kilolo District, 2013

In order to provide adequate supply of potable water to the residents of Kilolo district, different types of water technologies are being used. Table 5.62 shows the number and type of water delivery technologies used in rural water schemes by ward in Kilolo district in 2012. Table 5.62 show that; hand pump

technology is commonly used in supplying water to the rural population of Kilolo District, followed by gravity piped technology. Ng'uruhe ward is leading by having 21 working hand pumps followed by Ukumbi with 10 hand pumps, and Ruaha Mbuyuni ward which had 9 working hand pumps (Table 5.62).

Table 5.62: Number and Type of Water Delivery Technologies Used in Rural Water Schemes by Ward, Kilolo District, 2012

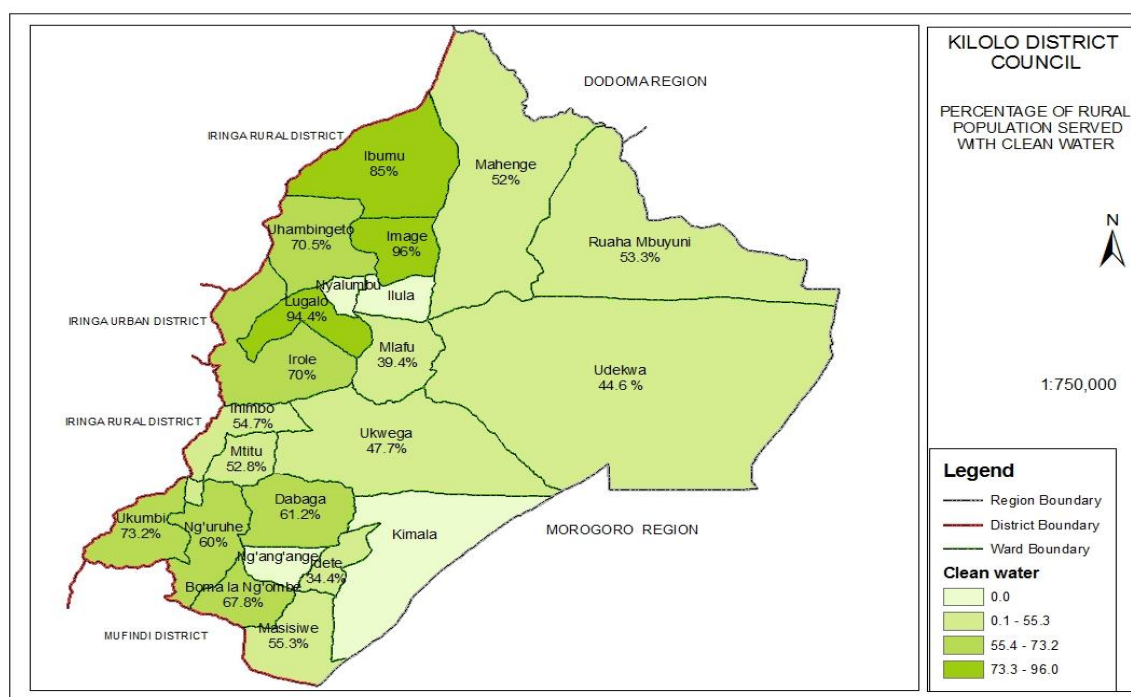
Ward	Type of Technology									
	Electricity Pump		Diesel Pump		Hand Pump		Gravity Piped		Total	
	W	NW	W	NW	W	NW	W	NW	W	NW
Image	0	0	0	0	2	0	3	0	5	0
Irole	0	0	0	0	1	9	1	0	2	9
Uhambingeto	1	1	0	0	6	12	2	0	9	13
Udekwa	0	0	0	0	6	4	1	0	7	4
Mahenge	0	0	0	0	8	5	0	0	9	5
Mtitu	0	0	2	1	3	3	2	0	5	3
Dabaga	0	0	2	0	2	2	0	0	2	1
Ukumbi	0	0	0	0	10	5	2	0	12	5
Ukwega	0	0	0	0	6	6	0	0	7	7
Bomalang'ombe	2	0	0	2	0	0	0	0	2	2
Idete	0	0	0	0	0	0	0	0	1	0
Masisiwe	0	0	0	0	6	0	0	0	6	1
Ng'uruhe	0	0	0	0	21	8	1	1	22	9
Ng'ang'ange	0	0	0	0	0	0	0	0	0	0
Ihimbo	0	0	0	0	3	1	0	0	3	1
Lugalo	0	0	0	0	1	2	1	0	2	2
Mlafu	0	0	0	0	5	2	0	1	6	3
Ibumu	0	0	0	0	5	0	2	0	7	0
Ruahambuyuni	0	0	0	0	9	5	0	0	9	5
Kimala	0	0	0	0	0	0	0	0	0	0
Total	3	1	4	3	94	64	15	2	116	70
Percent Working	2.6		3.4		81.0		12.9		100.0	

Note: W= Working, NW= Not Working

Source: District Executive Director's Office (Water Supply and Sanitation Department), Kilolo District, 2013

Table 5.63 shows percentage of the rural population by ward who were accessing clean water in 2012. Through government initiatives and efforts made by Kilolo residents and voluntary institutions in the district, the

Map 6 : Map of Kilolo District Council showing Percentage of Rural Population served with clean water by Ward; 2012



Source: District Executive Director's Office (Water Supply and Sanitation Department), Kilolo District Council, 2013

Table 5.63: Percentage of Rural Population Served with Clean Water by Ward, Kilolo District; 2012

Ward	Total Rural Population	Population Served with Clean Water	Percent Population Served with Clean Water
Image	9,180	8,813	96
Irole	12,146	8,502	70
Ilula	11,109	0	0
Uhambingeto	10,327	7,745	70.5
Udekwa	5,803	2,588	44.6
Mahenge	10,039	5,220	52
Mtitu	11,328	5,981	52.8
Dabaga	7,787	4,766	61.2
Ukumbi	12,912	9,452	73.2
Ukwega	12,195	5,817	47.7
Bomalang'ombe	11,313	7,670	67.8
Idete	8,059	2,772	34.4
Masisiwe	10,053	5,559	55.3
Ng'uruhe	11,012	6,607	60
Ng'ang'ange	4,123	0	0
Ihimbo	10,212	5,586	54.7
Lugalo	12,359	11,667	94.4
Nyalumbu	15,306	0	0
Mlafu	6,386	2,516	39.4
Ibumu	6,681	5,679	85
Ruahambuyuni	12,151	6,476	53.3
Kimala	7,649	0	0
Total	218,130	126,297	57.9

Source: District Executive Director's Office (Water Supply and Sanitation Department), Kilolo District, 2013

The management of rural water supply schemes in the district, according to the water policy, is carried out by Village Water Committees (VWCs). Table 5.64 shows that most villages in Kilolo District had Village Water Committees by the end of 2012. Only Ilula, Idete, Ng'ang'ange, Nyalumbu, Mlafu, and Kimala wards had no Village Water Committees.

Table 5.64: Number of Rural Village Water Committees, and Village Water Funds (VWFs) by Ward, Kilolo District as at 31.12. 2012

Ward	Village Water Committees Members			Village Water Fund (VWF)/Water Users Group (WUG) in Shs
	Male	Female	Total	
Image	5	4	9	5,800,000
Irole	2	1	3	800,000
Ilula	0	0	0	0
Uhambingeto	14	12	26	1,480,612.00
Udekwa	5	5	10	2,200,000
Mahenge	4	3	7	8,708,041.00
Mtitu	4	3	7	4,200,400.00
Dabaga	8	6	14	4,500,480.00
Ukumbi	4	3	7	500,000
Ukwega	4	3	7	2,800,600.00
Bomalang'ombe	8	6	14	3,921,247.00
Idete	0	0	0	0
Masisiwe	5	3	8	1,590,000.00
Ng'uruhe	4	3	7	7,300,800.00
Ng'ang'ange	0	0	0	0
Ihimbo	4	3	7	4, 410,446.00
Lugalo	3	2	5	820,000
Nyalumbu	0	0	0	0
Mlafu	0	0	0	0
Ibumu	5	4	9	1,200,000
Ruahambuyuni	0	0	0	0
Kimala	0	0	0	0
Total	79	61	140	45,822,180

Source: District Executive Director's Office (Water Supply and Sanitation Department), Kilolo District, 2013

5.3.2 Urban Water Supply

When considering safe water supplies in urban areas, apart from normal domestic needs, allowance has to be made for water for industrial and commercial needs. The concentration of the service sector also has a demand to be met. Some quantities of water also go towards the cleaning up of the crowded environment and for irrigation of urban grown horticultural crops. It is estimated that 50.5 percent of the Kilolo district's urban population were

served with clean water in 2012. This coverage is less good than that of the rural areas as may be expected.

The situation in regard to water supply in the urban areas is shown in Table 5.65. It may be observed that there were about 8 working water sources in Ilula urban areas and the same was in Kilolo urban area.

Table 5.65: Number and Type of Urban Water Sources by Ward, Kilolo District, 2012

Ward	Spring		Shallow Well		Piped Scheme		Total	
	W	NW	W	NW	W	NW	W	NW
Kilolo Urban	4	0	2	3	2	0	8	3
Ilula urban	2	0	4	2	2	0	8	2
Total	6	0	6	4	4	0	16	4

Note: W= Working, NW= Not Working

Source: District Executive Director's Office - Kilolo District, 2013

The urban population of Kilolo District is mostly fed by 9 hand pumps water supply systems, 5 gravity piped, and 2 diesel pumps which are located at Kilolo and Ilula townships (Table 5.66). All of the piped schemes are from nearby springs.

Table 5.66: Number of Water Schemes by Type of Technology and Ward, Kilolo District, 2012

District, 2012								
Ward	Type of Technology						Total	
	Diesel Pump		Hand Pump		Gravity Piped			
	W	NW	W	NW	W	NW	W	NW
Mtitu	2	0	8	3	1	0	13	4
Ilula	0	0	1	1	2	0	3	1
Total	2	1	9	4	5	0	16	5
Percent Working	12.5		56.3		31.3		100	

Source: District Executive Director's Office, Kilolo District, 2013

Information received from the District Water Engineer's Office reveals that in 2012 approximately 1201.0 cubic meters of water were actually supplied per day. The demand for water for urbanites in Ilula and Kilolo townships was estimated to be 4861.6 cubic metres (Table 5.67). The current capacity enables about 50.5 percent of urbanites in the townships to get clean water.

Table 5.67 : Demand and Supply of Water in Urban Areas-Kilolo District, 2012

Ward	Estimated Demand in cubic Meters per day	Actual Supply in cubic Meters per day	Percentage Population Served
Mtiti (Kilolo UWASSA)	2,062.0	382.0	56.0
Ilula - UWASSA	2,799.6	820.8	41.0
Total	4,861.6	1,201.0	50.5

Source: District Executive Director's Office (Water Supply and Sanitation Department), Kilolo District, 2013

5.3.3 Water Supply Personnel

Unlike health and education sectors, all personnel for the water sector (rural and urban) are located at the district headquarters. This is a new setup, different from the previous setup where all technical staffs were posted at ward headquarters. The situation in Kilolo District is a bit different. Out of 7 staff, one is in Ilula Ward, and the rest were at the district headquarters, in Mtiti ward. The 2012 water personnel consisted of one engineer, seven technicians and one plumber (Table 5.68).

Table 5.68: Type and Number of Water Supply Personnel by Ward, Kilolo District, 2013

Ward	Engineers	Technicians	Plumber	Pump Attendant	Pump Mechanics	Total
Mtiti	1	3	1	0	1	6
Ilula	0	1	0	0	0	1
Total	1	6	1	1	1	7

Source: District Executive Director's Office (Water Supply and Sanitation Department), Kilolo District, 2013

5.3.4 Sanitation

Kilolo District does not have a waste disposal system. Therefore, there are no proper ways of disposing of solid waste and waste water. The 2002 Population Census results show that 99 percent were using traditional pit latrines, and about 0.56 had no toilet facilities. The situation has not much changed. In 2012 very few households have septic tanks and the most common way of disposing human waste is through pit latrines. Moreover, with the lack of cesspit emptier and solid waste dump trucks, over-flooding sewage and uncollected garbage pollutes the environment of Ilula and Kilolo townships. At the same time, diarrhoea and water born diseases are rampant in the district due to uncollected animal dung and improper covering of human faeces during the rainy seasons. Table 5.69 shows the distribution of basic sanitation facilities in Kilolo District, and depicts that, 23 percent of households have no toilet facilities; which is an alarming situation.

Table 5.69: Availability of Toilet Facilities by Ward, Kilolo District, 2012

Ward	Estimated Total Number of Households	Total Number of Households with Toilets	Percentage of Households with Toilets	Total Number of Households without Toilets	Percentage of Households without Toilets
Image	2,186	1,596	73	590	27
Irole	2,962	1,925	65	1,037	35
Ilula	2,710	2,195	81	515	19
Uhambingeto	2,359	1,869	79	490	21
Udekwa	1,382	1,037	75	345	25
Mahenge	2,642	1,638	62	1,004	38
Mtitu	2,575	2,189	85	386	15
Dabaga	1,693	1,269	75	424	25
Ukumbi	3,003	2,402	80	601	20
Ukwega	2,489	2,041	82	448	18
Bomalang'ombe	2,571	1,774	69	797	31
Idete	1,679	1,276	76	403	24
Masisiwe	2,234	1,765	79	469	21
Ng'uruhe	2,503	1,927	77	576	23
Ng'ang'ange	959	690	72	269	28
Ihimbo	2,321	1,741	75	580	25
Lugalo	3,090	2,596	84	494	16
Nyalumbu	3,827	3253	85	574	15
Mlafu	1,520	1,140	75	380	25
Ibumu	1,554	1,290	83	264	17
Ruahambuyuni	2,964	2,519	85	445	15
Kimala	1,627	1,237	76	390	24
Total	50,850	39,369	77	11,481	23

Source: District Executive Director's Office (Water Supply and Sanitation Department), Kilolo District, 2013

5.3.5 Investment Opportunities in Water Supply

Kilolo District is endowed with a lot of springs and rivers. Although the district has made some efforts in providing safe and clean water to its urban population, this is not the case in the rural areas. Investment is needed in regard to the supply of pipes, water tanks, pumping equipment and the increase of the capacity of water storage. There are also opportunities for tapping and bottling clean and safe water from the numerous springs in the district that can be sold within the country or exported. This can increase the income of the district and its people.

CHAPTER SIX

Other Development Issues

6.0 Introduction

Chapter six discusses other development issues including gender empowerment such as Day Care Centres, Women Economic Groups, Youth Economic Groups, Cooperative Development (SACCOS) and other cooperative activities as well as Women's participation in managerial, political, professional and technical fields.

6.1 Gender Empowerment

Gender empowerment, among others, is to ensure all sex, particularly women, are fully participating in policy and decision-making processes and in all aspects of economic, socio-cultural and political life. Various measures had already been put in place to minimize time spent by women and girls in attending to home activities and allow more time to be used in the above mentioned activities. These measures include the use of family planning, opening and operating of day care centres, establishment of women economic groups, participation in SACCOS, CBOs and other cooperative activities. These initiatives are also implemented in Kilolo District since 1990s.

6.1.1 Day Care Centres

As per 2002 Census, population distribution and sex ratio of Kilolo District reveals a District Sex Ratio of 95 males for every 100 females compared to Regional Sex Ratio of 90 males for every 100 females. This is a significant observation because a large part of the female population remains in the district most of the year. Running of day care centres will enable mothers to contribute significantly to the socio-economic development of the district.

Unfortunately, no centres have been established in Kilolo District. There is a need for the government to have purposive plans to support the establishments of such centres.

6.1.2 Women Groups

Women in Kilolo District are industrious such that, a good number of them are engaged in various economic activities. In order to respond to the needs of women emancipation in society, women economic groups have been established to cater for to-day's women emerging needs. These women groups which are engaged in various micro economic activities such as horticulture, agriculture, poultry keeping, tailoring, sewing, tie and dye, pottery, bakery food and beverages, etc. will increase the growth of the district's economy. Table 6.1 shows that, Kilolo District had 56 women economic groups; the majority of which are located in Mtitu and Mahenge wards. Mtitu ward received loan assistance of Tsh 2,300,000 or 25.6 percent followed by Mahenge ward, Tshs 1,100,000 or 12.2 percent of all loan; while Ilula, Uhambingeto, and Dabaga were the least with no loan received in the financial year 2011/12.

The findings reveal that more women groups should be encouraged, particularly in Ilula, Uhambingeto, and Dabaga wards, and the remaining wards with no women groups. The participation of women in groups should go hand by hand both in provision of entrepreneurial skills as well as loans for transforming their groups into real 'Small and Medium Enterprises (SMEs)'. SMEs are often considered to be a key source of productivity, growth, and job creation and, hence, their performance and the environment in which they perform, are seen as an important factor for economic development. The promotion of women development projects in Kilolo district remain a challenge to the districts authorities.

Table 6.1: Number of Women Economic Groups by Ward, Kilolo District, 2011 and 2012

Ward	2011		2012				
	Total no. of Groups	Total Members	Total no. of Groups	Total Members	No. of Groups Assisted	Total Loaned Tshs.	Percent Loan
Image	1	15	1	16	1	600,000	6.7
Irole	5	30	5	30	1	600,000	6.7
Ilula	6	35	2	26	2	0	0
U/ngeto	2	12	0	0	0	0	0
Mahenge	8	49	9	55	3	1,100,000	12.2
Mtitu	8	66	11	61	4	2,300,000	25.6
Dabaga	2	11	0	0	0	0	0
Ukumbi	2	15	2	15	1	600,000	6.7
Ukwega	4	24	4	24	2	800,000	8.9
Bomang'ombe	2	10	1	5	1	500,000	5.6
Idete	4	23	1	5	1	400,000	4.4
Masisiwe	4	30	4	30	1	600,000	6.7
Ng'uruhe	4	22	4	22	1	500,000	5.6
Ihimbo	1	5	1	5	1	500,000	5.6
Lugalo	3	18	3	18	1	500,000	5.6
Total	56	366	48	312	20	9,000,000	100

Source: District Executive Director's Office Kilolo District, 2013

6.2 Youth Economic Groups

Employment of youths in Kilolo District is mainly in the agricultural sector and other informal sectors, mainly in form of self-employment. However, self-employment even in these sectors needs some preparation and some capital input. Access to entrepreneurship skills as well as credit is therefore absolutely essential if these youths are to develop their potential and contribute to the district economy and poverty eradication. Availability of training and credit facilities depends on the formation of mutual benefit economic groups basically because many youths have no collateral. Youths can be provided with entrepreneurial skills and access to credit through these groups, which provide supervision and guarantee repayment of the loans.

Based on this paradigm of helping youth to generate income for poverty alleviation, youth have initiated and formulated economic groups. Until the end of 2012, Kilolo District had managed to have youths organize themselves into 9 economic groups with a total membership of 89 (Table 6.3). Nevertheless, no youth groups have managed to secure loan from any financial institutions or District Council; and youth participation in economic groups still is insignificant in the district.

At ward level, Table 6.2 shows that only 5 out of 22 wards had youth economic groups. These were Mtitu, Ng'uruhe, Ilula, Nyarumbu, and Ruaha Mbuyuni. Ilula Ward had the largest number of groups (3 groups) with more registered youth members than other wards in the district.

Comparing with the number of youth population in the district, the reported youth groups and their members are not encouraging. The district authorities together with NGOs should take initiative to raise youth awareness by sensitization campaign on the importance of organizing themselves into youth economic groups for easy access of loans from financial institutions and betterment of their livelihoods in the future.

Table 6.2: Youth Economic Groups and Total Money Loaned by Ward, Kilolo District, 2012

Ward	Total Number of Registered groups	Total Members	No. of Groups Getting loans in 2011	Total Loans in 2011 (Tshs)	Total Loans of 2011 Recovered as at 31 Dec. 2012 (TShs)	Total Loans not Recovered as at 31 Dec. 2012 (TShs)
Mtitu	2	10	0	0	0	0
Ng'uruhe	1	25	0	0	0	0
Ilula	3	34	0	0	0	0
Nyalumbu	1	5	0	0	0	0
R/mbuyuni	2	15	0	0	0	0
Total	9	89	0	0	0	0

Source: District Executive Director's Office Kilolo District, 2013

6.3 Children and Vulnerability

Vulnerability refers to the risk of adverse outcome, such as impoverishment, ill health, social exclusion. It reflects not only the likelihood that an unpleasant event occurs, but also lack of capacity to cope with it. It is therefore the result not only of individual mishap, but also the social conditions which follow from systematic differences in the flows of resources and opportunities which themselves influence capabilities.

If vulnerability is a reflection of lack of control, then all children, and especially young children, are vulnerable simply because of their age; they depend on others to provide for their basic needs. Increasing physical and mental maturity usually leads to growing capability for self-provisioning, but during the period of childhood and adolescence, children and young people continue to need special care and support. While most children in Tanzania are cared for and protected by their families and communities, many are not so fortunate. Aspects of child vulnerability include:

- Child mortality and malnutrition;
- Orphan hood and HIV/AIDS;
- Children in household headed by children or household with elderly adults only;
- Education and child labour; and
- Gendered abuse.

Research results indicate that, orphaned children are poorer than children who are not orphaned. According to the 2002 Census, in Kilolo District 46 percent of the population were in the 0-14 age group. Of the population aged 0-17 years, 1.82 percent was orphans, and 5.6 of the population were widows. The incidence of orphan-hood was higher among male children (1.89 percent) compared to female children (1.74 percent). HIV/AIDS has focused much attention on the plight of orphaned children. In order to rescue the most vulnerable children, Kilolo District council in collaboration with community

organizations like CAMFED(Campaign for Female Education) responsible for school fees, uniform and other needs, Amani Centre, IOP (Ilula Orphanage Programme), TUNAJALI, MAWAKI (Maenedeleo ya Watu wa Kilolo), and Ilula Kwaya-Roman Catholic Parish have made initiative to serve these children with their necessary needs. Table 6.3 indicates that, 59 percent of population in age group 0-17 years was girls who were most vulnerable.

Table 6.3 also indicates that many efforts are needed to help girls in Nyarumbu, Uhambingeto, Mahenge, Ilula, Irole, Mlafu, Lugalo and Ng'uruhe Wards. In Nyarumbo ward, boys and girls are almost equal in number hence special attention is needed to care for both sexes. Examining individual wards (Table 6.3), there are more girls than boys in Mlafu (78 percent), Lugalo (76 percent), Ilula (69 percent), Mahenge (68 percent) and Ng'uruhe (60 percent) as well.

The poverty and generalized insecurity which was the condition of so many Kilolo residency, inevitably affects children. A district framework for social protection must address the overwhelming facets of life for large numbers of children. Individuals who require special support may be identified through a combination of community and local government systems, with strengthened organized community groups to care for the most vulnerable. Communities are now being asked to identify the most vulnerable children in the context of programs of support largely funded as a result of concern about the impact of HIV/AIDS.

Table 6. 3: Number of Most Vulnerable Children by Ward - Kilolo District, 2012

Ward	Total Children Aged 0 - 17	Girls		Boys		Total
		Number	Percent	Number	Percent	
Image	156	86	1.1	70	0.9	156
Irole	817	417	5.3	400	5.1	817
Ilula	542	373	4.7	169	2.1	542
Uhambingeto	779	479	6.1	300	3.8	779
Udekwa	134	59	0.7	75	0.9	134
Mahenge	675	458	5.8	217	2.7	675
Mtitu	72	37	0.5	35	0.4	72
Dabaga	78	40	0.5	38	0.5	78
Ukumbi	160	85	1.1	75	0.9	160
Ukwega	131	72	0.9	59	0.7	131
Bomalang'ombe	102	54	0.7	48	0.6	102
Idete	460	240	3.0	220	2.8	460
Masisiwe	133	70	0.9	63	0.8	133
Ng'uruhe	504	302	3.8	202	2.6	504
Ng'ang'ange	152	83	1.1	69	0.9	152
Ihimbo	40	20	0.3	20	0.3	40
Lugalo	406	307	3.9	99	1.3	406
Nyalumbu	1,218	618	7.8	600	7.6	1,218
Mlafu	403	314	4.0	89	1.1	403
Ibumu	313	190	2.4	123	1.6	313
Ruahambuyuni	478	278	3.5	200	2.5	478
Kimala	149	79	1.0	70	0.9	149
Total	7,902	4,661	59.0	3,241	41.0	7,902

Source: District Executive Director's Office, Kilolo District, 2013

6.4 Savings and Credit Cooperative Societies (SACCOS)

Majority of people in Kilolo District as per 2002 census, 90 percent of the population are engaged in agriculture. But employment in the agriculture requires some initial preparations including capital. Access to credit is an important facilitator to develop their potentials as contributors to the district economy. Kilolo District in that regard, had managed to establish 11 cooperative development associations commercially known as Savings and Credit Cooperative Societies or SACCOS in all 22 wards as shown in Table 6.5.

Proportion of women to the total SACCOS members were 31.1 percent compared to 69 percent of male (Table 6.4). At ward level, the share of women as members was largest in Ruaha, Ilula and Mtitu Wards. On other hand, Dabaga Ward had the lowest number (0.3 percent) of women members, followed by Ukumbi (1.3 percent).

The most important indicator of the effectiveness of cooperative development is the amount of funds deposited in the bank and the amount of loans granted to the members. Table 6.4 shows that a total of Tshs. 790,289,154 was deposited in 11 SACCOS Accounts by 2012. At the same time, a total of TShs. 4,911,509,650 was credited to individual members in 2012. Ilula Ward which accounted for about 40.6 percent of total deposits, received about 65.2 percent of the total loans made by 11 SACCOS in the district, followed by Mtitu Ward 28.1 percent and Ruaha Mbuyuni 3.7 percent during the same period.

Based on number of SACCOs, funds deposited and amount granted as a loan to members, the finding implies that the district needs to put more effort in encouraging the rural population to accord high priority in the formation of the much needed SACCOs and Livestock Co-operative Societies in the district. This is imperative since the loans and credit facilities such as SELF and Empowerment Funds will be channeled through SACCOs.

Table 6.4: Service and Credit Cooperative Groups (SACCOG) by Ward, Kilolo District, 2012

Ward	No. of Registered SACCOS		Total Members		Total Value of Shares/ Savings (Tshs) as at 31.12.2012	Total Money loaned to members Jan -Dec 2012	Total loans recovered , Jan-Dec 2012
	Active	Dormant	Male	Female	Tshs	Tshs	Tshs
Image	0	0	0	0	0	0	0
Irole	0	0	0	0	0	0	0
Ilula	1	0	879	295	320,500,000	3,200,300,000	2,979,300,000
U/ngeto	0	0	0	0	0	0	0
Udekwa	1	0	265	102	9,700,000	12,650,000	6,500,000
Mahenge	2	0	156	117	43,075,000	80,659,650	56,959,650
Mtitu	3	0	659	329	325,525,000	1,380,575,000	1,014,385,084
Dabaga	0	1	49	28	4,270,000	11,050,000	6,115,000
Ukumbi	0	1	126	49	15,774,154	25,000,000	12,400,000
Ukwega	0	0	0	0	0	0	0
Bomang'ombe	0	0	0	0	0	0	0
Idete	0	0	0	0	0	0	0
Masisiwe	0	0	0	0	0	0	0
Ng'uruhe	1	0	89	72	11,080,000	21,975,000	19,325,000
Ng'ang'ange	0	0	0	0	0	0	0
Ihimbo	0	0	0	0	0	0	0
Lugalo	0	0	0	0	0	0	0
Nyalumbu	0	0	0	0	0	0	0
Mlafu	0	0	0	0	0	0	0
Ibumu	0	0	0	0	0	0	0
Ruahambuyuni	3	0	304	147	60,365,000	179,300,000	143,500,000
Kimala	0	0	0	0	0	0	0
Total	11	2	2,527	1,139	790,289,154	4,911,509,650	4,238,484,734

Source: District Executive Director's Office (Cooperatives Department), Kilolo District, 2013

6.4 Women's Participation in Policy and Decision-Making

Despite efforts made by international and local organization together with government efforts, participation of women in managerial posts in Kilolo District is very disappointing as shown in Table 6.5. The data provided, gives general indication of women participation in policy and decision – making in the district.

Table 6.5 illustrates the strides that have being taken by women in their desire to emancipate themselves from their present position to a much higher position in society by participating in all spheres in the society. Ilula Ward has the highest number of women than men occupying high positions in managerial, technical and political spheres than in other wards. Other wards with women dominating in such positions are Mtitu, Nyalumbu, Lugalo and Irole.

Table 6.5: Participation in Managerial, Political, Professional and Technical Posts by Gender by Ward, Kilolo District, 2012

Ward	Managerial		Professionals/ Technicians		Politicians (MPs, DC & Councilors)		All Decision Making Positions		Total
	Male	Female	Male	Female	Male	Female	Male	Female	
Mahenge	5	1	60	27	1	2	66	30	96
Irole	6	1	59	67	1	0	66	68	134
Ukumbi	4	2	67	41	1	0	72	43	115
Idete	4	0	45	26	1	0	50	26	76
Mtitu	4	2	48	84	2	1	54	87	141
Bomalang'ombe	5	0	37	30	1	0	43	30	73
Dabaga	4	2	68	46	1	0	73	48	121
Ilula	6	0	88	122	0	3	94	125	219
Image	5	1	63	39	1	0	69	40	109
Uhambingeto	3	2	42	21	0	1	45	24	69
Udekwa	4	0	31	7	1	0	36	7	43
Ukwega	6	0	54	27	1	0	61	27	88
Ibumu	5	0	28	19	1	0	34	19	53
Ihimbo	5	1	54	37	1	0	60	38	98
Kimala	4	2	31	8	1	0	36	10	46
Lugalo	4	0	55	71	2	1	61	72	133
Masisiwe	4	1	45	12	1	0	50	13	63
Mlafu	3	0	33	28	1	0	37	28	65
Ng'ang'ange	2	1	21	9	1	0	24	10	34
Ng'uruhe	6	0	50	38	1	1	57	39	96
Nyalumbu	7	2	48	83	1	0	56	85	141
Ruaha Mbuyuni	5	0	49	49	1	1	55	50	105
Total	101	18	1,076	891	22	10	1,199	919	2,118

Source: District Executive Director's Office - Kilolo District, 2013

6.5 Investment Opportunities in Development of SACAS and SACCOS

The formation of Savings and Credit Associations in a district is a catalyst in economic undertakings. Kilolo District though has many SACCOS and SACCOG, there are still yet some divisions and wards which have very few of groups and members. Insufficient awareness and knowledge on group formation, organization and credit management are among the reasons attributing to inadequate number of SACAS and SACCOS.

6.6 Financial Institutions

By the end of 2012, NMB and Tanzania Postal Bank were the only banks that were operating in the district. Non-banking financial institution (FINCA) was also in full operation in that respective year. Increasing economic activities and population growth which counted at 218,130 people during 2012 Census exert more pressure to the services rendered by NMB and Postal Bank. This gives opportunity to other banks and other financial services such as PRIDE to operate in the district.

Kilolo District Council

Vision

Kilolo District Council “Intends to provide high quality, sustainable and efficient services.

Mission

To attain its Vision the Mission of Kilolo District Council is in collaboration with the internal and external stakeholders, intends to provide high quality and sustainable services to its community which are derived from participatory approach, democracy, good governance and rule of law and through the use of opportunities and proper use of available and future resources so as to improve the quality of life and increased income by 2025.