



The United Republic of Tanzania

MAKAMBAKO TOWN COUNCIL SOCIO-ECONOMIC PROFILE, 2015





The United Republic of Tanzania

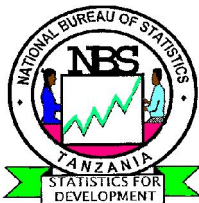
MAKAMBAKO TOWN COUNCIL SOCIO-ECONOMIC PROFILE, 2015

Jointly prepared by

Ministry of Finance,
National Bureau of Statistics

and

Makambako Town Council



National Bureau of Statistics
Dar es Salaam



Makambako Town Council
Njombe

June 2017

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Foreword

The goals of Tanzania's Development Vision 2025 are in line with United Nation's Millennium 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 availability of timely and accurate data and information at all levels.

Problems occurring in both urban and rural areas are many and challenging. Experience shows that delivery of quality social and economic services requires a continuous and sustainable improvement of strategies through community participation from time to time., Indeed, it must be admitted that high primary school enrolment rates recently attained have to be maintained by using abundant resources 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 continue to be high and unemployment triggers mass migration of youths from rural areas to the already overcrowded urban centres.

In addition to that, are health problems due to HIV/AIDS pandemic, the prevalence of which hinders efforts to advance smoothly 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 considerable suffering. AIDS together with environmental deterioration are the new developmental problems which cannot be ignored.

Our efforts to meet both the new and old challenges are hampered by many factors including ill prepared rural development programs followed by weak implementation, monitoring and supervision of these programs. The shortcomings in policy formulation, project identification, design and implementation due to lack of reliable and adequate data and information on urban development process have to be addressed appropriately. The availability of reliable, adequate and relevant qualitative and quantitative data and information at town council level is a pre-requisite for formulating, planning, implementation, monitoring and evaluation of town councils' development programs.

Makambako Town Council prepares this Socio-Economic by using its own funds. The publication of the Makambako Town Council Social-Economic Profile series by the Ministry of Finance in collaboration with the National Bureau of Statistics and the Town Council Management Team should be viewed as a step forward towards finding feasible solutions to the existing problem of data and information gap at town council level.

The Town Council Profile covers a wide range of statistics and information on geography, population, social-economic parameters, social services, economic infrastructure, productive sectors and cross cutting issues. It is believed, such data are vital to many policy makers, planners, researchers, donors and functional managers.

The Makambako Town Council Socio- Economic Profile has taken advantage of the cumulative experience gained in production of various Regional and District Socio Economic Profiles in Tanzania Mainland. It provides valuable information to our clients. Constructive views and criticisms are invited from stakeholders and various readers to enable this profile become a better tool in the formulation and implementation of the country's policies.

Last but not least, I would like to acknowledge with thanks, the contribution made by the Office of the Director of Makambako Town Council, National Bureau of Statistics and other staff of the Town Council who devoted their time and efforts to ensure the successful completion of this assignment.


Vumilia Nyamoga
TOWN DIRECTOR
MAKAMBAKO TOWN COUNCIL

June, 2017

Acronyms

AIDS	Acquired Immuno Deficiency Syndrome
ARI	Acute Respiratory Infections
BCG	Bacillus Calmet Guerin (TB Vaccine)
CBO	Community Based Organization
CBPP	Contagious Bovine Plural Pneumonia
CPR	Classroom Pupil Ratio
DPR	Desk Pupil Ratio
DC	District Council
DPT3/HB3	Diphtheria Pertusis Tetanus 3 rd doze/ Haemoglobin Level
ECF	East Coast Fiver
RVF	Rift Valley Fever
GIS	Geographical Information System
Govt.	Government
Ha	Hectare
HIV	Human Immuno deficiency 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
STD VII	Standard Seven
TANESCO	Tanzania Electric Supply Company
TB	Tuberculosis
TBAs	Traditional Birth Attendants
TC	Town Council
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 Makambako Town Council. Moreover, information about ethnic groups, population distribution, size, trend and other demographic characteristics is also given.

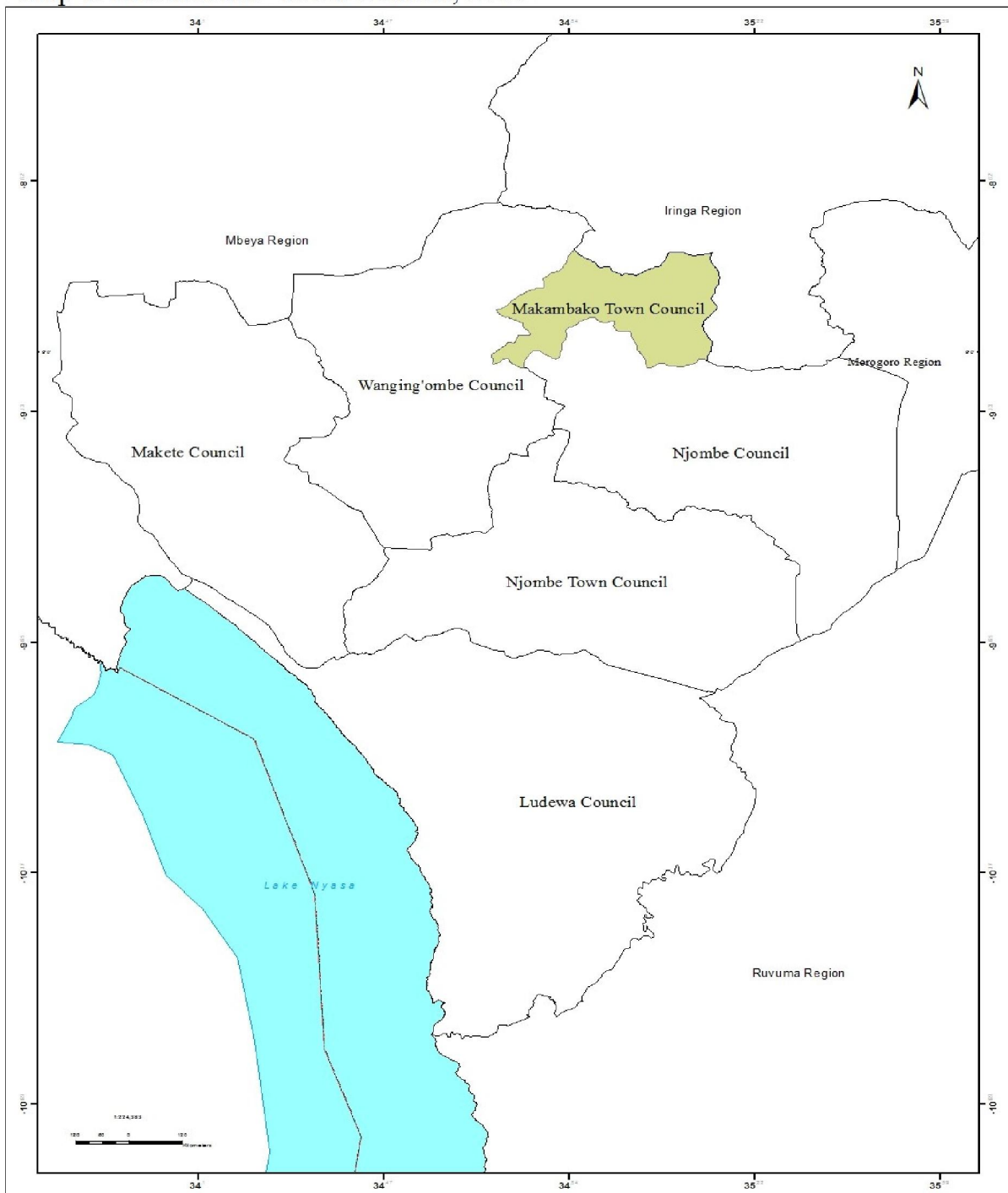
1.1 Geographical Location

Makambako is a small town near the Southwestern plateau of Tanzania. It is a medium – sized town in Njombe Region located roughly 60 kilometers north of Njombe Town. It is strategically located at the junction of the Iringa to Mbeya and Iringa to Songea highways. The town has a rapid economic development as a result it acquired the status of a Town Council in 2012. It is located in a strategic area such that all transport facilities including commercial, passenger and private vehicles travel from Dar es Salaam to Ruvuma, Mbeya or Dodoma regions pass through Makambako Town.

The name “Makambako” originated from a centre in the Makambako ward where big bulls used to be brought to this area to fight against each other. At the end of the fight they were then tied under a tree. Bull owners and passersby renamed that place as Makambako. In Bena language it meant an area where big bulls fight. Until now the trees where the bulls used to be tied still exist and it is honoured as a historical area bearing the name of Makambako.

Historically, Makambako Town was established in 1984 but at that time it was known by its residents as Makambako Ward after the re-establishing the local government. At that time Makambako Ward had eight villages namely Mlowa, Idofi, Mjimwema, Lyamkena, Mwembetogwa, Ikwete, Kiumba and Ubena. In 2012 however, Makambako was officially inaugurated as a Town. Makambako Town was declared a township under the Local Government Law number 8 and through the Local Government Notice number 176 of 1st July 2012 and is one of the four councils in Njombe Region. It lies at the crossings of Longitudes 33⁰05’ and 35⁰08’ east of the Greenwich Meridian and Latitude 8⁰08’ and 9⁰08’ south of the Equator. Other councils in the region include Njombe Town Council, Wanging’ombe District Council, Makete District Council, Njombe District Council and Ludewa District Council. In the south it borders Njombe District Council where it extends up to the south east; in the west it borders Wanging’ombe District Council while in the north and west it borders Mufindi District Council.

Map 1: Makambako Town Council



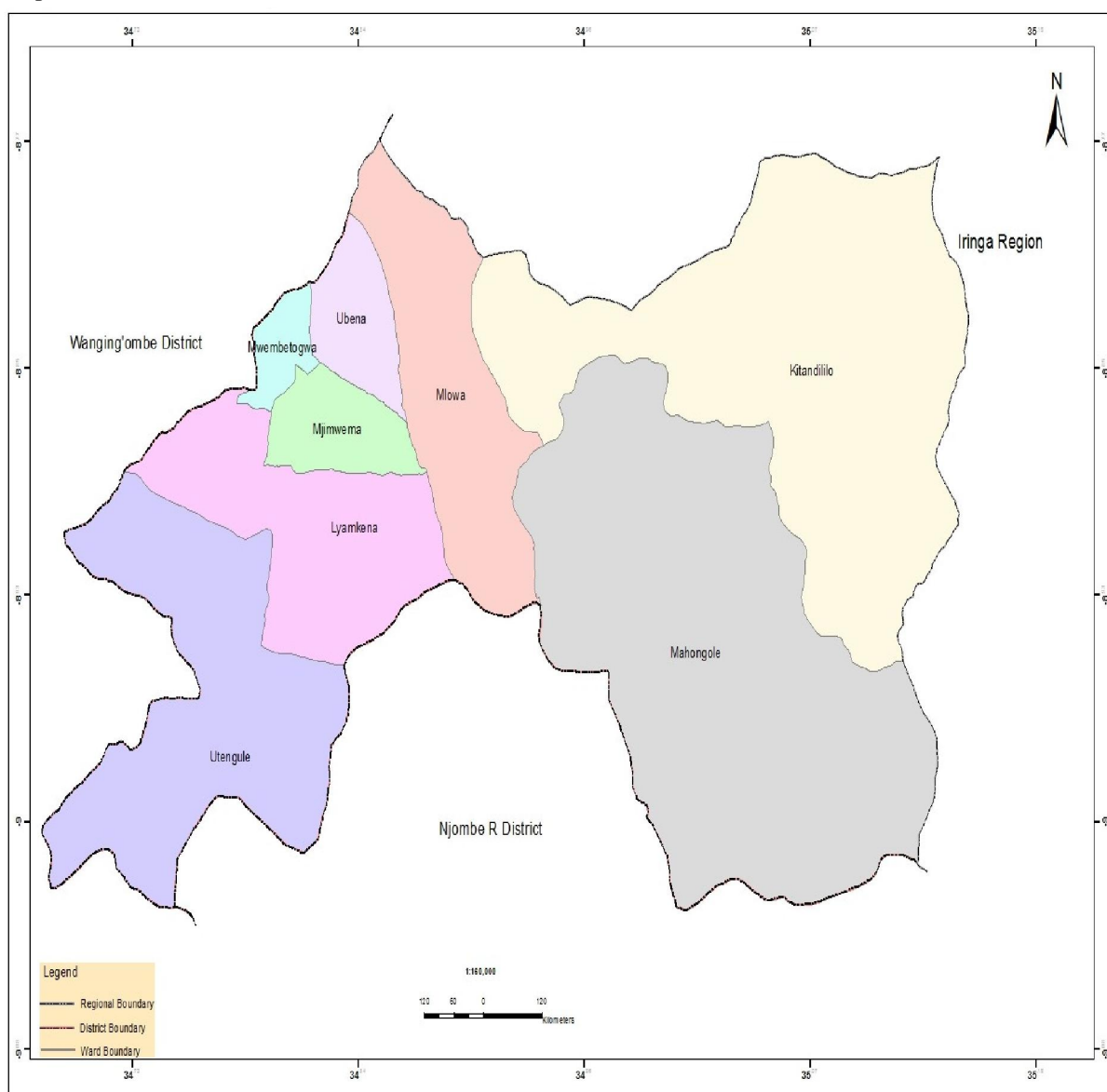
Source: NBS, GIS section, DSM

1.2 Land Area, Land Use Pattern and Administrative Units

Administratively, Makambako Town Council is the smallest council in terms of land area in the region. It has a total surface area of 884sq.kms, equivalent to 4.2 percent of the total regional

surface area. Currently, it is divided into one division with eight wards namely Ubena, Mjimwema, Mlowa, Lyamkena, Mwembetogwa, Mahongole, Kitandililo, and Utengule subdivided into nine streets (*mitaa*) and 79 hamlets (*vitongoji*) distributed unevenly as shown in Map 2 and Table 1.1. With the exception of Ubena, Mjimwema and Mwembetogwa wards which are in the urban area. The other five wards are situated in the sub-urban areas. Politically, the council has one constituency, namely Makambako Mjini. There is a proposal to increase the number of wards to 12, the number of streets to 54, the number of villages to 14 and 67 hamlets because of the population growth.

Map 2: Ward Boundaries, 2013



Source: NBS, GIS section, DSM

Table 1. 1: Land Area and Administrative Units by Ward, Makambako Town Council, 2013

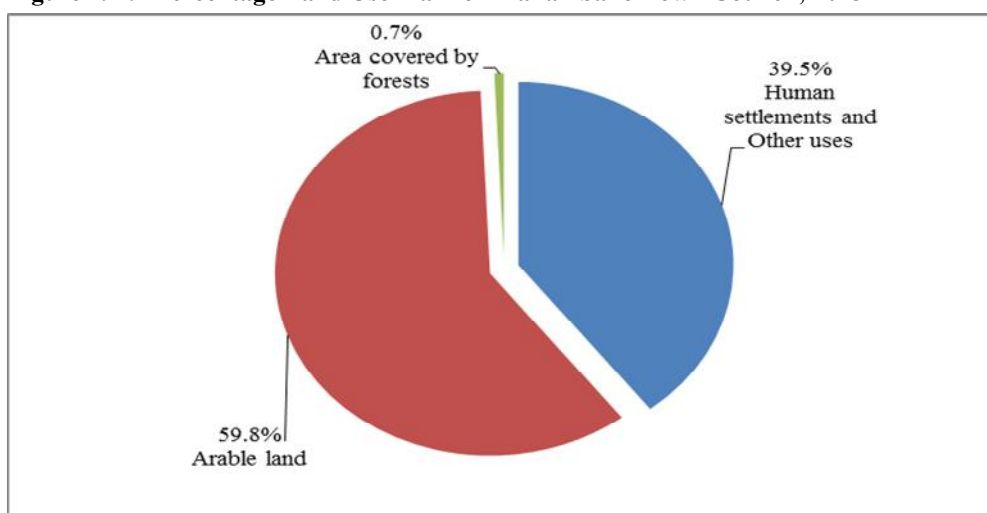
Ward	Land Area (Sq. Kms)	LandArea (Percent)	Streets/Hamlets (Mitaa/Vitongoji)	Average Land Area per Street/Hamlet (Sq. Kms)
Ubena	23.8	2.7	3	7.9
Mjimwema	24.8	2.8	4	6.2
Mlowa	82.1	9.3	5	16.4
Lyamkena	86.2	9.8	4	21.6
Mwembetogwa	11.2	1.3	2	5.6
Mahongole	277.7	31.4	25	11.1
Kitandililo	245.1	27.7	26	9.4
Utengule	132.8	15.0	16	8.3
Total	883.7	100.0	85	10.4

Source: Makambako Town Director’s Office – Land, Natural Resources and Environment Dept 2014

1.2.1 Land Use Pattern

Makambako Town Council has a total surface area of 884 sq.km which is about 4.2 percent of the total area of the Njombe Region. Most of the total land area, 51,600 ha, (59.8 percent) is arable land used for crop cultivation, and the remaining 34,650 ha, (40.2 percent) comprises of either area covered by forest (0.7 percent), human settlements and other uses (39.5 percent). Moreover, area covered by forest in Makambako Town Council includes all area covered by forest reserves, plantation forests, village forests and private forests.

Figure 1. 1: Percentage Land Use Plan for Makambako Town Council; 2013



Source: Makambako Town Executive Director’s Office, 2014

1.3 Climate, Soil and Topography

With exception of very few small hills, the council is relatively homogeneous with gently undulating plains intersected by seasonally flooded valley bottom soil. In the extreme northeast and northwest this pattern gives way to an open flat land suitable for cultivation that is covered by well or moderately drained soils with textures of sandy loams. The soils vary between red lateritic earth and grey sand to silt hardpan and iron crust “mbuga”. Moreover, there are sandy clay loams and reddish coloured soils on inter flute slopes that are saturated with water within 100cms of the surface during the growing season. However, a large proportion of these soils has high nutrient contents and are considered suitable for a wide range of both food and cash crops which have the potential for profitable cultivation. Therefore, Makambako Town Council soils can best be described as moderately fertile.

The Council experiences mild and sunny weather throughout the year, with maximum temperature in September and October while the minimum temperature occurs in June/July. Also, the Council experiences two distinct seasons; dry season extending between May and October and one rainy season. The rainy season is between October and November and ends sometime in March and April. The annual rainfall ranges from 600 mm to 1,000 mm.

In spite of a significant variation of climatic conditions throughout the year the weather is attractive because of its forest covers. The highest temperature occurs in August and October, during which the recorded maximum temperature is about 20 degrees centigrade. The minimum temperature occurs in June and August when the temperatures decrease to 15 degrees centigrade.

1.4 Drainage System

Makambako Town Council forms part of the vast northern plateau of Njombe Region, an area of flat and gently undulating plains broken in places by one or two small hills. Most parts of the council lie between 1,000 meters and 2,000 meters above sea level and form the main watershed separating rivers flowing south eastward into the Mufindi woodlands and finally into the Njombe DC plains.

There are three main streams with several tributaries, which form a number of alluvial flood plains in the council. The Fukulwa stream, though not in Makambako Town Council, supplements the over increasing demand of water supply for both industrial and domestic purposes in the Council. The stream flows through Kifumbwe and Mtanga villages in Makambako TC and finally ends up in the Mufindi swamps in the Mufindi District Council. The second stream namely Mrucha stream starts at Mahongole Village, flows through Manga Village and passes through Kitandililo Village in Kitandililo Ward, and finally joins Mufindi swamps in

the southern side of the council in Mufindi District Council. The third stream starts at Usetule Village in Mahongele Ward, flows through Ibatu and finally pours water into Mufindi swamps in Mufindi DC.

1.5 Population

1.5.1 Ethnic Groups

Generally inhabitants are mainly of the Bena tribe. However, the composition of the current population is getting more cosmopolitan due to a rapid increase in the number of workers in government offices, businessmen and fortune seekers from different district councils of Njombe Region as well as other regions in Tanzania Mainland. Nevertheless, the Council has three main ethnic groups namely: Bena, Hehe, and Kinga. The majority of Bena occupy the largest part of the town council area which covers all wards with no exception, followed by Hehe occupying four wards which are Kitandililo, Mjimwema, Ubena and Mwembetogwa. In addition, the council is also occupied by other small ethnic tribes including the Kinga who occupy three wards, namely Ubena, Mjimwema and Mwembetogwa.



1.5.2 Population Size and Growth

Like other councils in Njombe Region, the population of Makambako Town Council has experienced a significant increase in growth. The council's growth of the population during the 1988 to 2002 census periods was 76.3 percent, but dropped to 44.3 percent between 2002 and 2012. According to the 2002 and 2012 Population and Housing Censuses the population of the council increased from 91,079 (estimated population) in 2002 before reaching 93,827 in 2012. This resulted in an increase of only 2,748 people from 2002 to 2012. According to the 2012 Population Census the council's population was 93,827, out of which, females accounted for 53 percent (49,796) of the population. Table 1.2 shows the population size and its increase for Njombe Region and its councils for the census years of 2002 and 2012. Compared to other councils of Njombe Region, Table 1.2 also shows that Makambako Town Council is the smallest council in terms of land area and also the least populous council according to census results of 2012. According to the 2012 Population and Housing Census results, the council contributed 13.4 percent of the regional population which puts it at the fifth position. Between 2002 and 2012 the council's population increased by three percent compared to the regional increase of only 10.3 percent.

Table 1. 2: Population Size and Growth by District Council, Njombe Region, 2002 and 2012 Censuses

Council	Land Area (sq. kms.)	2002 Pop. Census		2012 Pop. Census		Growth Rate	
		Number	Percent	Number	Percent	1988 - 2002	2002 - 2012
Njombe TC	3,212	113,969	17.9	130,223	18.6	42.8	14.3
Wanging'ombe DC	3,217	133,351	21.0	161,816	23.0	4.9	21.3
Makete DC	4,850	106,061	16.7	97,266	13.8	3.4	-8.2
Njombe DC	2,706	63,362	10.0	85,747	12.2	27.4	-4.1
Ludewa DC	6,325	128,520	20.2	133,218	19.0	28.2	3.7
Makambako TC	862	91,079	14.3	93,827	13.4	*76.3	44.3
Total	21,172	636,342	100.0	702,097	100.0	23.1	10.3

* Makambako TC was part of Njombe DC. However, it was possible to estimate its population for 2002.

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

Looking at the ward level, Mjimwema Ward had the largest population in the council with 30 percent in 2002, followed by Ubena at 17.8 percent and Lyamkena at 10.2 percent of total council population. The situation changed much in 2012 as Mjimwema ward remained the most populated ward with 28,998 residents or 30.9 percent of the council residents followed by Ubena at 18.9 percent as indicated in Table 1.3.

Table 1. 3: Population Distribution by Ward, Makambako TC, 2002 and the 2012 Censuses

Ward	2002 Census		2012 Census	
	Total	Percent of Total	Total	Percent of Total
Ubena	16,249	17.8	17,691	18.9
Mjimwema	27,357	30.0	28,998	30.9
Mlowa	5,945	6.5	5,712	6.1
Lyamkena	9,327	10.2	9,383	10.0
Mwembetogwa	8,732	9.6	7,382	7.9
Mahongole	8,280	9.1	9,222	9.8
Kitandililo	6,493	7.1	6,842	7.3
Utengule	8,696	9.5	8,597	9.2
Total	91,079	100.0	93,827	100.0

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

1.5.3 Population Density

In reference to Table 1.4, Makambako Town Council, with an average population density of 109 persons per sq. km in 2012 is in actual fact the most densely populated Council in Njombe Region. The Population density of the Council was above the regional average population density of 33 persons per sq. km and was the most populous compared to other councils in the region based on data collected from two censuses. Among other reasons, the relatively large

population density of Makambako TC has not only been caused by the size of its land area but also the rural–urban migration within the region and the country as a whole.

Table 1. 4: Trend of Population Density by Council, Njombe Region, 2002 and 2012

Council	Land Area (sq. kms).	2002 Population	2012 Population	Population Density (Persons per Sq. Km.)	
				2002	2012
Njombe TC	3,212	113,969	130,223	35	41
Wanging'ombe DC	3,217	133,351	161,816	41	50
Makete DC	4,850	106,061	97,266	22	20
Njombe DC	2,684	63,362	85,747	33	32
Ludewa DC	6,325	128,520	133,218	20	21
Makambako TC	884	91,079	93,827	75	109
Total	21,172	636,342	702,097	30	33

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

Table 1.5 gives the population density at ward level for the census years of 2002 and 2012. In 2002 Mjimwema was the most densely populated ward with an average of 1,105 persons per sq.km, followed by Mwembetogwa ward with 779 persons and Ubena ward with 682 persons, while Kitangililo was the least populated ward with an average of 26 persons per sq.km as indicated in Table 1.5. In 2012 however, Mjimwema continued to be the most densely populated ward by having 1,172 persons per sq. km while Kitangililo was also the least densely populated ward by having only 28 persons per sq. km.

Table 1. 5: Population Density by Ward, Makambako Town Council, 2002 and 2012

Ward	Land Area (Sq.km.)	Population		Population Density (persons per sq. km.)	
		2002	2012	2002	2012
Ubena	23.8	16,249	17,691	682	742
Mjimwema	24.8	27,357	28,998	1,105	1,172
Mlowa	82.1	5,945	5,712	72	70
Lyamkena	86.2	9,327	9,383	108	109
Mwembetogwa	11.2	8,732	7,382	779	659
Mahongole	277.7	8,280	9,222	30	33
Kitandililo	245.1	6,493	6,842	26	28
Utengule	132.8	8,696	8,597	66	65
Total	883.7	91,079	93,827	103	106

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

1.5.4 Dependency Ratio

Dependants are persons aged 0–14 years and those aged 65 years and above. Economically active age group includes persons aged 15- 64 years. Table 1.6 indicates the number of dependants and economically active persons in Njombe Region captured during the 2002 and 2012 Population and Housing Censuses. Referring to Table 1.6, in the two censuses, Makambako Town Council had 37,716 dependants in 2002 census and 41,701 in 2012 census. Economically active persons in Town Council were 38,568 in 2002 census and were the smallest compared with that of Njombe District Council (44,214). However, further analysis of the table shows that the number of economically active persons was more than that of the dependants as revealed by a dependency ratio of 98. This shows in that year the burden of dependants to the economically active population was relatively small, suggesting that economic resources of economically active persons that were mobilized for development purposes helped to support few dependants. Similar cases were observed in the remaining councils, whereby the number of economically active persons was almost equal to the number of dependants. Further analysis in Table 1.6 shows that while the number of dependants had increased between the two consecutive censuses (2002 and 2012) in Njombe DC and Makambako TC only, the number of economically active persons had also increased between 2002 and 2012 in Njombe Town Council, Wangingombe DC, Ludewa DC, and Makambako TC. The number of dependants increased by 10.6 percent while that of the economically active persons increased by 35.1 percent in Makambako TC.

Table 1. 6: The Dependency Ratios by Council, Njombe Region, 2002 and 2012 Censuses

Council	2002 Population			2012 Population		
	Number of		Dependency Ratio	Number of		Dependency Ratio
	Dependants	Economically Active		Dependants	Economically Active	
Njombe TC	61,911	64,308	96	55,979	74,244	75
Wanging'ombe DC	84,332	78,879	107	77,451	84,365	92
Makete DC	51,672	54,103	96	45,155	52,111	87
Njombe DC	39,592	44,214	90	45,275	40,472	112
Ludewa DC	64,453	63,702	101	64,549	68,669	94
Makambako TC	37,716	38,568	98	41,701	52,126	80
Total	339,676	343,774	99	330,110	371,987	89

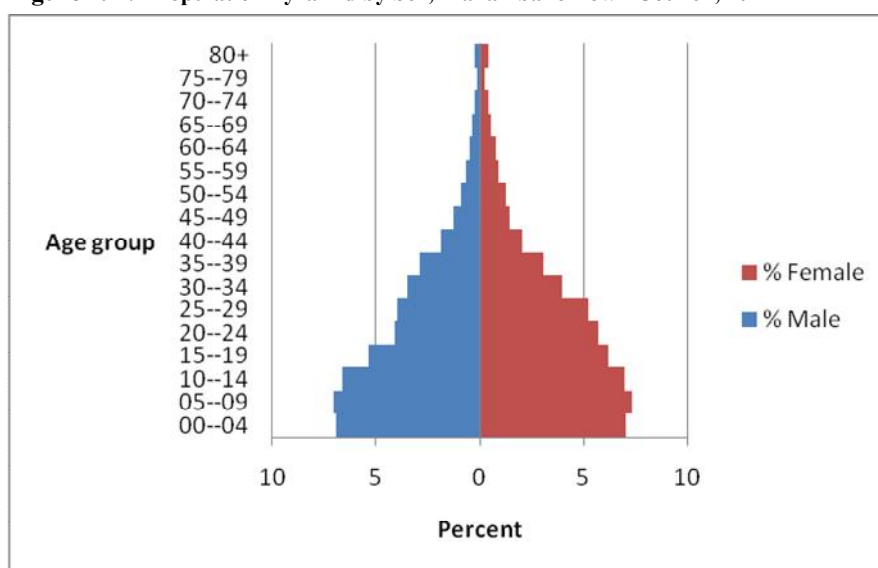
Source: National Bureau of Statistics, Computed Data from 2002 and 2012 Population Censuses Reports.

1.5.5 Population Distribution and Sex Ratio

When the population of Makambako Town Council of 2012 is distributed by age and sex, they show similar features. Figure 2 shows the population pyramid of the council based on the 2012 Census with its broad base indicating high fertility, mortality rates and the youth aged structure

in Makambako Town Council population. The 2012 Population Distribution by Age and Sex publication volume II of 2013 reveals that the Town Council has a Sex Ratio of 96 males for every 100 females. This is partly due to the fact that, at birth, the sex ratio is below 100 indicating an excess number of females over males. Traditionally, males in Makambako Town Council are much more mobile than females, of which most of the males move to Sumbawangaor Mbeya and other areas to look for employment in industries and other businesses while more girls remain in Mpanda. Also, in Makambako TC it is believed that more deaths occur to men than to women. However, this belief needs to be investigated further in order to establish facts based on scientific evidence.

Figure 1. 2: Population Pyramid by Sex, Makambako Town Council, 2012



Source: NBS, the 2012 Population Distribution by Age and Sex Vol. II, 2013

Furthermore, the 2012 population of Makambako Town Council as depicted by its pyramid above, is considered as the young population, comprising children under 18 years who were 22,408 males and 23,462 females or 48.9 percent of the total population, followed by the young population aged between 18 – 29 years estimated to be 21,964 persons with 9,567 males and 12,397 females or 23.4 percent of total population. Persons aged 61 years and above were 3,155 with 1,305 males and 1,850 females or 3.4 percent of the total population. Table 1.7 shows the 2012 population of Makambako Town Council distributed by broad age groups and sex.

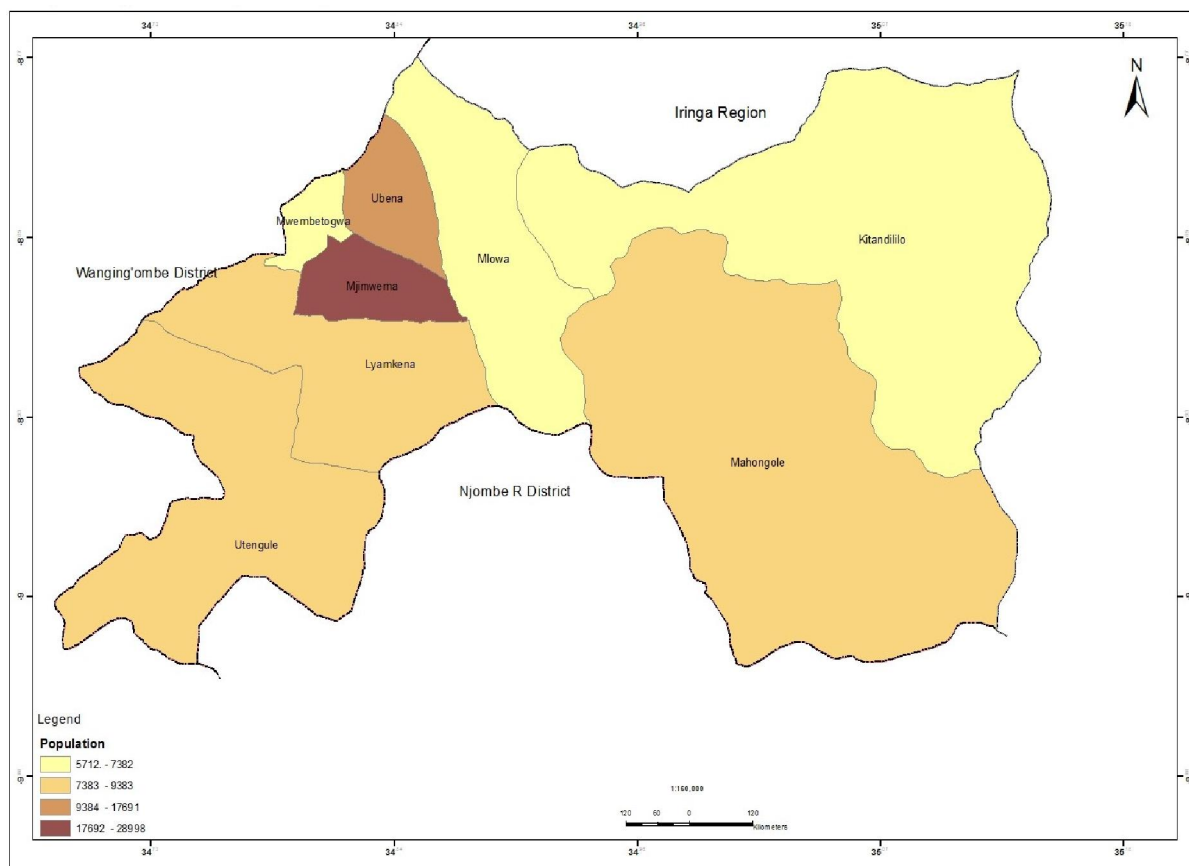
Table 1. 7: Population Distribution by Broad Age Group and by Sex, Makambako TC, 2012

Age Group	Sex					Percent of Total
	Male	Percent	Female	Percent	Total	
0 – 17	22,408	48.9	23,462	51.1	45,870	48.9
18 – 29	9,567	43.6	12,397	56.4	21,964	23.4
30 – 44	7,818	48.1	8,433	51.9	16,251	17.3
45 – 60	2,933	44.5	3,654	55.5	6,587	7.0
61+	1,305	41.4	1,850	58.6	3,155	3.4
Total	44,031	46.9	49,796	53.1	93,827	100.0

Source: The 2012 Population and Housing Census Report Volume I

At ward level, the 2002 Population and Housing Census indicated that Mjimwema was the most populous ward in the district, by having 27,357 persons or 30.0 percent of the total council population followed by Ubena Ward with 16,249 persons or 17.8 percent of the population. The least populous ward was Mlowa with a total number of 5,945 inhabitants (6.5 percent). For the 2012 census results, Mjimwema Ward leads with 17,691 persons (30.9 percent), followed by Ubena Ward with 17,691 people (18.9 percent). Mlowa Ward was also the least populous with only 6.1 percent of the council total population. Uneven distribution of residents is mainly influenced by the natural environment and physical features of the area. This phenomenon has significantly reduced the size of suitable for residential areas and limited accessibility to infrastructure and social services. Table 1.8 gives the population distribution by ward according to the 2002 and 2012 Population and Housing Census.

Map 3: Population by Ward; 2012



Source: NBS, GIS section, DSM

Table 1. 8: The 2002 and 2012 Population Distribution by Ward, Makambako TC

Ward	2002 Census		2012 Census	
	Total	Percent of Total	Total	Percent of Total
Ubena	16,249	17.8	17,691	18.9
Mjmwema	27,357	30.0	28,998	30.9
Mlowa	5,945	6.5	5,712	6.1
Lyamkena	9,327	10.2	9,383	10.0
Mwembetogwa	8,732	9.6	7,382	7.9
Mahongole	8,280	9.1	9,222	9.8
Kitandililo	6,493	7.1	6,842	7.3
Utengule	8,696	9.5	8,597	9.2
Total	91,079	100.0	93,827	100.0

Source: NBS, the 2002 Village/Street Statistics Report, Population Distribution by Age and Sex Vol. II, 2013

1.5.6 Households and Household Size

According to the 2002 Population and Housing Census, Makambako Town Council had an average household size of 4.1 perhaps due to its relative small geographical area and population size. With a population of 91,079 according to the 2002 census, there were 15,927 private households with an average of 4.6 persons per household; Ludewa District Council had the largest average (persons per household) in Njombe Region in 2002. Table 1.9 further shows that during the intercensal period, there was a general decrease in most of the council average household sizes. In 2002 Wanging'ombe District Council had the smallest average household size of 3.7 persons per household compared to Ludewa DC with 4.6 persons, Njombe DC with 4.4 persons, Njombe TC with 4.3 persons per household, Makambako with 4.1 persons per household and Makate DC with 3.8 persons per household. In 2012 however, Makambako TC together with Njombe DC with 4.2 persons per household was the second leading council compared to 4.1 of Njombe TC, 4.0 of Wanging'ombe DC, 3.7 of Makete DC and 4.4 of Ludewa DC.

Table 1. 9: Distribution of Households and Average Household Size by Council, Njombe Region, 2002 and 2012

Council	2002 Census			2012 Census		
	Total Population	Number of Households	Average Household Size	Total Population	Number of Households	Average Household Size
Njombe TC	113,969	26,300	4.3	130,223	31,593	4.1
Wanging'ombe DC	133,351	36,470	3.7	161,816	40,002	4.0
Makete DC	106,061	27,672	3.8	97,266	25,957	3.7
Njombe DC	63,362	20,128	4.4	85,747	20,341	4.2
Ludewa DC	128,520	27,729	4.6	133,218	30,164	4.4
Makambako TC	91,079	15,927	4.1	93,827	22,097	4.2
Total	636,342	154,226	4.1	702,097	170,154	4.1

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

Table 1.10 shows the distribution of households and average household size by ward for Makambako Town Council based on the results of the 2002 and 2012 Population and Housing Censuses. Although the population of 2002 was apportioned in the wards, it was not possible to do so for the number of households and the average household size. In this section both the household sizes and the average household sizes are described based on 2012 census. In 2012, however, Mahongole Ward had the largest average household size of 4.5 persons followed by Lyamkena, Mlowa and Mwembetogwa wards with an average household size of 4.3 persons. The minority of the wards (three wards out of eight) in 2012 had their average household sizes below the district average of 4.2 persons.

Table 1. 10: Population, Households and Average Household Size by Ward, Makambako TC, 2002 - 2012

Ward	2002 Population			2012 Population		
	Total Population	Number of Households	Average Household Size	Total Population	Number of Households	Average Household Size
Ubená	16,249	*	*	17,691	4,051	4.2
Mjimwema	27,357	*	*	28,998	7,099	4.1
Mlowa	5,945	*	*	5,712	1,315	4.3
Lyamkena	9,327	*	*	9,383	2,165	4.3
Mwembetogwa	8,732	*	*	7,382	1,677	4.3
Mahongole	8,280	3,119	4.5	9,222	2,060	4.5
Kitandililo	6,493	*	*	6,842	1,658	4.1
Utengule	8,696	*	*	8,597	2,072	4.1
Total	91,079	*	*	93,827	22,097	4.2

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

CHAPTER TWO

Council Economy

2.0 Introduction

Chapter Two highlights the economic performance of Makambako TC and its poverty status. The economic indicators used to assess the Council economy include the main sources of income for the inhabitants of the Council. The poverty indicators cover income and non-income indicators, including the percentage of people living below the poverty line, the spread of poverty, consumption patterns, and health and education status, access to drinking water and housing conditions.

2.1 GDP and Per Capita GDP

Makambako TC, like other Councils of Njombe region, has neither calculated its GDP nor Capital GDP but its economy continues to be dominated by the agriculture sector, of which it employs about 78 percent of the council population. Both cash and food crops are produced, with the latter dominating.

2.2 Poverty Indicators

As stated earlier, besides GDP and per capita GDP, there are a number of indicators that portray the poverty level in the council. These indicators include Gini coefficient, poverty gap, and percent of households below basic needs poverty line, main source of cash income, food consumption patterns, net enrolment ratio, adult literacy rate, health indicators and access to safe drinking water. They also include housing conditions in terms of type of toilets, roofing materials and source of both lighting energy and cooking energy. People's experience on poverty, state of material deprivation and their housing circumstances are closely intertwined. This is probably because housing acts both as a charge for income and as a source of income-like flows of benefits, as well as a potential source of monetary income on itself.

Since data for Makambako Town Council are not available, it is desirable to discuss the data for Njombe District as Makambako TC was part of Njombe District.

2.2.1 Income Poverty Rate, Poverty Gap and Gini Coefficient

Njombe District, of which Makambako Town Council was part, was not among the best 20 districts in Tanzania Mainland with least people living below the poverty line but at regional level, it is considered to be the worst district according to the 2005 Poverty and Human Development Report (Poverty and Human Development Reports, 2005). The Report indicates that 25 percent of people in Njombe District were living below the poverty line (Table 2.1). With respect to the rate of poverty gap, Njombe and Ludewa are the best districts by having only 6 percent each after Makete (7 percent).

The situation is different with regard to the Gini Coefficient. At 32 percent, Njombe had the best uneven distribution of wealth in Njombe Region. The worst district in terms of the distribution of income among people was Makete whose rate was 43 percent followed by Ludewa (36 percent) as indicated in Table 2.1.

Table 2. 1: Selected Poverty Indicators by District, Njombe Region; 2005

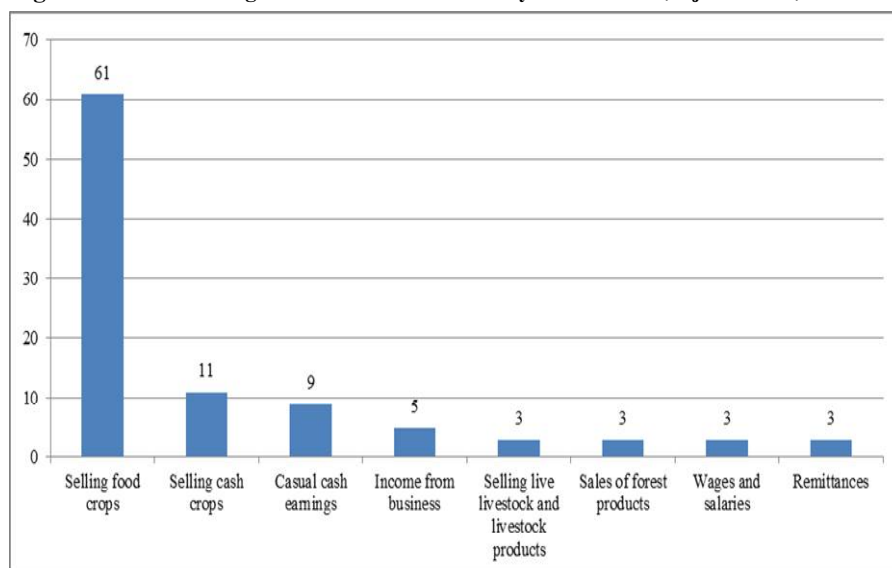
District	Percent of People Live Below Poverty Line	Poverty Gap	Gini Coefficient Rate	Number of Poor Per Sq. Km.
Makete	24	7	43	6
Njombe	25	6	32	9
Ludewa	24	6	36	5

Source: Poverty and Human Development Report, 2005

2.2.2 Main Source of Cash Income.

The National Agriculture Sample Survey (2007/08) report reveals that, Agriculture sector ranked first with the selling of food crops as the main source of cash income. The report further shows that 61 percent of cash income comes from selling food crops, about 11 percent from sales of cash crops, selling of both live livestock and sales of livestock products (3 percent), sales of forest products (3 percent) followed by casual cash earnings (9 percent), businesses income (5 percent), and three percent wages and salaries. However, significant cash earnings (3 percent) come from outside the Council as cash remittances (Figure 3).

Figure 2. 1: Percentage Distribution of Income by Main Source, Njombe DC, 2007/08



Source: National Agriculture Sample Survey Report, 2010

2.2.3 Access to Clean and Safe Water



There is no doubt about the importance of water to human existence. People need clean water in order to survive and stay healthy. Lack of clean water contributes to high mortality rates in children around the world. Water is also critical to the country’s development as it is needed not only for agricultural productivity but also for industrial production among others. Despite the vast amounts of fresh water available, many Tanzanians are still faced with water

shortage due to insufficient capacity to access and store it both in rural and urban areas.

Water services provided in the Town Council are through the gravity scheme, motorized pumping schemes (from rivers), deep and shallow wells and protected springs. Table 2.2 provides a summary on the water services in Makambako Town Council.

Table 2. 2: Status of Water Services in Makambako Town Council, 2014

S/No	Type of water scheme/ service	Amount	Percent of population being served
1	Gravity scheme	5	42,5
2.	Motorized schemes	5	11.01
3	Deep & shallow wells	8	1.3
4.	Protected springs	7	2.02
	Total	25	56.83

Source: Water Department, Makambako TC, 2014

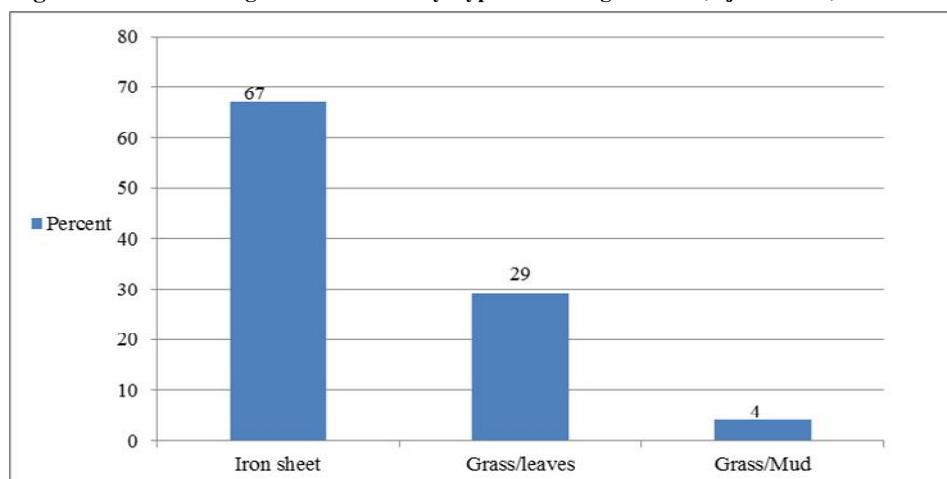
Data from the Town Council shows that demands of water in urban areas stand at 2,210,540 m³ per annum against supply of 1,141,920 m³ which is 51.6 percent shortage. In the sub –urban areas water is being supplied to 11,887 people who constitute 41.5 percent of the total population. The remaining 58.5 percent is subjected to unhygienic water which is both unclean and .unsafe for human consumption.

2.2.4 Types of Roofing Materials

The 2012 Population and Housing Census report indicates that iron sheets are the most common roofing materials in the region and were used by 78.3 percent of the households. As disaggregated data by district are not yet disseminated, other sources are discussed in this report. The National Sample Census of Agriculture 2007/08 indicated that grass and leaves were the most common roofing materials in rural areas in the country. The situation is different in Njombe DC (which includes Makambako TC) where 67 percent of households had iron sheets as the main roofing material, followed by grass or leaves (29 percent) while only four percent used grass and mud as roofing materials as indicated in Figure 4.



Figure 2. 2: Percentage of Households by Type of Roofing Material,Njombe DC; 2007/08



Source: 2007/08, NBS, National Agriculture Sample Survey Report,

2. 2.5 Source of Lighting Energy

The 2012 Population and Housing Census results reveal that 11.0 percent of households in Njombe region used electricity as the source of energy for lighting. In general, lantern lamps led with 41.1 percent followed by wick lamp at 25.8 percent, torches at 12.3 percent and solar at 2.9 percent.

2.2.6 Source of Energy for Cooking

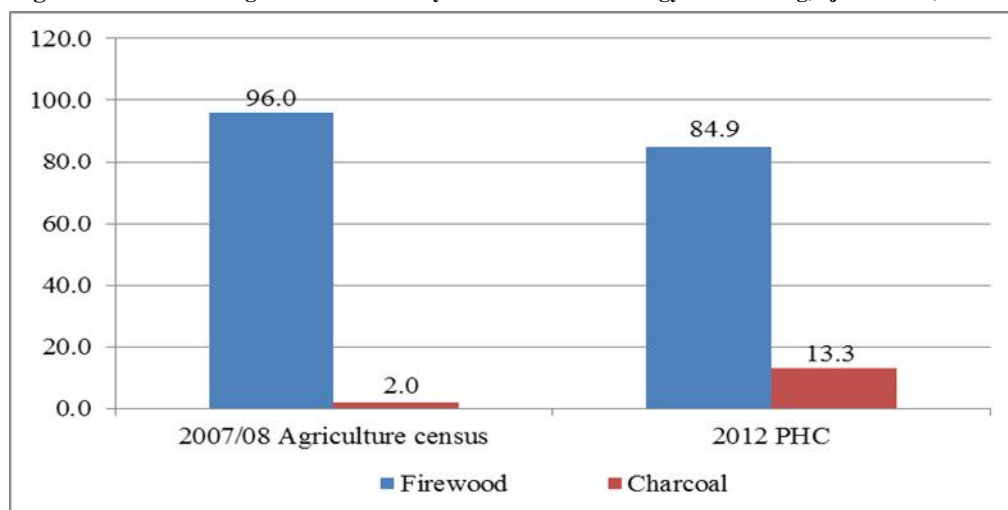
As reported in the 2012 Population and Housing Census, firewood remains the most prevalent source of energy for cooking in the country. This also applies to Njombe region, whereby 84.9



percent of the households in the region use it, followed by charcoal (13.3 percent). According to the National Sample Census of Agriculture 2007/08, about 96 percent of the households in the Council used firewood, followed by charcoal (two percent). An insignificant number of the households were reported using paraffin/kerosene and crop residues. However, no households were reported using modern and/or environmental friendly source of energy for cooking such as bio gas or bottled gas.

Although most of the fire wood and charcoal used comes from the remains of the stem of the wattle tree after extracting the buck, if the current practice continues, deforestation and depletion of natural vegetation by excessive use of firewood and charcoal will inevitably lead to destruction of nature and ecology of Njombe DC. Sustainable measures should be taken to ensure that natural vegetation and ecology of the Council are restored.

Figure 2. 3: Percentage of Households by Main Source of Energy for Cooking, Njombe DC, 2007/08

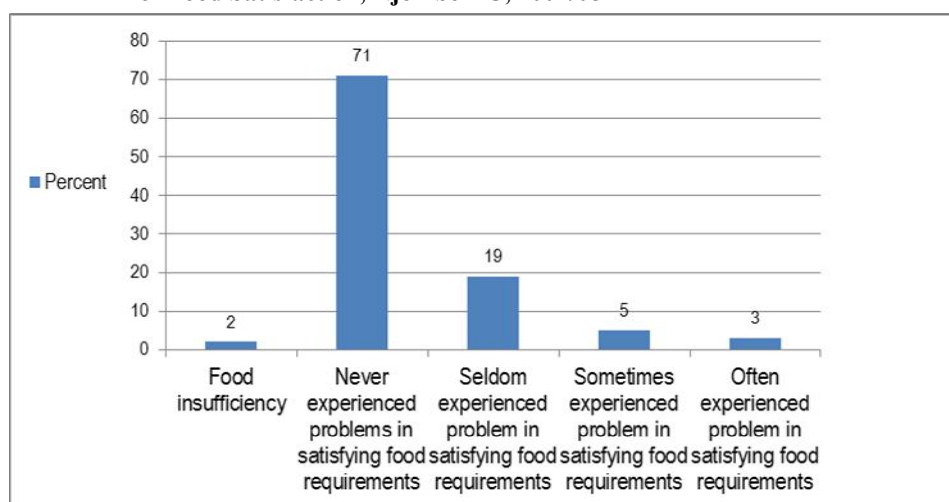


Source: 2007/08, NBS, National Agriculture Sample Survey Report and 2012 Housing and Population Censu Report

2.2.7 Food Security

Food security at Njombe DC is very significant. According to the 2007/2008 National Sample Census of Agriculture, Iringa Region, at most two percent of households said they always experience food insufficiency, while 71 percent of the total households in the Council said they have never experienced problems in satisfying the household food requirements and 19 percent seldom experienced problems in satisfying the household food requirements. The report also revealed that five percent and three percent said they sometimes or often experienced problems in satisfying the household food requirements respectively (Figure 6).

Figure 2.4: Percentage Distribution of Rural Agricultural Households by Status of Food Satisfaction, Njombe DC, 2007/08



Source: 2007/08, NBS, National Agriculture Sample Survey Report,

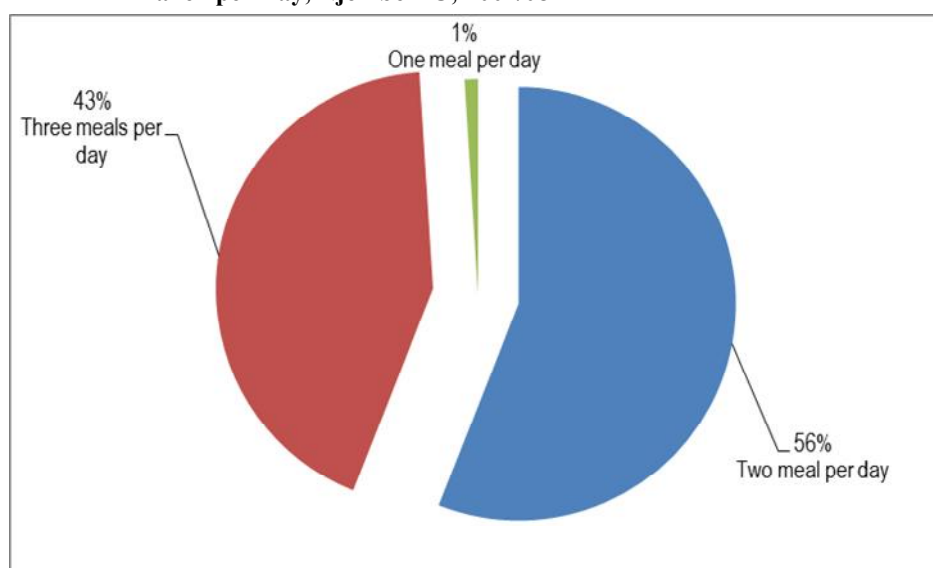
2.2.8 Food Consumption Patterns

The level of food consumption is also an indicator of the poverty level of the households. The number of meals consumed in a day and the frequencies of protein intake per week, particularly meat and fish, are the most plausible indicators in measuring poverty levels of the households.

2.2.8.1 Number of Meals per Day

The National Sample Census of Agriculture 2007/08 reveals that the majorities of rural agricultural households in Njombe DC normally have two meals per day (56 percent of total households), while 43 percent have three meals. Moreover, the results also indicate that one percent of the total households have one meal per day. These results indicate that food insufficiency affects a very small proportion of the rural households in the Council as 99 percent have either two or three meals per day.

Figure 2. 5: Percentage Distribution of Rural Agricultural Households by Meals Taken per Day, Njombe DC; 2007/08

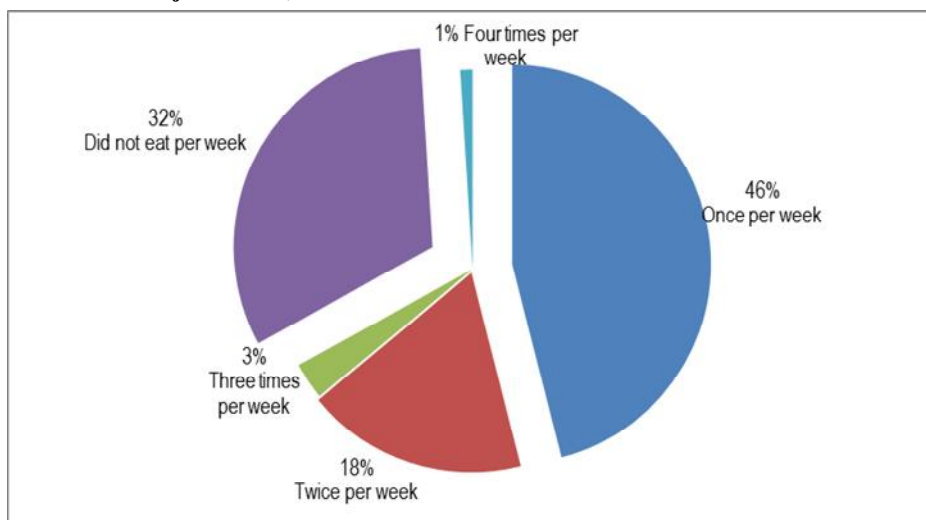


Source: 2007/08, NBS, National Agriculture Sample Survey Report

2.2.8.2 Protein (Meat and Fish) Consumption Frequencies

Njombe DC had a big percentage of households that did not eat meat compared to other Councils (Agricultural Sample Census 2007/2008). Figure 8 shows that most of the households ate meat once per week (46 percent), followed by those that ate meat twice (18 percent), then those that ate meat three times (three percent). However, a significant number of households (32 percent) did not eat meat during the week prior to the enumeration and only one percent ate four times.

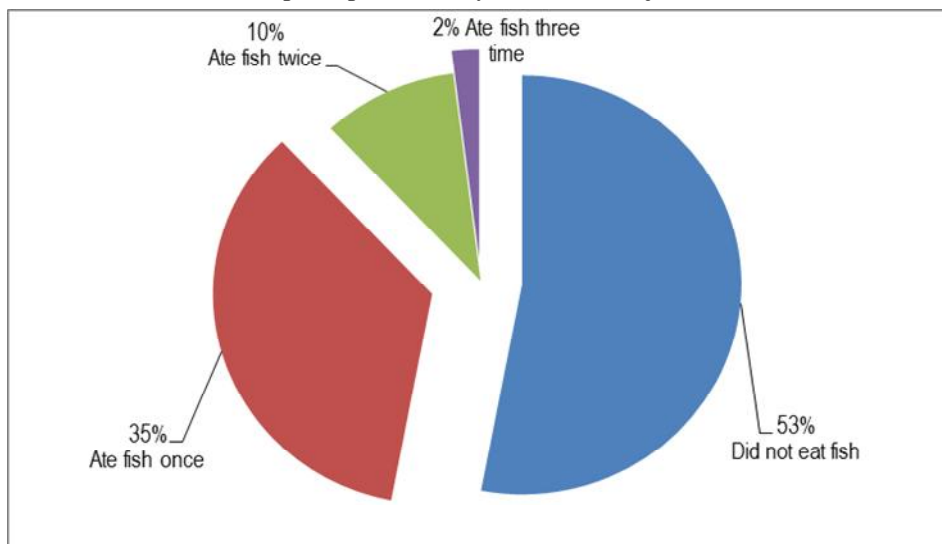
Figure 2. 6: Percentage Distribution of Rural Agricultural Households by Frequency of Meat Consumption per Week by Households, Njombe DC, 2007/08



Source: 2007/08, NBS, National Agriculture Sample Survey Report,

The observation was different regarding fish consumption. More than a half (about 53 percent) of the households did not eat fish during the week prior to the enumeration. However, as Figure 9 shows, about 35 percent of the households ate fish once and 10 percent ate fish twice per week and about 2 percent of households included those who ate fish three times per week.

Figure 2. 7: Percentage Distribution of Rural Agricultural Households by Frequency of Fish Consumption per Week by Household, Njombe DC, 2007/08



Source: 2007/08, NBS, National Agriculture Sample Survey Report

2.3 Health Indicators

Though the residents of Makambako Town Council are said to have a relatively good access to social services like health and education, malaria is among the diseases that have had a negative impact to the health of its residents resulting in high rates of morbidity, mortality, orphanhood and widowhood. The data from Makambako TC show the orphanhood rate of 3.4 percent and widowed rate of 5.2 percent in 2013. The health status of Makambako Town Council people can also be observed through other proxy health indicators shown in Table 2.3. They include Infant Mortality Rate (number of infant deaths per 1,000 livebirths), Children under Five Years Mortality Rate (infants and children deaths per 1,000 live births) and Doctor/Population Ratio (number of people per doctor). Data recorded from the Health Department in Makambako Town Council however show that IMR in 2013 was 35:1,000 while in 2014 was 30:1000. As for the U5MR the data recorded from the Health Department also shows that the rates in 2013 was 34:1,000 while in 2014 it was 31:1,000. The presented data were compiled from administrative hospital records, hence should be read with caution.

Table 2. 3: Selected Health Indicators for Makambako Town Council 2013 and 2014

Indicator	Makambako Town Council (2013)	Njombe Region (2013)	Makambako Town Council (2014)	Njombe Region (2014)
Orphaned Rate (percent)	3.42	2.58	3.64	2.58
Widowed Rate (percent)	5.24	6.65	8.26	6.65
Infant Mortality Rate (IMR)	35.0	152	30.0	152
Children Under Five Mortality Rate (U5MR)	34.0	166	31.0	166
Doctor/Population ratio	12,991	*	8,530	*
HIV/AIDS Prevalence Rate	15.7	14.8	15.2	14.8

Source: Compiled Data Based on: Makambako Town Council Reports.

2.4 Land Development

Land use planning is a key aspect of development planning for both urban and rural areas of any council in the country. The land needs in urban areas are mainly dominated by the demand for building plots for residential, commercial, institutional or industrial purposes. In rural areas a large component of land use is used for agriculture, livestock keeping and other production activities.

Currently, human settlements in Makambako Town Council are established on planned and surveyed plots. However, most parts of the urban centers were developed locally in unplanned squatters, most of which are found in Ubena, Mwembetogwa and Mjimwema wards. More resources are required for upgrading of squatters and provision of essential social and economic

services. Likewise, more planned settlements and business areas should be developed and allocated to potential users.

The demand for surveyed land plots in urban centres exceeds substantially the supply of plots in many urban areas. By the end of 2013 there were only 100 building plots surveyed in the urban areas of Makambako Town Council despite the demand of 1,050 plots. Plots allocated in that year were only 100 which is about ten percent of the demand. In 2014 however, a total 414 plots were surveyed and all of them were allocated although the demand remained high at 1,250 needed plots. It is obvious that lack of surveyed building plots in most cases leads to a spontaneous growth of slums or shanty towns in unplanned and crowded human settlements that are characterized by unhygienic environmental conditions exacerbated by poverty. This is a common feature in most poor or developing countries.

Table 2. 4: Demand and Supply of Building Plots in Urban Centers by wards, Makambako Town Council 2013 and 2014

Ward	1 st Jan. to 31 st Dec.2013			Plot Allocated as 31 st Dec. 2013	1 st Jan. to 31 st Dec.2014			Plot Allocated as 31.12.2014
	No. of Urban Centers	Demand for Plots	Plot Surveyed		No. of Urban Centers	Demand for Plots	Plot Surveyed	
Ubena	1	350	37	37	1	400	143	143
Mwembetogwa	1	200	30	30	1	350	87	87
Mjimwema	1	500	33	33	1	500	184	184
Total	3	1,050	100	100	3	1,250	414	414

Source: Town Director's Office Makambako 2015

2.5 Government Employees in Key Sectors of the Economy

Table 2.5 reveals government employees in key sectors of economy in Makambako TC in from 2012 and 2013. In 2012 the council had 793 government employees in four key sectors of economy namely education, health, agriculture and natural resources.. Health Sector with 655 employees had the largest share of government employees in council at 82.6 percent. Education was the second sector with a share of 12.9 percent, Agriculture Sector was third with a share of 3.7 percent and Natural Resources Sector had the smallest share (0.9 percent) (Table 2.5). In 2013 the total number of employees increased to 1,041 an increase of about 31.3 percent. This increase was due to the big increase in the number of employees in the Agriculture and Natural resources sectors.

Table 2. 5: Number of Government Employees in Key Sectors of Economy, Makambako TC; 2011 - 2013

Company/Year	2012	2013
Education sector	102	126
Health sector	655	841
Agriculture and Livestock sector	29	59
Natural Resource sector	7	15
Total	793	1,041

Source: Town Director's Office Makambako, 2014

Makambako Town Council, like other councils in the region is linked with several companies offering the communication and money transfer services in the different wards. These services are provided through Tigopesa, Mpesa and Airtelmoney. The network coverage in some of the wards of this town council is uneven in the sense that in some areas the network is strong while in other areas delivery of such service are constrained by either is weak or poor signals.

CHAPTER THREE

Productive Sectors

3.0 Overview

Chapter Three explains the performance of productive sectors in Makambako Town Council. These sectors include agriculture, livestock, natural resources and industrial development.

3.1 Agriculture

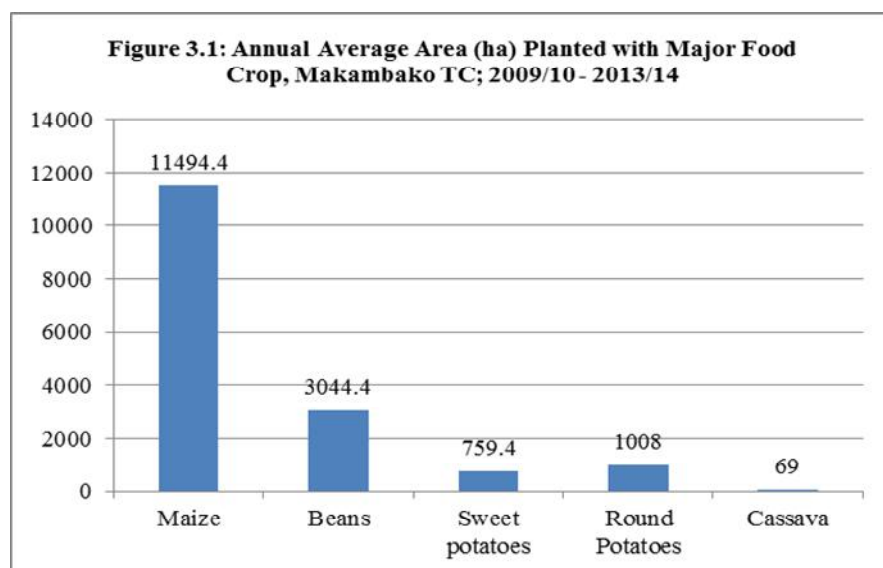
3.1.1 Introduction

Makambako TC is an urban area and its urban farming has been both extensive and intensive. Urban farmers include government civil servants, businessmen and the most disadvantaged slum dwellers. Normally urban areas in Tanzania are not designed to accommodate farming or livestock keeping at any scale of operation. Land management and use in urban areas is customary zoned out to accommodate residential areas, social services, business centres, industrial sites, road and railway construction, recreational activity among others. Besides, factors that have contributed towards emergence and persistence of urban agriculture in Tanzania are:-

- *Persistence of peasant culture:* This is because of the current generation of urban dwellers in Tanzania including Makambako TC still retaining remnants of rural culture. The persistence of the peasant culture explains the reasons why some urban residents planting various types of crops and keeps some form of livestock for cultural rather than purely economic ends.
- *The plight of urban worker:* High living costs attributed by high inflation rates is another important reason for urban residents involving in urban farming so as to ensure self food sufficiency through reducing the cost of buying foods. However, according to agronomical factors, Makambako TC produces more food crops such as maize, paddy, sweet potatoes rather than cash crops. The same crops are also used as source of income.

3.1.2 Area Planted with Major Food and Cash Crops

3.1.2.1 Area Planted with Major Food Crops



According to Table 3.1, over the season of 2009/10 – 2013/14 area cultivated with food crops in Makambako Town Council estimated annually at 16,375.2 ha. The crop season of 2009/10 had the lowest area plated with food crops of 14,195 ha and the crop season of 2012/13 had the biggest annual area of 17,468 ha. 70.2 percent of the estimated annual area was dominated by maize which is the most dependable food crop. Topography and climate of Makambako TC does not favour cassava farming well. This is the reason why land planted with cassava shown in Table 3.1 and Figure 3.1 was the smallest compared to other crops. Besides this, increase of the area planted with maize by 23.4 percent, sweet potatoes (46.0 percent) and cassava (19.0 percent) shown in Table 3.1 and Figure 3.1 is important for ensuring food sufficiency.

Table 3. 1: Estimated Annual Area (Ha) under Major Food Crops, MakambakoTC,2009/10– 2013/14

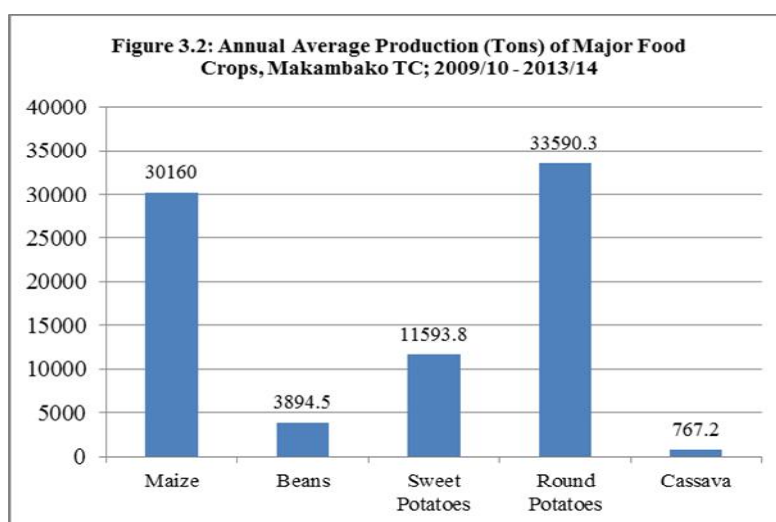
Crop	2009/10	2010/11	2011/12	2012/13	2013/14	Annual Average Area	Percent	Rate of Increase/Decrease in Area(2009/10-2013/14)
Maize	9,312	12,412	12,300	10,970	12,478	11494.4	70.2	23.4
Beans	3,154	3,012	2,178	3,669	3,209	3044.4	18.6	-3.5
Sweet potatoes	520.0	498.8	671.3	1,626	481	759.4	4.6	46.0
Round Potatoes	1,151.0	979.8	1,358	1,130	421	1008.0	6.2	-12.4
Cassava	58.0	62	73	73	79	69.0	0.4	19.0
Total	14,195	16,965	16,580	17,468	16,668	16,375.2	100.0	15.4

Source: Town Council Director's Office (Agriculture Department), Makambako TC, 2015

3.1.3 Area Planted with Major Cash Crops

The rapid pace observed in urbanizing Makambako TC is associated with the increase of surveyed plots for human settlements, business centres, social services, infrastructures and industries etc. The urbanizing trend has reduced the agriculture land planted with both food and cash crops. Small scale farming of sunflower and groundnuts are specific cash crops. To improve their livelihood local people of Makambako TC also market food crops such as maize, sweet potatoes, tomatoes and paddy.

3.1.4 Production of Major Food Crops



Over the reference period shown in Table 3.2, Makambako TC harvested a total of 400,029 tons of major food crops which averaged annually at 80,005.8 tons. Maize was the leading food crops in terms of production. It accounted for 37.7 percent of the total production (400,029 tons). Round potatoes was the second major food crop with

42.0 percent of the total production. Cassava was the least important food crop in terms of production (767.2 tons, 1.0 percent).

Between the crop season of 2009/10 and 2013/14 maize was the only food crop whose production rate increased by 1.1 percent. However, it is important for the Town Council to find out why production of the remaining food crops (beans, sweet potatoes, round potatoes and cassava) shown in Table 3.2 decreased substantially. Moreover, year 2011/12 was the best season with highest production of 96,492 tons which was 24.1 percent of the total production of 80,005.8 tons. 2013/14 was the worst season in terms of production of food crops (47,334 tons, 11.8 percent) respectively.

Table 3. 2: Estimated Production (Tones) of Major Food crops; Makambako TC; 2009/10 – 2013/14

Crop	2009/10	2010/11	2011/12	2012/13	2013/14	Total	Annual production	Percent	Rate of Increase/Decrease in Production 2009/10 and 2013/14
Maize	30,850	31,030	30,750	26,975	31,195	150,800	30160	37.7	1.1
Beans	4,942.5	4,500	3,141.9	3,302	3,586	19,472.4	3894.5	4.9	-27.4
Sweet Potatoes	8,691	7,699	10,741.0	24,390	6,448	57,969	11593.8	14.5	-25.8
Round Potatoes	43,212	51,333	50,983.4	16,950	5,473	167,951	33590.3	42.0	-87.3
Cassava	696	744	876	888	632	3836	767.2	1.0	-9.2
Total	88,392	95,306	96,492	72,505	47,334	400,029	80,005.8	100.0	-46.4
Percent	22.1	23.8	24.1	18.1	11.8	100			

Source: Town Council Director's Office (Agriculture Department), Makambako TC, 2015

3.1.5 Food Satisfaction/Adequacy

Makambako TC has not experienced problems caused by scarcity of food. Despite producing its own food, Makambako TC also receives extra food produced by other councils within Njombe Region and nearby regions. The ideal geographical position also favours the production of adequate food stock in Makambako TC. This is attributed to the fact that Makambako is the fast growing business centre that is suitable for production, storage and sales of agricultural products especially starch food particularly maize and rice brought in from Mbeya, Ruvuma and Rukwa Regions.

3.1.6 Production of Major Cash Crops

In Makambako TC, food crops are also sold as cash crops. Maize is the leading food crop, surplus is being sold as the main source of income for the majority of peasant farmers. Sold sunflower oil also helps to reduce income poverty to sunflower growing households in Makambako TC.

3.1.7 Crop Marketing

Selling agricultural products remains the main source of livelihood of rural agricultural households in Makambako Town Council. Among others, maize is used for various purposes in order to satisfy basic human needs since it is consumed as a principal food item as well as sold as a cash crop.

With reference to Table 3.3, a total of TZS 7,798,750,000 was obtained from selling of maize. Mahongole ward accounted for 25.5 percent of the total amount obtained and was the leading

ward. However, Mwembetogwa was the last ward by earning only 0.3 percent of the total amount consolidated from maize sales.

Table 3.3: Quantity and Value of Maize sold, MakambakoTC; 2013/14

Ward	Sold Maize			Percent
	Amount Sold (Kg)	Price per Kg (Tshs)	Total Value Tshs	
Utengule	6,712,000	250	1,678,000,000	21.5
Lyamkena	1,760,000	250	440,000,000	5.6
Mahongole	7,943,000	250	1,985,750,000	25.5
Kitisi	400,000	250	100,000,000	1.3
Maguvani	1,000,000	250	250,000,000	3.2
Majengo	1,750,000	250	437,500,000	5.6
Kivavi	400,000	250	100,000,000	1.3
Kitandililo	5,672,000	250	1,418,000,000	18.2
Mlowa	5,030,000	250	1,257,500,000	16.1
Mjimwema	300,000	250	75,000,000	1.0
Makambako	125,000	250	31,250,000	0.4
Mwembetogwa	103,000	250	25,750,000	0.3
Total	31,195,000		7,798,750,000	100.0

Source: Town Council Director's Office (Agriculture Department), Makambako TC, 2015

3.1.8 Irrigation Prospects

Irrigation farming in Makambako TC is feasible due to availability of some water bodies especially rivers. Fukurwa is a permanent river whose water is available in all seasons, it is therefore the most reliable for agriculture irrigation. As Table 3.4 shows, the whole Makambako Town Council has the irrigation potential of 2,240 ha of which 1,281 ha or 57.0 percent have already been exploited. The biggest potential area for irrigation found in Mahongole Ward which accounted for 46.4 percent of the total potential area. However, traditional irrigation schemes are dominant with horticultural crops followed by maize crop.

Table 3.4: Irrigation Prospects by Ward, Makambako TC; 2013/14

Ward	Estimated Potential Area (Ha)	Area Under Irrigation (Ha)	Un utilized potential area (ha)	Percent of potential area
Utengule	181	120	61	8.1
Lyamkena	97	59	38	4.3
Mahongole	1040	634	406	46.4
Kitisi	0	0	0	0.0
Maguvani	75	35	40	3.3
Majengo	0	0	0	0.0
Kivavi	0	0	0	0.0
Kitandililo	505	243	262	22.5
Mlowa	342	190	152	15.3
Mjimwema	0	0	0	0.0
Makambako	0	0	0	0.0
Mwembetogwa	0	0	0	0.0
Total	2,240	1,281	959	100.0

Source: Town Director's Office (Agriculture Department), Makambako TC, 2015

3.1.9 Agricultural Inputs

(i) Introduction

Besides other factors, crop production is also impaired by low application rate of agricultural inputs and poor agronomic practices. It is also believed that farmers who grow high value crops with reliable market outlets can afford to use industrial fertilizers and pesticides because the profit margin is big. However, data obtained from agriculture department in Makambako TC shows the use of agricultural inputs is so common among agricultural households in peripheral areas of the town council.

(ii) Inorganic Fertilizers and Organic fertilizers

Table 3.5 shows that over the three seasons chemical fertilizers supplied to farmers were below the demand and led to a shortage of 1,596 tons in 2011/12, 2,039 tons in 2012/13 and 2,217 tons in 2013/14. Shortage of composite fertilizer was higher than that of DAP and UREA fertilizers. This shortage likely justifies composite fertilizer as the most preferred and used organic fertilizer in Makambako TC.

Table 3. 4: Availability of Chemical Fertilizers and Organic Fertilizers (Tones), Makambako TC; 2011/12- 2013/14

Type of Fertilizer	2011/12			2012/13			2013/14		
	Demand	Supplied	Shortage	Demand	Supplied	Shortage	Demand	Supplied	Shortage
DAP	674	594	80	740	338	402	804	770	34
UREA	1,348	592	756	1,119	370	749	882	847	35
COMPOSIT	1,320	560	760	1,400	512	888	1,400	600	800
Total	3,342	1,746	1596	3,259	1,220	2039	3,086	2,217	869

Source: Town Council Director's Office (Agriculture Department), Makambako TC, 2015

3.1.10 Agro-Mechanisation

Table 3.5 provides agricultural implements that were available in Makambako TC during the crop season of 2013/14. Comparison of the required implements against the available and also looking at the number of implements in shortage shows a clear indication of the extent to which rural agricultural households of Makambako Town Council has a long way to go shifting from dependence of inferior agricultural implements to modern agricultural implements. Furthermore, the number of hand hoes shown in Table 3.5a illustrates dominance of inferior agricultural implements in Makambako Town Council.

Table 3. 5: Availability of Agriculture Implements, Makambako TC; 2013/14

No.	Implements			Shortfall/Excess
	Type	Required	Supplied/Available	
1	Ox plough	19,878	13,358	6,520
2	Ox harrow	2,783	32	2,751
3	Oxbridge	3,271	18	3,253
4	Oxcart	160	72	88
5	Ox cultivator	240	48	192
6	Ox chain	19,878	13,358	6,520
7	Ox shares	24,217	17,811	6,406
8	Tractors	16	7	9
9	Power tillers	21	16	5
10	Zege Pumps	42	20	22
11	Hand hoes	53,039	44,527	8,512
12	Ripper	7	3	4
13	Direct seeder	3	0	3

Source: Town Council Director's Office (Agriculture Department), Makambako TC, 2015

3.1.11 Agriculture Personnel

Table 3.6 shows that in 2013/14 Makambako TC had 15 staff in Agriculture Department which was equivalent to 37.5 percent of the required number of 40 staff. So far, 25 staffs were in shortage. Table 3.6 further shows that the largest concentration of staff was in Utengule, Lyamkena and Kitandilo in which each ward had three staff. Moreover, gender imbalance prevails in staffing the Agriculture Department as more males (11) than females (4) staff was observed. On the other hand, the biggest demand and deficit of staff was noticed in Maguvani Ward.

Table 3. 6: Availability of Agriculture Personnel by Ward; Makambako TC; 2013/14

Ward	Assistant Field Officers (11&111)					Percent of available staff against the Demand	Deficit
	Demand	Available			Total		
		Male	Female	Total			
Utengule	4	2	1	3	75.0	1	
Lyamkena	4	3	0	3	75.0	1	
Mahongole	5	1	0	1	20.0	4	
Kitisi	3	0	0	0	0.0	3	
Maguvani	6	0	1	1	16.7	5	
Majengo	2	0	0	0	0.0	2	
Kivavi	2	0	0	0	0.0	2	
Kitandililo	5	3	0	3	60.0	2	
Mlowa	3	2	0	2	66.7	1	
Mjimwema	2	0	1	1	50.0	1	
Makambako	2	0	0	0	0.0	2	
Mwembetogwa	2	0	1	1	50.0	1	
Total	40	11	4	15	37.5	25	

Source: Town Council Director's Office (Agriculture Department), Makambako TC, 2015

3.1.12 Policy Implication in Agriculture

As the majority of farmers continue using hand hoe it becomes difficult to talk of modern farming as it appears most of farmers in Makambako TC will continue using handhoes for a number of years. In this regard, Agricultural First Policy (*Kilimo Kwanza*) is far from being implemented fully.

3.1.13 Investment Opportunities in Agriculture Sector

Rapid population growth and urbanization of Makambako Town Council is positively associated with an increase in number of surveyed plots for residential areas, social services, and small

scale industries which in turn decrease agriculture land. Regarding this trend, small scale farming is becoming more convenient to the council rather than large scale farming. However, establishment of agro-processing industries such as grain milling machines, sunflower oil extraction small scale industries and selling of agricultural inputs are the most suitable investment in agricultural sector in Makambako TC. Moreover, its geographical position puts Makambako TC as an economic hub and important marketing centre for farm products which attracts businessmen within and outside the country. Tanzania- Zambia Railway line and Dar es Salaam-Mbeya to Zambia tarmac road also influences a rapid growth of Makambako TC and making it as a good businesscentre. Warehouse construction, buying and reselling crops at higher profit was identified as another investment opportunity in Makambako TC. Moreover, being linked by tarmac road with major crops producing regions of Tanzania namely Mbeya, Ruvuma and Rukwa, Makambako TC is a convenient place for establishing industries dealing with assembly of farm implements and selling as well as manufacturing of agricultural inputs such as fertilizers, pesticides, insecticides among others.

3.2 Livestock

3.2.1 Introduction

Like other urban areas in the country, rapid urbanization taking place in Makambako TC has not been accompanied with equitable economic growth and has resulted into increased urban poverty. As a result of the worsening situation related to urban poverty, many low-income households continue to suffer from an extreme state of deprivation that denies them to lead a decent life. To address this issue, most livestock keepers in Makambako TC are people of low-income category who engage in urban livestock keeping so as to mitigate limited livelihood options and food insecurity.

3.2.2 Challenges of Urban Livestock keeping

- Efforts of developing the livestock sector have been concentrated in rural areas with a view that improved livestock products in rural areas can satisfy the increasing demand of the expanding urban population. However, this initiative has not produced expected results to urban livestock keepers in Makambako TC, due to the fact that seldomly access support services such as extension services; diseases control measures and other inputs.
- **Inappropriate waste management:** It is evident animal waste disposal in Makambako TC frequently leads to environmental and public health problems which become more severe as the number of livestock increases.

- **Water availability:** Basing on the current situation in Makambako TC, livestock competes for water resources with humans as the demand for water for livestock keeping is not taken into account by the water management authorities since there are still very few water points allocated for livestock keeping.
- **Poor livestock health and high costs of veterinary services:** Livestock in Makambako face challenges due to high costs of veterinary services which poor livestock keepers can not afford. This endangers prosperity of livestock sector in Makambako TC.
- **Grazing land:** This is another major constraint associated with livestock keeping in urban areas whereby management of cattle and goats is commonly practised within residential areas as the most preferred option of feeding livestock in Makambako. Unfortunately, this method usually leads to high costs of feeding the livestock.
- **Low production levels:** Due to limited feed availability and quality associated with poor livestock management practices, the production level of livestock in Makambako TC is generally low.
- **Limited knowledge of livestock husbandry practices:** The majority of livestock keepers in urban centres like Makambako TC have a limited knowledge on livestock husbandry practices. This is partly contributed by lack of capacity building services on better livestock management practices that are expected to be delivered on a regular basis by stakeholders in collaboration with local government authorities. .

3.2.3 What to be done improving Livestock in Makambako TC

Urban areas like Makambako TC can improve livestock keeping through formulation of by-laws which can give guidance for urban livestock keeping development. Capacity building of livestock keepers in urban areas on information concerning better livestock management practices and marketing information would have an advantage of improving the livelihood of livestock keepers in urban areas whom the majority are low-income households. Improving accessibility of livestock extension services is among important areas the town council needs to focus.

3.2.4 Opportunities for Urban livestock keeping

Most of the people in urban areas of Makambako TC and its peri-urban areas practise urban agriculture because it provides food for them; for income generation or poverty alleviation

(because of the proximity to the market); promotes waste management (i.e. people take manure from the cattle barn or poultry house and send it to the farm); and as a means of converting by-products (e.g. brewers' spent grain, bran, seed cakes, low-quality roughage) into high-quality proteins/food (milk, meat and eggs).

3.2.5 Livestock Population

Table 3.7 shows estimated livestock population by ward in MakambakoTC in 2013/14. Poultry counted at 80,910 was the most populous livestock followed by cattle (12,443), pigs (11,494), goats (2,644), sheep (976) and donkeys (129). The majority of livestock populations are in Lyamkena as this ward led in number of cattle (2,635), goats (748) and sheep (294). Likewise, the largest population of donkeys (37) was observed in Utengule Ward, pigs (1,825) in Makambako Ward and poultry (18,093) in Kitandililo Ward.

Table 3. 7: Estimated number of Livestock Population by Ward, MakambakoTC; 2013/14

Ward	Cattle	%	Goats	%	Sheep	%	Donkeys	%	Pigs	%	Poultry	%
Utengule	2,110	17.0	412	15.6	80	8.2	37	28.7	1,190	10.4	6,665	8.2
Lyamkena	2,635	21.2	748	28.3	294	30.1	30	23.3	1,722	15.0	17,027	21.0
Mahongole	2,838	15.2	474	17.9	158	16.2	5	3.9	444	3.9	10,126	12.5
Kitisi	160	1.3	31	1.2	18	1.8	4	3.1	710	6.2	2,095	2.6
Maguvani	957	7.7	50	1.9	79	8.1	11	8.5	1,425	12.4	5,450	6.7
Majengo	253	2.0	37	1.4	22	2.3	6	4.7	580	5.0	2,400	3.0
Kivavi	237	1.9	34	1.3	20	2.0	4	3.1	744	6.5	2,093	2.6
Kitandililo	1,499	12.0	315	11.9	30	3.1	4	3.1	374	3.3	18,093	22.4
Mlowa	1,645	13.2	460	17.4	178	18.2	10	7.8	1,100	9.6	3,511	4.3
Mjimwema	178	1.4	37	1.4	21	2.2	5	3.9	800	7.0	3,600	4.4
Makambako	653	5.2	36	1.4	59	6.0	8	6.2	1,825	15.9	6,450	8.0
Mwembetogwa	230	1.8	10	0.4	17	1.7	5	3.9	580	5.0	3,400	4.2
Total	13,395	100.0	2,644	100.0	976	100.0	129	100.0	11,494	100.0	80,910	100

Source: Town Council Director's Office (Livestock Department), Makambako TC, 2015

3.2.6 Cattle Population

Table 3.7 above shows by the end of 2013/14 Makambako Town Council had 12,443 cattle. Most of the cattle (2,635) were found in Lyamkena and was the leading ward. However, cattle population in Lyamkena accounted for 21.2 percent of the total cattle population counted in Makambako TC. Kitisi Ward had the smallest population of cattle (160, 1.3 percent).

3.2.7 Goats Population

As it was for cattle, the same ward, Lyamkena had largest concentration of goats (748) which accounted for 28.3 percent of the total goats' population. Mwembetogwa Ward revealed to have smallest number of goats (10).

3.2.8 Sheep Population

Lyamkena Ward also ranked first on sheep population (294) which was equivalent to 30.1 percent of the whole sheep population in Makambako TC. Among all wards listed in Table 3.7, Mwembetogwa had the smallest number of sheep (17).

3.2.9 Pig Population

According to Table 3.7, Makambako was the first ward on pig population of 1,825 which was 15.9 percent of the total pig population of 11,494 in Makambako TC. The second and third wards on pig population were Lyamkena 1,722 (15.0 percent) and Maguvani (1,425, 12.4 percent).

3.2.10 Poultry/chicken Population

Because of easy management and as it does not require a huge initial capital, the majority of households in Makambako Town Council do poultry keeping. With referenceto Table 3.7, by the end of 2013/14 MakambakoTC had 80,910 poultry. Three wards with biggest poultry population were Kitandililo (18,093, 22.4 percent), Lyamkena (17,027, 21.0 percent) and Mahongole ward (10,126, 12.5 percent). Kitisi had smallest number of poultry (2,093, 2.6 percent).

3.2.11 Donkeys Population

A total of 129 donkeys was the smallest number compared to other livestock shown in Table 3.7. Most of the donkeys were concentrated in Utengule Ward (37) followed by Lyamkena Ward (30) and Maguvani Ward (11). Kitisi, Kivavi and Kitandililo wards each with four donkeys had the smallest number of donkeys.

3.2.12 Grazing Land

The characteristic of urban areas being not designed to accommodate farming or livestock keeping at any scale of operation is normally supported by by-laws or legal restrictions which dictate on the number of livestock which an urban farmer should keep because of limited space as more than half (68.3 percent) of the grazing land in Makambako is already on use (Table 3.8).

Hence, increasing awareness on the importance of grazing within a compound of residential areas according to by laws is another beneficial method for strengthening the economy.

Table 3. 8: Estimated area (Ha) under Grazing by Ward Makambako TC; 2014

Ward	Land fit for Grazing (Ha)	Percent of the Total grazing land	Land used for Grazing (Ha)	Percent of land used for grazing
Utengule	7020	20.1	6030	85.9
Lyamkena	3800	10.9	3800	100.0
Mahongole	7950	22.8	5100	64.2
Kitisi	10	0.0	10	100.0
Maguvani	100	0.3	100	100.0
Majengo	25	0.1	25	100.0
Kivavi	10	0.0	10	100.0
Kitandililo	9600	27.5	4950	51.6
Mlowa	6380	18.3	3800	59.6
Mjimwema	0	0.0	0	0.0
Makambako	0	0.0	0	0.0
Mwembetogwa	0	0.0	0	0.0
Total	34,895	100.0	23,825	68.3

Source: Director’s Office (Livestock Department), Makambako TC, 2015

3.2.13 Livestock Infrastructure

Modern abattoir in Makambako Town Council



Poor health of domestic animals is a common problem to many pastorists. The most prevalent and problematic disease that causes adverse effects to cattle is East Coast Fever. Tick borne diseases are also causing similar problems to livestock.

Table 3.9 shows livestock management infrastructure for controlling livestock diseases. The table also reveals that there are three operating/working dips which suggests dipping services are available in Makambako TC. However, absence of livestock veterinary centers exposes livestock at a high risk of infection by diseases. By recognizing the importance of veterinary centers for facilitating smooth delivery of the required services. Moreover, Makambako TC Management Team must allocate funds and find other resources for

establishingsuch centers in all wards. Improving availability and accessibility of other livestock infrastructures shown in Table 3.9 is important for development of livestock industry in Makambako TC.

Table 3. 9: Distribution of Number of Livestock Infrastructure by Ward; MakambakoTC; 2013/14

Ward	Dips			Veterinary Centres			Crushes	Hides/skin sheds	Abattoirs	Livestock market/Auction	Charco dams
	W	NW	Total	W	NW	Total					
Utengule	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lyamkena	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mahongole	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kitisi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maguvani	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Majengo	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0
Kivavi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kitandililo	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mlowa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mjimwema	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Makambako	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mwembetogwa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	3.0	1.0	4.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0

Source: Town Council Director’s Office (Livestock Department), Makambako TC, 2015

3.2.14 Major Livestock Diseases

The success of any type of livestock operation is closely related to reduction or elimination of the prevalence of animal diseases at community level. Losses due to diseases manifest themselves in many ways, some are obvious, such as deaths, medication costs, and condemnations at the processing plant whereas others are sometimes less obvious, such as poor growth, poor production, poor feed conversion, and downgrading.

3.2.15 Cattle Diseases

As Table 3.10 shows, East coast fever (E.C.F) and Black quarter are two major cattle diseases in Makambako TC. East coast fever was the main threat by causing 71.8 percent of all cattle morbidity and 64.7 percent mortality cases. Utengule ward led in cattle morbidity whereas Mahongole had the biggest number of cattle deaths.

Table 3. 10: Major Cattle Diseases Reported in Makambako TC; 2011 - 2013

Ward	Disease	Number of Morbidity cases reported			Total	%	Number of Mortality cases reported			Total	%
		2011	2012	2013			2011	2012	2013		
Lyamkena	E.C.F	400	313	80	793	20.3	100	50	45	195	19.9
Utengule	E.C.F	600	400	100	1100	28.1	140	90	20	250	25.5
Kitandililo	E.C.F	500	300	120	920	23.5	100	70	20	190	19.4
Sub- Total		1500	1013	300	2813	71.8	340	210	85	635	64.7
Mahongole	Black Quarter	402	201	70	673	17.2	160	120	10	290	29.6
Mlowa	Black Quarter	200	100	130	430	11.0	25	15	16	56	5.7
Sub- Total		602	301	200	1103	28.2	185	135	26	346	35.3
Total cases		2102	1314	500	3916	100.0	525	345	111	981	100.0

Source: Town Council Director's Office (Livestock Department), Makambako TC, 2015

3.2.16 Goats Diseases

Table 3.11 reveals that Mlowa was the only ward that recorded morbidity and mortality cases of goats. About half (i.e 46.5 percent) of all goats' diseases were due to *Demotocosis*. On the other hand, more than half of deaths (55.6 percent) that occurred to goats were caused by heart water.

Table 3. 11: Three Major Goats Diseases Reported in Makambako TC; 2011-2013

Ward	Disease	Number of Morbidity cases reported			Total	%	Number of Mortality cases reported			Total	%
		2011	2012	2013			2011	2012	2013		
Mlowa	ORF	35	30	25	90	28.8	1	2	0	3	33.3
	Heart water	37	25	15	77	24.7	2	2	1	5	55.6
	Demotocosis	80	45	20	145	46.5	1	0	0	1	11.1
Total		152	100	60	312	100.0	4	4	1	9	100.0

Source: Town Council Director's Office (Livestock Department), Makambako TC, 2015

3.2.17 Chicken Diseases

Table 3.12 shows chicken diseases that hinder the prosperity of poultry industry in Makambako TC. Of the three diseases, New castle causes extreme threat due to the fact that 36.4 percent of all poultry illnesses and 60.9 percent of deaths were caused by this disease. In this regard, sustainable development and growth of poultry industry in Makambako TC is entirely dependent on measures taken to control the spread of New castle disease

Table 3. 12: Three Major Chicken Diseases Reported in Makambako TC; 2011- 2013

Disease	Number of Morbidity cases reported			Total	%	Number of Mortality cases reported			Total	%
	2011	2012	2013			2011	2012	2013		
Newcastle	20000	18000	10000	48000	36.4	1000	700	400	2100	60.9
Forelytyphoid	17000	14000	13000	44000	33.3	500	250	150	900	26.1
Gumbolo	15000	13000	12000	40000	30.3	200	150	100	450	13.0
Total	52000	45000	35000	132000	100.0	1700	1100	650	3450	100.0

Source: Town Council Director's Office (Livestock Department), Makambako TC, 2015

3.3 Natural Resources

Urbanization of Makambako TC is closely associated with a rapid population growth. The social impact results from changes that occur on the environment through excessive exploitation of natural resources and various economic activities for satisfying basic human needs. Protection of natural resources is the most challenging problem facing management of urbanization process in Makambako. This is true as high urban population growth has raised the need for the Makambako TC to have properly planned, surveyed and serviced land for households and public uses. Admittedly, all these processes put more pressure on decreasing natural resources. In due cause, balancing urban development and management processes without violating guiding principles for protection of natural resources is important for sustainable development of the town council.

3.3.1 Environment and Waste Management

High urban population growth among others, causes various environmental problems as evidenced by the increasing volume of waste that consequently leads to decreasing of open dumps for disposing waste. Makambako being Town Council is developing very fast and therefore needs to have an effective solid waste management system which involves waste collection, transportation and disposal. Liquid waste management is also very important.

As Table 3.13 shows, Makambako TC is doing well in waste management whereby 76.0 percent of the solid waste and 81.0 percent of the liquid waste generated per day by both permanent residents and temporary visitors were disposed in required places. On the contrary, more efforts should be directed towards increasing awareness among households on pit latrine and dust bin use so as to improve solid and liquid waste management and sanitation conditions in Makambako. This is necessary as Table 3.13 reveals that only 7,037 households (22.8 percent of the total household in 2013) had pit latrines, and 8,610 households (27.9 percent) used dust bins for solid waste collection.

Table 3. 13: Solid and Liquid Waste Management; 2013, Makambako TC

Estimated population	Solid Waste generated per Day in Kg/M3	Liquid Waste generated per Day in Kg/M3	Solid waste Disposed per Day in KG/M ³	Percent of Solid waste Disposed per Day	Liquid waste Disposed per Day in KG/M ³	Percent of Liquid waste Disposed per Day	Household with garbage		Number of Household with Utensil racks
							PIT	BIN	
93,827	46,914	1,351,775	35,655	76.0	1,094,938	81.0	7,037	8,601	5,700

Source: Town Council Director's Office (Solid and Liquid Waste Management Unit), Makambako TC, 2015

3.3.2 Tourism

Location of Makambako being at the junction of Iringa_Mbeya and Iringa_Ruvuma highway favours this town council with a great potential of growing possibly to become the largest business and economic centre as well as a destination for urban tourism not only in Njombe region but also to neighboring regions of Iringa, Mbeya and Ruvuma. Creative town planning of the council through construction of shopping malls, super markets, recreation centres and hotels accompanied with improving street/feeder roads at tarmac level would make Makambako TC a good point for urban tourism. Tanzania-Zambia Railway line has a big station in Makambako. Through this railway line people from South Africa, Zambia and also within the country can reach the area at affordable transport costs. High way tarmac road from Dar es Salaam-Mbeya-Zambia provides an alternative option for tourists to reach Makambako.

3.4 Industrial Development

Any industrial development plan for establishing small, middle and large scale industries can easily be implemented in Makambako because of its proximity to the market due to its location at the junction of the highway tarmac road connecting Dar es Salaam- Iringa to Mbeya and Dar es Salaam-Iringa to Ruvuma. Makambako is also close to regions namely Mbeya, Ruvuma and somehow Rukwa which are giant producers of grains especially maize and rice. This makes it possible to establish international grain markets and processing industries.

All trucks and buses going to Mbeya, Rukwa, Ruvuma, Katavi and nearby countries of Malawi and Zambia pass through Makambako TC. Thus, people of different cultures are common in Makambako who provide marketing opportunities for goods and services offered in the area. On the other hand, Makambako has a chance of becoming a home of a sound Economic Processing Zone specifically for processing soft wood due to its proximity to leading district councils in soft wood production like Mufindi, Makete and Njombe rural. Besides the enormous potential endowed with Makambako as already described. In addition to this, strong winds experienced in several areas of the Makambako TC can also provide a reliable alternative source of electricity if proper investment is done.

CHAPTER FOUR

Economic Infrastructures

4.0 Introduction

Chapter four explains the existing economic infrastructure in Makambako Town Council. Economic infrastructures discussed include road network development, air and telecommunication services, railways and energy sector. Road network development is discussed in terms of road classification, type, passability and density. Telecommunication services include number of telephone lines (land lines) available, number of television, radio and railway stations, number of internet centers, accessibility of mobile phone services and number of post offices. In energy sector, the chapter discusses main sources of energy used in the council and more specifically, the distribution of electricity.

4.1 Road Network

4.1.1 Road Network by Ward and Grade

Although virtual connectivity has become increasingly important today with the emergence of new communication avenues, a good and reliable transport network remains vital. There is a very



strong positive correlation between a country's economic development and the quality of its road network.

Roads in Tanzania are classified or grouped into trunk, regional, district, feeder and urban categories. Trunk Roads are the primary, national and international routes to regions, border posts and ports. Regional Roads are the secondary routes which connect district centres in a region or from another important centre to a trunk road. The Tanzania National Roads Agency (TANROADS) is one of the agencies under the Ministry of Works and is responsible for the management of trunk and regional road network of Tanzania Mainland.

Council roads are tertiary routes providing a linkage between council headquarters to ward centers; important centers within the district; and important centres to a higher class of road. Feeder roads are the village access roads linking important centres within a ward to the rest of the network and urban roads are roads within the urban centres. District, urban and feeder roads are managed by LGAs under the coordination of the Prime Minister's Office Regional Administration and Local Government (PMO-RALG). LGAs are therefore responsible for

managing, development and maintenance of district, feeder and urban roads under the coordination of PMO-RALG.

Road transportation is the major type of transportation for people and goods within and outside Makambako Town Council. The council road network is composed of trunk, regional, district/urban and feeder roads. The council has a total road network of 522 kms. Mjimwema Ward has the longest road network of 142 kms (27.1 percent) followed by Mlowa Ward with 83 kms (15.9 percent) and Ubena Ward 65 kms (12.4 percent). Utengule Ward has the shortest road network in the council with 30 kms (5.7 percent) and road lengths for other wards are as shown in Table 4.1.

Table 4. 1: Length (km) of Road Network by Ward and Grade, Makambako TC, 2013

Ward	Grade (Kms.)				Total Road Network	Total Road Network (%)
	Trunk	Regional	District/Urban	Feeder		
Ubena	3	0	62	0	65	12.4
Mjimwema	5	0	137	0	142	27.1
Mlowa	0	0	0	83	83	15.9
Lyamkena	0	0	0	46	46	8.8
Mwembetogwa	5	0	31	0	36	6.8
Mahongole	0	0	0	60	60	11.5
Kitandililo	0	18	0	43	61	11.7
Utengule	0	0	0	30	30	5.7
Total	13	18	229	262	522	100.0

Source: Town Director's Office – Makambako Town Council, 2014

The results further show that 94.1 percent of the road networks are maintained by the council and the remaining 5.9 percent are trunk roads maintained by TANROADS. This implies that a high percent of road network in Makambako Town Council are under the maintenance of the council and therefore the council should have a comprehensive plan to make sure that all roads are maintained and passable throughout the year to facilitate community's access to different social services and transportation of their agricultural, livestock, forestry and other products to different parts of the country.

4.1.2 Road Classification by Type of Road Surfaces



The grade of road surface to a large extent determines durability of the road. It is therefore necessary to survey or examine the type of road surfaces in conjunction with their respective lengths in Makambako Town Council so as to establish the real status of their durability. Table 4.2 and figure 4.2 quantifies the quality of road surface available in Makambako Town Council and shows that,

only 13 kms or 2.5 percent of the network was surfaced by tarmac; 24 kms or 4.6 percent of the network was surfaced by gravel, while 486 kms or 93.1 percent was earth surfaced.

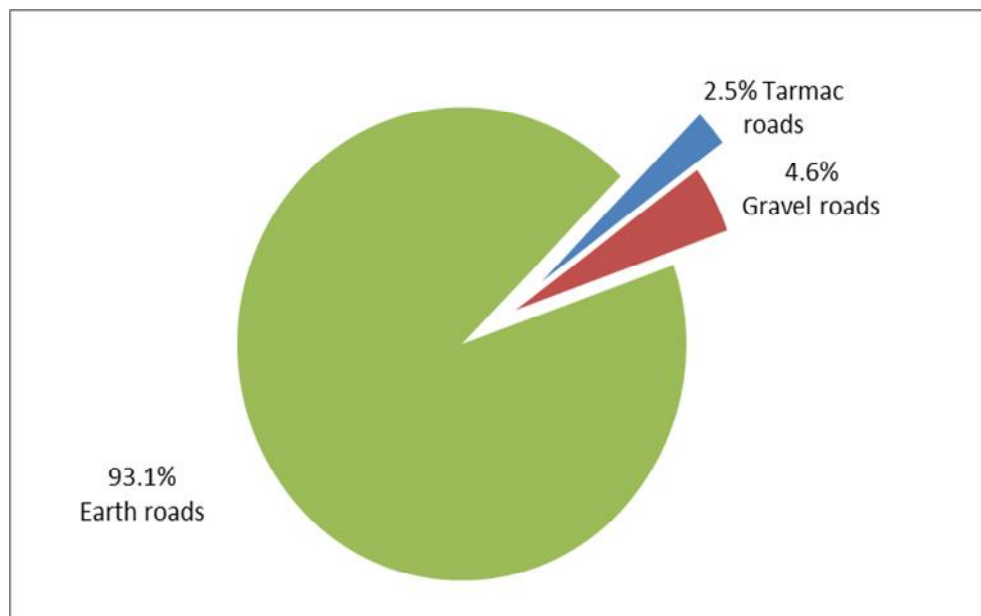
Table 4. 2: Length of Road Network by Type of Road Surface and By Ward; Makambako Town Council, 2013

Ward	Type of Surface (Kms.)			Total
	Tarmac	Gravel	Earth	
Ubena	3	5	57	65
Mjimwema	5	12	125	142
Mlowa	0	0	83	83
Lyamkena	0	3	43	46
Mwembetogwa	5	4	27	36
Mahongole	0	0	60	60
Kitandililo	0	0	61	61
Utengule	0	0	30	30
Total	13	24	486	522
Percent	2.5	4.6	93.1	100

Source: Town Director's Office – Makambako Town Council, 2014

It can also be noted from the results that, a greater part of the road network is surfaced by earth (93.1percent) which suggests that a greater part of the council is likely to be impassable following possible destruction by heavy rains. This may eventually make it difficult for the Council to deliver quality social and economic services to the public that involve among others transportation of people and goods, particularly agricultural products to the market.

Figure 4.1 Percentage Distribution of Road Network by Type of Road Surface, Makambako Town Council; 2013



Source: Town Director's Office – Makambako Town Council, 2014

4.1.3 Road Passability

Table 4.3 and Figure 4.3 show the condition of roads network in Makambako TC in a year. It has already been pointed out that the total road network in Makambako TC is 522 kms. About 32 percent or 167 kms of the total road network is passable throughout the year. About 14.6 percent or 76 kms of the total road network in Makambako TC is passable a great part of the year, this means some parts of the road network might be impassable during a specific period of the year particularly during rainy seasons. The remaining 53.4 percent of 279 kms is not passable most of the year which can have a negative economic and social impact on the population living in areas connected with these roads, in terms of accessing social services and interaction with other parts of the council and the country in general. In general, the Town Council has a long way to go so long as only 32 percent of the road network is passable throughout the year. The big portion of 53.4 percent which is not passable most of the year should be looked at more seriously.

Table 4. 3: Passability of Road Network by Ward, Makambako Town Council, 2013

Ward	Condition of Road Network throughout the year in square km				
	Passable throughout the year	Passable a greater part of the year	Not passable most of the year	Total Road Network	Percentage passable (column 2+3)
Ubena	26	11	28	65	57.3
Mjimwema	57	20	65	142	54.4
Mlowa	13	6	64	83	22.9
Lyamkena	22	9	15	46	67.4
Mwembetogwa	12	3	21	36	42.1
Mahongole	11	18	31	60	48.3
Kitandililo	12	2	47	61	22.9
Utengule	14	7	9	30	70.0
Total	167	76	279	522	46.6

Source:Town Director's Office – Makambako Town Council, 2014

It should be observed that, poor road conditions constrain the movement of people and goods, significantly raises vehicle operating costs, increases accident rates and their associated human and property costs, and aggravate isolation, poverty, poor health, and illiteracy in the communities.

4.1.4 Major Road Connections

Table 4.4 highlights road connections and road links which connect the Makambako TC with the vicinity. As the table depicts most of the roads are in good condition which are easily passable in all seasons. In this respect, the roads need to be taken care of for improvement to ease transportation of goods and services to the rural population in the council.

Table 4. 4: Major Road Connections and Road link, Makambako TC; 2013

Major Inter - District Road Connections	Length of Road link in kms.	Quality of road surface	Type of Road
Makambako-Njombe(Songea road)	18.0	Very Good	Trunk- Tarmac
Makambako-Mbeya	5.0	Very Good	Trunk - Tarmac
Makambako -Iringa	10.0	Very Good	Regional - Tarmac
Makambako-Mlowa- Kifumbe	18.0	Good	Regional - Gravel

Source:Town Director Makambako Town Council (Works Department), 2014

4.2 Railway Services



Railways transportation remains the most affordable way of transporting heavy and bulky goods though the unsatisfactory performance of Tanzania Zambia Railways Authority (TAZARA) has forced many companies and individuals to rely on the relatively more expensive road transportation to move their goods from one place to another.

The economy of Makambako Town Council apart from other factors is also influenced by the presence of reliable and affordable railway transport namely Tanzania Zambia Railways line (TAZARA). As shown in Table 4.4, Kitandililo and Makambako are the two railway stations which serve as a gateway for receiving and exporting heavy and bulky goods and services in and out of the council. The presence of reliable public road transportation of passengers, goods and services attributed also by poor performance of the railwayline caused a gradual decrease in the number of passengers and goods and services transported in recent years through this railway line in Makambako Town Council. Table 4.4 shows that about 38,890 passengers and 375 tonnes of goods were transported through the three railway stations in Makambako Town Council in 2013.

Table 4. 5: Railway Services in Makambako Town Council; 2013

Division	Ward	Name of station	Number of Passengers	Quantity of cargo in tonnes
Makambako	Kitandililo	Kitandililo	490	55
Makambako	Ubena	Makambako	38,400	320
Total			38,890	375

Source: Makambako Town Council (Construction Department), 2014

4.3 Air Services

Makambako Town Council has neither an air port no an air strip but since it is located near Njombe air strip about 60 km from Makambako Town, it relies heavily on that airstrip for air transportation. Moreover, unreliability of air transport and uncertainty of railway services makes road transport the only reliable type of transport in the council.

4.3 Telecommunication Services



As a means of exchanging information over significant distances, telecommunication is very important as it provides access to relevant information and knowledge which improves efficiency and productivity; enhances social services delivery; increases access to market opportunities; and improves government performance. Makambako Town Council is

facilitated with reliable communication networks such as land line telephones, mobile phones and internet cafes. By the end of 2013, the council had five (5) operating cellular phone companies namely: Vodacom, Airtel, Zantel, Tigo and Tanzania Telecommunication Company Limited (TTCL) at between 60 and 95 percent coverage. TTCL provides both land line telephone services and mobile phone services. Radio, television services and cable television accessed in the council include Radio One, Clouds, Radio Maria, TBC and Radio Free Africa just to mention a few. There is only one radio station, Ice FM that broadcasts from Makambako Town but there is however no television station in the council though there are six internet cafes and one post office.

4.4 Energy

Energy is a crucial ingredient for economic development. As both agricultural and industrial activities increase, the demand for energy also increases. Provision of a greater access to energy has been suggested that it will help grow economies and improve the lives of the poor.

Makambako TC depends on various sources of energy for domestic as well as commercial use. Such sources include electricity, paraffin, firewood, charcoal, gas and solar. However, the majority of the people in sub-peripheral areas use kerosene and firewood as a major source of energy for lighting and cooking. Some institutions and few individuals in the urban areas use solar energy and electricity as their source of energy for lighting and cooking but the majority use charcoal as the main source of cooking and electricity as the main source for lighting.

There are no data to show the status of main sources of energy in Makambako Town Council and the number of users for each energy source. This information will be used after analysis and dissemination of data from the 2012 Population and Housing Census.

4.4.1 Electricity

Electricity supply stimulates both social and economic development. Furthermore, it also improves leisure and generally the quality of life. Like other parts of the country, TANESCO continued to be the sole supplier of electricity in the Makambako Town Council. Data (available from the council) on the number of customers, both commercial and domestic show that in 2011 there were 28,932 customers, 33,600 customers in 2012 and about 38,532 customers in 2013.

4.4.2 Fire Wood and Charcoal

Fire wood and charcoal had become the dominant source of energy used for domestic consumption (lighting and cooking), although the majority of the households in the council have access to electricity. The use of firewood implies alarming rates of environmental destruction. Indiscriminate cutting of trees for firewood cause soil erosion. Destruction of forests reduces biodiversity and efficiency of water sources. In turn, environmental destruction causes rampant poverty since the livelihood of the majority of the people in the rural areas in Tanzania depends on agriculture and rangelands for livestock keeping. Alternative sources of energy should be considered carefully and be found as soon as possible instead of using fuel wood if the council's forests and neighboring areas are to be saved from depletion on a progressive scale.

CHAPTER FIVE

Social Services

5.0 An Overview

Chapter Five discusses status of social services in Makambako Town Council and covers the health sector, education sector, water and sanitation. In the health sector, the discussion covers improvement of health facilities and staff, morbidity and mortality status and mother and child health. It also covers the prevalence of HIV/AIDS and related diseases as well as its impact to the community.

5.1 Health Sector

The status of public health services can be visualized through the health infrastructure, availability and commitment of health practitioners, implementation of preventive and curative measures and availability of medicine and supplies. The council experiences shortages of health practitioners such as assistant medical officers (AMOs), clinical officers (COs), nursing officers (NOs) and midwives; and medicines. This causes unnecessary loss of peoples' lives due to preventable diseases. The major killer diseases in Makambako Town Council include: Malaria, Anemia, Pneumonia, Clinical AIDS and other communicable diseases.

5.1.1 Health Facilities

Makambako Town Council was inaugurated in 2010 and is still improving the health sector by constructing new facilities, from 2 public health facilities in 2010 to 4 facilities (one health facility and 4 dispensaries) in 2013. However, currently the council has more private health facilities (one hospital and 7 dispensaries) that are operating efficiently. Looking at ward level, the facilities are distributed unevenly with health centres and dispensaries in Ubena, Mwebetogwa and Mahongole wards (Table 5.1).

Looking at ownership, private sector participation in the provision of health facilities as emphasized by the health policy is more significant, 8 out of 13 facilities are privately owned (Table 5.1).

Table 5. 1: Availability of Health Facilities by Ownership and by Ward, Makambako Town Council;2013

Ward	Hospital		Health Centres		Dispensaries		Total	
	Public	Private	Public	Private	Public	Private	Public	Private
Utengule	0	1	0	0	0	1	0	2
Lyamkena	0	0	0	0	0	0	0	0
Mahongole	0	0	0	0	2	0	2	0
Kitandililo	0	0	0	0	1	1	1	1
Mlowa	0	0	0	0	0	0	0	0
Mjimwema	0	0	0	0	0	1	0	1
Ubena	0	0	1	0	1	1	2	1
Mwembetogwa	0	0	0	0	0	3	0	3
Total	0	1	1	0	4	7	5	8

Source: Town Director's Office (District Medical's Office), Makambako Town Council, 2014

Looking at ward level, the district is still lagging behind in the implementation of the National Health Policy which stipulates that each ward has to have a health centre and a dispensary in each *mtaa*. Table 5.2 shows that among eight wards, only Ubena Ward managed to implement the policy of one health centre per ward at 12.5 percent as a result Makambako TC still faces a shortage of health centres at 87.5 percent. The Council also still had a significant shortage of dispensaries in all wards. Only three out of eight wards had one dispensary, while Utengule, Nyamkena, Mlowa, Mjimwema and Mwembetogwa wards had no dispensary. The council should mobilise people to participate in the construction of these facilities through community participation also encouraging the private sector to build more facilities in order to fulfil the requirements of the health policy as previously described.

Table 5. 2: Distribution of the Health Centres and Dispensaries by Ward, Makambako Town Council, 2013

Ward	Number of Village/ Street	Available Health Facilities			Shortage of Health Facilities			
		Hospitals	Health Centres	Disp.	Required Health Centres	Percent Shortage	Required Disp.	Percent Shortage
Utengule	16	0	0	0	1	100.0	16	100.0
Lyamkena	4	0	0	0	1	100.0	4	100.0
Mahongole	25	0	0	2	1	100.0	25	92.0
Kitandililo	26	0	0	1	1	100.0	26	96.2
Mlowa	5	0	0	0	1	100.0	5	100.0
Mjimwema	4	0	0	0	1	100.0	4	100.0
Ubena	3	0	1	1	1	0.0	3	66.7
Mwembetogwa	2	0	0	0	1	100.0	2	100.0
Total	85	0	1	4	8	87.5	85	95.3

Source: Town Director's Office (District Medical's Office), Makambako Town Council, 2014

5.1.1.1 Health Facility Ratios

This sub-section focuses on availability of health facilities observed in Makambako Town Council in 2002 and 2013. The availability of health facilities in Makambako Town Council falls below WHO standards. The average coverage of the population by health facilities in Makambako Town Council was 27 facilities per 10,000 people in 2002 but increased to 122 facilities per 10,000 persons in 2013. At ward level, Table 5.3 shows that the best population coverages in 2013 were Ubena and Mjimwema. Looking at average population per facility in 2002, the average was 8,696 persons per facility recorded at Utengule ward and Ubena (16,249 persons). In 2013, Ubena and Mjimwema continued to be the best wards with averages of 5 and 3 facilities per 10,000 persons respectively, while Mwebetogwa and Kitandililo wards had the best mean average population per facility 2,461 persons and 3,421 persons respectively (Table 5.3).

Table 5.3: Relating Health Facilities to the Population by Ward, Makambako Town Council; 2002 and 2013

Ward	2002				2013			
	Total Population	h.f.s.	Mean Average Population per h.f.s	h.f.s. per 10,000 People	Total Population	h.f.s.	Mean Average Population per h.f.s	h.f.s. per 10,000 People
Utengule	8,696	1	8,696	1	8,597	2	4,299	2
Lyamkena	9,327	0	0	0	9,383	0	0	0
Mahongole	8,280	0	0	0	9,222	2	4,611	2
Kitandililo	6,493	0	0	0	6,842	2	3,421	1
Mlowa	5,945	0	0	0	5,712	0	0	0
Mjimwema	27,357	1	27,357	3	28,998	1	28,998	3
Ubena	16,249	1	16,249	2	17,691	3	5,897	5
Mwebetogwa	8,732	0	0	0	7,382	3	2,461	2
Total	91,079	3	30,360	27	93,827	13	7,217	122

h.f.s: Health Facility Services

Source: Town Director's Office (District Medical's Office), Makambako Town Council, 2014

5.1.1.2 Population per Doctor Ratio



Table 5.4 shows that the distribution of doctors for the year 2013 was uneven and in favour of Ubena which is a council hospital. The council's average population per doctor was 23,457 in 2013 and there was no practitioner in 2002. A similar trend is observed at ward level but more so in Tumbi compared to the rest of wards.

Table 5. 4: Distribution of Doctors Among Population by Ward, Makambako Town Council; 2002 and 2013

Ward	2002				2013			
	Total Population	Doctor	Mean Average Population per Doctor	Doctor per 10,000 People	Total Population	Doctor	Mean Average Population per Doctor	Doctor per 10,000 People
Utengule	8,696	0	0	0	8,597	0	0	0
Lyamkena	9,327	0	0	0	9,383	0	0	0
Mahongole	8,280	0	0	0	9,222	0	0	0
Kitandililo	6,493	0	0	0	6,842	0	0	0
Mlowa	5,945	0	0	0	5,712	0	0	0
Mjimwema	27,357	0	0	0	28,998	0	0	0
Ubená	16,249	0	0	0	17,691	4	4423	7.1
Mwembetogwa	8,732	0	0	0	7,382	0	0	0
Total	91,079	0	0	0	93,827	4	23457	37.5

Source: Town Director's Office (District Medical's Office), Makambako Town Council; 2014

As the available official health facilities were not enough to serve the ever growing population of Makambako Town Council, the District Authority established primary rural health centres to complement the existing facilities. These centres were operated by Mtaa Health Workers (MHWs) assisted by Traditional Birth Attendants (TBAs) under supervision of Mtaa Health Committees (MHCs). Table 5.5 shows that by 2012, the district had 29 Trained Tradition Birth Attendants (TBAs), 40 Mtaa Health Workers (MHWs) and 40 *Mtaa* Health Posts (MHP).

Table 5.5 also shows that the Council also had no sufficient number of primary rural health centres, including traditional birth attendants, *mtaa* health workers and tradition medical practioners in 2013. The Council had only 15 Trained Traditional Birth Attendants and 45 Tradition Medical Practitioners with no *mtaa* health workers. Mahongole ward had more (10) TBAs and three TMPs, followed by Kitandililo (5 TBAs and TMPs each), while Ubená, Mjimwema and Lyamkena wards had 9,8 and 6 TMPs but neither TBA nor MHW and MHP. However, the rest of *mitaa* had only TMPs though not sufficient for each *mtaa* in 2013 (Table 5.5).

Table 5. 5: Distribution of Complementary Rural Health Facilities by Ward, Makambako TC; 2013

Ward	No. of TBAs(Trained)	No. of MHWs	No. of MHP	No. of TMP(Registered)
Utengule	0	0	0	5
Lyamkena	0	0	0	6
Mahongole	10	0	0	3
Kitandililo	5	0	0	5
Mlowa	0	0	0	4
Mjimwema	0	0	0	8
Ubena	0	0	0	9
Mwembetogwa	0	0	0	5
Total	15	0	0	45

Source: Town Director's Office (District Medical's Office), Makambako Town Council, 2014

5.1.1.3 Population per Hospital Bed

Table 5.6 also shows average population per hospital bed. Involvement of private sector in the provision of health services in Makambako Town Council has created shortage of hospital beds in 2013. The limitation of beds in 2013 has caused the ratio of population per bed to be 782 (Table 5.6). In 2013, Mjimwema Ward had the worst access to the hospital bed with 2,900 persons per bed followed by Mahongole Ward which had 2,304 persons per bed and Utengule (1,433), while Ubena (253 persons per bed) had the best access due to the number of beds in a hospital and health centre.

Table 5. 6: The Number of Population per Hospital Bed by Ward, Makambako Town Council, 2002 and 2013

Ward	2002				2013			
	Total Population	Beds	Mean Average Population per Bed	Bed per 10,000 People	Total Population	Beds	Mean Average Population per Bed	Bed per 10,000 People
Utengule	8,696	0	0	0	8,597	6	1,433	5.2
Lyamkena	9,327	0	0	0	9,383	0	0	0
Mahongole	8,280	0	0	0	9,222	4	2,306	3.7
Kitandililo	6,493	0	0	0	6,842	16	428	10.9
Mlowa	5,945	0	0	0	5,712	0	0	0.0
Mjimwema	27,357	0	0	0	28,998	10	2,900	29.0
Ubena	16,249	0	0	0	17,691	70	253	123.8
Mwembetogwa	8,732	0	0	0	7,382	14	527	10.3
Total	91,079	0	0	0	93,827	120	782	1,125.9

Source: Town Director's Office (District Medical's Office), Makambako Town Council, 2014

5.1.1.4 Status of Health Personnel

Table 5.7 shows that in 2013, the council was still experiencing a significant shortage of health personnel in regard to specialised doctors, radiologists, dental therapists and pharmacists. In 2013, health personnel were dominated by trained Nurses and Midwives (35.4 percent) followed by medical attendants (23.8 percent), clinical officers (6.3 percent), assistant medical officers and assistant clinical officers (4.8 percent each) as shown in Table 5.7.

Table 5. 7: Type and Number of Medical Personnel, Makambako Town Council; 2013

Medical Personnel	Male	Percent	Female	Percent	Total	Percent
Specialist Doctors	0	0.0	0	0.0	0	0.0
Medical Doctors	0	0.0	1	100.0	1	0.8
Ass. Medical Officers	4	66.7	2	33.3	6	4.8
Clinical Officers	3	37.5	5	62.5	8	6.3
Ass. Clinical Officers	4	66.7	2	33.3	6	4.8
Dental Surgeons	1	100.0	0	0.0	1	0.8
Ass. Dental Officers	0	0.0	1	100.0	1	0.8
Dental Therapists	1	25.0	3	75.0	4	3.2
Pharmacists	1	50.0	1	50.0	2	1.6
Pharmaceutical Technicians	1	25.0	3	75.0	4	3.2
Pharmaceutical Assistants	0	0.0	0	0.0	0	0.0
Laboratory Technicians	2	33.3	4	66.7	6	4.8
Laboratory Assistants.	0	0.0	1	100.0	1	0.8
Radiologists	0	0.0	0	0.0	0	0.0
Radiographers	1	100.0	0	0.0	1	0.8
Radiographic Assistants	0	0.0	0	0.0	0	0.0
Nursing Officers	0	0.0	3	100.0	3	2.4
Trained Nurse/NM/PHN	5	11.1	40	88.9	45	35.7
MCHA	0	0.0	0	0.0	0	0.0
Medical Attendants	3	10.0	27	90.0	30	23.8
Health Officers	0	0.0	0	0.0	0	0.0
Health Assistants	0	0.0	2	100.0	2	1.6
Health Secretaries	0	0.0	3	100.0	3	2.4
Other Medical Carders	2	100.0	0	0.0	2	1.6
Total	28	22.2	98	77.8	126	100.0

Source: District Executive Director's Office (District Medical's Office), Makambako Town Council, 2014

5.1.2 Morbidity

The health service aims at solving the problems of morbidity or sicknesses as well as mortality. However, in order to take care of morbidity, the government needs an inventory of these health problems. The inventory shows that the ten most common causes of illnesses are almost the same between outpatients and inpatients in the Council.

Out-patients

Lack of health facilities, especially health centres makes it difficult to get trend of illness in Makambako Town Council. However, the available medical records shows that out of 6,621 outpatients recorded in 2013, 87.8 percent were suffering from one or the other of the first five illnesses. Table 5.8 shows that malaria illness ranked first as a cause of morbidity in Makambako Town Council. Diarrhoeal diseases with 18 percent cases ranked second, Acute respiratory infections (ARI) ranked third and the fourth was intestinal worms. The fifth disease was pneumonia accounted for 10.3 percent of total cases reported in 2013 (Table 5.8).

Table 5. 8: Ten Most Commonly Reported Causes of Morbidity (Out Patients), Makambako Town Council; 2008 and 2013

2008			2013		
Disease	Cases	Percent	Disease	Cases	Percent
Malaria	n.a	n.a	Malaria	2,035	30.7
ARI	n.a	n.a	Diarrhoeal diseases	1,189	18.0
Diarrhoea	n.a	n.a	Acute respiratory infection	970	14.7
Pneumonia	n.a	n.a	Intestinal worms	939	14.2
Intestinal worms	n.a	n.a	Pneumonia	679	10.3
Sub Total	n.a	n.a	Sub Total	5,812	87.8
Eye infection	n.a	n.a	Skin Diseases	533	8.1
Skin infection	n.a	n.a	Oral condition	115	1.7
Oral condition	n.a	n.a	Eye conditions	72	1.1
Anaemia	n.a	n.a	Ear conditions	53	0.8
PID	n.a	n.a	Fractures	36	0.5
Total	n.a	n.a		6,621	100.0

Source: Town Director's Office (District Medical's Office), Makambako Town Council, 2014

In-patients

Table 5.9 shows the most ten commonly reported causes of morbidity for inpatients in Makambako Town Council. Similar observations were also made for inpatients in 2013 when malaria, other diagnosis and diarrhoea were the first, second and third causes of morbidity in Makambako Town Council. The fourth and fifth causes of illnesses were ARI and clinical AIDS that accounted for 14.7 percent and 13.4 percent respectively of inpatients (Table 5.9). However, out of 7,321 inpatients recorded at Makambako Town Council in 2013, 98.8 percent were suffering from the five diseases (Table 5.9).

Table 5. 9: Ten Most Commonly Reported Causes of Morbidity (InPatients), Makambako Town Council; 2008 and 2013

2008			2013		
Disease	Cases	Percent	Disease	Cases	Percent
Other diagnosis	n.a	n.a	Malaria (Uncomp.)	2,035	30.7
Pneumonia	n.a	n.a	Other Diagnosis	1,466	22.1
Malaria uncomplicated	n.a	n.a	Diarrhoeal diseases	1,189	18.0
Diarrhoea	n.a	n.a	ARI	970	14.7
Malaria severe	n.a	n.a	Clinical AIDS	884	13.4
Sub Total	n.a	n.a	Sub Total	6,544	98.8
ARI	n.a	n.a	Pneumonia	679	10.3
Clinical AIDS	n.a	n.a	Fractures	36	0.5
Poising	n.a	n.a	Poisoning	9	0.1
Fracture	n.a	n.a	Malaria severe	53	0.8
Neoplasm	n.a	n.a	Neoplasm	0	0.0
Total	n.a	n.a		7,321	100.0

Source: Town Director's Office (District Medical's Office), Makambako Town Council, 2014

5.1.3 Mortality

The available data does not give the true picture of the mortality level in Makambako Town Council. However, medical records indicate that a dominant cause of mortality for inpatients of all ages in 2013 was malaria followed by the clinical AIDS and related diseases such as anaemia, pneumonia, tuberculosis and diarrhea due to its location. Makambako Town Council is located at the junction of Iringa to Mbeya and Songea roads. Therefore, special attention should be directed to control of HIV prevalence in the Town Council.

5.1.4 HIV/AIDS Infections

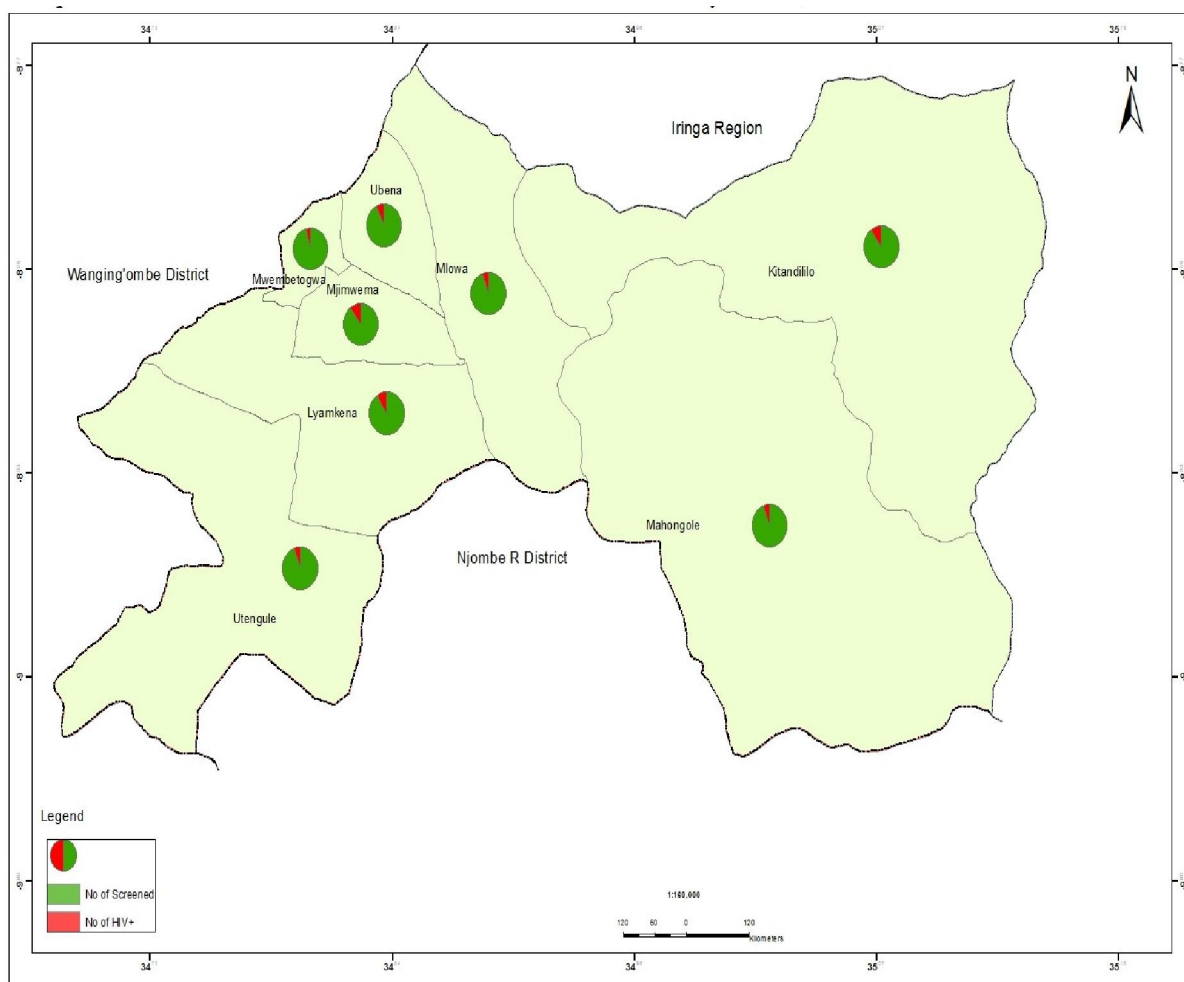
The HIV/AIDS pandemic is the single most important threat to morbidity and survival of the human race. In the context of the country AIDS has now caught up with malaria and tuberculosis as the greatest causes of deaths among in-patients. The big problems of malaria and tuberculosis are virtually static while that of HIV/AIDS is on the increase. Hence, the assessment of HIV/AIDS prevalence along with its control is the single greatest challenge to the health delivery system in the council and country at large.

Though there are a number of methods that can be used to measure the extent and trend of the HIV prevalence among the people, the common ones used in Makambako Town Council include testing prevalence among VCT volunteers. Establishment of VCT services in remote areas to a great extent manages to establish a reliable source of data on the extent and significance of HIV

prevalence in Makambako Town Council since it involves ethical or moral principles and willingness of inhabitants to be screened. Table 5.10 shows that out of 6,918 persons screened in 2013, out of whom 8.5 percent were affected with HIV/AIDS in the council. Sex wise, females were more affected (9.8 percent) than males (6.9 percent) as shown in Table 5.10.

The most affected ward was Mjimwema, of which 11.6 percent out of 1,938 persons screened were HIV positive, followed by Kitandililo (11.2 percent) and Lyamkena (10.1 percent), while Mwembetogwa had a minimum percentage (4.2 percent) of persons with HIV positive (Table 5.10).

Map 4: Total number of screened and HIV of VCT Volunteers by Ward: 2013



Source: NBS, GIS section, DSM

Table 5. 10: VCT Volunteers who were screened for HIV and New AIDs Cases by Sex and by Ward; Makambako Town Council; 2013

Ward	No. of Screen			No. of HIV+			Percent HIV+		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Utengule	186	171	357	7	15	22	3.8	8.8	6.2
Lyamkena	97	130	227	10	13	23	10.3	10.0	10.1
Mahongole	224	249	473	9	20	29	4.0	8.0	6.1
Kitandililo	289	362	651	26	47	73	9.0	13.0	11.2
Mlowa	213	259	472	2	29	31	0.9	11.2	6.6
Mjimwema	939	999	1,938	95	129	224	10.1	12.9	11.6
Ubená	734	1,002	1,736	49	91	140	6.7	9.1	8.1
Mwembetogwa	508	556	1,064	22	23	45	4.3	4.1	4.2
Total	3,190	3,728	6,918	220	367	587	6.9	9.8	8.5

Source: Town Director's Office (District Medical's Office), Makambako Town Council, 2014

5.1.4.1 The Impact of HIV/AIDS

The socio-economic assessment of Makambako Town Council is not complete without addressing the extreme challenges caused by the HIV/AIDS and the efforts so far made by various local and international organizations to combat the epidemic. HIV/AIDS is highlighted in this document, because it has been a major health problem since its advent at the end of 1987. The other reason for addressing the epidemic stems from the role it plays in impoverishing families and generating widows, orphans and vulnerable children due to the loss of bread-earners? in their families.

The report from the District Medical Office (DMO) qualifies Makambako Town Council as among the few districts with ever increasing rates of HIV/AIDS prevalence in the country. Geographically, Makambako Town Council is located at the junction along Iringa-Mbeya and Songea highways, which makes it easy for people to interact closely and engage in social and economic activities among others. Other factors are associated by drivers of heavy trucks while on transit at Makambako centre along the Iringa- Mbeya and Songea roads are frequently involved in prolonged drinking of alcohol and unsafe sexual practices. Other reasons that contribute to high prevalence rate of HIV/AIDS are polygamy and poverty among residents of Makambako Town Council. The poor, especially young girls who migrate to Makambako town centre are initially recruited in households as domestic workers for sometime before resorting to prostitution which is probably lucrative.

(i) The Increase of Vulnerable Persons

Understanding the status of HIV/AIDS prevalence in Makambako town council is very difficult since the council does not have referral facilities such as adequate health centres and hospitals as a result, many people die at home. With the exception of 2013, the lack of VCT was reported to

be a common problem in remote areas where people could be tested in order to know their health status.. Therefore, there are people who live with the HIV/AIDS virus without knowing their actual status.

One of the indicators of the high prevalence rate in the council is the increase of vulnerable persons (widow and orphans) and HIV/AIDS related diseases, including malaria, tuberculosis, pneumonia, anaemia and diarrhoea. Unfortunately, there is no statistical evidence to substantiate it since the council does not have enough referral facilities. There is therefore, a need to conduct a detailed study that will gather information on the impact of HIV/AIDS together with levels of vulnerable persons and their problems in order to come up with appropriate measures and solutions. Understanding the status of most vulnerable persons such as widows and orphans will enable the council to adopt policies and measures that will reduce poverty and improve their welfare.

5.1.5 Child Nutrition

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. Besides vaccination programme, children are also weighed to reveal how prevalent underweight is 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 in turn manifests itself in high infant and child mortality rates. However, lack of health facilities particularly MCHA in the council makes it difficult to quantify significance of severe malnutrition.

5.1.5.1 Mother and Child Health Care

Protection of expectant or lactating mothers and children from measles, tuberculosis, etc through immunization programme (CSPD) which is supported by development partners has to a large extent reduced the risk of infection. The available medical records show the decline of all mortality rates relating to mothers and children by 2013. Infant mortality rate based on medical records estimated at 8 per 1,000 livebirths, deaths of children under five years were estimated at 37 per 1,000 children and the estimated maternal mortality rate was 3 per 100,000 mothers, while prenatal and neonatal mortalities reached 4 and 11 per 1,000 livebirths respectively.

Reduction of deaths among children and their mothers is attributed to the wide coverage of immunization campaigns in the country. Table 5.11 reveals that out of 3,557 targeted pregnant women 98.5 percent were vaccinated in 2012 and 93.2 percent of 3,761 targeted pregnant were

vaccinated with TT2 in 2013. This suggests that there is a positive change in the council on the extent of immunizing pregnant women.

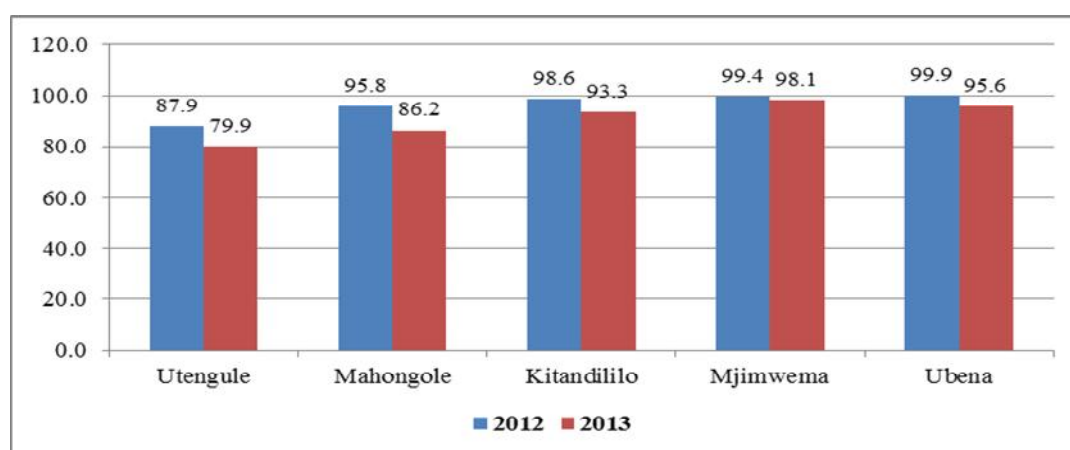
At ward level, in 2013, Mjimwema Ward had the highest coverage of 98.1 percent. In 2012 Ubena Ward reported the highest vaccination coverage of 99.9 percent followed by Mjimwema (99.4 percent) and Kitandililo (98.6 percent). Lyamkena, Mlowa and Mwembetogwa were not able to vaccinate expectant mothers due to lack of facilities (Table 5.11). The success of immunization depends mostly on the awareness of its beneficiaries.

Table 5. 11: Percentage of Expectant Mothers Vaccinated TT2 by Ward, Makambako Town Council; 2012 and 2013

Ward	2012			2013		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage
Utengule	190	167	87.9	209	167	79.9
Lyamkena	0	0	0.0	0	0	0.0
Mahongole	526	504	95.8	559	482	86.2
Kitandililo	222	219	98.6	240	224	93.3
Mlowa	0	0	0.0	0	0	0.0
Mjimwema	969	963	99.4	983	964	98.1
Ubena	1650	1649	99.9	1770	1693	95.6
Mwembetogwa	0	0	0.0	0	0	0.0
Total	3,557	3,502	98.5	3,761	3,530	93.9

Source: Town Director's Office (District Medical's Office), Makambako Town Council, 2014

Figure 5. 1: Percentage of Expectant Mothers Vaccinated TT2 by Ward, Makambako TC; 2012 and 2013



Source: Town Director's Office (District Medical's Office), Makambako Town Council, 2014

The trend of BCG vaccination for children under one year shows an increase in the number of children vaccinated between 2012 and 2013. At council level the percentages of targeted children

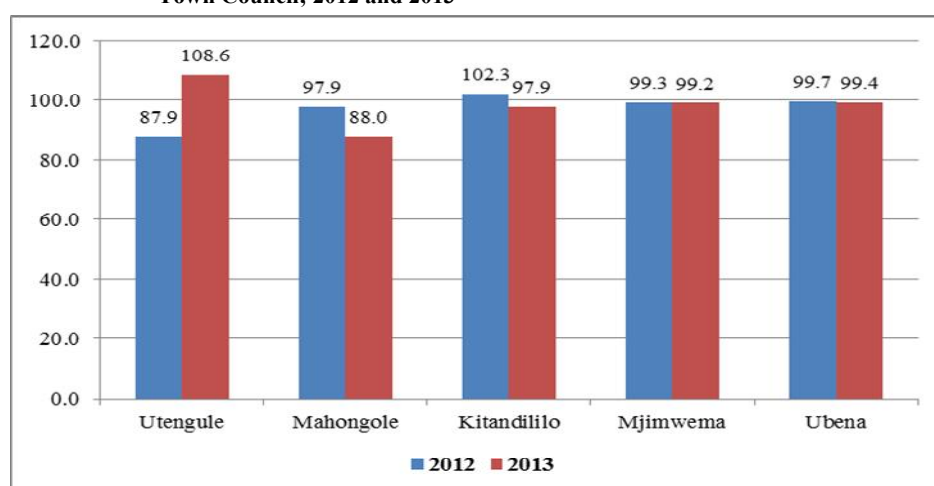
under one year vaccinated in 2012 and 2013 were 98.8 percent and 98.1 percent, respectively. The ward with the highest coverage in 2012 and 2013 were Kitandulilo and Utengule with vaccination coverages of 102.3 percent and 108.6 percent respectively. Other wards with good coverage in 2012 were Ubena (99.7 percent) and Mjimwema (99.3 percent). In 2013, the coverage in the wards was also good with Ubena Ward covering 99.4 percent followed by Mjimwema (99.2 percent) and Kitandililo (97.9 percent) (Table 5.12). Lyamkena, Mlowa and Mwembetogwa were not able to vaccinate expected mothers due to lack of facilities (Table 5.12).

Table 5. 12: Percentage of Children Under One Year Vaccinated BCG by Ward, Makambako Town Council; 2012 and 2013

Ward	2012			2013		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage
Utengule	190	167	87.9	209	227	108.6
Lyamkena	0	0	0.0	0	0	0.0
Mahongole	526	515	97.9	559	492	88.0
Kitandililo	222	227	102.3	240	235	97.9
Mlowa	0	0	0.0	0	0	0.0
Mjimwema	969	962	99.3	983	975	99.2
Ubena	1650	1645	99.7	1770	1760	99.4
Mwembetogwa	0	0	0.0	0	0	0.0
Total	3,557	3,516	98.8	3,761	3,689	98.1

Source: Town Director’s Office (District Medical’s Office), Makambako Town Council, 2014

Figure 5. 2: Percentage of Children under One Year Vaccinated BCG by Ward, Makambako Town Council; 2012 and 2013



Source: Town Director’s Office (District Medical’s Office), Makambako Town Council, 2014

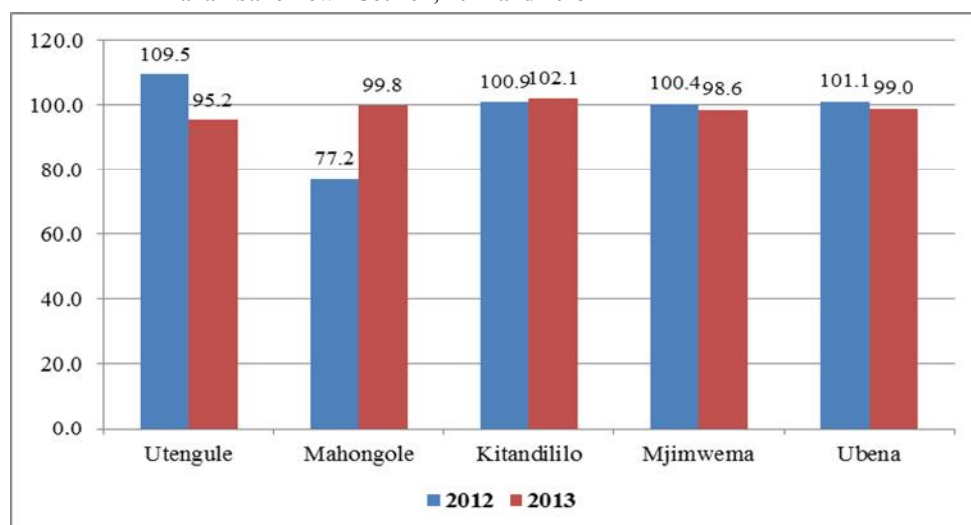
With regard to DPT3, the coverage of immunization in the district was good, the growth has not been steady. The proportion of vaccinated children increased from 97.8 percent of 3,557 targeted children in 2012 to 99.0 percent in 2013. At ward level, Utengule Ward had the highest proportion of vaccinated children (109.5 percent of the targeted children) in 2012. The second, third and fourth wards in 2012 were Ubena (101.1 percent), Kitandililo (100.9 percent) and Mjimwema (100.4 percent) respectively. Table 5.13 also reveals that Kitandililo ward had the largest proportion of vaccinated children in 2013, being 102.1 percent of the targeted children, followed by Mahongole (99.8 percent) and Ubena (99.0 percent).

Table 5. 13: Percentage of Children under One Year Vaccinated DPT3 by Ward, Makambako Town Council; 2012 and 2013

Ward	2012			2013		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage
Utengule	190	208	109.5	209	199	95.2
Lyamkena	0	0	0.0	0	0	0.0
Mahongole	526	406	77.2	559	558	99.8
Kitandililo	222	224	100.9	240	245	102.1
Mlowa	0	0	0.0	0	0	0.0
Mjimwema	969	973	100.4	983	969	98.6
Ubena	1650	1668	101.1	1770	1752	99.0
Mwembetogwa	0	0	0.0	0	0	0.0
Total	3,557	3,479	97.8	3,761	3,723	99.0

Source: Town Director’s Office (District Medical’s Office), Makambako Town Council, 2014

Figure 5. 3: Percentage of Children under One Year Vaccinated DPT3 by Ward, Makambako Town Council; 2012 and 2013



Source: Town Director’s Office (District Medical’s Office), Makambako Town Council, 2014

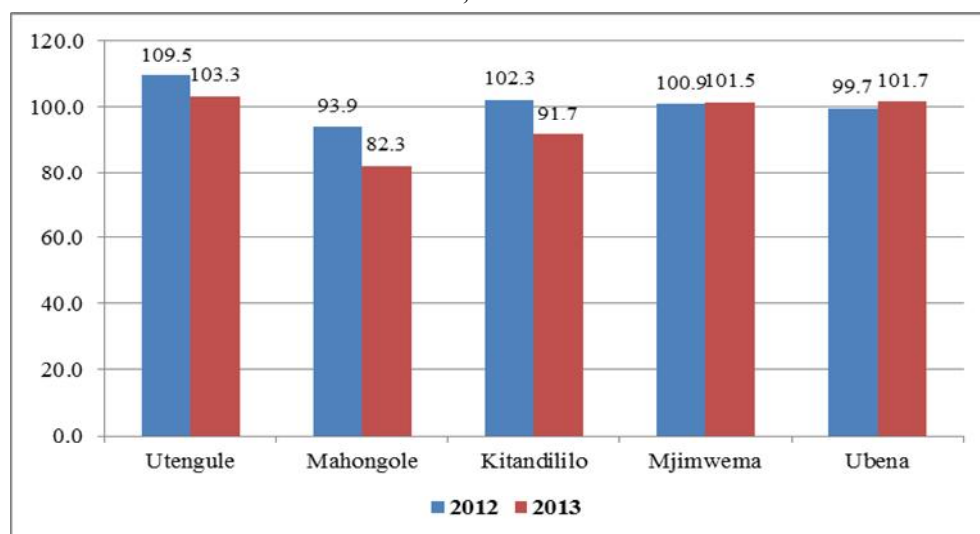
Coverage of the district's under one year children for OPV3 vaccination was 99.9 percent in 2012 but slightly decreased to 98.2 percent in 2013. At ward level, Utengule was the best performer in both years with vaccination coverage of 109.5 percent in 2012 and 103.3 percent in 2013. The second, third and fourth wards in 2012 were Kitandililo (102.3 percent), Mjimwema (100.9 percent) and Ubena (99.7 percent) respectively. In 2013, Ubena (101.7 percent) was the second ward followed by Mjimwema (101.5 percent) and Kitandililo (91.7 percent). Mahongolo was the least ward in both referred years (Table 5.14).

Table 5. 14: Percentage of Children under One Year Vaccinated OPV3 by Ward, Makambako Town Council, 2012 and 2013

Ward	2012			2013		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage
Utengule	190	208	109.5	209	216	103.3
Lyamkena	0	0	0.0	0	0	0.0
Mahongole	526	494	93.9	559	460	82.3
Kitandililo	222	227	102.3	240	220	91.7
Mlowa	0	0	0.0	0	0	0.0
Mjimwema	969	978	100.9	983	998	101.5
Ubena	1650	1645	99.7	1770	1800	101.7
Mwembetogwa	0	0	0.0	0	0	0.0
Total	3,557	3,552	99.9	3,761	3,694	98.2

Source: Town Director's Office (District Medical's Office), Makambako Town Council, 2014

Figure 5. 4: Percentage of Children under One Year Vaccinated OPV3 by Ward, Makambako Town Council, 2012 and 2013



Source: Town Director's Office (District Medical's Office), Makambako Town Council, 2014

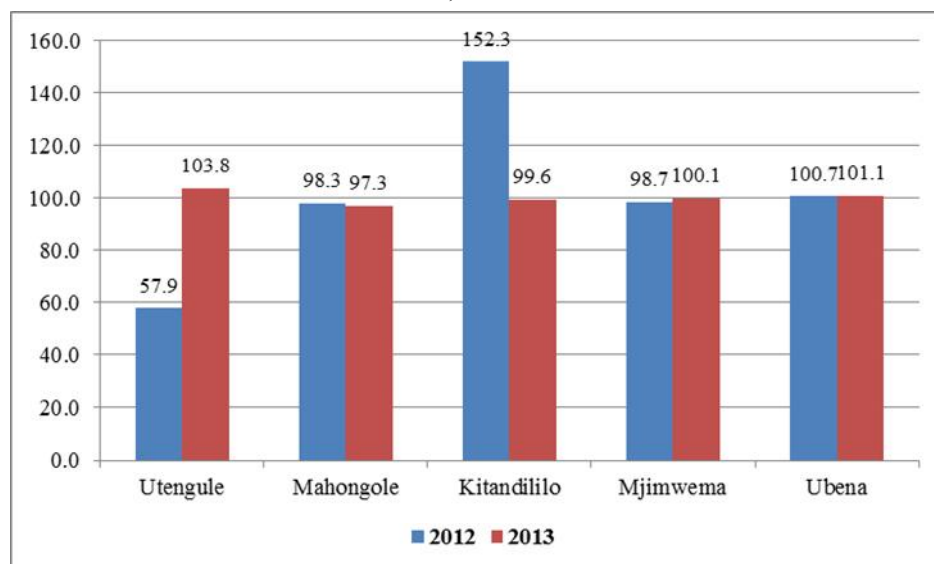
Measles vaccination is performed to protect children against measles. At the council level coverage for 2012 was 100.9 percent but decreased slightly to 100.3 percent in 2013. In 2012, the best performer was Kitandililo Ward with the coverage of 152.3 percent followed by Ubena 100.7 percent and Mjimwema (98.7 percent), but in 2013 with coverage of 103.8 percent Utengule was the best ward (Table 5.15) followed by Ubena (101.1 percent) and Mjimwema (100.1 percent). The worst ward in 2012 was Utengule (57.9 percent).

Table 5. 15: Percentage of Children under One Year Vaccinated Measles by Ward, Makambako Town Council; 2012 and 2013

Ward	2012			2013		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage
Utengule	190	110	57.9	209	217	103.8
Lyamkena	0	0	0.0	0	0	0.0
Mahongole	526	517	98.3	559	544	97.3
Kitandililo	222	338	152.3	240	239	99.6
Mlowa	0	0	0.0	0	0	0.0
Mjimwema	969	956	98.7	983	984	100.1
Ubena	1650	1662	100.7	1770	1789	101.1
Mwembetogwa	0	0	0.0	0	0	0.0
Total	3,557	3,583	100.7	3,761	3,773	100.3

Source: Town Director’s Office (District Medical’s Office), Makambako Town Council, 2014

Figure 5. 5: Percentage of Children under One Year Vaccinated Measles by Ward, Makambako Town Council; 2012 and 2013



Source: Town Director’s Office (District Medical’s Office), Makambako Town Council, 2014

5.1.7 Policy Implication on Health sector

Provision of health services at Makambako Town Council, according to the WHO standard, is still of a low quality. The council still has inadequate number of health facilities, equipment and doctors. Moreover, inadequate number of doctors, limited provision of health services including curative and preventive measures. High mortality due lack of awareness on the threat posed by HIV/AIDS and related diseases has affected the productive population in the council. However, health services can be improved through implementation of health policy and strategies which advocate health facility per each village, incentives that favour doctors and other health workers working in rural areas. Likewise, the policy of constructing dispensaries in every village and one health centre in every ward should be adhered to for increasing accessibility of health services to rural population.

5.1.8 Investment Opportunities for Health Sector

This sub-sector faces many problems including prevalence of diseases such as malaria, ARI, pneumonia, diarrhoea, clinical AIDS, etc; shortage of workers especially nurses and medicines. Investment is needed focussing on the construction of more health facilities e.g. health centers, instruments, medicines and training of health or medical personnel.

5.2 EDUCATION SECTOR

5.2.0 An Overview

Education sector covers both formal and informal education. Formal education includes pre-primary, primary and secondary school education. Informal education covers colleges and vocational education. Therefore, the development of the sector in Makambako Town Council involves improvements in all the above mentioned areas.

5.2.1 Pre-Primary Education

The availability of nursery schools in the council is yet another feature depicting the level of development of education system. Pre-primary schools are meant for children aged 3-5 years. The condition set by the Ministry of Education and Vocational Training that all children who start standard one must have undergone pre-primary education, accelerated the establishment of pre-primary schools all over the country including Makambako Town Council. Most of such schools were annexed to government primary school compounds.

As Table 5.16 shows the contribution of private sector in education sector is still very low since only one out of 38 pre-primary schools registered in the council was privately owned in 2013,

while 37 schools were annexed to public primary schools. However, the distribution of these schools was not even as it was skewed towards urban wards and also those with large populations like Mjimwema and Kitandililo. Table 5.16 also shows that Mjimwema Ward, being the most urban centre had the largest number of pre-primary schools (7), while Mlowa Ward which has rural characteristics had the least number of pre-primary schools (3).

Table 5. 16: Number of Pre-Primary School Classes by Ownership and Ward, Makambako Town Council; 2012 and 2013

Ward	2012			2013		
	Public	Private	Total	Public	Private	Total
Utengule	5	0	5	5	0	5
Lyamkena	4	0	4	4	0	4
Mahongole	4	0	4	4	0	4
Kitandililo	6	0	6	6	0	6
Mlowa	3	0	3	3	0	3
Mjimwema	6	1	7	6	1	7
Ubena	4	0	4	4	0	4
Mwembetogwa	4	0	4	5	0	5
Total	36	1	37	37	1	38

Source: Town Council Director's Office (Education Department), Makambako Town Council, 2014

5.2.2 Enrolment in Pre-Primary Schools

The motive behind introducing pre-primary schools classes in government primary schools all over the country was to increase enrolment of children aged 3-5 years in such schools. Contrary to the expectations, enrolment in Makambako Town Council decreased from 2,717 pupils in 2012 to 2,265 in 2013 (Table 5.17). The significant decrease in enrolment is attributed to the decline of enrolment in three wards namely Mlowa (67.2 percent), Lyamkena (38.9 percent), Ubena (38.5 percent) and Mjimwema (14.0 percent) as shown in Table 5.17. The Town council should find out causes for a decline in enrolment at pre-primary schools.

Table 5. 17: Pre-Primary Schools Enrolment by Ownership and Ward, Makambako Town Council, 2012 and 2013

Ward	2012			2013			Increase of Enrolment	
	Public	Private	Total	Public	Private	Total	Number	Percent
Utengule	290	0	290	291	0	291	1	0.3
Lyamkena	400	0	400	288	0	288	-112	-38.9
Mahongole	281	0	281	275	0	275	-6	-2.2
Kitandililo	195	0	195	207	0	207	12	5.8
Mlowa	326	0	326	195	0	195	-131	-67.2
Mjimwema	506	26	532	418	26	444	-62	-14.0
Ubeni	363	0	363	262	0	262	-101	-38.5
Mwembetogwa	330	0	330	303	0	303	-27	-8.9
Total	2691	26	2717	2239	26	2265	-426	-18.8

Source: Town Council Director's Office (Education Department), Makambako Town Council, 2014

5.2.3 Primary Education

Primary school education is a basic right of every Tanzanian child of school going age (6-13). To realize this, the Government of Tanzania put formulated the policy of Universal Primary Education (UPE) in 1974 making such education compulsory and ensuring that every child was enrolled at school. To achieve this goal, the first task was to have a reliable number of primary schools which would increase enrolment. .

According to Table 5.18, with exception of one privately owned primary school in the council, the rest were owned by the government. By increasing the number of primary schools from 141 in 2008 to 146 in 2010 and 149 in 2012 the district showed a positive attitude by giving every child of school going age a chance of being enrolled into standard one. On average, each village had a primary school because the district had 139 villages and 149 primary schools in 2012. Futhermore, Table 5.25 reveals that Ushokola had the largest number of primary schools (8) whilst Imalakoye and Kanindo had the smallest each with one school.

Table 5. 18: Number of Primary Schools by Ownership and by Ward, Makambako Town Council, 2012 and 2013

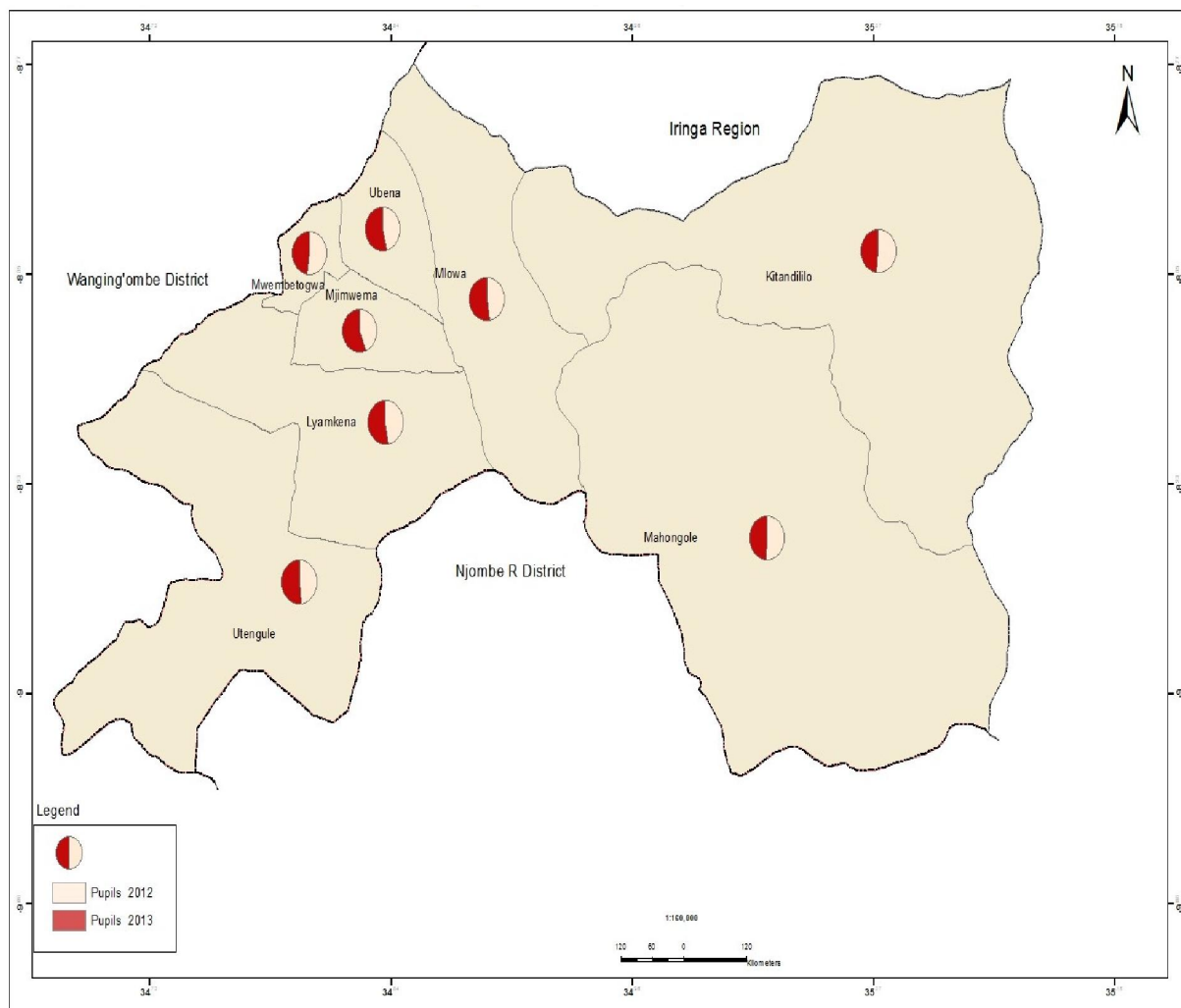
Ward	2012			2013		
	Public	Private	Total	Public	Private	Total
Utengule	5	0	5	5	0	5
Lyamkena	4	0	4	4	0	4
Mahongole	5	0	5	5	0	5
Kitandililo	6	0	6	6	0	6
Mlowa	3	0	3	3	0	3
Mjimwema	5	1	6	5	1	6
Ubena	4	0	4	5	0	5
Mwembetogwa	4	0	4	5	0	5
Total	36	1	37	38	1	39

Source: Town Director's Office (Education Department), Makambako Town Council, 2014

5.2.3.1 Standard I Enrolment

Over the period of two years 2012 and 2013 the Makambako Town Council implemented successfully the call of the government to increase enrolment in primary school. As Table 5.19 indicates, the enrolment increased by 9.5 percent from 2012 to 2013. In regard to enrolment trend at ward level, Mjimwema Ward did well in 2013 as the enrolment increased by 277 children or 24.3 percent was the highest among wards followed by Ubena (13 percent) and Mlowa (9.8 percent). Likewise, with enrolment decreased by 10.9 percent, Mwembetogwa had the worst enrolment in 2013, followed by Kitandililo (7.6 percent and Mahongole (2.2 percent). Dropping of enrolment in some wards is attributed to the fact that some households are migratory comprising livestock keepers.

Map 5: Pupils enrolment in Public Primary School by Ward; 2012 and 2013



Source: NBS, GIS section, DSM

Table 5. 19: Standard I Enrolment in Primary Schools by Ward, Makambako Town Council, 2012 and 2013

Ward	2012			2013			Increase of Enrolment	
	Public	Private	Total	Public	Private	Total	Number	Percent
Utengule	272	0	272	289	0	289	17	5.9
Lyamkena	403	0	403	444	0	444	41	9.2
Mahongole	281	0	281	275	0	275	-6	-2.2
Kitandililo	268	0	268	249	0	249	-19	-7.6
Mlowa	193	0	193	214	0	214	21	9.8
Mjimwema	862	37	899	1,087	52	1,139	277	24.3
Ubena	502	0	502	577	0	577	75	13.0
Mwembetogwa	558	0	558	503	0	503	-55	-10.9
Total	3,339	37	3,376	3,638	52	3,690	351	9.5

Source: Town Director's Office (Education Department), Makambako Town Council, 2014

According to Universal Primary Education (UPE), school going age is seven years. Based on Table 5.20, in 2012 children enrolled in standard one at the age of seven years accounted for 86.8 percent of the total enrolment while children aged eight years accounted for 11.7 percent and those with more than eight years were 1.5 percent. At the age of seven years more girls (1,504) were enrolled than boys (1,393). In 2012 Table 5.20 also reveals that more pupils (91.7 percent) were registered into standard one at the age of seven years followed by those with eight years (8.9 percent) and only a pupil had more than eight years. Again, Table 5.20 shows that more girls (1,706) were registered at age seven than boys (1,609), but more boys were registered at age eight than girls (Table 5.20).

Table 5. 20: Standard I Enrolment by Age Group, Makambako Town Council; 2012 and 2013

Year	Sex	Seven Years		Eight Years		9 and Above Years		Total
		Number	Percent	Number	Percent	Number	Percent	
2012	Boys	1,393	84.4	227	13.7	31	1.9	1,651
	Girls	1,504	89.1	165	9.8	19	1.1	1,688
	Total	2,897	86.8	392	11.7	50	1.5	3,339
2013	Boys	1,609	90.5	168	9.4	1	0.1	1,778
	Girls	1,706	91.7	154	8.3	0	0.0	1,860
	Total	3,315	91.1	322	8.9	1	0.0	3,638

Source: Town Director's Office (Education Department), Makambako Town Council, 2014

5.2.3.2 Completion Rate

The completion rate is an indicator of the efficiency of the school system that shows the extent to which a cohort of pupils admitted in class one complete the primary education cycle irrespective of whether they sit for the final examination or not. According to Table 5.21, the council somehow managed to control pupils drop outs caused by different reasons as among 2,846 of the cohort pupils registered in standard one in 2006, more than three quarters (2,367 pupils or 83.2 percent) completed standard seven in 2012. More girls (87.1 percent) than boys (78.7 percent) completed that level of education, Mlowa Ward had lowest completion rate in the council and had a significant difference in the number of boys and girls who completed primary school education cycle. Girls had the largest percentage (79.9 percent) that completed primary school education cycle than boys (47.5 percent). Poor completion rates of boys in some wards are due to the fact that most them are involved in pet businesses leading to pupils' drop outs.

Table 5. 21: Number of Pupils Enrolled in STD I in 2006 and Completed STD VII in 2012 by Ward, Makambako Town Council

Ward	Enrolled 2006			Completed 2012			Completion Rates		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Utengule	143	164	307	120	143	263	83.9	87.2	85.7
Lyamkena	99	132	231	84	125	209	84.8	94.7	90.5
Mahongole	133	165	298	126	158	284	94.7	95.8	95.3
Kitandililo	126	119	245	114	112	226	90.5	94.1	92.2
Mlowa	120	144	264	57	115	172	47.5	79.9	65.2
Mjimwema	308	340	648	233	295	528	75.6	86.8	81.5
Ubena	192	209	401	176	194	370	91.7	92.8	92.3
Mwembetogwa	203	249	452	132	183	315	65.0	73.5	69.7
Total	1,324	1,522	2,846	1,042	1,325	2,367	78.7	87.1	83.2

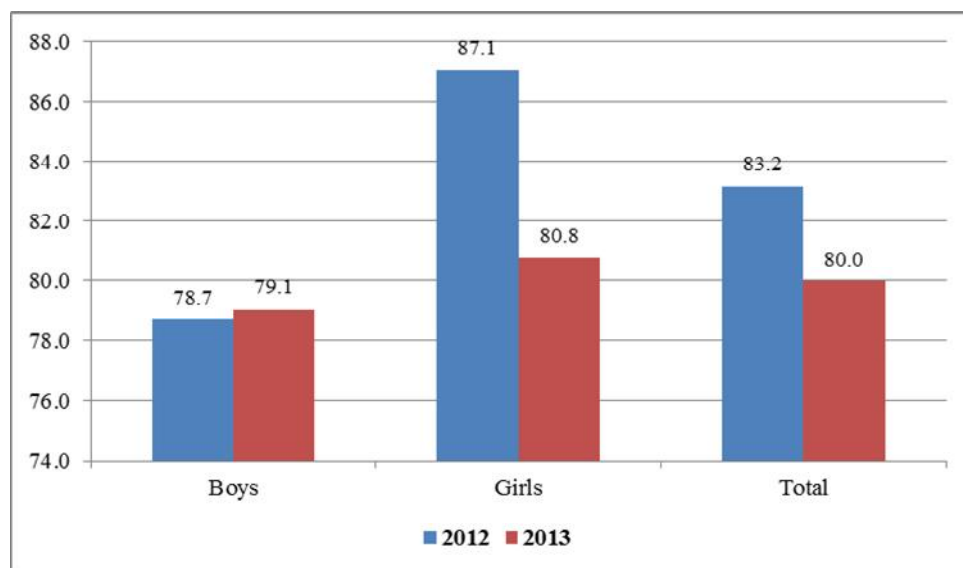
Source: Town Director's Office (Education Department), Makambako Town Council, 2014

Table 5.22 shows that performance of primary schools in terms of completion rate was worse in 2013 than was in 2012. Pupils who completed primary school education cycle in 2013 were less than those of the previous year by 40 pupils. This was a 1.7 percent decrease over a total of 1,367 pupils in 2012. Moreover, more girls (1,274) completed education cycle in 2013 than boys (1,053). This indicates that the school dropout problem was more serious for boys than for girls during that education cycle. Hence, the Council needs to find out why boys dropouts have increased in the council. At ward level, Mahongole and Lyamkena with shares of 100.3 percent and 90.4 percent of pupils who completed education cycle were the best wards while Mlowa (65.0 percent) and Mwembetogwa (66.0 percent) had the smallest completion rates in the council in 2013.

Table 5. 22: Number of Pupils Enrolled STD I in 2007 and Completed STD VII in 2013 by Ward in Makambako Town Council

Ward	Enrolled 2007			Completed 2013			Completion Rates		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Utengule	138	190	328	109	150	259	79.0	78.9	79.0
Lyamkena	108	132	240	97	120	217	89.8	90.9	90.4
Mahongole	136	167	303	140	164	304	102.9	98.2	100.3
Kitandililo	114	175	289	78	136	214	68.4	77.7	74.0
Mlowa	114	100	214	75	64	139	65.8	64.0	65.0
Mjimwema	321	334	655	259	268	527	80.7	80.2	80.5
Ubena	198	203	401	163	188	351	82.3	92.6	87.5
Mwembetogwa	203	276	479	132	184	316	65.0	66.7	66.0
Total	1,332	1,577	2,909	1,053	1,274	2,327	79.1	80.8	80.0

Source: Town Director's Office (Education Department), Makambako Town Council, 2014

Figure 5. 6: Rates of Completion of Primary Education in Makambako Town Council, 2012 and 2013

Source: Town Director's Office (Education Department), Makambako Town Council, 2014

5.2.2.3 Primary School Dropout Rate

Table 5.23 summarizes the situation of primary school pupil's dropouts in two consecutive years; 2012 and 2013 in Makambako Town Council. Out of the total 18,021 pupils enrolled into primary school education in 2012, 9,071 pupils (2.0 percent) drop-outs were due to truancy or other reasons, including transfer to other schools, death, and sickness among others. Out of the total dropouts, other reasons also caused the most serious problems for primary school pupils in 2012. In 2013, the percentage drop-outs remained almost the same as previous years though increased in absolute number. It increased by 6.8 percent from 369 in 2012 to 396 in 2013. Each year there was a slight difference in the number of boys and girls who dropped out from schools.

Table 5. 23: Drop Outs by Reasons, Makambako Town Council; 2012 and 2013.

Reason	2012				2013			
	Boys	Percent Boys	Girls	Total	Boys	Percent Boys	Girls	Total
Truancy	50	41.3	71	121	101	50.2	100	201
Pregnancy			0	0			1	1
Death	0	0.0	0	0	4	0.0	0	4
Other	119	48.0	129	248	93	48.9	97	190
Total	169	45.8	200	369	198	50.0	198	396
Total Enrolment	8,950		9,071	18,021	9,402		9,943	19,345
percent	1.9		2.2	2.0	2.1		2.0	2.0

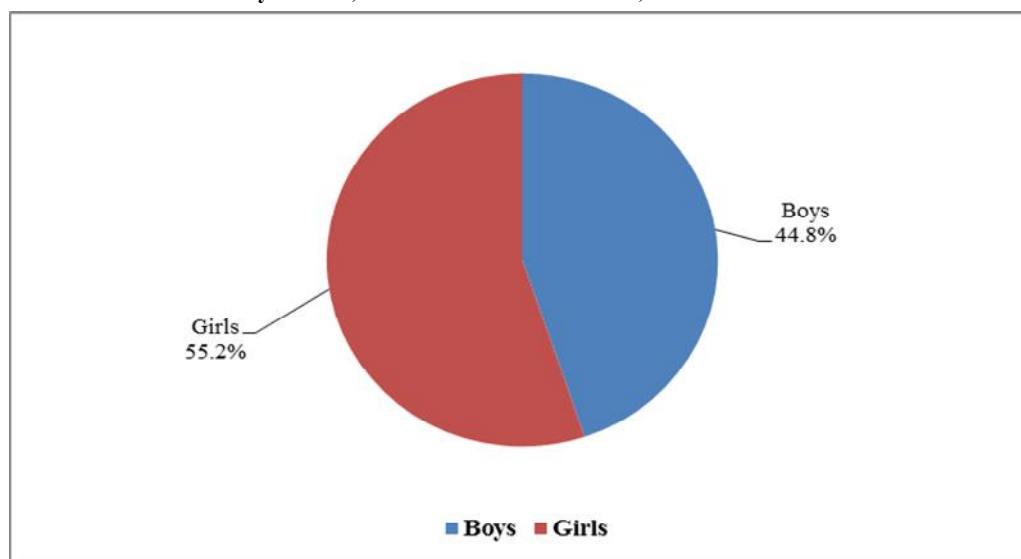
Source: Town Director's Office (Education Department), Makambako Town Council, 2014

5.2.2.4 Pass Rate

Pass rate refers to the percentage of pupils who passed standard seven examinations out of the total pupils who sat for the examinations. The current data show that Makambako Town Council being a new council fails to investigate carefully education statistics as a result managed to come up with inadequate information showing the current situation. Therefore, the 2013 information shows the council experiencing low pass rate and minimum chances of joining secondary education within the council due to lack of schools, dormitories and other related facilities.

Data revealed by Town Council shows that, out of 2,387 pupils who sat for Standard VII examination, more than half (1,205 pupils) equivalent to 51.8 percent joined Form One in 2013. Figure 5.7 shows that more girls joined secondary education (55.2 percent) than boys (44.8 percent). Initiatives are however needed to increase the number of pupils who joined Form One as data indicates that a smaller number of pupils joined Form One.

Figure 5. 7: Number of Pupils who Sat for STD VII Examinations and Selected to Joine Form I by Sex in Secondary Schools, Makambako Town Council; 2013



Source: District Executive Director’s Office (Education Department), Makambako Town Council, 2014

5.2.2.5 Primary School Facilities

It is the duty of educational authorities like the Ministry of Education to collaborate with beneficiaries (the community) to make sure that teachers and basic education facilities such as classrooms, toilets, staff houses, furniture, libraries, bookstores and textbooks are in place. Moreover, school feeding programme needs to be implemented in all schools in order to minimize truancy as well as improve the health status of pupils.

(i) Classrooms

According to Tanzania education system, the use of each classroom in primary and secondary schools should follow with the national standard of accommodating 45 pupils/students only. Due to inadequate infrastructure shown in Table 5.24, most of schools especially in Makambako Town Council failed to meet the requirement of pupils classroom ratio of one classroom per 45 pupils/students (i.e CPR 1:45). At CPR of 1:67 in 2013, the council experienced a serious shortage of classrooms in primary schools which led to the demand of 153 classrooms. Primary schools located in Kitandililo were the only ones which fell below the national standard at CPR of 1:38. Primary schools in Ubena at CPR of 1: 99 had critical shortage of classrooms.

Table 5. 24: Availability of Classrooms in Primary Schools by Ward, Makambako Town Council; 2013

Ward	No. of Schools	No. of Pupils	Available Classrooms	Classroom Pupils Ratio	Required Classrooms	Deficit of Classes	
						Number	Percent
Utengule	5	1,827	37	49	41	4	8.9
Lyamkena	4	2,327	36	65	52	16	30.4
Mahongole	4	2,166	42	52	48	6	12.7
Kitandililo	6	1,611	42	38	36	-6	-17.3
Mlowa	3	1,277	22	58	28	6	22.5
Mjimwema	7	5,585	60	93	124	64	51.7
Ubena	4	3,578	36	99	80	44	54.7
Mwembetogwa	5	2,595	38	68	58	20	34.1
Total	38	20,966	313	67	466	153	32.8

Source: Town Director's Office (Education Department), Makambako Town Council, 2014

(ii) Pit latrine

All primary schools in the district had a total of 1,266 pit-latrine in 2013 (Table 5.25). Basing on the standard set by the Government of Tanzania, the standard pupils pit-latrine ratio is 1:20 for girls and (1:25) for boys or 24 pupils for both sexes. Table 5.25 indicates that there was a serious shortage of pit-latrine in primary schools as one pit-latrine was used by 28 pupils in 2013. Three wards whose primary schools experienced remarkable shortages (i.e. wards with pupils pit latrine ratio far above that of council) were Mjimwema (1:38), Ubena (1:34) and Mlowa (1:29). However, with pupils' pit-latrine ratios of 1:20 and 1:23, primary schools in Kitandililo and Mwembetogwa respectively were better off than other schools.

Table 5. 25: Availability of Pit Latrines in Primary Schools by Ward, Makambako Town Council; 2012

Ward	No. of Schools	No. of Pupils	Available Toilets	Toilet Pupils Ratio	Required Toilets	Deficit of Toilets	
						Number	Percent
Utengule	5	1,827	70	26	76	6	8.0
Lyamkena	4	2,327	90	26	97	7	7.2
Mahongole	4	2,166	85	25	90	5	5.8
Kitandililo	6	1,611	82	20	67	-15	-22.2
Mlowa	3	1,277	44	29	53	9	17.3
Mjimwema	7	5,585	147	38	233	86	36.8
Ubená	4	3,578	106	34	149	43	28.9
Mwembetogwa	5	2,595	112	23	108	-4	-3.6
Total	38	20,966	736	28	874	138	15.7

Source: Town Director's Office (Education Department), Makambako Town Council, 2012

(iii) Staff Houses



For the various teaching incentives, the provision of staff quarters is very crucial as it facilitates the retention of teachers and also promotes teaching morale. Table 5.26 reveals that Makambako Town Council had a total of 230 teachers' houses compared to the actual requirement of 587 houses. Concerning, the required official House Teacher Ratio (HTR) of 1:1, Makambako Town Council had a deficit of

357 houses (equivalent to 60.8 percent deficit) based on HTR.

Table 5.26 shows that there is no ward with a surplus of houses. With exception of Mahongole and Kitandililo rest of wards suffered from a critical shortage of houses almost all with a deficit of more than 45 percent. Mwembetogwa ward was the most affected (98.6 percent) followed by Ubená (96.6 percent) and Lyamkena (70.5 percent). The headquarters of Makambako Town Council is established within the urban part of the council and therefore, most of the teachers prefer to work in this council probably with better facilities compared to other rural councils in Njombe region. Consequently, the extra number of teachers working in this council causes the council to lead in the artificial shortage of teachers' houses

Table 5. 26: Availability of Teachers' Houses by Ward, Makambako Town Council; 2013

Ward	No. of Pupils	Available Teachers	Available Houses	House Teachers Ratio	Required Houses	Deficit of Houses	
						Number	Percent
Utengule	1,827	62	30	2	62	32	51.6
Lyamkena	2,327	61	18	3	61	43	70.5
Mahongole	2,166	53	46	1	53	7	13.2
Kitandililo	1,611	49	35	1	49	14	28.6
Mlowa	1,277	34	14	2	34	20	58.8
Mjimwema	5,585	155	83	2	155	72	46.5
Ubeni	3,578	89	3	30	89	86	96.6
Mwembetogwa	2,595	84	1	84	84	83	98.8
Total	20,966	587	230	3	587	357	60.8

Source: Town Director's Office (Education Department), Makambako Town Council, 2014

(iv) Furniture (Desks)

The average number of pupils per desk is an important indicator of the provision of favourable and conducive learning environment for the pupils. With 20,966 pupils registered in 2013, Makambako Town Council needed about 6,989 desks so as to comply with the official Desk Pupils Ratio of 1:2.7. The Council, therefore, has an extra of 730 desks or a 10.5 percent extra. The most advantaged wards were Utengule and Mahongole where the excess stood at 37.8 percent and 33.9 percent respectively while Lyamkena, Mlowa and Mjimwema wards were at the official Desk Pupil Ratio of 1:3 (Table 5.27).

Table 5. 27: Availability of Desks in Primary Schools by Ward, Makambako Town Council; 2012

Ward	No. of Schools	No. of Pupils	Available Desks	Desk Pupils Ratio	Required Desks	Deficit of Desks	
						Number	Percent
Utengule	5	1,827	839	2.2	609	-230	-37.8
Lyamkena	4	2,327	785	3.0	776	-9	-1.2
Mahongole	4	2,166	967	2.2	722	-245	-33.9
Kitandililo	6	1,611	661	2.4	537	-124	-23.1
Mlowa	3	1,277	435	2.9	426	-9	-2.2
Mjimwema	7	5,585	1,867	3.0	1,862	-5	-0.3
Ubeni	4	3,578	1,285	2.8	1,193	-92	-7.7
Mwembetogwa	5	2,595	880	2.9	865	-15	-1.7
Total	38	20,966	7,719	2.7	6,989	-730	-10.5

Source: District Executive Director's Office (Education Department), Makambako Town Council, 2014

(v) Teachers

The teacher to pupil ratio is an important indicator which shows the ability to provide quality of education in schools. The standard requirement is that one teacher should serve a class of 45

pupils (1:45). Makambako Town Council had an average TPR of 1:36 this shows an excess of 121 teachers (26 percent) at the Council in 2013 (Table 5.28).

Based on Table 5.28, primary schools in all wards in 2013 met the Tanzania National Primary Standard of TPR of 1: 45 or below. Those were primary schools in Utengule ward with TPR of 1:29, Mwembetogwa Ward (TPR of 1:45.7), Kitandililo (1:36.9) and Mjimwema (1:24.9). However, the local government authority should reallocate teachers based on the needs of remaining wards to alleviate the shortage.

Table 5. 28: Availability of Primary School’s Teachers (Grade A, B, Diploma and Degree) by Ward, Makambako Town Council; 2013

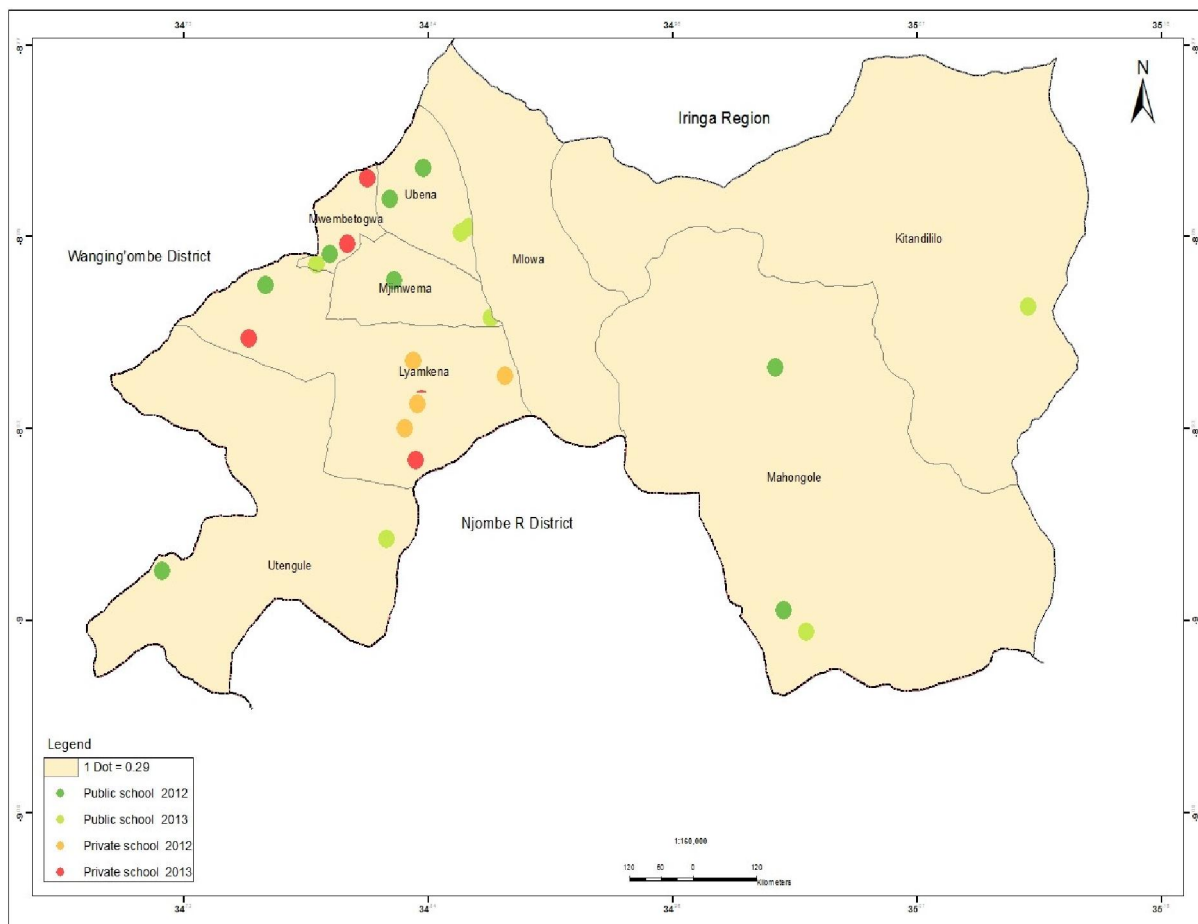
Ward	No. of Schools	No. of Pupils	Available Teachers	Teacher Pupils Ratio	Required Teachers	Deficit of Teachers	
						Number	Percent
Utengule	5	1,827	62	29	41	-21	-52.7
Lyamkena	4	2,327	61	38	52	-9	-18.0
Mahongole	4	2,166	53	41	48	-5	-10.1
Kitandililo	6	1,611	49	33	36	-13	-36.9
Mlowa	3	1,277	34	38	28	-6	-19.8
Mjimwema	7	5,585	155	36	124	-31	-24.9
Ubeni	4	3,578	89	40	80	-9	-11.9
Mwembetogwa	5	2,595	84	31	58	-26	-45.7
Total	38	20,966	587	36	466	-121	-26.0

Source: District Executive Director’s Office (Education Department), Makambako Town Council, 2014

5.2.3 Secondary Education

By the end of 2013 the district had 8 public secondary schools and 5 private secondary schools located in Lyamkena (2) and Mwembetogwa (3) wards. Out of the 8 wards, 2 wards had not succeeded in building a secondary school (Table 5.29). The Government campaign of establishing at least one secondary school in each ward should continue to meet the demand for secondary school enrolment in the council.

Map 6: Number of Public and Private Secondary Secondary School by Ward, 2012 and 2013



Source: NBS, GIS section, DSM

Table 5. 29: Number of Secondary Schools by Ownership and by Ward, Makambako Town Council; 2012 and 2013

Ward	2012			2013		
	Public	Private	Total	Public	Private	Total
Utengule	1	0	1	1	0	1
Lyamkena	1	2	3	1	2	3
Mahongole	1	0	1	1	0	1
Kitandililo	0	0	0	1	0	1
Mlowa	0	0	0	0	0	0
Mjimwema	1	0	1	1	0	1
Ubena	2	0	2	2	0	2
Mwembetogwa	1	0	1	1	3	4
Total	7	2	9	8	5	13

Source: Town Director's Office (Education Department), Makambako Town Council, 2014

5.2.3.1 Secondary School Enrolment

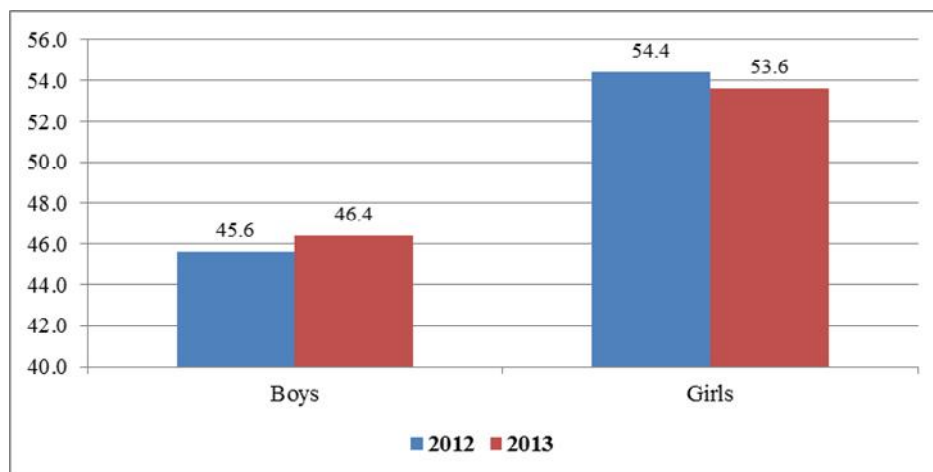
The enrolment of students in Makambako Town Council increased with the increase of school infrastructure constructed through people's contribution of financial, material and human resources. Over the period given in Table 5.30, enrolments in secondary schools have remained almost constant since total enrolment decreased by 0.5 percent from 4,479 in 2012 to 4,455 students in 2013. Gender imbalance was observed in both years as more than half of the students enrolled were girls. In 2012, out of 4,479 students in public secondary schools in Makambako Town Council, 54.4 percent were girls and 45.6 percent were boys (Figure 5.8). A similar experience was also observed in 2013, whereby more girls (53.6 percent) than boys (46.4 percent) were enrolled.

Table 5.30: Total Enrolment in Public Secondary Schools by Sex, Makambako Town Council; 2012 and 2013

Year	Boys		Girls		Total	Increase	
	Number	Percent	Number	Percent		Number	Percent
2012	2,043	45.6	2,436	54.4	4,479		
2013	2,067	46.4	2,388	53.6	4,455	-24	-0.5
Total	4,110	46.0	4,824	54.0	8,934		

Source: Town Director's Office (Education Department), Makambako Town Council, 2014

Figure 5.8: Total Enrolment by Sex in Secondary Schools, Makambako Town Council; 2012 and 2013



Source: Town Director's Office (Education Department), Makambako Town Council, 2014

Table 5.31 shows the number of students who completed secondary school education by sex in Makambako Town Council. In 2012, out of 990 students who completed form IV, 503 equivalent to 50.8 percent were boys and 49.2 percent were girls. The number of girls decreased to 47 percent in 2013 while the number of boys increased to 53 percent. More effort is needed to

ensure that more girls complete secondary education. Overall, the number of form IV leavers has remained constant in Makambako Town Council though at a decreasing rate.

Table 5. 31: Number of Students Completed Form IV in Public Secondary Schools by Sex, Makambako Town Council; 2012 and 2013

Year	Boys		Girls		Total	Increase	
	Number	Percent	Number	Percent		Number	Percent
2012	503	50.8	487	49.2	990		
2013	524	53.0	465	47.0	989	-1	-0.1
Total	1,027	51.9	952	48.1	1,979		

Source: Town Director's Office (Education Department), Makambako Town Council, 2014

The enrolment of students in high schools in Makambako Town Council is toward girls only due to slow increase of school infrastructure constructed through people's participation caused by lack of parents' awareness on the importance of education to their children. Table 5.32 shows that student's enrolment decreased by a percent from 2012 to 2013, and enrolment of girls in high schools declined from 143 in 2012 to 107 in 2013.

Table 5. 32: Total Form V Enrolment by Sex in Public Secondary Schools, Makambako Town Council; 2012 and 2013

Year	Boys		Girls		Total	Increase	
	Number	Percent	Number	Percent		Number	Percent
2012	0	0.0	143	100.0	143		
2013	0	0.0	107	100.0	107	-36	-33.6
Total	0	0.0	250	100.0	250		

Source: Town Director's Office (Education Department), Makambako Town Council, 2014

Table 5.33 shows the number of students who completed high school education by sex in Makambako Town Council. In 2012, out of 73 students who completed form VI, all of them were girls. In 2013 the percentage of girls completing form VI decreased further to 70 or 4.3 percent. Overall, the number of form VI leavers has been decreasing year after year in Makambako Town Council. It is important for the council to understudy the cause of a declining number of A level students in Makambako Town Council.

Table 5. 33: Number of Students Who Completed 'A' Level Secondary School Education by Sex, Makambako Town Council; 2012 and 2013

Year	Boys		Girls		Total	Increase	
	Number	Percent	Number	Percent		Number	Percent
2012	0	0.0	73	100.0	73		
2013	0	0.0	70	100.0	70	-3	-4.3
Total	0	0.0	143	100.0	143		

Source: Town Director's Office (Education Department), Makambako Town Council, 2014

5.2.3.2 Quantity and State of School Facilities

The quantity and quality of facilities for the secondary school system in Makambako Town Council are below the standards set by the educational authorities. The most common facilities are classrooms, toilets, staff quarters, libraries, laboratories, dormitories, desks and teachers. However, the following discussion only aims at indicating quantitative adequacy of the facilities in the district.

(i) Teachers

Expansion of secondary education should always go hand in hand with the increase in the number of teaching staff. By the end of 2013, Makambako Town Council had a total of 261 teachers distributed in 8 public secondary schools. This gives an average School Teachers Ratio of 1:33. The required teachers were 294; therefore, the council experienced a shortage of 33 teachers equivalent to 11.2 percent. With exception of Mlowa and Mjimwema, the remaining wards had a deficit of teachers ranging from 3.4 percent and 29.4 percent. Kitandililo (29.4 percent deficit), Mjimwema (16.9), Mahongole (10.7 percent) and Utengule (10.3 percent deficit) were the most affected wards. On the basis of these results, the council should find out ways of minimizing the shortage of teachers in some wards as shown in Table 5.34.

Table 5. 34: Availability of Public Secondary School Teachers by Ward, Makambako Town Council; 2013

Ward	No. of Schools	Available Teachers	Required Teachers	Deficit of Teachers	
				Number	Percent
Utengule	1	26	29	3	10.3
Lyamkena	1	28	29	1	3.4
Mahongole	1	25	28	3	10.7
Kitandililo	1	12	17	5	29.4
Mlowa	1	11	9	-2	-22.2
Mjimwema	1	69	83	14	16.9
Ubena	1	55	61	6	9.8
Mwembetogwa	1	35	38	3	7.9
Total	8	261	294	33	11.2

Source: Town Director's Office (Education Department), Makambako Town Council, 2014

(ii) Staff Quarters

Besides the shortage of teachers, the council also experienced a shortage of staff quarters in all wards except Igombemkulu ward. Table 5.35 shows that, the Council required 234 houses based on 2013 demand. There was a shortage of 205 houses (87.6 percent) in Makambako Town Council. The most affected wards (which are above average) were Mlowa (100 percent), Lyamkena (96.4 percent), Mwebetogwa (94.3 percent) and Mjimwema (94.2 percent). The authorities at ward level should remember that the provision of staff houses is a basic incentive

for retention of teachers and promotion of effective teaching. Therefore, more efforts should also be directed towards building staff houses together with other facilities.

Table 5. 35: Availability of Teachers Houses in Public Secondary Schools by Ward Makambako Town Council; 2013

Ward	No. of Schools	Available Houses	Required Houses	Deficit of Houses	
				Number	Percent
Utengule	1	6	26	20	76.9
Lyamkena	1	1	28	27	96.4
Mahongole	1	10	25	15	60.0
Kitandililo	1	2	12	10	83.3
Mlowa	1	0	11	11	100.0
Mjimwema	1	4	69	65	94.2
Ubeno	1	4	28	24	85.7
Mwembetogwa	1	2	35	33	94.3
Total	8	29	234	205	87.6

Source: Town Director's Office (Education Department), Makambako Town Council, 2014

(iii) Desks

Table 5.36 shows that of the required number of desks, the council had 9.1 percent excess. At ward level, with exception of Mjimwema, four wards registered excess ranging from 2.4 percent to 33.1 percent. Mahongole, Kitandililo and Mlowa were not affected (no deficit). The council should encourage the community to participate fully in construction of more desks in order to increase number of students in public secondary schools.

Table 5. 36: Availability of Desks in Public Secondary Schools by Ward, Makambako Town Council; 2013

Ward	No. of Schools	Available Desks	Required Desks	Deficit of Desks	
				Number	Percent
Utengule	1	512	391	-121	-30.9
Lyamkena	1	574	467	-107	-22.9
Mahongole	1	350	350	0	0.0
Kitandililo	1	180	180	0	0.0
Mlowa	1	52	52	0	0.0
Mjimwema	1	1,145	1,203	58	4.8
Ubeno	1	1,044	1,020	-24	-2.4
Mwembetogwa	1	784	589	-195	-33.1
Total	8	4,641	4,252	-389	-9.1

Source: Town Director's Office (Education Department), Makambako Town Council, 2014

(iv) Pit-Latrines

The council requirements were 172 pitlatrines in 2013 but only 138 were available leaving a shortage of 34 pitlatrines (19.8 percent deficit). Table 5.37 shows that only two wards out of 8 had enough pitlatrines in 2013. These wards were Mahongole and Kitandililo. Lyamkena ward was the most affected with a deficit of 60 percent, followed by Utengule (38.9 percent), Ubena (23.6 percent) and Mwembetogwa (7.4 percent).

Table 5.37: Availability of Pit Latrines in Public Secondary Schools by Ward, Makambako Town Council; 2013

Ward	No. of Schools	Available Toilets	Required Toilets	Deficit of Toilets	
				Number	Percent
Utengule	1	11	18	7	38.9
Lyamkena	1	8	20	12	60.0
Mahongole	1	32	32	0	0.0
Kitandililo	1	8	8	0	0.0
Mlowa	1	12	12	0	0.0
Mjimwema	1	0	0	0	0.0
Ubena	1	42	55	13	23.6
Mwembetogwa	1	25	27	2	7.4
Total	8	138	172	34	19.8

Source: Town Director's Office (Education Department), Makambako Town Council, 2014

(v) Classrooms

Table 5.38 shows that the required number of classrooms at the District had 33.3 percent deficit. Table 5.38 also shows that all wards registered shortages ranging from 12.5 percent to 68.8 percent. Mjimwema was the most affected ward with shortages of 68.8 percent followed by Mlowa (61.5 percent) and Kitandililo Ward (53.8 percent).

Table 5.38: Availability of Classrooms in Public Secondary Schools by Ward, Makambako Town Council; 2013

Ward	No. of Schools	Available Classrooms	Required Classes	Deficit of Classrooms	
				Number	Percent
Utengule	1	14	16	2	12.5
Lyamkena	1	10	16	6	37.5
Mahongole	1	9	13	4	30.8
Kitandililo	1	6	13	7	53.8
Mlowa	1	5	13	8	61.5
Mjimwema	1	5	16	11	68.8
Ubena	1	27	32	5	15.6
Mwembetogwa	1	14	16	2	12.5
Total	8	90	135	45	33.3

Source: Town Director's Office (Education Department), Makambako Town Council, 2014

(vi) Laboratories

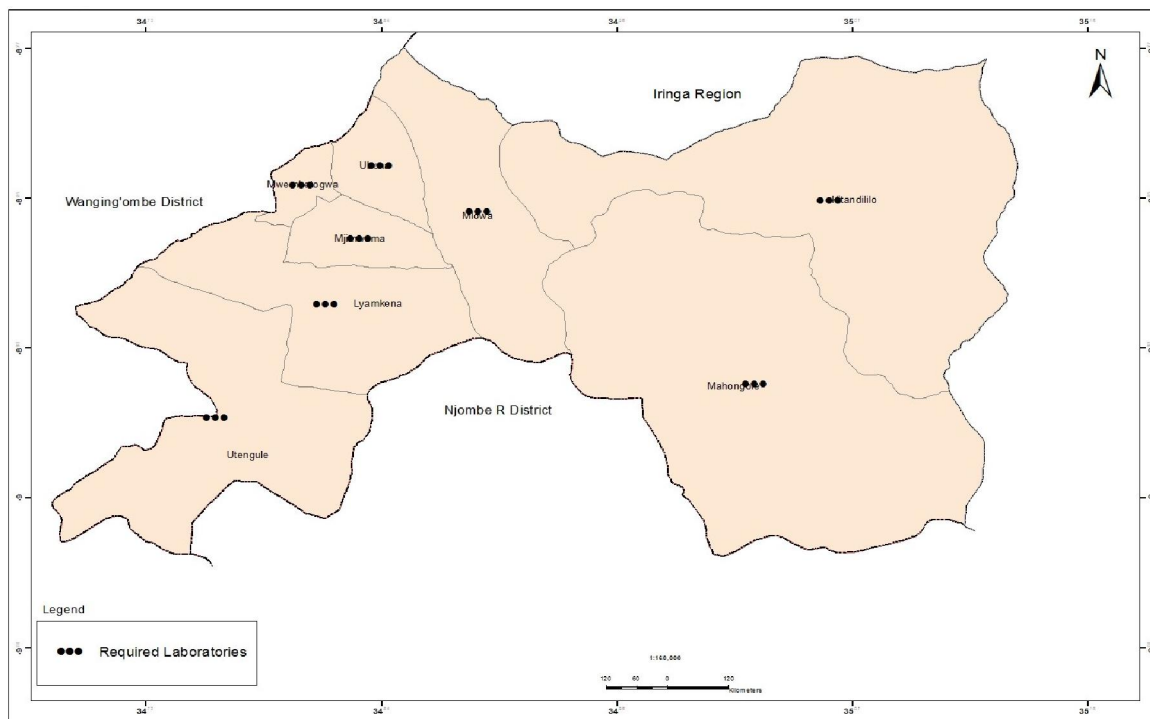
The laboratory is a necessary facility for students majoring in science subjects. The specifications set by the government are that each school should have at least three laboratories for physics, chemistry and biology subjects. Table 5.39 shows that the council had managed to fulfill the government decree that requires each secondary school should at least have 3 laboratories to each school at all public secondary schools.

Table 5.39: Availability of Laboratories in Public Secondary Schools by Ward, Makambako Town Council; 2013

Ward	No. of Schools	Available laboratories	Required Labs	Deficit of Laboratories	
				Number	Percent
Utengule	1	3	3	0	0.0
Lyamkena	1	3	3	0	0.0
Mahongole	1	3	3	0	0.0
Kitandililo	1	3	3	0	0.0
Mlowa	1	3	3	0	0.0
Mjimwema	1	3	3	0	0.0
Ubena	1	3	3	0	0.0
Mwembetogwa	1	3	3	0	0.0
Total	8	24	24	0	0.0

Source: Town Director’s Office (Education Department), Makambako Town Council, 2014 (v)

Map 7: Number of available laboratories in Public School by Ward; 2013



Source: NBS, GIS section, DSM

Dormitories

Construction of dormitories in rural areas is very essential due to the geographical nature of these areas and distribution of human settlements.

The availability of dormitories helps students to solve the problem of walking long distances and reduce the rates of drop outs due to pregnancies and truancy. The information provided by the town director's office reveals the shortage of dormitories in the council by year 2013. It was reported that only 2 dormitories were built in Mjimwema Ward while the other 7 wards will cause the shortage of 38 dormitories if each school built four buildings.

5.2.4 Adult Education

Along with the expansion of primary and secondary education, the district has also expanded adult education using primary schools as centres with head teachers being in charge of adult education campaigns through MUKEJA and MEMKWA programs. Unfortunately, though the council had these facilities in all primary schools no one was attending in these centres. Lack of sensitization campaigns to adults is the reason for the decrease in the number of adults who joined such programs in both years 2012 and 2013. Moreover, the council should have regular sensitization campaigns for sustainability of the two programs.

5.2.5 Special Education

The issue of disability of late has been getting the badly needed support in Tanzania as part of the worldwide efforts of alleviating common problems associated with disability. 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 a sustainable programme for disabled pupils in order to get special education according to their type of impairment. The report of education department of the council shows that most of enrolled pupils (14) were visually impaired. The number of pupils enrolled in special education had increased from 8 to 31 over the period from 2010 to 2012. Of the impaired pupils, boys outnumbered girl.

5.2.6 Colleges and Vocation Training Schools

Makambako Town Council is not well endowed with colleges and vocational training schools. Until 2013, the council had neither vocational training centres nor Focal Development College (FDC).

5.2.7 Policy Implication on Education sector

Although there is recognizable development in both primary and secondary education, policy intervention needs to take place to alleviate the few challenges observed. The council needs to put more effort in construction girls' dormitories which will help to prevent or reduce girls' dropout due to pregnancy and also increasing pass rate for girl pupils/students. In addition to that, for learning improvement in primary schools, the school feeding programme is of paramount importance.

Since both primary and secondary schools in the council have a critical shortage of toilet holes, more toilet holes should be constructed to implement the education policy of one toilet hole for 20 girls and one toilet hole for 24 boys. Likewise, the number of desks in some of primary and secondary schools should be increased to meet education policy of one desk per three pupils/students.

Most of primary and secondary schools in Makambako have no access to clean and safe water. Therefore, initiatives are needed to supply the schools with clean and safe water through tap water or construction of boreholes. Rain water harvest technology can also help to alleviate the water shortage problem. Moreover, if not all, boarding schools should be supplied with electricity to create a conducive learning environment.

5.2.9 Investment Opportunities in Education.

Further investment is required in both secondary and primary education so that quality education is availed. Quality education can be attained when there is sufficient investment in all school facilities including qualified teachers, staff quarters, classrooms, laboratories, libraries, dormitories, school pit latrines, learning and teaching materials.

5.3 WATER SUPPLY AND SANITATION

5.3.0 An Overview

Water Supply and Sanitation Sector cover rural and urban water supply in terms of water sources, schemes and technology used to supply water. Besides that, staffing situation is also highlighted especially the work of the Town Councils' water and sanitation engineers/technicians in providing sustainable water and sanitation services.

5.3.1 Water Supply

Availability of adequate supply of clean potable water for the residents of Makambako Town Council is of utmost importance. This is because water is very useful to human beings, livestock and agriculture. According to the report of water and sanitation department the council has two types of water supply, rural and urban water supply.

5.3.2 Rural Water Supply

Since Makambako Town Council like most Town Councils is dominated by both rural and urban characteristics, the Council mainly focused on supplying water through the provision of water pipes and wells. Table 5.60 shows that the main sources of water for the rural population in Makambako Town Council so far are the shallow wells followed by unprotected springs and river/streams. This means that the majority of the rural populations are at a higher risk of suffering from water- borne diseases because they are using unprotected water sources.

At ward level, water springs and shallow wells are the most common sources of water used by almost all wards followed by bore holes. The well endowed wards with many water sources were Mahongole and Kitandililo. Others include, Mjimwema, Lyamkena and Mwembetogwa. The worst wards with very few water sources were Utengule and Mlowa (Table 5.40)

Table 5. 40: Number and Type of Rural Water Sources by Ward, Makambako Town Council; 2013

Ward	Spring		Shallow Well		Rain Water Harvest Tanks		Bore Holes		River Water		Piped Scheme	
	W	NW	W	NW	W	NW	W	NW	W	NW	W	NW
Utengule	2	0	0	0	0	2	0	0	0	0	0	0
Lyamkena	2	7	0	1	1	2	1	0	0	0	1	0
Mahongole	15	0	46	50	6	0	0	0	4	1	0	0
Kitandililo	22	3	49	23	0	0	0	0	8	2	0	0
Mlowa	2	5	0	0	0	0	1	0	0	0	0	0
Mjimwema	8	13	0	0	0	0	3	1	0	0	0	0
Ubena	2	7	0	2	0	0	3	1	0	0	0	0
Mwembetogwa	3	4	1	0	1	0	2	0	0	0	0	0
Total	56	39	96	76	8	4	10	2	12	3	1	0

W: Working, NW: Not working

Source: Town Director's Office (Water Supply and Sanitation Department), Makambako Town Council, 2014

In order to make sure that there is a fairly sufficient supply of water to rural residents of Makambako Town Council, different types of water technologies are used. Table 5.41 shows that hand pump is the leading technology used in the Town Council followed by electricity and subsequently gravity. At ward level, the hand pump is the most used technology in supplying

water in Mahongole and Kitandililo wards. The second important technology is electricity which was used in Mjimwema, Ubena and Mwembetogwa wards.

Table 5. 41: Number and Type of Technology Used in Rural Water Schemes by Ward; Makambako Town Council; 2013

Ward	Electricity Pump		Hand Pump		Gravity Piped		Total	
	W	NW	W	NW	W	NW	W	NW
Utengule	0	0	0	0	0	0	0	0
Lyamkena	0	1	0	0	1	0	1	1
Mahongole	0	0	46	50	3	2	49	52
Kitandililo	0	0	49	23	0	0	49	23
Mlowa	0	0	1	0	0	0	1	0
Mjimwema	3	1	0	0	0	0	3	1
Ubena	3	0	0	0	0	0	3	0
Mwembetogwa	3	1	0	0	0	0	3	1
Total	9	3	96	73	4	2	109	78

W: Working, NW: Not working

Source: Town Director's Office (Water Supply and Sanitation Department), Makambako Town Council, 2014

In order to facilitate provision of water to the rural population sustainably, the Council established the management of rural water supply schemes by introducing water user groups (WUGs), village water committees (VWCs) as well as village water funds (VWFs) so that the problem of water supply can be tackled efficiently. This is in accordance with the National Water Policy. Table 5.42 shows that Mahongole and Kitandililo wards managed to establish water user groups, active village water committees and village water funds in 2013. According to Table 5.42, the village water committees had a total of TZS 11,000,000 as at 31st December, 2013. Mahongole ward recorded the highest revenue (TZS. 10,600,000) and the least revenue was that of Kitandililo (TZS. 400,000). There is therefore a need to establish these facilities in those wards where water services were not provided.

Table 5. 42: Number of Water User Groups, Village Water Committees and Village Water Funds by Ward, Makambako Town Council; 2013

Ward	Number of Groups	WUGs		VWC Members			Total VWF
		Active	Inactive	Male	Female	Total	
Utengule	0	0	0	0	0	0	0
Lyamkena	0	0	0	0	0	0	0
Mahongole	3	2	1	12	8	20	10,600,000
Kitandililo	1	1	1	3	3	6	400,000
Mlowa	0	0	0	0	0	0	0
Mjimwema	0	0	0	0	0	0	0
Ubena	0	0	0	0	0	0	0
Mwembetogwa	0	0	0	0	0	0	0
Total	4	3	2	15	11	26	11,000,000

* WUG = Water Users Groups, VWC = Village Water Committee and VFWs = Village Water Funds,

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

5.3.3 Urban Water Supply

Table 5.43 shows that out of 70 sources of urban water supply found in Makambako Town Council, 51 are springs followed by boreholes (11) and rain water harvesting Tanks (4). Piped scheme is the least source of urban water supply with only one source (Table 5.43).

Looking at the condition of sources, Table 5.43 shows that 44 out of 70 sources were not working or temporarily used. Moreover, 36 out of 44 sources which are not working or temporarily not working are springs followed by boreholes (4) and rain water harvesting and shallow wells (2 each). However, according to the reported findings springs and boreholes were the most common sources of water for the largest urban population of Makambako Council..

Table 5. 43: Number and Type of Urban Water Sources by Ward; Makambako Town Council; 2013

Ward	Spring		Shallow Well		Rain Water Harvest Tanks		Boreholes		Piped Scheme		Total	
	W	NW	W	NW	W	NW	W	NW	W	NW	W	NW
Utengule	0	0	0	0	0	0	0	0	0	0	0	0
Lyamkena	2	7	0	1	1	2	1	0	1	0	4	11
Mahongole	0	0	0	0	0	0	0	0	0	0	0	0
Kitandililo	0	0	0	0	0	0	0	0	0	0	0	0
Mlowa	2	5	0	0	0	0	1	0	0	0	2	6
Mjimwema	6	13	0	0	0	0	3	1	0	0	8	15
Ubena	2	7	0	1	0	0	3	1	0	0	4	8
Mwembetogwa	3	4	1	0	1	0	2	0	0	0	8	4
Total	15	36	1	2	2	2	10	2	1	0	26	44

Note: W = Working, NW = Not working

Source: Town Director's Office (Water Supply and Sanitation Department), Makambako Town Council, 2014

Looking on technology used to ensure sufficient water supply in urban areas, Table 5.44 shows out of the existing 15 schemes electricity pump (12) were mostly used followed by hand pumps (2) and gravity piped (one). The most encouraging finding is the efficiency of Makambako Town Council to maintain its water sources and technology since only 5 out of 15 sources were not working in 2013.

Table 5. 44: Number and Type of Technology Used in Urban Water Schemes by Ward; Makambako Town Council; 2013

Ward	Electricity Pump		Hand Pump		Gravity Piped		Total	
	W	NW	W	NW	W	NW	W	NW
Utengule	0	0	0	0	0	0	0	0
Lyamkena	0	1	0	1	1	0	1	2
Mahongole	0	0	0	0	0	0	0	0
Kitandililo	0	0	0	0	0	0	0	0
Mlowa	0	0	0	1	0	0	0	1
Mjimwema	3	2	0	0	0	0	3	2
Ubena	3	0	0	0	0	0	3	0
Mwembetogwa	3	0	0	0	0	0	3	0
Total	9	3	0	2	1	0	10	5

Source: Town Director's Office (Water Supply and Sanitation Department), Makambako Town Council, 2014

5.3.4 Staff Establishment

For ensuring that water and sanitation services are accessible to the majority of Makambako residents (urban and rural population), equipping water and sanitation department with the required number of staff, and, with necessary working facilities, is vital. The council has only two engineers and 3 technicians with no pump mechanics (Table 5.45). The majority of staff at Water supply and Sanitation Department are plumbers (7) with no pump attendants. As long as water and sanitation department is facing staffing shortage (Table 5.45), the Town Council has a long way to go to achieve the millennium development goal of supplying clean and safe water to a significant number to her residents. Therefore, for the promising future in provision of water and sanitation services, initiatives are needed to solve staffing shortage highlighted in Table 5.45.

Table 5. 45: Staff Establishment in Water and Sanitation by Ward, Makambako Town Council; 2013

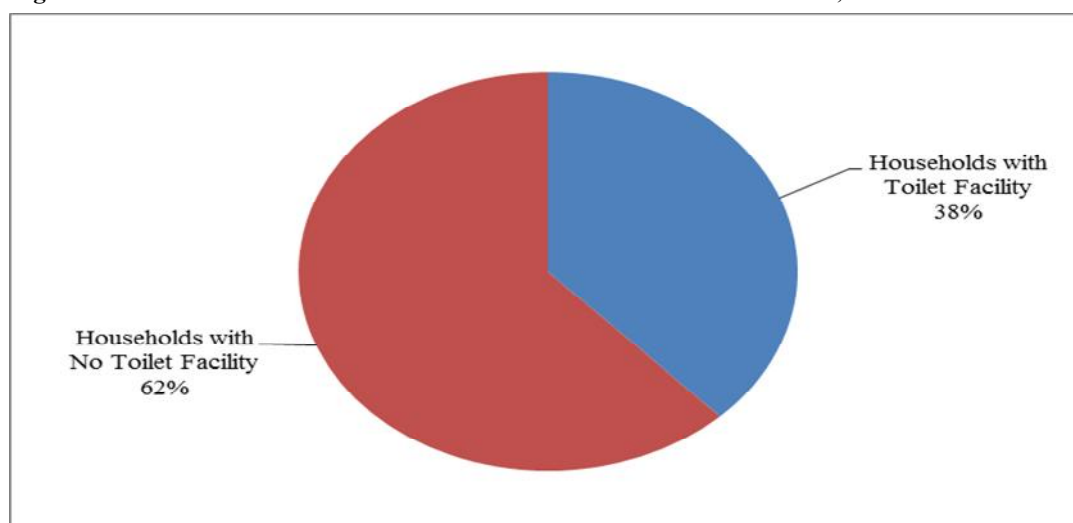
Ward	Engineers	Technicians	Plumber	Pump Attendant	Pump Mechanics	Total
Utengule	0	0	0	0	0	0
Lyamkena	0	0	1	0	0	1
Mahongole	0	0	4	0	0	4
Kitandililo	0	0	2	0	0	2
Mlowa	0	0	0	0	0	0
Mjimwema	2	3	0	0	0	5
Ubena	0	0	0	0	0	0
Mwembetogwa	0	0	0	0	0	0
Total	2	3	7	0	0	12

Source: Town Director's Office (Water Supply and Sanitation Department), Makambako Town Council, 2014

5.3.5 Sewage and Sanitation

Sanitation facilities are essential for ensuring good health and a favourable living environment in any society. According to the report of the department, the Council had 6,188 estimated households with only 38 percent of them had toilet facilities in 2013. The remaining 62 percent of the households did not have toilet facilities (Figure 5.9). This situation is discouraging hence, the authorities of Makambako Town Council have the responsibility of advocating the importance of toilet facilities so as to make sure that they get rid of communicable diseases like diarrhoea and other water borne diseases.

Figure 5. 9: Number of Households with Toilet Facilities Makambako TC; 2013



Source: Town Director's Office (Water Supply and Sanitation Department), Makambako Town Council, 2014

5.3.6 Policy Implications

Accessibility of clean and safe water is a very common problem in many Town Councils of our country including Makambako. Lack of reliable and permanent water sources in most wards like Utengule, Mlowa, Ubena and Mwembetogwa is believed to be the corner stone of the problem. To alleviate the situation, effective research is needed to make sure the problem is alleviated otherwise people in these wards will continue to be infected by communicable diseases. However, the Council should also put more efforts to educate people on the importance of having improved toilets in their households in order to reduce environmental pollution and prevalence of communicable diseases most of which are preventable such as diarrhea, dysentery and other related diseases.

5.3.7 Investment Opportunities in Water Supply

Makambako Town Council is endowed with various types of water sources such as springs and river water which is dominant. However, the Town Council has very few piped water sources and rain water harvest schemes. In this regard, investment is needed to the supply of pipes, building of storage tanks and pumping equipment and increase the capacity of water storage. Investment is also needed for the supply of electricity/solar power to be used in pumps.

CHAPTER SIX

Other Development Issues

6.0 Introduction

Other development issues include youth economic groups, Gender empowerment such as day care centers, women economic groups, cooperative development (SACCOS) as well as women's participation in managerial, political, professional and technical fields.

6.1 Gender Empowerment

The load in social and family welfare is big as they bear the load of housekeeping and attending household chores, at the same time they are expected to produce economically in order to improve the economy of their family. Challenges like poverty and HIV/AIDS affect women more than men since they are the ones who take the responsibility of caring the sick ones. In that aspect, various measures have been taken to minimize the time spent by women and girls in attending household chores. Gender empowerment initiatives are meant to enable women to participate fully in policy and decision making as well as participate in economic activities. Measures that are taken include establishment of daycare centers, establishment of women economic groups, establishment of SACCOS and other co-operatives groups.

6.1.1 Day Care Centers

Day care centers are important for bringing up children aged three to four before joining pre-primary school. Day care centers are important because they keep children away from their mothers and hence give the mothers opportunities to participate in economic activities and hence improve their social economic status. In Makambako Town Council, there were 20 day care centers with 936 pupils in 2012. The number of day care centers remained constant but the number of pupils increased to 1,008 with the observed difference of 72 pupils. It is only one ward out of the usual eight wards that did not have a day care center. Mjimwema, Lyamkena and Utengule wards led in the number of day care centers as well as the number of pupils. In 2013 however, Mjimwema ward led in the number of day care centers but not in the number of pupils.

Table 6. 1: Distribution of Day Centers by Ward, Makambako Town Council; 2012 and 2013

Ward	2012		2013		Difference in number of Pupils	Percent difference of Pupils
	Number of centres	Number of pupils	Number of centres	Number of pupils		
Ubena	2	54	3	64	10	19
Mjimwema	4	136	6	140	4	3
Mlowa	3	180	3	202	22	12
Lyamkena	4	246	4	254	8	3
Majengo	1	42	1	53	11	26
Mahongole	2	60	2	75	15	25
Kitandililo	0	0	0	0	0	0
Utengule	4	218	4	220	2	1
Total	20	936	23	1,008	72	8

Source: Town Director (Community Development unit), Makambako Town Council, 2014

6.1.2 Women Economic Groups



The emancipation of women from poverty and economic discrimination is something women themselves can do with some help from a responsible government and society. The formation of economic groups for women is the strategy towards this emancipation. The groups also serve the additional purpose of providing a forum for the discussion of gender issues leading to women equality and equity between genders. According to

Table 6.2, women economic groups increased remarkably from 532 groups in 2012 to 632 in 2013. Group members also increased from 2,670 in 2012 to 3,160 in 2013 an increase of about 18.3 percent. Economic groups increased in all wards between 2012 and 2013. All women economic groups received loans in 2012 totaling to TZS 27,000,000 compared to TZS 15,000,000 in 2013. The largest share of loans (TZS.7,000,000 equivalent to 25.9 percent) in 2012 went to 14 women economic groups in Lyamkena ward compared to TZS 1,500,000 for three groups in 2013.

Table 6. 2: Number of Women Economic Groups by Ward, Makambako Town Council; 2012 and 2013

Ward	2012				2013			
	Total no. of registered groups	Total members	No. of groups assisted	Total loaned TZSt.	Total no of groups	Total members	No. of groups assisted	Total loaned TZS.
Ubena	100	500	4	2,000,000	120	600	4	2,500,000
Mjimwema	120	600	10	5,000,000	140	700	7	2,500,000
Mlowa	50	250	7	3,500,000	71	355	3	1,500,000
Lyamkena	65	325	14	7,000,000	70	350	3	1,500,000
Mwembetogwa	62	320	4	2,000,000	66	330	2	2,000,000
Mahongole	45	225	10	5,000,000	50	250	3	1,500,000
Kitandililo	49	245	4	2,000,000	60	300	3	1,500,000
Utengule	41	205	1	500,000	55	275	2	2,000,000
Total	532	2,670	54	27,000,000	632	3,160	27	15,000,000

Source: Town Director (Community Development unit), Makambako Town Council, 2014

6.1.3 Women's Participation in Policy and Decision-Making

Table 6.3 reveals an encouraging level of women participation in professionals/technicians and managerial posts but not politicians' posts. Up to 2013, among 49 posts of managers, 24 (49 percent) were filled by female so far. For professionals/technicians, the situation is also good as about 47.5 percent of the professionals are women while that of politicians only 21 percent of the 95 posts have been filled by females. This shows that Makambako TC has a long way to go before reaching the MDG goal of 50/50 by 2015 since on average the proportion is 64/36.

Table 6. 3: Participation in Managerial, Political, Professional and Technical Personnel by Gender and by Ward, Makambako Town Council; 2013

Ward	Managerial		Professionals/Technicians		Politicians (MPs, DCs and Councilors)		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
Ubena	2	4	0	5	1	13	3	22
Mjimwema	2	5	1	18	13	1	16	24
Mlowa	1	4	8	0	8	1	17	5
Lyamkena	6	0	2	3	7	1	15	4
Mwembetogwa	7	6	0	0	6	1	13	7
Mahongole	3	2	7	1	5	1	15	4
Kitandililo	3	0	8	0	30	2	41	2
Utengule	1	3	6	2	5	0	12	5
Total	25	24	32	29	75	20	132	73

Source: Town Director (Community Development unit), Makambako Town Council, 2014

6.2 Youth Economic Groups

Youths in Mpanda TC are mainly involved in small scale activities like horticulture, agriculture, poultry and bee- keeping and other petty business activities. Employment of youths in these activities has helped to overcome the problem of youth unemployment. However, self-employment even in these sectors needs some preparation and some capital input. Accesses to entrepreneurship skills as well as credit are therefore essential facilities if these youths are to develop their potential and contribute to the council's economy and poverty eradication. Availability of training and credit facilities depends on the formation of mutually beneficial 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 youths to generate income for poverty alleviation, youths have initiated and formulated economic groups. In 2012 there were only 211 youth groups with 1,185 members from all the eight wards of Makambako TC. where 21 groups were assisted the sum of TZS. 11,000,000. Groups from Ubena, Mwembetogwa and Utengule wards were not assisted at all. By 2013, the number of groups dropped to 183 and only four groups managed to get loans in Makambako TC.

Mjimwema ward was leading in the number of youth economic groups (50 groups) followed by Mlowa ward (30 groups) and Utengule ward (28 groups). Initiatives made by Mpanda TC authority together with NGOs to encourage youths organize themselves into economic groups as a condition of getting loans is expected to bring positive results for future youth development. Even though, more education and mobilization of youths to join groups is strongly recommended. The total amount of money loaned to the groups amount to TZS. 9,000,000 with Mjimwema Ward receiving the highest loan of about TZS. 5,000,000 followed by Mlowa and Mahongole wards receiving TZS. 1,500,000 each.

Table 6. 4: Youth Economic Groups and Total Money Loaned by ward; Makambako Town Council, 2012 and 2013

Ward	2012					2013						
	Total number of registered groups	Total members			No. of groups assisted	Total amount of funds loaned (Tshs.)	Total no. of registered group	Total members			No. of groups assisted	Total amount of funds loaned (Tshs)
		Male	Female	Total				Male	Female	Total		
Ubena	60	150	150	300	0	0	3	9	6	15	0	0
Mjimwema	40	120	80	200	5	3,000,000	50	75	175	250	4	5,000,000
Mlowa	20	70	30	100	2	1,000,000	30	65	85	150	3	1,500,000
Lyamkena	15	50	25	75	6	3,000,000	20	28	72	100	0	0
Mwembetogwa	10	30	20	50	0	0	5	9	16	25	0	0
Mahongole	21	100	5	105	4	2,000,000	25	41	84	125	3	1,500,000
Kitandililo	22	200	45	245	4	2000000	22	39	206	245	2	1,000,000
Utengule	23	100	10	110	0	0	28	21	119	140	0	0
Total	211	820	365	1,185	21	11,000,000	183	287	763	1,050	12	9,000,000

Source: Town Director (Community Development unit) Makambako Town Council, 2014

6.3 Vulnerable Children and Orphan hood



An orphan is a child aged below 18 years who has lost one or both parents. According to UNICEF, a child who has lost one parent is termed as ‘single orphan’ and who has lost both parents is a ‘double orphan’. Table 6.5 shows the magnitude of vulnerability for the Makambako Town Council of which, out of 45,870 children aged 0-17 years, 2,324 children (5.1 percent) were orphans and 2,770 children (6.0 percent) were non-orphans. More girls at 2,803 (55 percent) than boys 2,291(45 percent) were living vulnerable life in the council in 2013. At ward level, Ubena Ward had the largest number of vulnerable children (998 equivalent to 19.6 percent) followed by Lyamkena Ward (975 equivalent to 19.1 percent), Mjimwema Ward (691 equivalent to 13.6 percent), Utengule Ward (566 equivalent to 11.1 percent), Mwembetogwa Ward (553 equivalent to 10.9 percent), Mlowa Ward (502 equivalent to 9.8 percent), and Kitandililo Ward (484 r equivalent to 9.5 percent) while the least number of vulnerable children were in Mahongole Ward (325 equivalent to 6.4 percent).

Table 6. 5: Number of Most Vulnerable Children by Ward, Makambako Town Council; 2013

Ward	Total children aged 0-17	Most vulnerable children									
		Orphans					Non Orphans				
		No. of girls	Girls percent	No. of boys	Boys percent	Total	No. of girls	Girls percent	No. of boys	Boys percent	Total
Ubena	8,649	250	55	205	45	455	300	55	243	45	543
Mjimwema	14,177	167	56	133	44	300	250	64	141	36	391
Mlowa	2,792	75	30	175	70	250	145	58	107	42	252
Lyamkena	4,587	136	32	294	68	430	421	77	124	23	545
Mwembetogwa	3,609	60	25	180	75	240	200	64	113	36	313
Mahongole	4,508	73	50	72	50	145	130	72	50	28	180
Kitandililo	3,345	100	43	134	57	234	148	59	102	41	250
Utengule	4,203	143	53	127	47	270	205	69	91	31	296
Total	45,870	1,004	43	1,320	57	2,324	1,799	65	971	35	2,770

Source: Town Director (Community Development unit), Makambako Town Council, 2014

6.4 Savings and Credit Cooperative Societies (SACCOS)

As it is shown in Table 6.6, a total of 14 SACCOSs were registered in Makambako Town Council of which nine were active and five were dormant. The SACCOS had more male members (1,618) than females (917). Total value of money loaned to members was TZS 722,718,480 for the period January to December 2013. This amount was more than four times the value of the shares as it was at the end of the year. The total loans recovered were TZS. 101,144,000 which is about only 14 percent. This rate is not encouraging as it is still very low. Mlowa Ward had the largest number of active SACCOSs (three) but not the largest number of members while Mwembetogwa Ward had only one active but had the largest number of members (1,099). It is only one ward that had no SACCOS group (Kitandililo). Ubena Ward got the smallest loan of TZS. 2,000,000 only and money recovered was 15 percent.

Table 6. 6: Active SACCOS by Ward, Makambako Town Council; 2013

Ward	No. of SACCOS (Registered)				Total value of shares (TZS) as at 31.12.2013	Total money loaned to members Jan – Dec 2013 (TZS.)	Total loans recovered from members Jan-Dec 2013 (TZS.)
	Active	Dormant	Male	Female			
Ubena	1	1	135	203	5,050,000	2,000,000	300,000
Mjimwema	1	1	296	174	33,700,000	267,654,000	76,500,000
Mlowa	3	3	117	86	6,641,232	9,300,000	5,430,000
Lyamkena	1	0	79	63	2,094,000	4,408,000	4,768,000
Mwembetogwa	1	0	828	271	95,390,338	427,377,000	5,718,000
Mahongole	1	0	93	59	2,485,700	5,107,480	4,228,000
Kitandililo	0	0	0	0	0	0	0
Utengule	1	0	70	61	6,757,257	6,872,000	4,200,000
Total	9	5	1,618	917	152,118,527	722,718,480	101,144,000

Source: Makambako Town Director (Cooperative unit) 2014

6.5 Village Community Bank (VICOBA)

There were 220 Village Community Banks in Makambako Town Council with 6,600 members of which males were 1,769 (26.8 percent) and females were 4,831 (73.2 percent). The largest number of VICOBA was in Mwembetogwa Ward (41) while Utengule Ward had only 14.

Table 6. 7: Village Community Bank (VICOBA) by Ward, Makambako Town Council, 2013

Ward	Number of VICOBA	Members			Percent	
		Male	Female	Total	Male	Female
Ubena	40	450	750	1200	38	63
Mjimwema	35	271	779	1050	26	74
Mlowa	15	118	332	450	26	74
Lyamkena	28	220	620	840	26	74
Mwembetogwa	41	278	952	1230	23	77
Mahongole	29	174	696	870	20	80
Kitandililo	18	143	397	540	26	74
Utengule	14	115	305	420	27	73
Total	220	1,769	4,831	6,600	27	73

Source: Town Director (Cooperative unit) Makambako Town Council, 2014

6.6 (a) Active Non-Governmental Organization (NGOs)

There were four Active Non-Governmental Organization (NGOs) operating in Makambako Town Council with 2,076 beneficiaries. Types of the activities performed by these groups are Education, HIV/AIDS and Health.

Table 6. 8: Active Non-Governmental Organization (NGOs) Mpanda Town Council, 2013

Ward	Number of Organization	Type of Programs/Activities	Number of Beneficiaries
Ubena	2	-To promote peer health education	2000
Mjimwema	1	-To support vulnerable groups	50
Mwembetogwa	1	-To educate community against HIV/AIDS	26
Total	4		2,076

Source: Makambako Town Director (Cooperative unit) 2014

6.6 (b) Community Based Organization (CBOs/BMUs), Makambako Town Council, 2012

There were 99 Community Based Organization (CBOs/BMUs) that operated in Makambako Town Council with 752 beneficiaries. The types of the activities performed by the organizations are entrepreneurship training to community.

Table 6.8 a: Community Based Organization (CBOs/BMUs), Makambako Town Council, 2013

Ward	Number of Organization	Type of Programs/Activities	Number of Beneficiaries
Ubena	38	-Environmental conservation	380
Mjimwema	28	-Provide entrepreneurial skills	210
Kitandililo	06	-Fight against HIV/AIDS	30
Mlowa	05	-Savings and credit provision	50
Mwembetogwa	11	-Poultry keeping	25
Lyamkena	04	-Saving rearing	12
Utengule	03	-Fight against HIV/AIDS	45
Mahongole	04	-Fight against HIV/AIDS	-
Total	99		752

Source: Makambako Town Director (Cooperative unit) 2014

6.7 Financial Institutions



Remarkable development in social economic activities such as growth of industrial activities, increasing number of higher learning institutions as well as cropping up of formal and informal small scale businesses resulted in high demand of financial institutions in the town council. As Table 6.9 shows, up to the end of 2013 there were three banks operating in the town council. Moreover, inadequate number of financial institutions in the sub-peripheral areas increases more pressure to banks or financial institutions operating in the town council. Bank branches and Automatic Teller Machines (ATMs) allocated outside the bank buildings to a large extent improved availability of financial services not only to urban population within the town but also to other rural population of the Njombe and neighboring regions or areas.

Table 6. 9: Financial institution, Makambako Town Council; 211-2013

Year	Bank	
2011	NBC, NMB	
2012	NBC, NMB	
2013	NBC, NMB,	NJOCOBA

Source: Town Director's Office (Community Development unit) Makambako Town Council, 2014

6.8 Crime statistics

6.8.1 Introduction

The growth of towns, population increase, the development of science and technology and the increase of crimes are the sources and catalyst to the erosion of morals in the country. The statistics on the rate of crimes and the type of offences committed reveal that the extent of the erosion of morals within the society has been increasing day after day.

6.8.2 Motorcycle Operators (BodaBoda)

Informal sector such as motor bike or “*bodaboda*” business contributes in reducing youth unemployment as well as reducing income poverty.

The challenge of poor infrastructure, high expenses of hiring motor vehicles have provided a way for “*Bodaboda*” to serve as a means of transportation in almost all wards of Makambako Town Council with poor road network. Most people opt for “*bodaboda*” as they are cheap and can reach places that are difficult to reach with vehicles. With reference to Reports from the

Trade Department of the Makambako Town Council, by the end of 2013 Makambako Town Council had 755 *bodaboda* operators allocated in 59 centers of the council; whereby centers like Mwangaza had 30 operators, Savannah 25 operators, and the smallest numbers were at Aston Villa (seven), and five each at Igembe, Bugabo, Baraka Guest House, Kashoto and Kombe centers. *Bodabodas* have provided employment to youths in the council and raised their family income. One *bodaboda* operator earns between TZS 180,000 – 250,000 per month which is probably a good income for the operators.

6.8.3 Policy Implication on Other Development Issues

Policy formulation on youths and women is important in order to deal with new challenges of



unemployment and gender equalities. Informal sector is now playing a big part in youths and women employment. Therefore, policies have to focus on enabling youths to employ themselves and to empower them so as establish economic groups for easy access of loans. A significant number of women occupy professional or technical posts than other posts. Impetus should now be directed towards maintaining the number

of women occupying such posts as well as under technical support of the council, youths need to formulate more economic groups.

6.9 Potential Areas for Investment

The district council has identified main sectors as potential areas for investment; these among others include agriculture, livestock development, industrial development, tree nurseries and education.

6.9.1 Industrial Development

The council has a very low level of industrial development as such investors are invited to establish small, medium and large scale industries. Construction of fruit and vegetable processing and cereal millings in the council are another green area for investment. The area for construction as well as raw materials is available e.g. oil seeds, fruits, dairy products etc. Also, transportation is not a problem as both railway and road transportation is good.

6.9.2 Education

The government education policy states clearly on the call for private sector participation in the sector. Consequently, individuals, NGOs, Religious institutions are invited to invest in private primary schools and secondary schools in the town council.

6.9.3 Health

Up to 2013 the town council had only 11 health facilities which are not enough for service delivery to the community. Hence, there is room for investment in the health sector in terms of health centers and dispensaries. There are only three health centers, two are owned by the government and the other privately owned. There were nine dispensaries, four owned by the government while the remaining five were privately owned.

6.9.4 Energy

Since Makambako Town Council has electricity from TANESCO which is in the National Grid, investment opportunities exist in the energy sector in the way of generation and distribution of the energy from other sources like wind. Makambako TC is endowed with diverse energy sources including biomass, coal, solar and wind power. There is plenty of opportunities in investment in biogas and all other sources of energy.

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VISION

“To have a Community with High Quality and Sustainable Living Standards by the Year 2020”

MISSION

“Providing High Quality Services to the Community by Distributing Equitably Available Resources and Opportunities to Improve the Quality of Life and Income of the People”

