United Republic of Tanzania

KAGERA REGION

SOCIO-ECONOMIC PROFILE, 2015

April 2018

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SOCIO-ECONOMIC PROFILE, 2015

Jointly prepared by
National Bureau of Statistics,
Ministry of Finance and Planning
and
Kagera Regional Secretariat

National Bureau of Statistics
Dar es Salaam

April 2018

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Foreword

Goals of Tanzania's Development Vision 2025 are in line with United Nation's Sustainable Development Goals (SDGs) 2030. The vision's major goals include achieving high quality livelihood for the people; achieving food security; developing a strong and competitive economy; combating inequality and empowering women and girls. Monitoring the progress in achieving these goals, requires availability of timely and accurate statistical information at all levels.

Problems occurring in both urban and rural areas are many. Experience shows that delivery of quality social and economic services requires a continuous and sustainable improvement of strategies with community participation from time to time. High primary school enrolment rates recently attained have to be sustained using available resources and so is the policy of making sure that all pupils who pass Standard Seven Examination join Form One. The food situation is still precarious; infant and maternal mortality rates while showing signs of decline are still high. Unemployment in rural areas triggers mass migration of youths to the already overcrowded urban centres.

Health problems due to HIV/AIDS pandemic have been quite severe among the economically active population hindering efforts to advance smoothly into the 21st century of science and technology. The pandemic has left an increasing number of orphans, broken families and considerable suffering. AIDS together with environmental deterioration are among the new developmental problems which cannot be ignored.

Efforts by the Kagera Regional Authority to meet these challenges are hampered by many factors including ill prepared rural development programs followed by weak implementation, as well as monitoring and supervision of these programs. Shortcomings in policy formulation, project identification, design and implementation due to lack of adequate reliable information on the rural development process have to be addressed appropriately. The availability of adequate, relevant and reliable qualitative and quantitative information at district level is a prerequisite for formulating, planning, implementation, monitoring and evaluation of districts' policies and development programs.

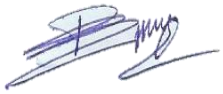
Kagera Region has prepared this socio-economic profile by using its own funds. The publication of the Kagera Regional Socio-Economic Profile Series by the Regional Management Team with

technical backstopping from the National Bureau of Statistics should be viewed as a step towards finding feasible solution to the existing problem of data and information gap at regional level.

The Kagera Regional Socio-Economic Profile covers a wide range of statistics and information on geography, population, social services, economic infrastructure, productive sectors and cross cutting issues. It is believed that, such information is vital to policy makers, planners, researchers, donors and functional managers.

This Profile has taken advantage of the cumulative experience gained from the production of various regional and district socio-economic profiles in the country. 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.

I would like to acknowledge with thanks, the contribution made by the Office of the Regional Administrative Secretary, National Bureau of Statistics and other staff of the region who devoted their time and efforts to ensure the successful completion of this assignment.



CP. Diwani Athumani
Regional Administrative Secretary
April, 2018

Abbrevitions and Acronyms

AIDS	Acquired Immuno Deficiency Syndrome
ARI	Acute Respiratory Infections
ARV	Antiretroviral
CBO	Community Based Organization
CRDB	Cooperative Rural Development Bank
DC	District Council
DPs	Development Partners
DPT3/HB3	Diptheria Pertusis Tetanus 3 rd doze/ Haemoglobin Level
ECF	East Coast Fever
FAO	Food Agriculture Organization
GIS	Geographical Information System
Govt	Government
Ha	Hectares
HIV	Human Immune deficiency Virus
IMR	Infant Mortality Rate
MC	Municipal Council
MMR	Maternal Mortality Rate
MVC	Most Vulnerable Children
NCD	New Castle Disease
NMB	National Microfinance Bank
NBC	National Bank of Commerce
OPV3	Oral Polio Vaccine 3rd Doze
PMTCT	Prevention of Mother to Child Transmission
SACCOS	Savings and Credit Cooperative Societies
SMEs	Small Medium Enterprises
Sq. Km.	Square Kilometre
Std VII	Standard Seven
STI	Sexually Transmitted Infection
TB	Tuberculosis
TBAs	Traditional Birth Attendants
TC	Town Council
TPR	Toilet Pupil Ratio /Teacher Pupil Ratio
TT2	Tetanus Toxoid 2 nd doze
TPB	Tanzania Postal Bank

U5MR	Under Five Mortality Rate
UTI	Urinary Track Infection
VCT	Voluntary Counselling and Testing
VHC	Village Health Committee
VHWs	Village Health Workers
VHP	Village Health Practitioner
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

This chapter has information on the geographical location, land area, administrative units, climate and agro-ecological zones of Kagera Region. Moreover, information about ethnic groups, migration, population size, distribution and other demographic characteristics are also provided.

Kagera Region is one of Tanzania's 31 administrative regions. The regional headquarters is the municipality of Bukoba which is about 1,500 kilometres from Dar es Salaam by road. The region takes its name from the Kagera River which flows from Rwanda through northern Tanzania before it enters Lake Victoria.

The region is located in the north-western corner of Tanzania on the western shore of Lake Victoria. The region neighbours Uganda, Rwanda, and Burundi and lies across the lake from Kenya. It shares borders with Uganda to the north, Rwanda and Burundi to the west, the Kigoma Region to the south, and the Geita Region to the east. Before June 1979, the region was known as the West Lake Region. It was renamed Kagera region after the Uganda-Tanzania War when Idi Amin attempted to annex the region in 1978.

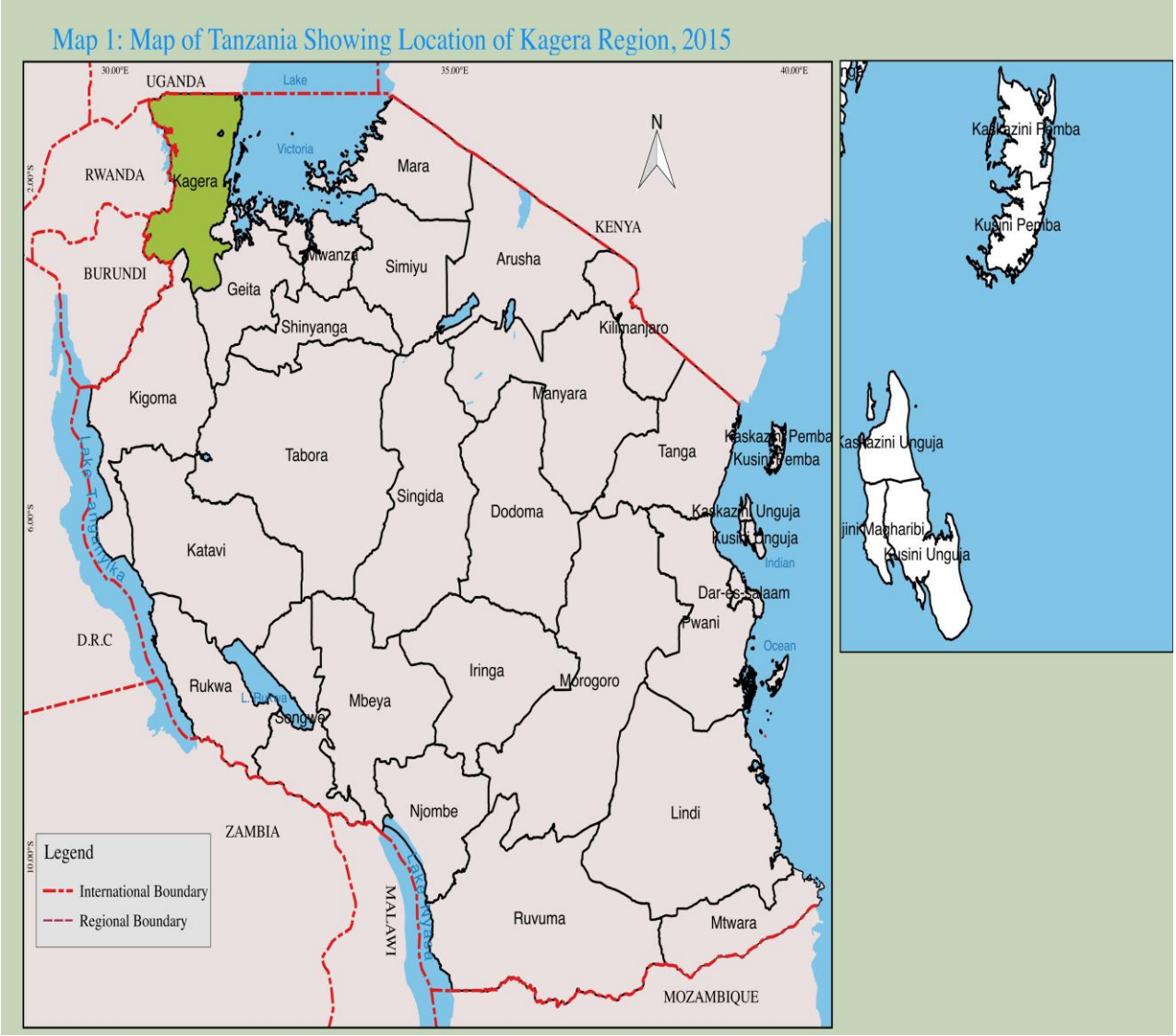
The region is known for its agriculture, its beautiful lush landscapes, and its wildlife. It can be accessed as follows; from the Northern Zone regions like Arusha by road through Singida - Nzega - Kahama, Dar es Salaam through Morogoro- Dodoma- Singida-Nzega - Kahama; Southern Highlands Zone like Mbeya/Songea through Iringa-Dodoma-Singida-Nzega-Kahama. These connections are generally passable throughout the year. There is also a daily flight from Dar es Salaam through Mwanza by Air Tanzania and Precision Air. You may also reach Kagera Region by road from Rwanda, Burundi or Uganda. Ease of accessibility, makes Kagera Region an ideal place for business and a perfect stop for tourists traveling between any of these countries and Tanzania hence Kagera Region can look forward to a rosy future.

For a period of about five centuries Kagera Region had nine different chiefdoms and a highly hierarchical society. It was during this period that coffee was introduced as a cash crop and bananas were introduced as a staple food. Women of that time were considered to be inferior to men. Chiefs lived in elaborate palaces and were highly respected and were believed to have a direct link to god.

The demise of these chiefdoms came after Tanganyika gained its independence in 1961 and the Father of the Nation, President Julius Nyerere abolished themto create National unity. Some prominent chiefs who are known in Kagera include Kyamukuma who was the last chief in Misenye (currently Missenyi District). Other chiefs include Rumanyika of Karagwe, Ruhinda, Kahigi and other chiefs. Kahigi is among the chiefs who waived their rule by collaborating with German colonialists. Other chiefdoms were Kihanja, Kiziba, Bugabo, Kyamtwara, Ihangiro, Bukara and Biharamulo. The regimes of these chiefdoms were blended into that of the Germans who colonized Tanganyika from 1890 and are reported to have liked the Haya, the ethnic group of Bukoba and Muleba Districts. Later the British took over from the Germans. Kagera Region is considered to be the first area where Lutheran missionaries settled. Roman Catholic and other denominations now also have a large number of followers in the region, which is evidenced by the physical presence of impressive cathedrals, mosques, jamats and other churches commonly found everywhere in the region.

1.1 Geographical Location

Kagera Region lies just south of the equator between 1° 00' and 2° 45' south latitudes. Longitudinally, it lies between 30° 25' and 32° 40' east of Greenwich.



Source: NBS, Cartographic Unit, Dsm, 2017

1.2 Land Area, Land Use Pattern and Administrative Units

Kagera Region has a total surface area of 33,191.4 sq. km out of which 8,582.5 sq.km or 25.9 percent is covered by water bodies of lakes Victoria, Ikimba, Burigi, Rushwa, Majungu and rivers like Kagera, Ruvubu and Ngono. The remaining 24,608.9 sq.km is land area. Kagera Region is the fifteenth largest region occupying about three percent of Tanzania Mainland's total area of 883,600 sq.km.

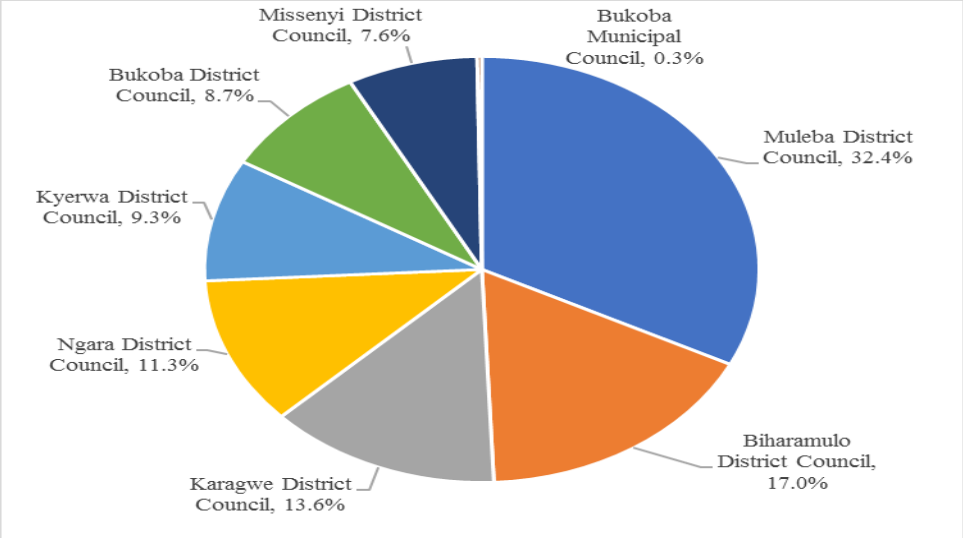
Table 1.1 and Figure 1.1 show that the distribution of the region's surface area among the councils is largely in favour of Muleba District Council which covers about 32.4 percent of the total area followed by Biharamulo DC (16.9 percent), Karagwe DC (13.5 percent) and Ngara DC (11.3 percent). Bukoba MC has the smallest area and accounts for only about 0.3 percent of the total area.

Table 1.1: Distribution of Surface Area, Land Area and Water Area by Council, Kagera Region, 2015

Council	Land Area (sq. km)	Water Area (sq.km)	Total Surface Area (sq. km)	Percent
Karagwe DC	4,342.00	158	4,500.00	13.5
Bukoba DC	2,595.50	288.4	2,883.90	8.7
Muleba DC	3,444.00	7,295.0	10,739.00	32.4
Biharamulo DC	5,617.00	10	5,627.00	16.9
Ngara DC	3,744.00	0	3,744.00	11.3
Bukoba MC	83	5.5	88.5	0.3
Missenyi DC	2,000.00	523	2,523.00	7.6
Kyerwa DC	2,783.40	302.6	3,086.00	9.3
Total	**24,608.90**	**8,582.50**	**33,191.40**	**100**

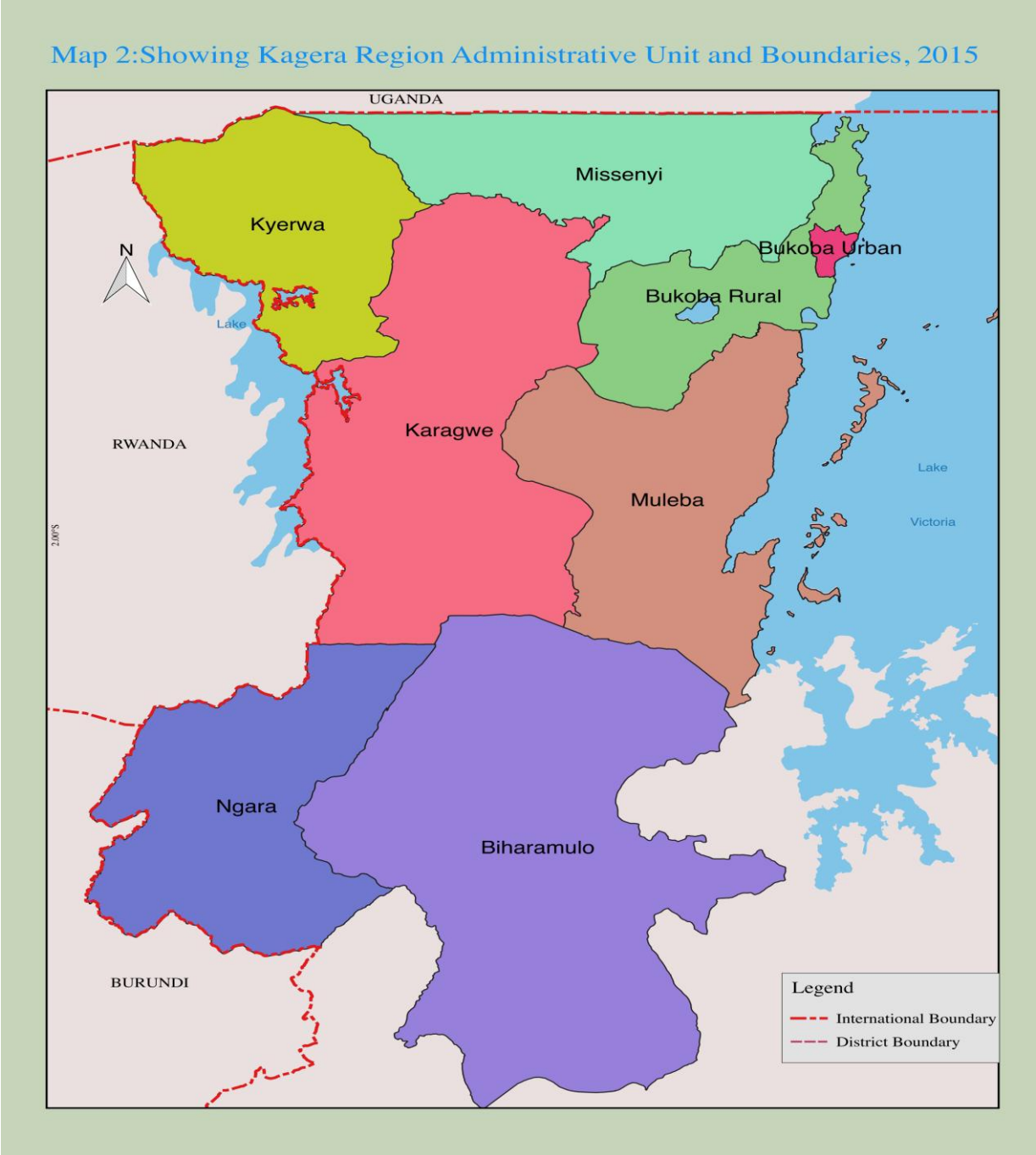
Source: Kagera Regional Commissioner's Office, 2017

Figure 1.1: Percentage Distribution of Total Surface Area by Council, Kagera Region, 2015



Source: Kagera Regional Commissioner's Office, Land Natural Resources and Environment Department, 2017

As Map 2 shows, administratively, Kagera Region is divided into seven districts of Bukoba, Muleba, Karagwe, Ngara, Biharamulo, Missenyi and Kyerwa with eight Councils namely: Karagwe District Council, Bukoba District Council, Muleba District Council, Biharamulo District Council, Ngara District Council, Bukoba Municipal Council, Missenyi District Council and Kyerwa District Council. Moreover, Table 1.2 shows Kagera Region is further sub divided into wards (192), villages (662), mitaa (66) and hamlets (3,126). Likewise, Table 1.2 shows that the number of wards among councils differs very significantly as well as the number of villages and hamlets, ranging from 14 wards in Bukoba Municipal to 43 wards in Muleba DC, zero to 166 for villages and 66 to 752 for streets/hamlets.



Source: NBS, Cartographic Unit, Dsm, 2017

Table 1.2: Area and Number of Administrative Units by Council, Kagera Region, 2015

Council	Land Area (sq. km)	Number			
		Wards	Villages	*Mitaa*	Hamlets
Karagwe DC	4,342.00	23	77	0	629
Bukoba DC	2,595.50	29	94	0	515
Muleba DC	3,444.00	43	166	0	752
Biharamulo DC	5,617.00	17	74	0	373
Ngara DC	3,744.00	22	75	0	394
Bukoba MC	83	14	0	66	66
Missenyi DC	2,000.00	20	77	0	356
Kyerwa DC	2,783.40	24	99	0	670
Total	**24,608.90**	**192**	**662**	**66**	**3,126**

Source: Kagera Regional Commissioner's Office, 2017

Table 1.3 shows that the average surface area per ward in Kagera Region is 168.5 sq. km, ranging from 6.3 sq. km per ward in Bukoba MC to 331.0 sq. km in Biharamulo District Council. At village level, the average area per village in Kagera Region is 37.0 sq. km, but varying from 31.2 sq.km per village in Kyerwa DC to 92.6 sq. km per village in Muleba District Council for rural councils only.

In Kagera Region, the average population per ward was 12,802 persons. The average population per ward in 2012 varied from 9,200 in Bukoba MC to 19,029 persons in Biharamulo District Council. At the village level, the average population was 3,609 persons ranging from 2,632 people per village in Missenyi District Council to 4,658 people per village in Muleba District Council for the rural district councils.

Table 1.3: Average Surface Area and 2012 Population Per Ward and Village by Council, Kagera Region, 2015

			Ward			Village		
Council	Surface Area (sq. km)	2012 Population (number)	Number	Average Area per Ward (sq.km)	Average Population per Ward	Number	Average Area per Village/Mtaa (sq.km)	Average Population per Village/Mtaa
Karagwe DC	4,500.0	332,020	23	195.7	14,436	80	56.3	4,150
Bukoba DC	2,883.9	289,697	29	99.4	9,990	94	30.7	3,082
Muleba DC	10,739.0	540,310	43	249.7	12,565	116	92.6	4,658
Biharamulo DC	5,627.0	323,486	17	331.0	19,029	80	70.3	4,044
Ngara DC	3,744.0	320,056	22	170.2	14,548	75	49.9	4,267
Bukoba MC	88.5	128,796	14	6.3	9,200	66	1.5	2,147
Missenyi DC	2,523.0	202,632	20	126.2	10,132	77	32.8	2,632
Kyerwa DC	3,086.0	321,026	24	128.6	13,376	99	31.2	3,243
Total	**33,191.4**	**2,458,023**	**192**	**172.9**	**12,802**	**681**	**48.7**	**3,609**

Source: Kagera Regional Commissioner's Office, and the 2012 Population and Housing Census, Vol. I Population Distribution by Administrative Units, 2013

1.3 Climate, Soil and Topography

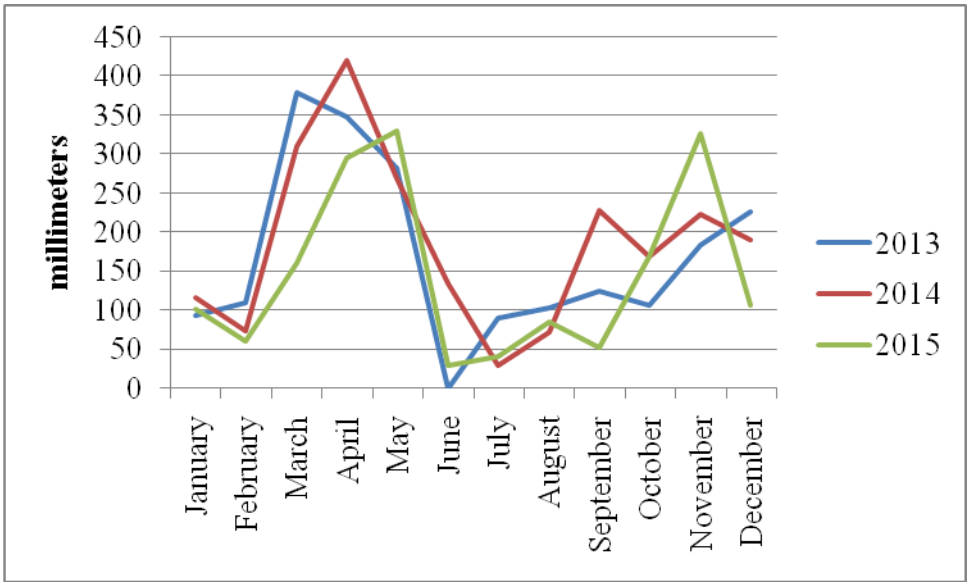
1.3.1 Climate

Temperature and rainfall are two key features that show the climate of Kagera Region. The region along with Geita, Mwanza, Shinyanga, Simiyu and Mara regions form what is called the Lake Zone. Other Zones include the Northern Highlands of Kilimanjaro and Arusha regions in the far north of Tanzania and the Southern Highlands of Iringa, Mbeya, Njombe and Rukwa. The region experiences a pleasant climate, with an average temperature of 20° to 30°C throughout the year, although it can drop to as low as 10°C at night in the rainy season. A Large part of the region is hilly terrain with thick tropical vegetation including forests and wide-open grasslands.

The climate of the Kagera Region is related to its equatorial location, its altitude, the major air currents and the occurrence of a mass of water (Lake Victoria) within a continental land mass.

Owing to the equatorial location, the height of the sun at midday varies little and day length is close to twelve hours throughout the year. The southeast monsoons, bearing moisture from the Indian Ocean, are responsible for the main seasonal rainfalls while dry conditions occur when the northeast winds prevail. The Region experiences two rainy seasons. The heavy rains fall from March to May and short rains from October to December. The annual rainfall in the Kagera Region ranges from 650 mm to about 1,000 mm (along the Kagera River in the Kagera National Park). Rainfall varies considerably in space and time and is rather unpredictable. Only the driest period of the year occurs from mid June to mid August. During the rainy seasons it usually rains only in the morning and ends up being a very nice day afterwards. Daily temperature fluctuates between 12°C and 34°C, with an average of about 21°C. Seasonal fluctuations in temperature are negligible. Explanations for these low temperatures are frequent cloudiness and a relative high altitude (1,142 – 1,800 metres above sea level).

Figure 1.2: Rainfall in Millimeters by Month, Kagera Region, 2013-2015



Source: National Bureau of Statistics, Statistical Abstract; 2015

Altitude, topography and vegetation influence the climate greatly, resulting in micro climate in specific areas and macro climate in larger areas. The climate in Kagera Region is influenced by several factors resulting in the formation of three distinctive climatic zones. These are the Bukoba Rural and Muleba District Zone, the Karagwe District Zone and the Ngara and Biharamulo Zone.

Winds follow a monsoonal pattern being north-easterly during the months of May to November and south-easterly for the rest of the year. From June to October, the winds are usually dry and sometimes dusty.

1.3.2 Soil

Kagera Region is hilly, rolling or undulating and well drained. Bold ridges have developed on hard bands of quartzite. The mountain ridges are in contrast to the low, flat plains surrounding Kagera River and its effluents that have been built up by sediments during periods from tertiary times to the present day. The mountain ranges of the Kagera Region are formed of metamorphosed sedimentary rocks that have undergone rather strong folding. The mountains lie between 1,300 and 1,800 metres above sea level.

In Kagera Region, three major superficial geological deposits are identified. These are the dark brown to reddish brown clay loams and clay sandy loams which have low to medium water holding capacity; to grayish brown loamy sands soils and, well drained and highly weathered; and the leached very dark grey silts and clay with dark brown sands and loams with low fertility and poor drained. Dark grayish brown to reddish loamy sands which are characterized by being moderately drained and leached are found in the midlands while the lowlands are occupied by grayish brown loamy sands.

1.3.3 Topography

Kagera Region lies in the West Lake Zone which rises from 1,000 m to 1,900 m above sea level. The Western part of the region is covered by plateaus of Karagwe and Ngara which lie within the Western arm of the Rift Valley. To the East of the region there is the Lake Victoria. Similarly towards the North there are Kagera plains whose elevation lies up to 1,400 m above sea level. South of the Region runs through the lower plains which are dissected by Burigi Forest.

Apart from being a natural boundary between the republics of Tanzania and Rwanda, Kagera River is also an important river in the Northern drainage system. The Kagera River drains into the Lake Victoria and it is constituted by several pinnacle tributaries such as Mwisa. Other rivers include Muyowosi, Ngono, Ruvubu and many small streams that form the major drainage system for the Region.

1.4 Vegetation

The vegetation consists of woodland, bush land thicket and grasslands. The common vegetation in the arable land comprises planted trees and shrubs. Miombo woodlands cover a greater part of the region including some parts of Bukoba District Council, Karagwe, Ngara and Biharamulo. Areas

surrounding Muleba plateau are covered by planted pines and gravellier and a few eucalyptus trees. The Kagera savanna landscape forms a floristic unit and belongs to the 'Lake Victoria Regional Mosaic". It is a meeting-place of five floristic regions: Guineo-Congolian, Sudanian, Zambezian, Somalia-Masai and Afromontane. The phytogeographical mosaic contributes widely to the high areal-richness of the Kagera Region.

The main terrestrial vegetation types in the Kagera Region are determined by the soil catenae and have been defined according to the classification, which is based mainly on physiognomic criteria. For our purpose the cover as well as the average height of the woody plants has been considered for getting a more objective classification.

According to the climatic conditions mesic to moist savannas occur in the Kagera Region. They cover a much larger area than the forest types. The savanna types have a continuous herbaceous layer (mainly grasses), the forest types have a sparse and discontinuous herbaceous layer. Trees are the dominating woody plants in all forest types as well as in the tree savannas and the savanna woodland, whereby shrubs dominate in the so-called shrub savanna. Since shrubs do usually not exceed 6 m in the Kagera Region the relation between shrubs and trees has been fixed arbitrarily at this height. Encroached savannas are potential tree savannas. On hillsides thicket clumps may be of larger size. On the other hand gallery forests are narrow bands of trees and shrubs along seasonal watercourses in flat areas.

The typical trees found in the region fall under three species namely, branchstegia, julbernardia and isoberlinia. The woodlands (Miombo) in the near past used to cover a large area of Kagera Region. However, much of the woodlands is being depleted through human activities such as firewood, timber, charcoal, tobacco curing and brick making. Consequently, the six areas covered by woodlands in the region are now declining. The bush land is found in lower slopes. The occurrence of bushes is a result of forest clearing, shifting cultivation and tree cutting. Grasslands which are common in lowlands and plateau are due to destructive human activities as well as drainage and rainfall effects.

1.5 Agro – Ecological Zones (AEZ)

Climatic conditions as well as geological features have been the base of identifying different agro-ecological zones in Kagera Region. The region is characterized by highlands, small mountain peaks, moderate hills, gentle plains and plateaus. Basically the Region has three distinctive agro-ecological zones.

1.5.1 Bukoba Rural and Muleba District Zone

Mild temperatures and adequate rainfall conducive for cultivation of permanent cash and food crops like coffee, bananas and tea while in the plains one finds the "Rweya" grasses suitable for animal feed

The zone is characterized by moderately high rainfall with annual mean precipitation ranging from 1,000 mm to 1,500 mm falling in two seasons from September to December or sometimes January (Vuli or short rains) and also between February and May (Masika or long rains). The dry and cold season occurs after the masika rain season and lasts from June to August. The zone is generally mountainous with plains dissected by many seasonal streams. The zone lies almost in the central area of the region.

The soils are dark brown to reddish brown clay loams and dark grayish brown loamy sands somewhat darker in colour in the western part of the zone than in the east with medium fertility, and highly water holding. Livestock keeping is practised in the tsetse fly free areas. Because of abundant forests, beekeeping as a minor activity is also practised after crop production.

1.5.2 Karagwe District Zone

Ample rainfall and fertile soils, which allow for the cultivation of the largest areas of bananas cultivated in the region, coffee, beans and horticultural crops. Karagwe is a major breadbasket of the region. However, the Karagwe district has no rivers except on its borders. This is a very hilly area whose altitude ranges from 800 to 1,500 m and annual rainfall 1,100 to 1,300 mm. Soils are deep, dark reddish brown to red sandy clay loams and vegetation is woodlands. Crops grown include coffee, bananas**,** maize, cassava and beans. Livestock keeping includes cattle, goats, sheep, pigs and poultry. Honey collection is also an important activity.

1.5.3 Ngara and Biharamulo Zone

Receive comparatively small amounts of rainfall and crops cultivated include cotton, tobacco, maize, cassava and sorghum.

The zone is predominantly undulating, flat and broken by occasional small hills and has a fair rainfall regime ranging from 600 mm to 1,000 mm annually. It has an altitude of 600 meters to 900 meters above sea level. This zone covers the low and high lying southern parts of the Kagera Region. The temperatures vary between 20^0 C and 30^0 C. The lowlands are dominated by grayish brown loamy sands and reddish brown clay loams which have low fertile and low water holding capacity hence there is considerable soil erosion. Rainfall ranges from 900 mm to 1,200 mm per annum. The zone is suitable for growing maize, beans, sorghum, cassava, paddy, coffee, bananas, tobacco and cotton. It is moderately infested by tsetse flies and hence livestock keeping is practised

in a large scale. Bee keeping, fishing and lumbering of hard wood are other economic activities practised in this zone.

1.6 Drainage System

The Kagera River is the main drainage line and base level of erosion of Karagwe and Bukoba districts in northern Tanzania. Kagera Region can be divided into three main drainage systems, separated by the high quartzite ridges and generally following the north-south lying geological structures. The western area is drained directly to the Kagera River along the Rwandan border, by numerous smaller catchment areas of which the tributaries join the Kagera River via lakes and swamps.

The Kishanda Valley system drains the central part of the region, including Karagwe District as far as south-west of Nyaishozi. It traverses the swamps below Nkwenda, where it is joined by tributaries draining the Kayanga, Kituntu and Rwambaizi areas. Further north, it crosses the swamps of the Kishanda valley, where the tributaries from Mabira join, and enters the Kagera River in the north, just east of Murongo. All land east of the hill range that runs from Kibare in the very north to beyond Kimisi into Ngara, is drained by the Mwisa Valley. The Mwisa River runs north, bending to the northeast, crossing the Kitengure plains, then joins the Kagera River near Kyaka. Going southward, the Mwisa enters Lake Burigi.

1.7 Population

1.7.1 Ethnic Groups

The main indigenous ethnic group is the Haya tribe. Other groups with significant numbers of persons are the Nyambo, Hangaza, Subi, Ha, Sukuma, Nyarwanda, Zinza, Rundi and the Kerewe. The Hangaza, Subi and Sukuma are found in all the councils while the Ha and Kerewe are mainly in Karagwe, Ngara and Biharamulo district councils. The Nyarwanda on the other hand are mainly in Kyerwa and Muleba district councils. The Sukumas who are mainly herders are found in Kyerwa, Muleba, Ngara, Biharamulo and Karagwe district councils.

1.7.2 Population Size and Growth

Like most regions in Tanzania Mainland, the population of Kagera Region has experienced a significant growth. Table 1.5 shows that the region had 2,458,023 people in 2012 compared to 1,777,823 inhabitants counted in the 2002 Population and Housing Census, resulting in a significant increase of 680,200 people (38.3 percent) during the intercensal period. The region accounted for 5.6 percent of the total population of Tanzania Mainland in 2012.

When compared with other regions in the Mainland, in 2012 Kagera Region was the fourth populous region and below Mbeya, Mwanza and Dar es Salaam in population size (Table 1.4).

Table 1.4: Distribution of Population and Growth Rates by Region, Tanzania Mainland, 2002 and 2012 Censuses

Region	Population (number)		Increase 2002 – 2012		
	2002	2012	Increase	Rate (percent)	Average Annual Rate (percent)
Dodoma	1,692,025	2,083,588	391,563	23.1	2.1
Arusha	1,288,088	1,694,310	406,222	31.5	2.7
Kilimanjaro	1,376,702	1,640,087	263,385	19.1	1.8
Tanga	1,636,280	2,045,205	408,925	25	2.2
Morogoro	1,753,362	2,218,492	465,130	26.5	2.4
Pwani	885,017	1,098,668	213,651	24.1	2.2
Dar es Salaam	2,487,288	4,364,541	1,877,253	75.5	5.6
Lindi	787,624	864,652	77,028	9.8	0.9
Mtwara	1,124,481	1,270,854	146,373	13	1.2
Ruvuma	1,113,715	1,376,891	263,176	23.6	2.1
Iringa	837,847	941,238	103,391	12.3	1.1
Mbeya	2,063,328	2,707,410	644,082	31.2	2.7
Singida	1,086,748	1,370,637	283,889	26.1	2.3
Tabora	1,710,465	2,291,623	581,158	34	2.9
Rukwa	729,060	1,004,539	275,479	37.8	3.2
Kigoma	1,674,047	2,127,930	453,883	27.1	2.4
Shinyanga	1,249,226	1,534,808	285,582	22.9	2.1
Kagera	**1,777,823**	**2,458,023**	**680,200**	**38.3**	**3.2**
Mwanza	2,058,866	2,772,509	713,643	34.7	3
Mara	1,363,397	1,743,830	380,433	27.9	2.5
Manyara	1,037,605	1,425,131	387,526	37.3	3.2
Njombe	648,464	702,097	53,633	8.3	0.8
Katavi	424,794	564,604	139,810	32.9	3.2
Simiyu	1,317,879	1,584,157	266,278	20.2	1.8
Geita	1,337,718	1,739,530	401,812	30	2.6
Tanzania Mainland	**33,461,849**	**43,625,354**	**10,163,505**	**30.4**	**2.7**

Source: The United Republic of Tanzania Population and Housing Census, 2012 Vol. 1

Table 1.5 shows that Kagera is among regions with high growth rates. In Tanzania Mainland, other regions are Dar es Salaam, Manyara, Rukwa and Katavi. The growth rate has been increasing in the 1978 to 1988 intercensal period. While in 1978 to 1988 the growth rate was 2.6 percent, it was 3.1 percent in 1988 to 2002 and 3.2 percent in 2002 to 2012. Kagera Region had a higher growth rate than Tanzania Mainland in the period of 2002 to 2012.For example, the growth rate for Kagera Region was 3.2 percent compared to 2.7 percent for Tanzania Mainland.

Table 1.5: Average Annual Growth Rates for the Inter-censal Periods of 1978-1988, 1988-2002 and 2002-2012 by Region, Tanzania Mainland

	Average Annual Growth Rate (Percent)			Difference in Annual Rates (percentage points)	
Region	**1978-1988**	**1988-2002**	**2002-2012**	**1**	**2**
Dodoma	2.4	2.2	2.1	-0.2	-0.1
Arusha	3.8	3.9	2.7	0.1	-1.2
Kilimanjaro	2.0	1.6	1.8	-0.4	0.2
Tanga	2.1	1.8	2.2	-0.3	0.4
Morogoro	2.6	2.6	2.4	0.0	-0.2
Pwani	2.1	2.4	2.2	0.3	-0.2
Dar es Salaam	4.8	4.3	5.6	-0.5	1.3
Lindi	2.0	1.4	0.9	-0.6	-0.5
Mtwara	1.4	1.7	1.2	0.3	-0.5
Ruvuma	3.3	2.5	2.1	-0.8	-0.4
Iringa	2.5	1.6	1.1	-0.9	-0.5
Singida	2.6	2.3	2.3	-0.3	0.0
Tabora	2.4	3.6	2.9	1.2	-0.7
Rukwa	4.4	3.5	3.2	-0.9	-0.3
Kigoma	2.8	4.8	2.4	2.0	-2.4
Shinyanga	2.9	3.3	2.1	0.4	-1.2
Kagera	**2.6**	**3.1**	**3.2**	**0.5**	**0.1**
Mwanza	2.6	3.2	3.0	0.6	-0.2
Mara	2.7	2.6	2.5	-0.1	-0.1
Manyara	n.a	3.9	3.2	n.a	-0.7
Njombe	n.a	n.a	0.8	n.a	n.a
Katavi	n.a	n.a	3.2	n.a	n.a
Simiyu	n.a	n.a	1.8	n.a	n.a
Geita	n.a	n.a	2.6	n.a	n.a
Tanzania Mainland	**2.8**	**2.8**	**2.7**	**0.0**	**-0.1**

(1) Is difference in growth rates for 1988 to 2002 and 1978 to 1988.
(2) Is difference in growth rates for 2002 to 2012 and 1988 to 2002.
Source: Computed from the Tanzania population and housing censuses of 1988, 2002 and 2012, Population Distribution by Administrative Units Volume 1

Table 1.6 shows the population size and growth rate of Kagera Region by council according to 1988, 2002 and 2012 censuses. The total population of Kagera Region has increased by 38.3 percent from 1,777,823 persons in 2002 to 2,458,023 persons in 2012 Census. However, for the period of 14 years (1988 to 2002), the total population of Kagera Region increased by 35.3 percent. From 2002 to 2012 population increase was recorded in all councils except Ngara District Council. The largest population change was recorded in Biharamulo DC (103.4 percent) while the smallest was recorded inNgara DC (-4.3 percent).

A rapid population increase was observed during the 1988 to 2002 intercensal period (35.3 percent increase with growth rate of 2.2 per annum) also from 2002 to 2012 (38.3 percent increase and an average annual growth rate of 3.2 percent). Table 1.6 also shows the population increase in 2012 was higher in urban areas (139.8 percent) than in rural areas (32.6 percent). Biharamulo District Council had the largest increase of 103.4 percent with a growth rate of 7.1 percent per annum between 2002 and 2012, followed by Karagwe District Council (increase of 64.8 percent with a growth rate of 5.0 percent per annum) and Bukoba MC (59.3 percent increase with a growth rate of 4.7 per annum). The smallest percent increase and growth rate were observed in Ngara District Council and were caused by the reduction of population after the refugees went back to Rwanda and Burundi.

Table 1.6: Population Size and Growth Rate by Council, Kagera Region, 1988, 2002 and 2012 Censuses

	Population Size (number)			Percentage Change		Growth Rate per annum		Doubling Time (years)
District/Council	1988	2002	2012	1988-2002	2002-2012	1988-2002	2002-2012	2002-2012
Kagera Region	**1,313,594**	**1,777,823**	**2,458,023**	**35.3**	**38.3**	**2.2**	**3.2**	**21.4**
Rural	**1,244,158**	**1,683,152**	**2,231,033**	**35.3**	**32.6**	**2.2**	**2.8**	**24.6**
Urban	**69,436**	**94,671**	**226,990**	**36.3**	**139.8**	**2.2**	**8.7**	**7.9**
Karagwe DC	284,137	201,446	332,020	-29.1	64.8	-2.5	5.0	13.9
Bukoba DC	340,800	241,234	289,697	-29.2	20.1	-2.5	1.8	37.9
Muleba DC	273,329	385,184	540,310	40.9	40.3	2.5	3.4	20.5
Biharamulo DC	209,279	159,055	323,486	-24.0	103.4	-2.0	7.1	9.8
Ngara DC	159,546	334,409	320,056	109.6	-4.3	5.3	-0.4	-158
Bukoba MC	46,503	80,868	128,796	N/A	59.3	N/A	4.7	14.9
Missenyi DC	N/A	152,786	202,632	N/A	32.6	N/A	2.8	24.5
Kyerwa DC	N/A	222,841	321,026	N/A	44.1	N/A	3.7	19.0

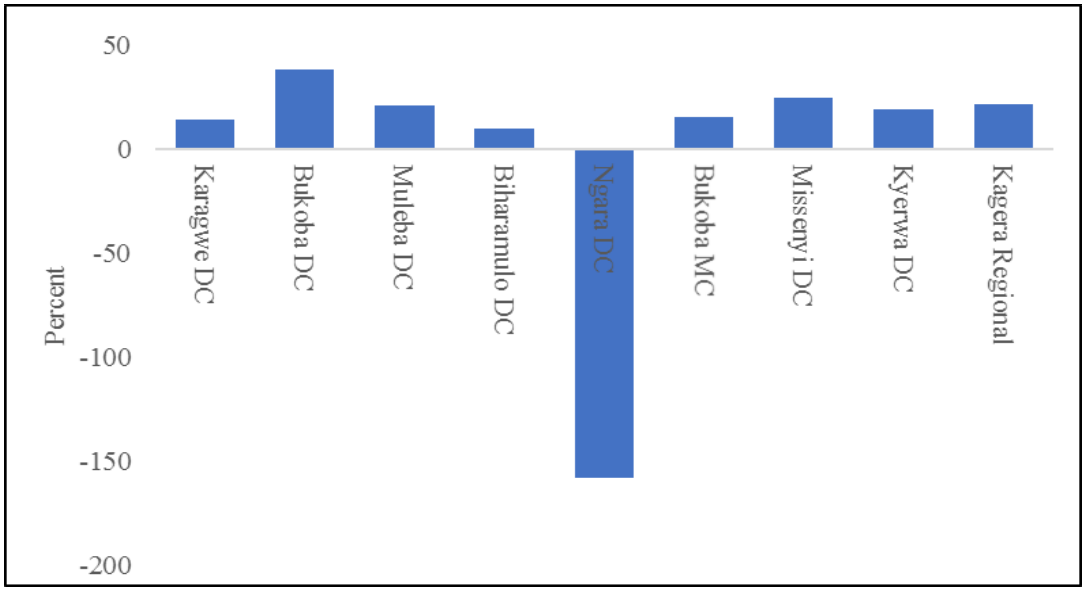
Note:
(i) N/A=Not Applicable
(ii) Missenyi and Kyerwa are new districts/councils. Missenyi was formally in Bukoba DC and Kyerwa was formmaly in Karagwe DC
Source: NBS, computed data from 2002 and 2012 Population Census Reports.

1.7.3 Doubling Time

Doubling time is another key population indicator which shows in how many years the region or council would double its population. This indicator alerts decision makers to review their socio-economic goals and targets by taking into consideration expected socio-economic pressures that will be caused by their increased population. The socio-economic demands are in regard to land, water supply, education and health facilities, employment opportunities, housing and other social facilities. Taking the 2012 Population and Housing Census as a base, the population of Kagera Region will double after 21 years. At the council level, the population of Biharamulo District Council will double after the shortest time of 10 years followed by Karagwe District Council (14 years), Bukoba Municipal Council (15 years), Kyerwa District Council (19 years) and Muleba

District Council (21 years). Missenyi and Bukoba district councils will take more years, (25 and 38 years respectively) to double their populations (Figure 1.3). Ngara District Council has negative doubling time since the council had two wards (Kasulo and Rusumo) which were occupied by refugees from Rwanda since late nineties. As a result of the political stability in the country, almost all the refugees went back to Rwanda and respective camps were almost closed. This resulted in the fall of the population at the wards as well as in the council. This is what led to the negative population increase of 4.3 percent for Ngara DC between 2002 and 2012 compared to the increase of 109.6 percent between 1988 and 2002.

Figure 1.3: Estimated Doubling Time (years) by Council, Kagera Region, 2015



Source: NBS, the 2012 Population and Housing Census Report (Kagera Region Profile), 2016.

Table 1.7 shows that Biharamulo District Council's share of the regional population increased from 8.9 percent in 2002 to 13.2 percent in 2012. Bukoba MC's share increased slightly from 4.5 percent to 5.2 percent; Kyerwa DC's share increased slightly from 12.5 percent to 13.1 percent. On the contrary, Ngara DC's share of the regional population decreased from 18.8 percent in 2002 to 13.0 percent in 2012, Bukoba DC's share decreased from 13.6 percent to 11.8 percent and Missenyi DC's share decreased from 8.6 percent to 8.2 percent.

Table 1.7: Percentage Share of Regional Population by District Council, Kagera Region, 2002, and 2012

Council	2002 Population (census) (number)			Percent Share of Population	2012 Population (census) (number)			Percent Share of Population	Projection 2017 (number)
	Male	Female	Total		Male	Female	Total		
Karagwe DC	99,015	102,431	201,446	11.3	163,864	168,156	332,020	13.5	393,219
Bukoba DC	115,766	125,468	241,234	13.6	141,142	148,555	289,697	11.8	343,095
Muleba DC	191,548	193,636	385,184	21.7	267,858	272,452	540,310	22.0	639,902
Biharamulo DC	79,185	79,870	159,055	8.9	160,572	162,914	323,486	13.2	383,112
Ngara DC	162,314	172,095	334,409	18.8	152,443	167,613	320,056	13.0	379,050
Bukoba MC	40,583	40,285	80,868	4.5	62,521	66,275	128,796	5.2	152,536
Missenyi DC	74,836	77,950	152,786	8.6	100,085	102,547	202,632	8.2	239,982
Kyerwa DC	108,835	114,006	222,841	12.5	157,198	163,828	321,026	13.1	380,199
Total	**872,082**	**905,741**	**1,777,823**	**100.0**	**1,205,683**	**1,252,340**	**2,458,023**	**100.0**	**2,911,095**

Source: Compiled from population and housing census reports for 2002 and 2012

As mentioned earlier, compared to other regions of Tanzania Mainland, in 2015 Kagera Region was of medium size in terms of land area. It occupied three percent of total area of Tanzania Mainland. However, according to the 2002 population and housing census results it was among the five most populous regions of Tanzania Mainland. In the 2012 Population and Housing Census, Kagera Region was again among the five most populous regions in the country contributing 5.6 percent of the Mainland population. Nevertheless, Table 1.8 shows that the share of the region has been almost constant and has increased to about 5.6 percent in the year 2012.

Table 1.8: Kagera Region's Percentage Share of Tanzania Mainland Population in 1967, 1978, 1988, 2002 and 2012

Year	Total Population (number)				
	1967	1978	1988	2002	2012
Tanzania Mainland	11,958,654	17,036,499	22,455,207	33,461,849	43,625,354
Kagera	658,712	1,009,379	1,313,594	1,777,823	2,458,023
Percent Share	**5.5**	**5.9**	**5.8**	**5.3**	**5.6**

Source: Compiled from the 1967, 1978, 1988, 2002 and 2012 census data

1.7.4 Population Density

Kagera Region, with population density of 71 persons per sq.km. In 2002 was considered to be a high densely populated region compared to other regions of Tanzania Mainland. In 2012, Kagera Region had an estimated density of 87 people per square kilometer. The region reflected land pressure like Kilimanjaro, Mwanza or Dar es Salaam regions.

The Tanzania Mainland population density in 2002 was 38 people per sq. km. Kagera Region was fourth among Tanzania Mainland regions in terms of population density. Dar es Salaam led with 1,786 people per sq. km followed by Mwanza 150 and Kilimanjaro 103. The other high densely populated regions were Mara (70), Mtwara (67) and Tanga (61 people per sq. km).

The national average population densities are presented in Table 1.9 has 19 people per sq. km in 1978, 26 in 1988, 38 in 2002 and 50 in 2012. The table also compares the Tanzania Mainland regions' population densities. Kagera Region's population density was high compared to many other regions. In 2002, Kagera Region ranked fourth out of Tanzania Mainland regions and in 2012 it ranked fifth.

Table 1.9: Population Density by Region and Ranking, Tanzania Mainland, 1978, 1988, 2002 and 2012 Censuses

	Density (persons per sq. km)				Rank	
Region	**1978**	**1988**	**2002**	**2012**	**2002**	**2012**
Dodoma	24	30	41	50	10	9
Arusha	13	20	35	49	11	10
Kilimanjaro	68	83	103	123	3	3
Tanga	39	48	61	76	7	6
Morogoro	13	17	25	31	15	13
Pwani	16	20	27	34	13	12
Dar es Salaam	605	977	1,786	3,133	1	1
Lindi	8	10	12	13	21	21
Mtwara	46	53	67	76	6	7
Ruvuma	9	12	18	22	19	19
Iringa	16	21	26	26	14	18
Mbeya	n.a	n.a	n.a	n.a	n.a	n.a
Singida	12	16	22	28	18	17
Tabora	7	14	22	30	20	16
Rukwa	11	10	17	15	16	20
Kigoma	18	23	45	57	9	8
Shinyanga	26	35	55	30	8	15
Kagera	**36**	**46**	**71**	**87**	**4**	**5**
Mwanza	74	96	150	142	2	2
Mara	37	48	70	89	5	4
Manyara	11	13	23	31	16	14
Njombe	n.a	n.a	n.a	n.a	n.a	n.a
Katavi	n.a	n.a	9	12	22	22
Simiyu	n.a	n.a	n.a	n.a	n.a	n.a
Geita	n.a	n.a	n.a	n.a	n.a	n.a
Total Mainland	**19**	**26**	**38**	**50**		

Source: 2002 Population and Housing Census General Report and Population Projections

Table 1.10 gives the population density at the district council level for the census years of 2002 and 2012. For the rural district councils, in 2002 Muleba District Council with a population density of 112 persons per sq. km was the most densely populated district council, followed by Bukoba District Council with 93 persons per sq. km. and Ngara District Council with 89 persons per sq. km.

In 2012, Muleba DC still led by having 157 persons per sq. km followed by Kyerwa with 115 persons per sq.km and Bukoba DC at 112 persons per sq.km.

Table 1.10: Population Density by Council, Kagera Region, 2002 and 2012

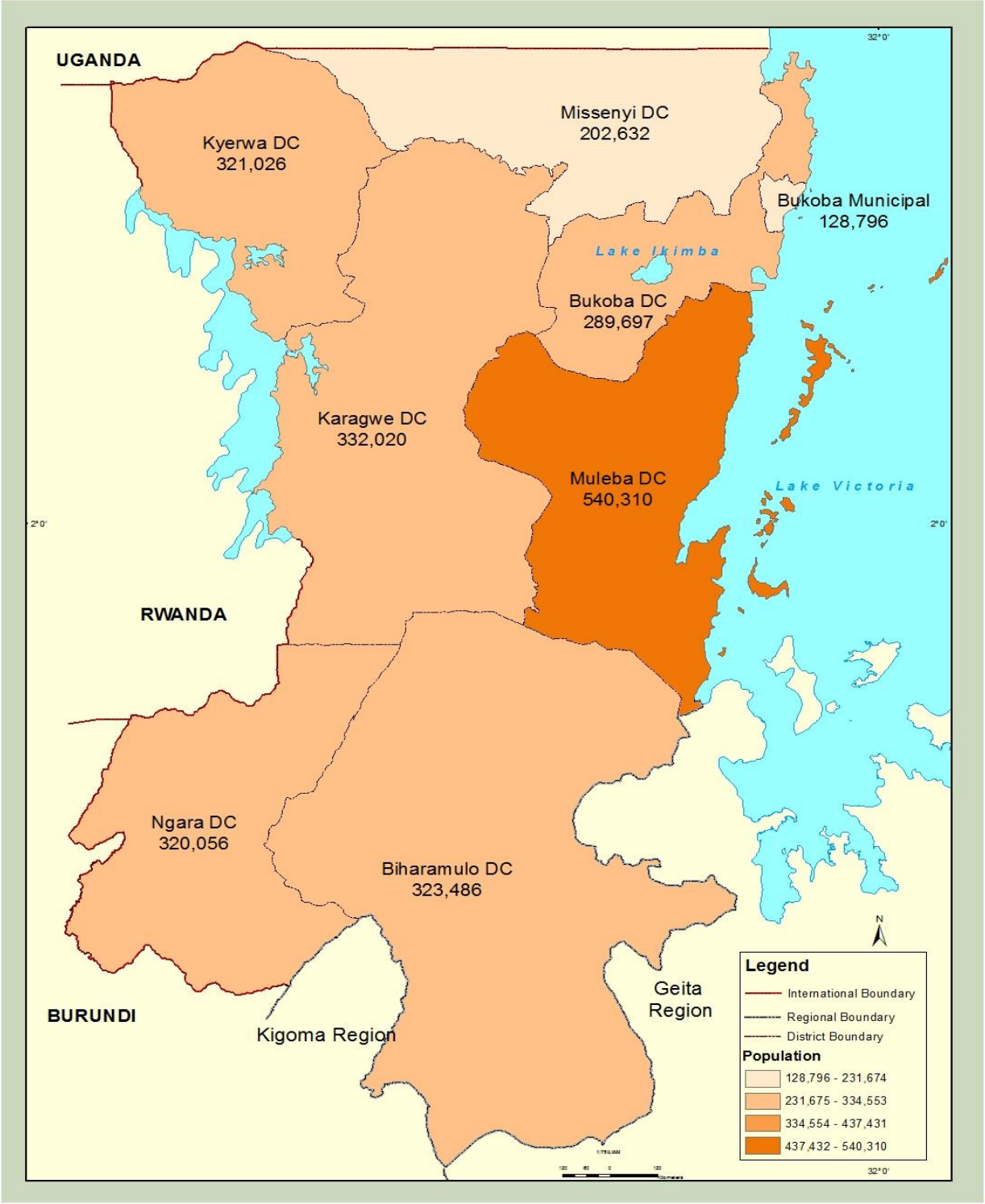
Council	Land Area (sq. kms).	2002 Population	2012 Population	Population Density (persons per sq. km.) 2002	2012
Karagwe DC	4,342.0	201,446	332,020	46	76
Bukoba DC	2,595.5	241,234	289,697	93	112
Muleba DC	3,444.0	385,184	540,310	112	157
Biharamulo DC	5,617.0	159,055	323,486	28	58
Ngara DC	3,744.0	334,409	320,056	89	85
Bukoba MC	83.0	80,868	128,796	974	1,552
Missenyi DC	2,000.0	152,786	202,632	76	101
Kyerwa DC	2,783.4	222,841	321,026	80	115
Total	**24,608.9**	**1,777,823**	**2,458,023**	**72**	**100**

Source: NBS computed data from 2002 and 2012 population censuses reports.

1.7.5 Population Change

Table 1.11 shows that from 2002 to 2012 the region's population increased by 680,200 (38.3 percent) from 1,777,823 in 2002 to 2,458,023 in 2012. However, at the council level there were significant differences in the nature and level of population change with one council registering population decrease of about -4.3 percent while in the others the population increase ranged from 20.1 percent and 103.4 percent. Other councils that show significant population increases were Karagwe DC (64.8 percent) followed by Bukoba MC (59.3 percent).

Map 3: Map of Kagera Region showing Population Distribution by Council, 2012



Source: NBS, Cartographic Unit, Dsm, 2017

Table 1.11: Population change by Council, Kagera Region, 2002 and 2012 Censuses

Council	Population		Population Increase: 2002 to 2012	
	2002	2012	Number	Percent
Karagwe DC	201,446	332,020	130,574	64.8
Bukoba DC	241,234	289,697	48,463	20.1
Muleba DC	385,184	540,310	155,126	40.3
Biharamulo DC	159,055	323,486	164,431	103.4
Ngara DC	334,409	320,056	-14,353	-4.3
Bukoba MC	80,868	128,796	47,928	59.3
Missenyi DC	152,786	202,632	49,846	32.6
Kyerwa DC	222,841	321,026	98,185	44.1
Total	**1,777,823**	**2,458,023**	**680,200**	**38.3**

Source: computed data from 2002 and 2012 population censuses reports**.**

1.7.6 Dependency Ratio

The Dependency Ratio is a measure which shows the load carried the economically active population in supporting the young and the old population who are termed as dependants. The Age Dependency Ratio therefore gives the number of persons of age 0 – 14 years and 65 years or above who depend on a 100 persons of age 15 – 64 years. In 2002, Kagera Region had a total of 903,154 dependants and 874,669 economically active population. In 2012 dependants were 1,258,738 and the active population was 1,199,285. As a result, the working age group in Kagera Region supported a large number of dependants and caused the dependency ratio to become the highest in the country. It may be observed that the number of dependants for every 100 of the economically active population in Kagera Region increased from 103 persons in 2002 to 105 persons in 2012.

Table 1.12 gives the magnitude of dependence ratio for each council in Kagera Region based on the 2002 and 2012 population census results. In 2002, Bukoba MC (65 persons) had the smallest dependency ratio followed by Karagwe and Muleba DCs (101 persons each), Ngara and Missenyi DCs (106 persons each), Bukoba DC (107 persons), Kyerwa DC (110 persons) and Biharamulo DC (113 persons).This situation portrays effects of geographical location and especially the difference between rural and urban councils. The impact of HIV/AIDS should also not be neglected. In 2012 however, the heaviest burden was in Biharamulo DC where the ratio was 123 dependants for every 100 of the economically active persons and the lightest was in Bukoba MC with a dependency ratio of 68 persons.

Table 1.12: Dependency Ratio by Council, Kagera Region, 2002 and 2012

Council	2002 Population			2012 Population		
	Number of			Number of		
	Dependants	Economically Active	Dependency Ratio	Dependants	Economically Active	Dependency Ratio
Karagwe DC	101,433	100,013	101	167,198	164,822	101
Bukoba DC	124,965	116,269	107	148,390	141,307	105
Muleba DC	193,794	191,390	101	275,558	264,752	104
Biharamulo DC	84,415	74,640	113	178,207	145,279	123
Ngara DC	171,753	162,656	106	168,469	151,587	111
Bukoba MC	31,727	49,141	65	51,929	76,867	68
Missenyi DC	78,464	74,322	106	100,263	102,369	98
Kyerwa DC	116,603	106,238	110	168,724	152,302	111
Total	**903,154**	**874,669**	**103**	**1,258,738**	**1,199,285**	**105**

Source: computed data from 2002 and 2012 population censuses reports.

1.7.7 Population Distribution by Sex and Age

The 2002 and 2012 population censuses showed that there were more females than males in Kagera Region and in most of its councils. At the regional level, in 2002 and 2012 the sex ratios were similar in that in both years for every 100 females there were 96 males (Table 1.14). In 2002, the council with the largest sex ratio of 101 males for every 100 females was Bukoba Municipal Council. In 2012 however, Biharamulo District Council had the largest sex ratio of 99 males for every 100 females. While Bukoba DC with 92 had the smallest ratio in 2002, Ngara DC had the smallest ratio of 91 in 2012 (Table 1.13).

Table 1.13: Population Distribution by Sex and Sex Ratio by Council, Kagera Region, 2002 and 2012

Council	2002				2012			
	Males	Females	Total	Sex Ratio	Males	Females	Total	Sex Ratio
Karagwe DC	99,015	102,431	201,446	97	163,864	168,156	332,020	97
Bukoba DC	115,766	125,468	241,234	92	141,142	148,555	289,697	95
Muleba DC	191,548	193,636	385,184	99	267,858	272,452	540,310	98
Biharamulo DC	79,185	79,870	159,055	99	160,572	162,914	323,486	99
Ngara DC	162,314	172,095	334,409	94	152,443	167,613	320,056	91
Bukoba MC	40,583	40,285	80,868	101	62,521	66,275	128,796	94
Missenyi DC	74,836	77,950	152,786	96	100,085	102,547	202,632	98
Kyerwa DC	108,835	114,006	222,841	95	157,198	163,828	321,026	96
Total	**872,082**	**905,741**	**1,777,823**	**96**	**1,205,683**	**1,252,340**	**2,458,023**	**96**

Source: Calculations based on data from the 2002 and 2012 Censuses

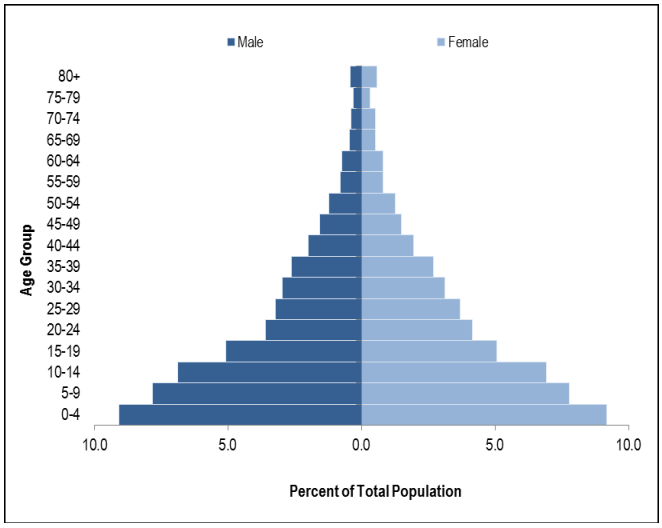
Furthermore, the 2012 population of Kagera Region as shown in Table 1.14 is considered to be a young population. It is made up of children under 15 years who were 1,171,789 (584,204 males and 587,585 females) equivalent to 47.7 percent of the total population, followed by the young population aged between 15–24 years accounted for 439,394 persons (212,512 males and 226,882 females) equivalent to 17.9 percent of the total population. Persons aged 65 years or above were 86,949 (39,004 males and 47,945 females) equivalent to 3.5 percent of the total population. Table 1.14 also shows the 2012 population of Kagera Region distributed by broad age groups.

Table 1.14: Population Distribution by Broad Age Group and by Sex, Kagera Region, 2012

	Male		Female		Total	
Age Group	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent Share**
0 – 14	584,204	49.9	587,585	50.1	1,171,789	47.7
15 – 24	212,512	48.4	226,882	51.6	439,394	17.9
25 – 34	151,548	47.5	167,482	52.5	319,030	13.0
35 – 44	113,213	49.7	114,475	50.3	227,688	9.3
45 – 54	67,760	49.8	68,178	50.2	135,938	5.5
55 – 64	37,442	48.5	39,793	51.5	77,235	3.1
65+	39,004	44.9	47,945	55.1	86,949	3.5
Total	**1,205,683**	**49.1**	**1,252,340**	**50.9**	**2,458,023**	**100.0**

Source: population and housing census reports

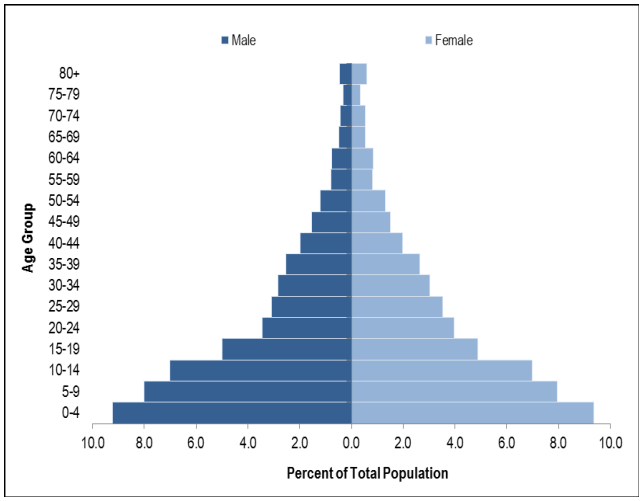
Figure 1.4: Population Pyramid for Kagera Region; 2012



Source: NBS, Kagera region Socio – economic Profile, 2012 Population Census

The population pyramid of the rural areas of Kagera Region (Figure 1.5) depicts a shape similar to the regional pyramid (Figure 1.4) with a broad base, but narrowing very quickly to old ages.

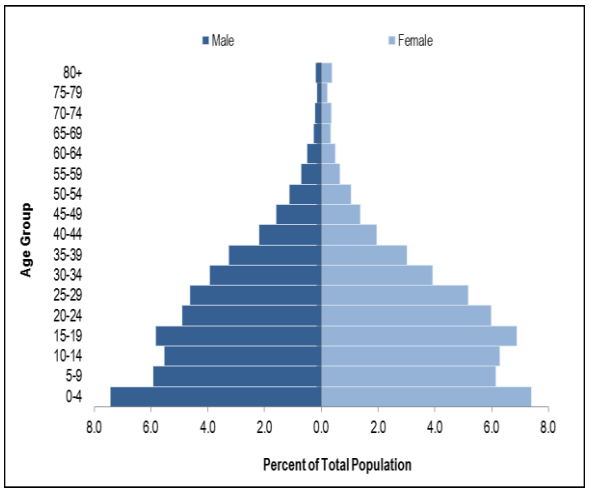
Figure 1.5: Population Pyramid, Kagera Region (Rural Areas); 2012



Source: NBS, Kagera Region Socio – economic Profile, 2012 Population Census

However, the population pyramid for the urban areas of Kagera Region has a typical age structure as urban areas such as Dar es Salaam, Nairobi and Kampala. It shows a youthful age structure with a bulge in age group 15–29: an indication of youth in-migration (Figure 1.6).

Figure 1.6: Population Pyramid, Kagera Region (Urban Areas); 2012

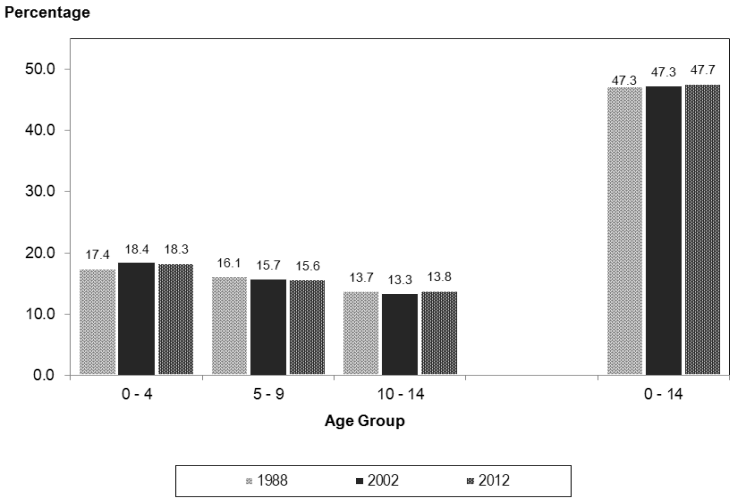


Source: NBS, Kagera Region Socio – economic Profile, 2012 Population Census

Young Population (0-14 years)

The proportion of population below 15 years of age increased from 47.3 percent in 1988 and 2002 censuses to 47.7 percent in 2012 Census (Figure 1.7). This marginal increase indicates a slow pace of fertility increase in the Region over a 24-year period.

Figure 1.7: Percentage Distribution of Young Population (0-14 Years); by Five Year Age Group, Kagera Region, 1988, 2002 and 2012 Censuses

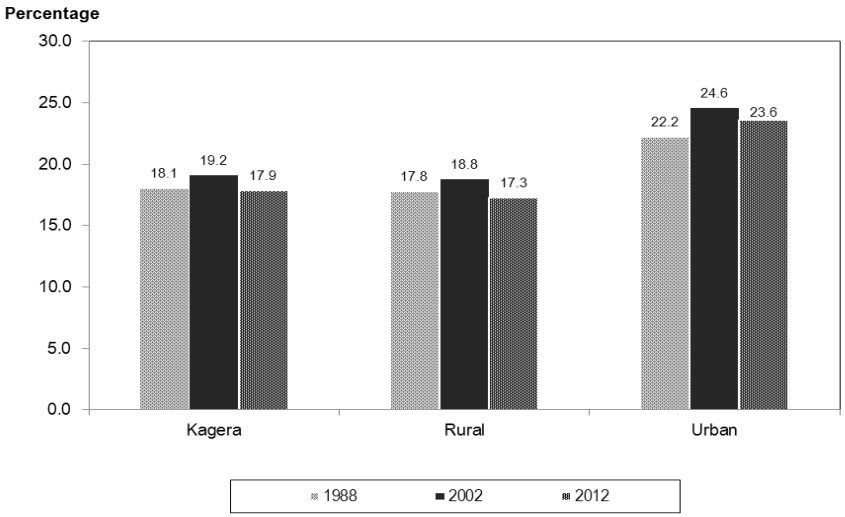


Source: NBS, Kagera Region Socio – economic Profile, 2012 Population Census

Youth Population (15-24 Years)

Figure 1.8 presents the percentage of youth population of Kagera Region, Kagera Rural and Kagera Urban for the 1988, 2002 and 2012 censuses. The percentage of the youth population (15-24 years) in Kagera Region increased from 18.1 percent in 1988 to 19.2 percent in 2002 and then decreased to 17.9 percent in 2012 Census. The same trend is observed in rural and urban areas, but in urban areas it increased from 22.2 percent to 24.6 percent in the 2002 PHC and then decreased to 23.6 percent in the 2012 Census.

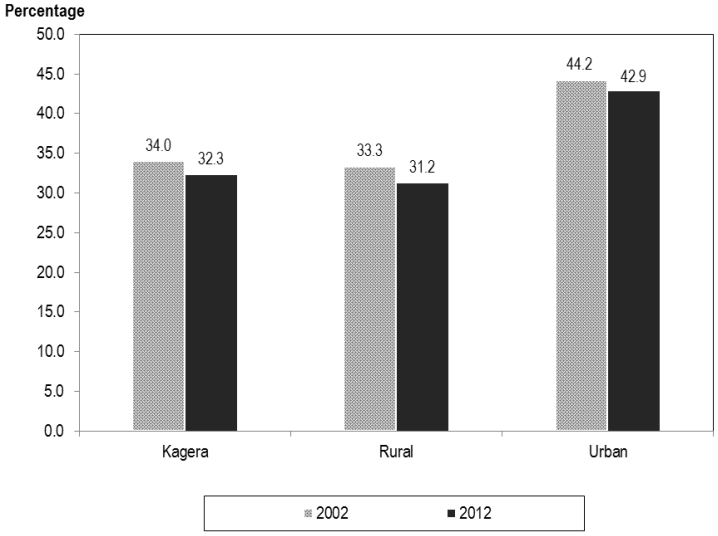
Figure 1.8: Percentage of Youth Population (15-24 years) by Area, Kagera Region, 1988, 2002 and 2012 Censuses



Source: NBS, Kagera Region Socio – economic Profile, 2012 Population Census

According to the Tanzania Youth Policy, the youth constitute the population of age 15 to 35 years. The percentage of persons of age 15-35 years in the 2012 PHC decreased from 34.0 percent in 2002 to 32.3 percent in 2012 for Kagera Region, from 33.3 to 31.2 percent for Kagera Rural and 44.2 percent in 2002 to 42.9 percent in 2012 Census for Kagera urban (Figure 1.9).

Figure 1.9: Percentage of the Youth Population (15-35 years); by Area, Kagera Region, 2002 and 2012 Censuses

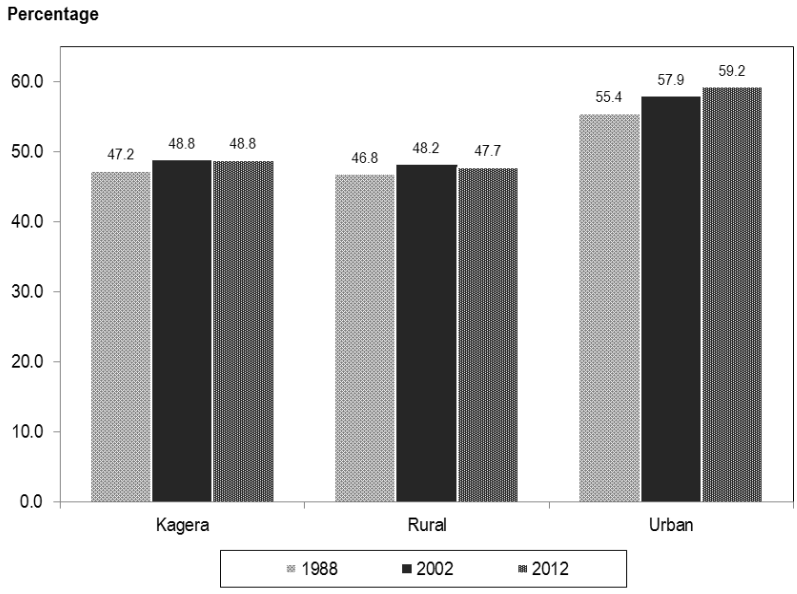


Source: NBS, Kagera Region Socio – economic Profile, 2012 Population Census

Working Age Population (15-64 years)

The percentage of Kagera's total population that constitutes the working age population (15-64 years) increased from 47.2 percent in 1988 Census to 48.8 percent in 2002 and remained at the same level in 2012. The percentage of the working population in Kagera rural increased from 46.8 percent in 1988 to 48.2 percent in 2002 then decreased slightly to 47.7 percent in 2012. On the other hand, there was a significant increase in percentage of the working population for Kagera Urban, from 55.4 in 1988 to 57.9 in 2002 and 59.2 percent in 2012 (Figure 1.10).

Figure 1.10: Percentage of the Working Age Population (15-64 years); by Area, Kagera Region, 1988, 2002 and 2012 Censuses

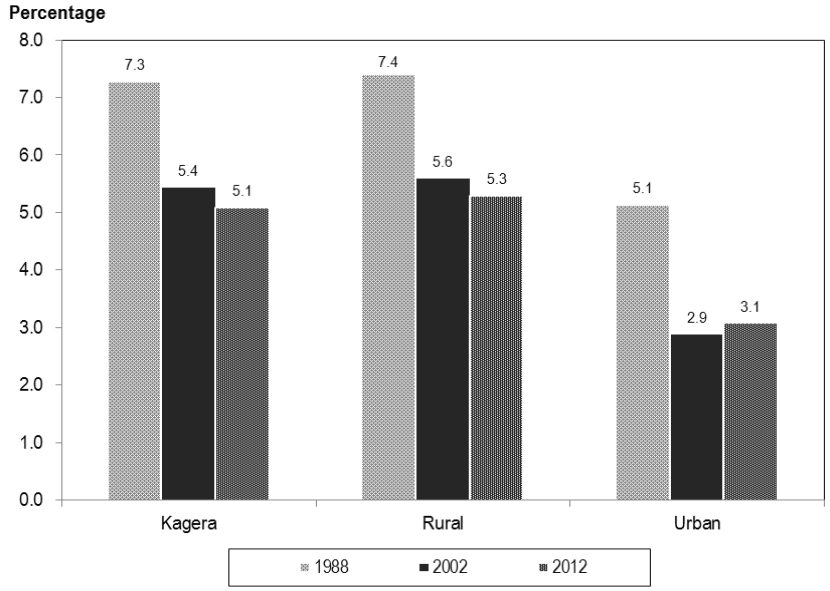


Source: NBS, Kagera Region Socio – economic Profile, 2012 Population Census

Elderly Population

The percentage of the elderly population (60 years or above) in Kagera Region decreased from 7.3 percent in 1988 to 5.1 percent in 2012 Census; almost a similar situation was observed in Kagera Rural. In Kagera urban, the Percentage of the elderly population decreased from 5.1 percent in 1988 to 3.1percent in 2012 (Figure 1.11).

Figure 1.11: Percentage of the Population of Age 60 Years or Above; by area, Kagera Region, 1988, 2002 and 2012 Censuses



Source: NBS, Kagera Region Socio – economic Profile, 2012 Population Census

1.7.8 Households and Average Household Size

1.7.8.1 Households

A population and housing census collects information from private and collective households. The information, on household composition and characteristics, includes the number of persons in the households, their sex and relationship to the household head.

In population and housing census, a private household is defined as a person or group of persons who reside in the same homestead or compound but not necessarily in the same dwelling unit, having the same cooking arrangements, and are answerable to the same household head. Analysis in this Chapter concerns private households only.

According to the 2012 Population and Housing Census, Kagera Region had a total of 521,028 private households. Rural areas had 465,595 households (89.4 percent) and urban areas had 55,433 households (10.6 percent) (Table 1.15).

Table 1.15 reveals that the council with the largest percentage of private households in urban areas was Bukoba MC (100.0 percent), followed by Karagwe and Missenyi DCs (8.3 percent each) and Ngara DC (7.1 percent). The council with the smallest percentage was Muleba DC (3.0 percent). The council with the largest number of private households in rural areas was Kyerwa (100.0 percent), followed by Bukoba DC (96.2 percent).

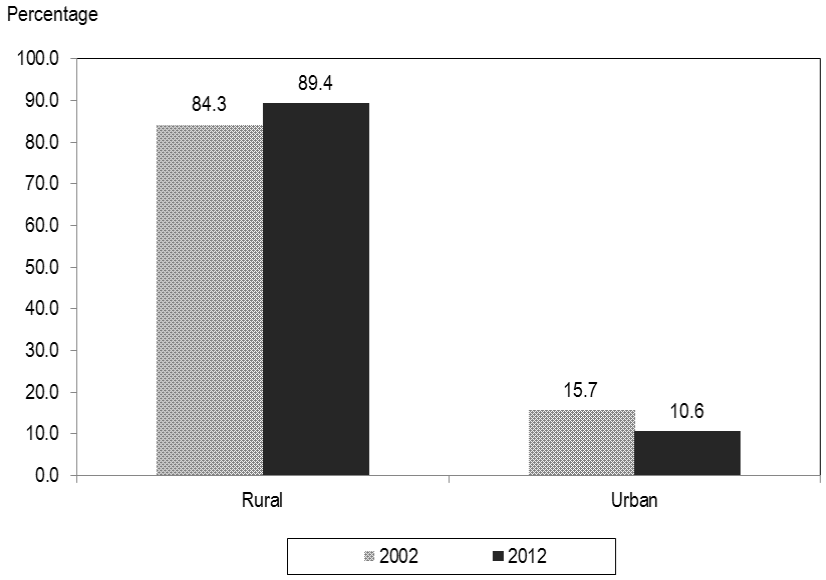
Table 1.15: Number and Percentage Distribution of Private Households by Council and Rural-Urban; Kagera Region, 2012 Census

	Total		Rural		Urban	
District/Council	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Kagera Region	**521,028**	**100.0**	**465,595**	**89.4**	**55,433**	**10.6**
Karagwe DC	72,339	13.9	66,302	91.7	6,037	8.3
Bukoba DC	65,375	12.5	62,909	96.2	2,466	3.8
Muleba DC	113,380	21.8	110,028	97.0	3,352	3.0
Biharamulo DC	55,674	10.7	53,183	95.5	2,491	4.5
Ngara DC	67,477	13.0	62,686	92.9	4,791	7.1
Bukoba MC	32,296	6.2	N/A	N/A	32,296	100.0
Missenyi DC	48,104	9.2	44,104	91.7	4,000	8.3
Kyerwa DC	66,383	12.7	66,383	100.0	N/A	N/A

Source: NBS, Kagera Region Census Profile 2015

Figure 1.12 shows a decrease in the percentage of urban households in Kagera from 15.7 percent in 2002 to 10.6 percent in 2012 but an increase in the percentage of rural households from 84.3 percent in 2002 to 89.4 percent in 2012.

Figure 1.12: Percentage of Private Households by Rural-Urban; Kagera Region, 2002 and 2012 Censuses



Source: NBS, Kagera Region Socio – economic Profile, 2012 Population Census

Table 1.16 also gives the distribution of households by council based on the 2002 and 2012 census data. In 2012, Muleba DC had the largest number of households (113,380) followed by Karagwe DC (72,339) and Ngara DC (67,477). The 2002, Bukoba DC (90,502) had the largest number of households followed by Karagwe District Council (89,047) and Muleba District Council (79,107) while Bukoba MC had the smallest number of household (19,259).

Table 1.16: Average Households Size and Distribution of Households by Council, Kagera Region, 2002 and 2012 Censuses

Council	2002 Census			2012 Census		
	Total Population (number)	Number of Households	Average Household Size	Total Population (number)	Number of Households	Average Household Size
Karagwe DC	201,446	89,047	2.3	332,020	72,339	4.6
Bukoba DC	241,234	90,502	2.7	289,697	65,375	4.4
Muleba DC	385,184	79,107	4.9	540,310	113,380	4.7
Biharamulo DC	159,055	67,131	2.4	323,486	55,674	5.7
Ngara DC	334,409	49,082	6.8	320,056	67,477	4.7
Bukoba MC	80,868	19,259	4.2	128,796	32,296	3.9
Missenyi DC	152,786	N/A	N/A	202,632	48,104	4.2
Kyerwa DC	222,841	N/A	N/A	321,026	66,383	4.8
Total	**1,777,823**	**394,128**	**4.5**	**2,458,023**	**521,028**	**4.7**

Source: Computed data from 2002 and 2012 population censuses reports.

1.7.8.2 Average Household Size

Average household size is the average number of persons per private household. Average household size is obtained by dividing the total number of persons living in private households by the total number of private households. In 2012, only one out of 8 district councils in Kagera Region had an average household size of more than 5 persons (Table 1.16). Bukoba MC had the smallest household size of 3.9 persons per household; lower than the regional average household size of 4.7.

Table 1.16 also shows that during the intercensal period, there was a decrease in average household size in three councils, Muleba DC, Ngara DC and Bukoba MC.

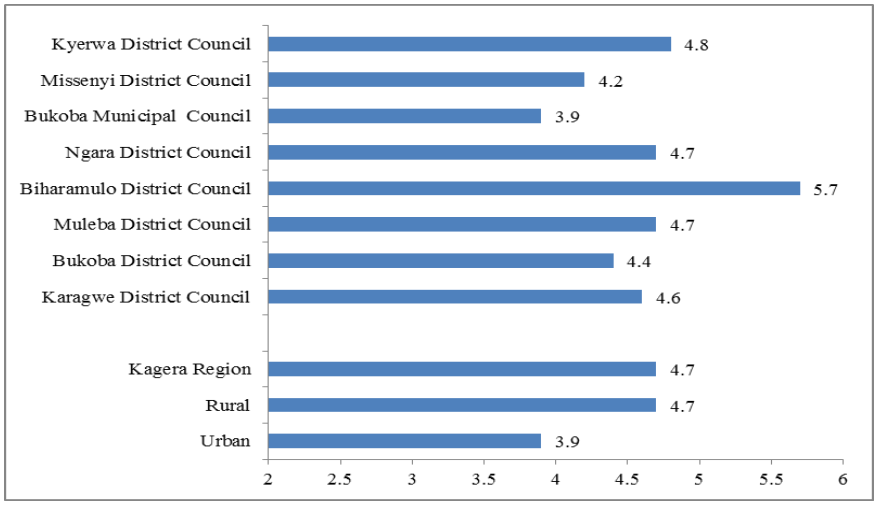
Figure 1.13 and Table 1.17 show that the average household size for Kagera Region in the 2012 Population and Housing Census was 4.7 persons, which is higher than that of 4.5 recorded in the 2002 Population and Housing Census. The rural households with an average of 4.7 persons per household are relatively larger than the urban ones (3.9 persons). The average household size varied notably across councils, ranging between 3.9 persons in Bukoba MC and 5.7 persons in Biharamulo DC (Figure 1.13).

Table 1.17: Population Size, Number of Households and Average Household Size, by Rural-Urban, Kagera Region, 2002 and 2012 Censuses

	Population (number)		Number of Households		Average Household Size	
Administrative Unit	**2002**	**2012**	**2002**	**2012**	**2002**	**2012**
Kagera Region	**1,777,823**	**2,458,023**	**394,128**	**521,028**	**4.5**	**4.7**
Rural	1,653,225	2,231,033	366,778	465,595	4.8	4.7
Urban	124,598	226,990	29,755	55,433	4.1	3.9

Source: Kagera Region Census 2012 Profile NBS 2015

Figure 1.13:Average Household Size by Council, Kagera Region, 2012 Census



Source: NBS, Kagera Region Profile, 2012 Population Census

1.7.9 Rural and Urban Population

According to the Table 1.18, urban population of Kagera Region increased from 7.0 percent in 2002 census to 9.2 percent in 2012. At council level, the table shows that Bukoba Municipal Council had the largest percentage of urban population (73.2 percent) in 2002. In the other councils with the exception of Biharamulo DC, the percentage of urban was relatively small about or (less than 4.0 percent). However, in 2012 the percentage of urban population increased to 100.0 percent in Bukoba Municipal Council as from 73.2 percent recorded in 2002.

Table 1.18: Distribution of Urban Population and Percentage Urbanized by Council, Kagera Region, 2002 and 2012 Censuses

	2002			2012		
Council	**Total Population**	**Urban Population**	**Percent Urbanized**	**Total Population**	**Urban Population**	**Percent Urbanized**
Karagwe DC	201,446	7,242	3.6	332,020	24,447	7.4
Bukoba DC	241,234	969	0.4	289,697	10,130	3.5
Muleba DC	385,184	8,734	2.3	540,310	15,747	2.9
Biharamulo DC	159,055	40,842	25.7	323,486	11,700	3.6
Ngara DC	334,409	4,844	1.4	320,056	22,152	6.9
Bukoba MC	80,868	59,157	73.2	128,796	128,796	100.0
Missenyi DC	152,786	2,810	1.8	202,632	14,018	6.9
Kyerwa DC	222,841	0	0.0	321,026	0	0.0
Total	**1,777,823**	**124,598**	**7.0**	**2,458,023**	**226,990**	**9.2**

Source: NBS, Population Census Report 2002 and 2012.

1.7.10 Diaspora

The 2012 Population and Housing Census collected information on the number of Tanzanians living outside the country (Diaspora) as well as information on whether households received any remittances from their relatives living outside the country. Information was collected by asking a direct question to the head of household if there was any former household member who was living outside the country at the time of the census, the name of country in which that particular person was residing and if that particular household was receiving any remittance (cash or in kind) from him or her.

Number of Persons Living in Diaspora

Table 1.19 presents the number of households that reported to have at least one of its former household members living outside the country by council. About two (1.5) percent of total private households in Kagera Region reported to have at least one former household member living outside the country in 2012. The percentage of households with former household members living in Diaspora was higher in urban areas (2.2 percent) than in rural areas (1.4 percent). The council with the largest percentage of households with Diaspora was Missenyi DC (4.8 percent).

Table 1.19: Number and Percentage of Households with Diaspora by Council and Rural-Urban; Kagera Region, 2012 Census

	Total Households			Rural			Urban		
Council	Number	with Diaspora	Percent	Number	with Diaspora	Percent	Number	with Diaspora	Percent
Kagera Region	**521,028**	**7,894**	**1.5**	**465,595**	**6,697**	**1.4**	**55,433**	**1,197**	**2.2**
Karagwe DC	72,339	825	1.1	66,302	706	1.1	6,037	119	2.0
Bukoba DC	65,375	1,056	1.6	62,909	1,015	1.6	2,466	41	1.7
Muleba DC	113,380	837	0.7	110,028	749	0.7	3,352	88	2.6
Biharamulo DC	55,674	273	0.5	53,183	248	0.5	2,491	25	1.0
Ngara DC	67,477	571	0.8	62,686	491	0.8	4,791	80	1.7
Bukoba MC	32,296	684	2.1	N/A	N/A	N/A	32,296	684	2.1
Missenyi DC	48,104	2,292	4.8	44,104	2,132	4.8	4,000	160	4.0
Kyerwa DC	66,383	1,356	2.0	66,383	1,356	2.0	N/A	N/A	N/A

Source: NBS, Kagera Region Profile, 2012 Population Census

Table 1.20 shows the distribution of persons living outside Tanzania by countryresidence for rural and urban areas in Kagera Region. The table shows that there were about 57.7 percent of Tanzanians living in Uganda, followed by 12.5 percent living in Rwanda, 6.0 percent living in Burundi, 5.3 percent living in USA and 4.8 living in Kenya. The majority of these people were from the rural areas. The table show that 84.4 percent of the Diaspora were from rural areas while 15.6 percent were from urban areas. It is further observed that 61.6 percent of the total diaspora reported by rural households were living in Uganda followed by Rwanda (13.1 percent) and Burundi (6.6 percent). Diaspora reported by urban areas were largest in Uganda (36.4 percent)

followed by USA (10.6 percent), Rwanda (9.5 percent), Great Britain (8.8 percent) and Kenya (7.0 percent).

Table 1.20: Number and Percentage Distribution of Tanzanians Living Outside Tanzania (as reported at household level) by Country of Residence and Rural-Urban; Kagera Region, 2012 Census

	Total		Rural		Urban	
Country of Residence	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Total	**34,276**	**100.0**	**28,945**	**84.4**	**5,331**	**15.6**
Angola	7	0.0	4	0.0	3	0.1
Botswana	140	0.4	125	0.4	15	0.3
Burundi	2,041	6.0	1,917	6.6	124	2.3
Comoro	36	0.1	25	0.1	11	0.2
Kenya	1,652	4.8	1,278	4.4	374	7.0
Lesotho	34	0.1	21	0.1	13	0.2
Malawi	241	0.7	233	0.8	8	0.2
Mauritius	11	0.0	9	0.0	2	0.0
Mozambique	54	0.2	33	0.1	21	0.4
Namibia	80	0.2	70	0.2	10	0.2
Rwanda	4,300	12.5	3,792	13.1	508	9.5
Seychelles	27	0.1	23	0.1	4	0.1
Somalia	31	0.1	28	0.1	3	0.1
Swaziland	54	0.2	51	0.2	3	0.1
South Africa	323	0.9	254	0.9	69	1.3
Uganda	19,772	57.7	17,831	61.6	1,941	36.4
Republic of Congo	214	0.6	74	0.3	140	2.6
Zimbabwe	77	0.2	75	0.3	2	0.0
Zambia	126	0.4	100	0.3	26	0.5
Other African Countries	237	0.7	188	0.6	49	0.9
China	139	0.4	130	0.4	9	0.2
India	127	0.4	36	0.1	91	1.7
Pakistan	14	0.0	2	0.0	12	0.2
Other Asian Countries	549	1.6	116	0.4	433	8.1
Italy	91	0.3	71	0.2	20	0.4
Nordic Countries	284	0.8	146	0.5	138	2.6
Great Britain	1,185	3.5	718	2.5	467	8.8
Germany	234	0.7	128	0.4	106	2.0
Other European Countries	280	0.8	152	0.5	128	2.4
Canada	85	0.2	47	0.2	38	0.7
USA	1,830	5.3	1,267	4.4	563	10.6
Not Reported	1	0.0	1	0.0	0	0.0

Source: NBS, Kagera Region Profile, 2012 Population Census

CHAPTER TWO

Regional Economy

2.0 Introduction

This chapter describes the economy of Kagera Region by analysing its status and trends of both economic and non-economic indicators, including Gross Domestic Product (GDP), Per Capita Gross Domestic Product and categories of occupations for the residents of Kagera Region. Others are income and non-income indicators, demographic characteristics, health and education status of Kagera residents, the durability and quality of houses in terms of building materials used for roofing, walls and thefloor. Availability of social amenities in or around the house such as access to drinking water, source of energy for cooking and lighting and toilet facilities are also considered.

Kagera Region has a mixed economy dominated by the agriculture sector. Both commercial and peasantry farming are practiced with the latter dominating. According to results of the 2012 Population and Housing Census, the agriculture sector in Kagera engages 77.4 percent of the people of age 10 years or above. In rural areas 95.1 percent of the population was engaged in agriculture while only 4.9 percent of the urban population was engaged in agriculture. Agriculture contributes most of the region's cash income mainly from coffee, beans, tobacco, bananas, cotton, tea, fruits and vanilla production. Generally the crop sub-sector's performance has been adequate to ensure food security. Poor performance of this sub-sector in some years has been attributed to the dependence on variable climatic conditions especially rainfall. Thus, the relatively high growth rates of the economy in some years reflect the availability of favourable rainfall in those years.

Trade is the second most important occupation after agriculture, involving 5.3 percent of the population age 10 years or above in the region while domestic service sub-sector comes third engaging 4.3 percent. The fourth most important occupation in the region is fishing, hunting, livestock and other related activities engaging 2.9 percent and the fifth occupation (mining and quarrying businesses) engaging 1.9 percent of the population age 10 years or above. The census results also show that manufacturing occupation accounted for 1.5 percent of the Kagera Region population age 10 years or above while the construction sector engaged 1.4 percent.

2.1 Regional Gross Domestic Product

The 2015 National Accounts of Tanzania new series shows that Kagera Region's GDP has been increasing steadily from TZS 2.5 trillion in 2013 to TZS 3.1 trillion in 2014 and reached TZS 3.4 trillion in 2015. Kagera Region was the 10th region among the main contributors to the national GDP.

The Kagera Region's GDP stood at TZS 2,483,011 million at current market prices in 2013. In terms of GDP, the regional economy grew by 23.8 percent between 2013 and 2014. That was the only remarkable growth rate of the economy of Kagera Region recorded so far. A lower GDP growth rate of 13.1 percent was observed over the period of 2014 to 2015 (Table 2.1).

Table 2.1: Regional GDP at Current Market Prices and Economic Growth for Kagera Region 2013 – 2015.

Year	Regional GDP	Economic Growth (percent)
2013	2,483,011	
2014	3,073,157	23.8
2015	3,474,256	13.1

Source: National Bureau of Statistics, Kagera Region GDP Data, 2017

In 2015 Kagera Region's share of the national GDP was 4.0 percent which is equivalent to TZS 3,474,256 million (Table 2.2).

Table 2.2: Top 10 Regions with Highest GDP at Current Market Prices, Tanzania Mainland, 2011, 2013 and 2015

Region	2013		2014		2015p	
	Regional GDP (TZS)	Percent Share	Regional GDP (TZS)	Percent Share	Regional GDP (TZS)	Percent Share
Dar -es Salaam	12,259,974	17.3	13,711,568	17.2	15,631,679	17.2
Mwanza	6,654,600	9.4	7,477,587	9.4	8,452,013	9.3
Mbeya	5,272,770	7.4	5,931,050	7.4	6,761,610	7.4
Shinyanga	4,203,285	5.9	4,727,302	5.9	5,389,294	5.9
Iringa	3,677,346	5.2	4,137,386	5.2	4,816,738	5.3
Morogoro	3,433,705	4.8	3,866,343	4.9	4,453,211	4.9
Arusha	3,366,418	4.7	3,786,625	4.8	4,271,447	4.7
Tanga	3,312,524	4.7	3,714,878	4.7	4,235,095	4.7
Kilimanjaro	3,217,876	4.5	3,619,216	4.5	4,126,036	4.5
Kagera	**2,483,011**	**3.5**	**3,073,157**	**3.9**	**3,474,256**	**3.8**
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Tanzania Mainland	**70,953,227**	**100**	**79,718,416**		**90,863,681**	**100**

Source: National Bureau of Statistics, Kagera Region GDP Data, 2017

Table 2.3: GDP and Per Capita GDP at Current Market Prices in TZS and USD, Kagera Region, 2013 – 2015

Year	GDP at Current Prices	GDP Change		Per Capita GDP at Current Market Prices (TZS and USD)			Percent Contribution to Tanzania Mainland GDP
		TZS	Percent	TZS.	Exchange Rate (TZS per USD)	USD	
2013	2,483,011			978,711	1,598	612.5	3.5
2014	3,073,157	590,146	23.8	1,173,607	1,653	710.0	3.9
2015	3,474,256	401,099	13.1	1,285,469	1,991	645.6	3.8

Source: National Bureau of Statistics, Kagera Region GDP Data, 2017

2.1.1 Sector Contribution to the Regional GDP

Table 2.4 shows that agriculture sector was the main contributor to the Kagera regional economy in all the three years (87.1 percent in 2013, 87.2 percent in 2014 and 86.8 percent in 2015) followed by services sector, (11.1 percent in 2013, 11.2 percent in 2014 and 11.5 percent in 2015) and the rest sectors contributed about 1.8 percent in 2013, 1.6 percent in 2014 and 1.7 percent in 2015 (Table 2.5).

Table 2.4: Sectoral Contribution (percent) to Regional GDP, Kagera Region, 2013, 2014 and 2015

Sector	2013	2014	2015
Agriculture	87.1	87.2	86.8
Manufacturing/Industry	0.4	0.4	0.4
Services	11.1	11.2	11.5
Utilities (Water and Energy)	0.8	0.6	0.6
Administration	0.3	0.3	0.4
Construction	0.1	0.1	0.1
Mining	0	0	0
Trade	0.2	0.2	0.2
Total	**100**	**100**	**100**

Source: National Bureau of Statistics, Kagera Region GDP Data, 2017

2.1.2 Council Contribution to the Region GDP

Table 2.5 shows the computed GDP estimates by council in Kagera Region for 2013, 2014 and 2015 years. Muleba District Council contributed about 29.1 percent of region's GDP in 2013, followed by Missenyi DC (23.3 percent) and Karagwe DC (21.1 percent). The trend remained almost the same for the three years consecutive. On the other hand, Bukoba DC's share in the GDP was very little in all the three years (Table 2.5).

Table 2.5: GDP Estimates Contribution by Council, 2013, 2014 and 2015 (Mill. Tsh), Kagera Region

Council	2013		2014		2015	
	Amount	Percent	Amount	Percent	Amount	Percent
Karagwe DC	523,163	21.1	528,036	17.2	652,493	18.8
Bukoba DC	149,125	6.0	176,221	5.7	195,565	5.6
Muleba DC	723,634	29.1	765,450	24.9	682,194	19.6
Biharamulo DC	178,899	7.2	201,923	6.6	299,686	8.6
Ngara DC	167,196	6.7	295,892	9.6	333,023	9.6
Bukoba MC	160,314	6.5	173,893	5.7	222,565	6.4
Missenyi DC	578,785	23.3	662,288	21.6	595,429	17.1
Kyerwa DC	1,894	0.1	269,455	8.8	493,301	14.2
Total	**2,481,116**	**100**	**3,073,157**	**100**	**3,474,256**	**100**

Source: National Bureau of Statistics, Kagera Region GDP Data, 2017

2.2 Regional Per Capita GDP

Regional Per Capita Gross Domestic Product is obtained by dividing the Total Gross Domestic Product by the total population of a region in a given year. It shows how much of the region's total income each person would get if this was distributed equally.

In the Tanzania Mainland economy, Kagera region ranked 20th and 21st after Singida region with largest GDP per capita at current prices in Tanzania Mainland in 2012 and 2015. Its per capita GDP increased from TZS 0.86 million in 2012 to TZS. 1.1 million in 2015 (Table 2.6).

Table 2.6: Per Capita GDP at Current Prices by Region, Tanzania mainland, 2013 and 2015

Region	2013	Rank	Region	2015p	Rank
Dar es salaam	2,655,398	1	Dar es salaam	3,025,543	1
Iringa	2,215,720	2	Iringa	2,845,393	2
Arusha	1,933,172	3	Mbeya	2,779,266	3
Kilimanjaro	1,927,968	4	Ruvuma	2,415,486	4
Ruvuma	1,919,307	5	Kilimanjaro	2,387,031	5
Mbeya	1,895,336	6	Arusha	2,322,031	6
Mwanza	1,645,136	7	Mwanza	2,004,353	7
Manyara	1,599,832	8	Tanga	1,936,701	8
Tanga	1,583,923	9	Manyara	1,930,722	9
Morogoro	1,511,773	10	Lindi	1,901,044	10
Lindi	1,503,942	11	Morogoro	1,870,508	11
Rukwa	1,490,059	12	Rukwa	1,840,724	12
Mara	1,461,960	13	Mtwara	1,792,305	13
Mtwara	1,390,125	14	Mara	1,776,538	14
Shinyanga	1,235,338	15	Shinyanga	1,596,344	15
Tabora	1,180,744	16	Pwani	1,403,185	16
Pwani	1,145,034	17	Tabora	1,380,413	17
Dodoma	1,011,390	18	Dodoma	1,188,343	18
Kagera	**959,260**	**19**	Kigoma	1,152,553	19
Kigoma	941,015	20	Singida	1,113,241	20
Singida	930,926	21	**Kagera**	1,075,268	**21**
Tanzania Mainland	**1,408,223**		**Tanzania Mainland**	**1,918,928**	

Source: National Bureau of Statistics, Kagera Region GDP Data, 2017

2.2.1 Council Per Capita GDP

Looking at the distribution of the regional economy, Missenyi DC had highest per capita GDP in the region, TZS 2,767,397 in 2013, TZS 3,068,050 in 2014 and TZS 2,672,439 in 2015 followed by Karagwe DC where in 2013 had TZS 1,526,634, TZS 1,492,873 in 2014 and TZS 1,787,299 in 2015 (Table 2.7). The least council was Bukoba DC in all the three years.

Table 2.7: Per Capita GDP Estimates by Council, 2013, 2014 and 2015, Kagera Region

	2013		2014		2015	
Council	**Amount**	**Rank**	**Amount**	**Rank**	**Amount**	**Rank**
Karagwe DC	1,526,634	2	1,492,873	2	1,787,299	2
Bukoba DC	498,734	7	571,002	8	613,949	8
Muleba DC	1,297,590	3	1,329,834	3	1,148,287	5
Biharamulo DC	535,815	5	585,942	7	842,551	7
Ngara DC	506,131	6	867,823	5	946,312	6
Bukoba MC	1,205,952	4	1,267,369	4	1,571,591	3
Missenyi DC	2,767,397	1	3,068,050	1	2,672,439	1
Kyerwa DC	5,717	8	787,897	6	1,397,519	4
Regional Per Capita	**978,711**		**1,173,607**		**1,285,469**	
National Per Capita	**1,582,797**		**1,724,416**		**1,918,928**	

Source: *National Bureau of Statistics*, Kagera Region GDP Data, 2017

2.3 Poverty Indicators

Besides GDP and per capita GDP, there are a number of indicators that show poverty levels in the region. These indicators include GINI coefficient, Poverty gap, and Percent of households below basic needs poverty line, main source of cash income, food security, food consumption patterns, net enrolment, adult literacy rate, health indicators, and access to safe drinking water. They also include housing conditions in terms of type of toilet, roofing material, and source of energy for lighting as well as for cooking. In this section all indicators except net enrolment will be discussed. Net enrolment will be dealt with in chapter five.

2.3.1 Income Poverty Rate, Poverty Gap and GINI Coefficient

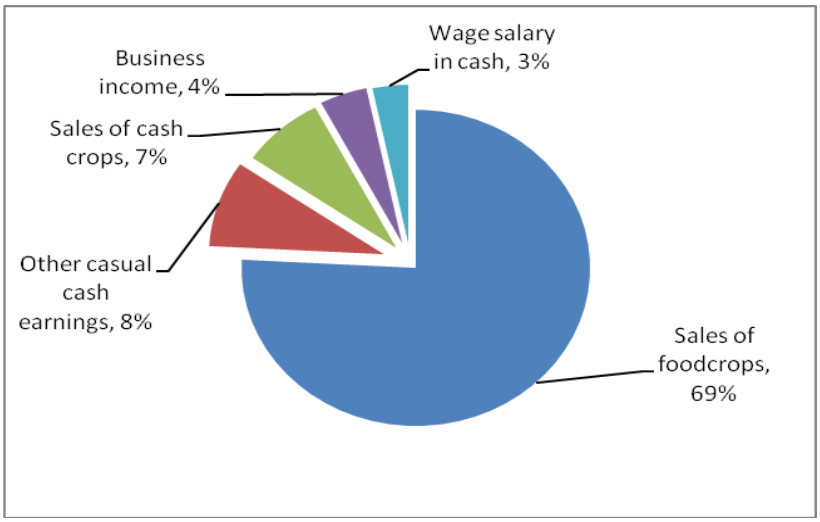
According to the 2005 Poverty and Human Development Report, the number of poor people per square kilometre in Kagera Region was 27. Regarding the poverty line, the report shows that Kagera Region had as much as 39 percent of its households living below the basic needs poverty line. With respect to rate of poverty gap, the report shows that Kagera Region had a poverty gap of ten.

Regarding the GINI Coefficient Rate, the results portray that Kagera Region had a very high coefficient rate of 30 percent an income inequality.The levels and trends in IMR and U5MR will be discussed at regional level since data for councils are not available. This area is discussed in Section 2.3.3 (Well-being of the People).

2.3.2 Main Source of Cash Income

The 2007/08 National Sample Census of Agriculture Report shows that the main occupation/source of income for the households in Kagera Region was sales of food crops (69.0 percent of the total agricultural households). Other sources were other casual cash earnings (8.0 percent), sales of cash crops (7.0 percent), business income (4.0 percent), and wage salary in cash (3.0 percent).

Figure 2.1: Percentage Distribution of Households by Main Source of Income, Kagera Region, 2007/08



Source: National Sample Census of Agriculture 2007/08 Volume Vn: Regional Report - Kagera Region

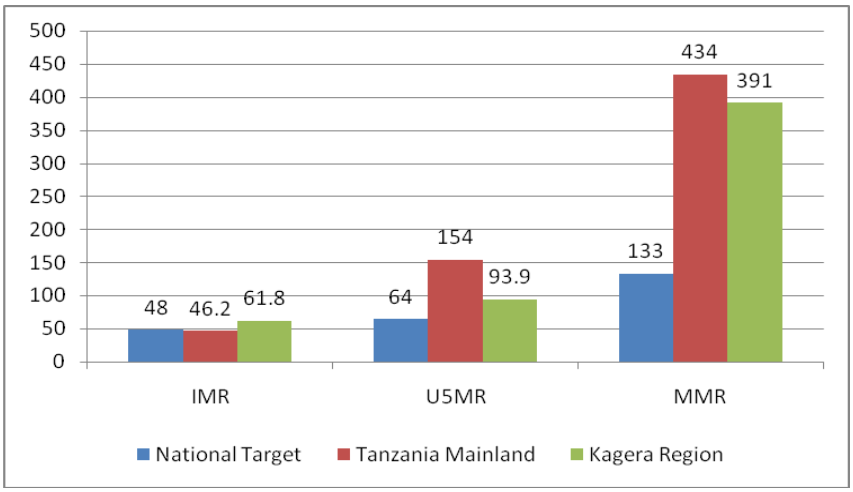
2.3.3 Well-being of the People

The achievement of economic development of Kagera Region can also be assessed by observing the health status of residents using health indicators, including life expectancy and basic mortality rates. Generally, the region has not shown successided in reducing childhood mortality to targets set in the Millennium Development Goals (International goals) as well as in MKUKUTA goals (National goals). According to National goals, the country targeted to reduce under-five and infant mortality to 64 and 48 deaths for per 1,000 live births respectively by 2015, while the target for maternal mortality was to reach 133 maternal deaths per 100,000 live birth.

Figure 2.2 shows that there was no achievement of the well being of Kagera residents by reaching the set targets before time. The 2012 Population and Housing Census shows that infant mortality rate was 61.8 deaths per 1,000 live births in 2012 which was below the targeted rate of 48 deaths per 1,000 live births by 2015, while under five mortality rate for the region was 93.9 deaths per 1,000 live births in

2012 which was also below the targeted under five mortality rate of 64 deaths per 1,000 live deaths by 2015. It is evident from these results that Kagera Region will not manage to reduce infant and under five Mortality to the targeted level by 2015 (Figure 2.2).

Figure 2.2: Status of Infant and Under 5 Mortality Rates against National Targets, Kagera Region, 2012



Source: NBS, the 2012 Population and Housing Census Report.

Table 2.8 shows that life expectancy for Kagera Region in 2012 was 57.5 years which was below 61.7 years for Tanzania Mainland. In 2002 Life expectancy for Kagera Region was 52.6 years. of the maternal mortality rate for Kagera Region in 2012 was 391 maternal deaths per 100,000 live births which was below the Tanzania Mainland rate of 432 maternal deaths per 100,000 live births.

Table 2.8: Basic Health Indicators by Sex, Kagera Region and Tanzania Mainland, 2012

	Kagera Region			Tanzania Mainland		
Health Indicator	**Male**	**Female**	**Both Sexes**	**Male**	**Female**	**Both Sexes**
Crude Death Rate (CDR)	121	10.7	11.4	10.1	8.6	9.4
Adult Mortality Rate (AMR)	10	8.9	9.4	9	7.9	8.4
Infant Mortality Rate (IMR)	67.1	56.4	61.8	50.9	41.3	46.2
Child Mortality Rate (CMR)	35.6	32.7	34.2	23	19.6	21.3
Under 5 Mortality Rate (U5MR)	100.3	87.2	93.9	72.7	60.1	66.5
Maternal Mortality Rate (MMR)		391			432	
Life Expectancy (LE)	55.5	59.7	57.5	59.7	63.7	61.7

Source: NBS, the 2012 Population and Housing Census Report.

2.3.4 Literacy Rate and Level of Education

The literacy rate and level of education attained by the community gauge the quality of human resource of the country. The census results shows that literacy rate of the population aged 15 years or above for Kagera Region improved from 68.3 percent in 2002 to 76.8 percent in 2012. Comparing 2002 and 2012 there is a slight increase in adult literacy rates in Kyerwa DC from 66.3 percent in 2002 to 91.9 percent in 2012 and Karagwe DC from 67.4 percent in 2002 to 78.9 percent in 2012. Other councils show an increase of literacy rate from 2002 to 2012 census whereby the

percentage change in these councils' ranges between 6.7 percent in Bukoba Municipal Council and 38.6 percent in Kyerwa District Council (Table 2.9).

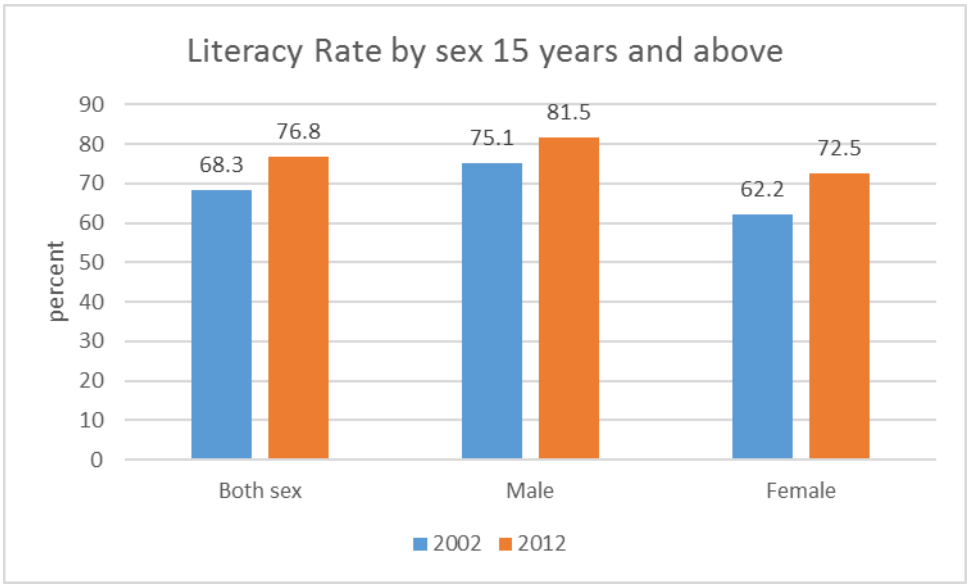
For the age 15 and above the situation was a bit different. The literacy rate among males age 15 years or above increased from 75.1 percent in 2002 to 81.5 percent in 2012. That of females increased from 62.2 percent in 2002 to 72.5 percent in 2012 (Table 2.9).

Table 2.9: Comparison of Literacy Rates for Persons of Age 15 Years or Above by Council and Sex; Kagera Region, 2002 and 2012 Censuses

	Literacy Rate						Percent Change		
	2002 Census			2012 Census					
Council	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Kagera Region	**68.3**	**75.1**	**62.2**	**76.8**	**81.5**	**72.5**	**12.5**	**8.5**	**16.5**
Rural	66.9	74.1	60.5	85.0	84.6	85.5	27.1	14.1	41.4
Urban	88.3	88.6	88.0	81.6	84.5	79.1	-7.6	-4.6	-10.1
Karagwe DC	67.4	72.5	62.7	78.9	82.5	75.5	17.1	13.8	20.4
Bukoba DC	76.8	82.4	72.1	84.9	88.4	81.8	10.5	7.3	13.4
Muleba DC	67.8	75.5	61.2	78.2	82.3	74.3	15.4	9.0	21.5
Biharamulo DC	57.6	65.6	50.0	63.8	71.2	56.8	10.8	8.5	13.5
Ngara DC	56.3	67.1	47.2	64.6	73.0	57.6	14.8	8.7	22.1
Bukoba MC	90.0	91.9	88.1	96.1	97.1	95.1	6.7	5.6	8.0
Missenyi DC	74.6	79.1	70.3	83.1	86.5	79.9	11.5	9.4	13.6
Kyerwa DC	66.3	73.3	59.9	91.9	91.7	92.3	38.6	25.0	53.9

Source: NBS, 2012 Population and Housing Census Report, 2015 Kagera Region

Figure 2.3: Literacy Rates by Sex; Kagera Region, 2002 and 2012 Censuses

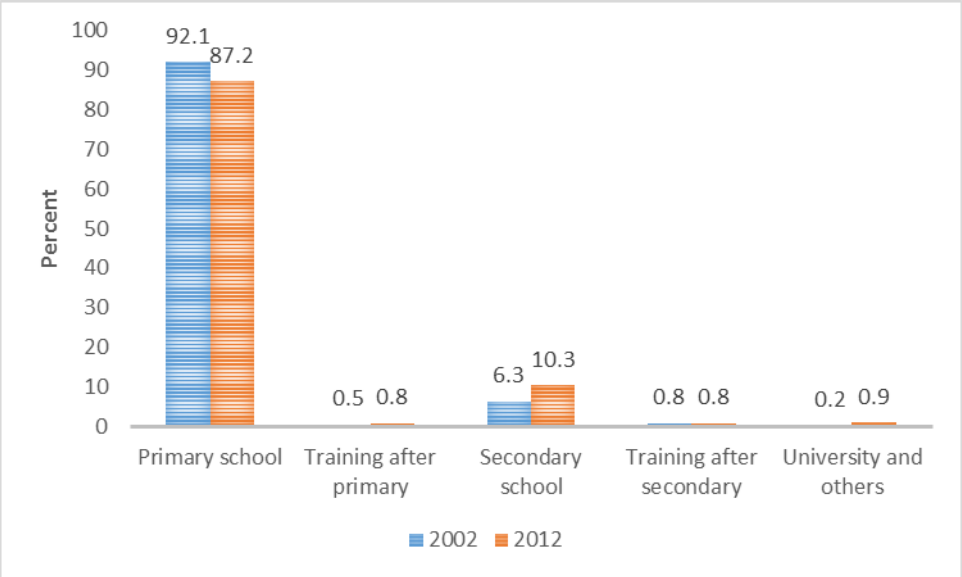


Source: NBS: 2012 Population and Housing Census Report: Kagera Region

The Region also observed improvement in the education attainment levels between 2002 and 2012 censuses. The proportion of the population aged 5 years and above that had attained secondary education during inter-censual period increased from 6.3 percent in 2002 to 10.3 percent in 2012 and from 0.2 percent in 2002 to 0.9 percent in 2012 for University or equivalent levels. The results

also show that the regional population that completed primary education decreased from 92.1 percent in 2002 to 87.2 percent in 2012 (Figure 2.4).

Figure 2.4: Percentage Distribution of Population Age Five Years or Above by Level of Educational Attainment, Kagera Region, 2002 and 2012 Censuses



Source: NBS: 2012 Population and Housing Census Report: Kagera Region

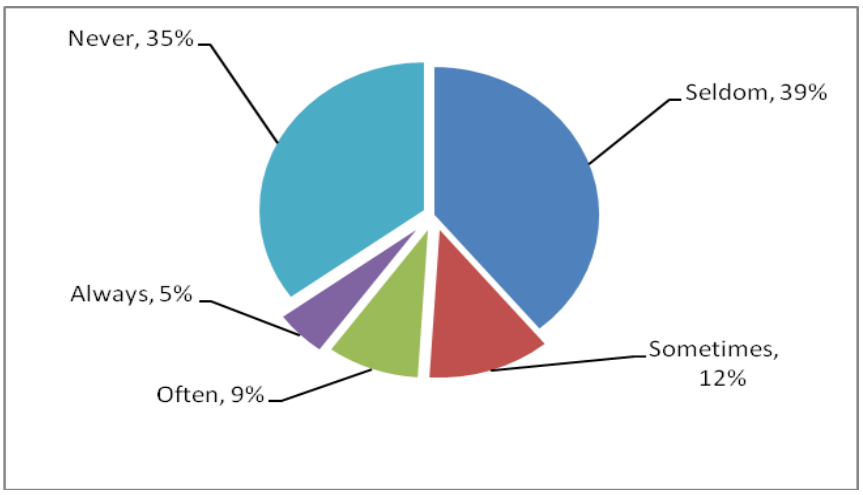
2.3.5 Food security and Food Consumption Patterns

Food security and level of food consumption is also an indicator of economic status of the household. The number of meals consumed in a day and the frequencies of protein intake per week particularly meat and fish are good indicators of economic status of households.

2.3.5.1 Food Security

According to the 2007/08 Agricultural Sample Census, 157,092 households (39.0 percent of agricultural households in Kagera region) said they seldom experienced problem in satisfying the household food requirements. However 50,648 (12.0 percent) said they sometimes experienced problems. 9.0 percent of households experienced problems often and 5.0 percent always had problems in satisfying their household food requirements. About 35.0 percent of agricultural households said they never experienced any food sufficiency problems (Figure 2.5).

Figure 2.5: Percentage of Households Reporting Status of Food Security, Kagera Region, 2007/08

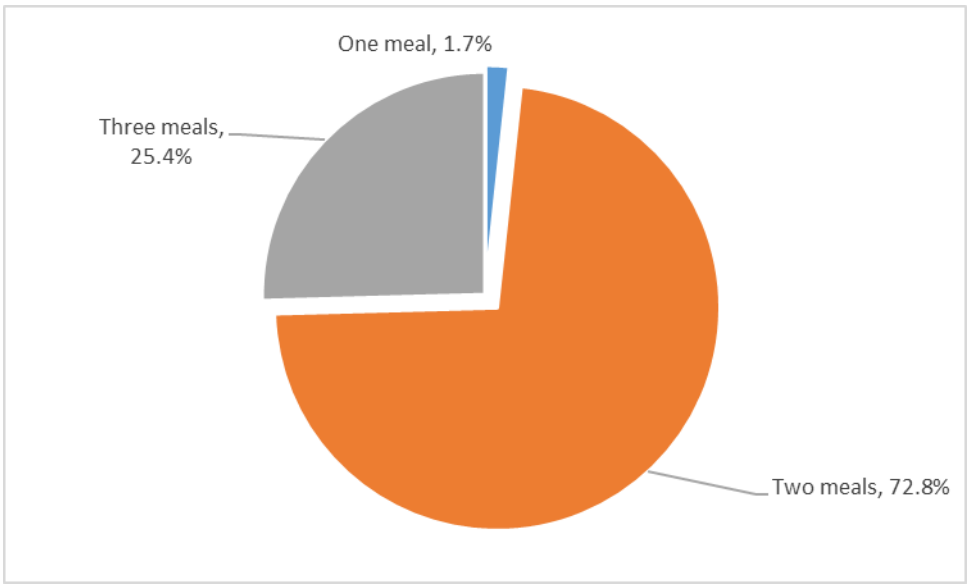


Source: NBS, National Sample Census of Agriculture, Kagera Region, 2007/08.

2.3.5.2 Number of Meals

According to the 2007/08 National Sample Census of Agriculture majority of households in Kagera Region normally have two meals per day (73.0 percent). This is followed by households that reported to have three meals per day (25.0 percent) and those who reported to have one meal per day were 2.0 percent (Figure 2.6).

Figure 2.6: Percentage of Households and Number of Meals Consumed per Day, Kagera Region 2007/08



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

Table 2.10 shows the meal consumption pattern per day in each council of Kagera Region. Ngara DC had the largest percentage (92.3 percent) of households eating two meals per day followed by Bukoba MC (85.8 percent) and Biharamulo DC (76.3 percent). Whereas, Missenyi DC had the largest percentage (57.0 percent) of households eating three meals per day, Ngara DC had the smallest percentage (4.2 percent). WHO recommendation is three meals per day.

Table 2.10: Number of Households and Number of Meals Consumed per Day by Council, Kagera Region, 2007/08

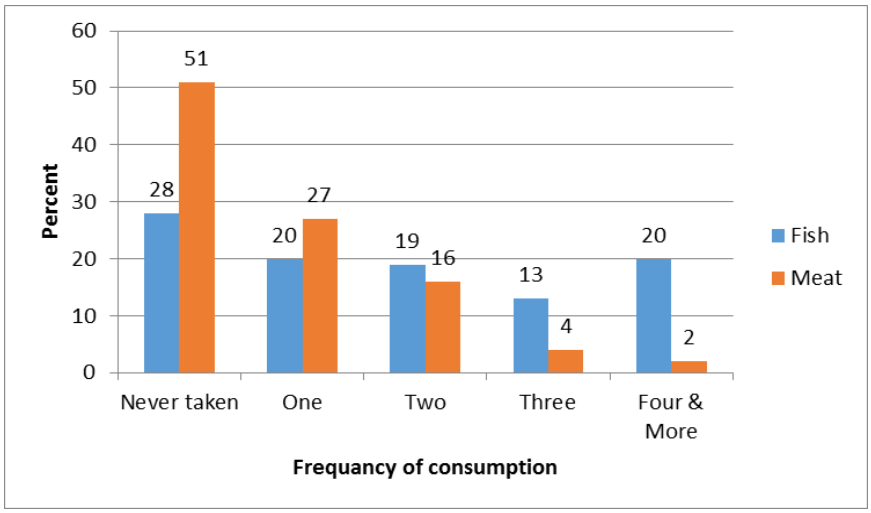
	One		Two		Three		Total	
Council	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Karagwe DC	2,327	2.5	69,824	74.1	22,111	23.5	94,263	100.0
Bukoba DC	589	1.0	42,725	71.6	16,353	27.4	59,667	100.0
Muleba DC	1,020	1.2	58,941	71.4	22,638	27.4	82,599	100.0
Biharamulo DC	314	1.0	24,233	76.3	7,215	22.7	31,762	100.0
Ngara DC	1,803	3.5	48,167	92.3	2,189	4.2	52,159	100.0
Bukoba MC	0	0.0	5,924	85.8	978	14.2	6,902	100.0
Missenyi DC	276	0.7	15,742	42.2	21,265	57.0	37,283	100.0
Total	**6,329**	**1.7**	**265,556**	**72.8**	**92,749**	**25.4**	**364,635**	**100.0**

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

2.3.5.3 Protein (Meat and Fish) Consumption Frequencies

According to the 2007/08 National Sample Census of Agricultural, Kagera Region had, a total of 208,665 agricultural households (51.4 percent) that reported not to have eaten meat during the week preceding the census. On the other hand, agricultural households that did not eat fish were 114,045 (28.2 percent). About 27.0 percent of the agricultural households in the region consuming meat only once during the respective week compared to 20.0 percent who consumed fish. This was followed by households that who had eaten meat twice during the week preceding the census (16.0 percent) compared to 19.0 percent of households that consumed fish twice during the respective week. Very few households (4.0 percent) had meat three times compared to 13.0 percent of households that consumed fish. Households that consumed fish four times or more were 20.0 percent compared to only 2.0 percent of households that consumed meat. About 51.0 percent of agricultural households in Kagera Region did not eat meat whereas 28.0 percent never consumed fish during the week preceding the census, (Figure 2.7).

Figure 2.7: Percentage of Households by the Frequency of Protein (Meat and Fish) Intake, Kagera Region, 2007/08



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

Bukoba DC, being near Lake Victoria was the biggest fish consumer in the region with 32.0 percent of households eating fish four or more times in the week preceding the survey followed by Missenyi DC (31.0 percent) and Muleba District Council (29.0 percent). About 82.0 percent of the agricultural households in Ngara DC did not eat fish during the week preceding the survey while for Biharamulo DC it was 41.0 percent and Bukoba MC 7.0 percent.. Ngara DC was the least meat consumer with 73.0 percent of households that did not eat meat during the week preceding the suevey followed by Bukoba DC (67.0 percent) and Muleba DC (56.0 percent) (Table 2.11).

Table 2.11: Percentage of Households by the Frequency of Protein (Meat and Fish) Intake, Kagera Region, 2007/08

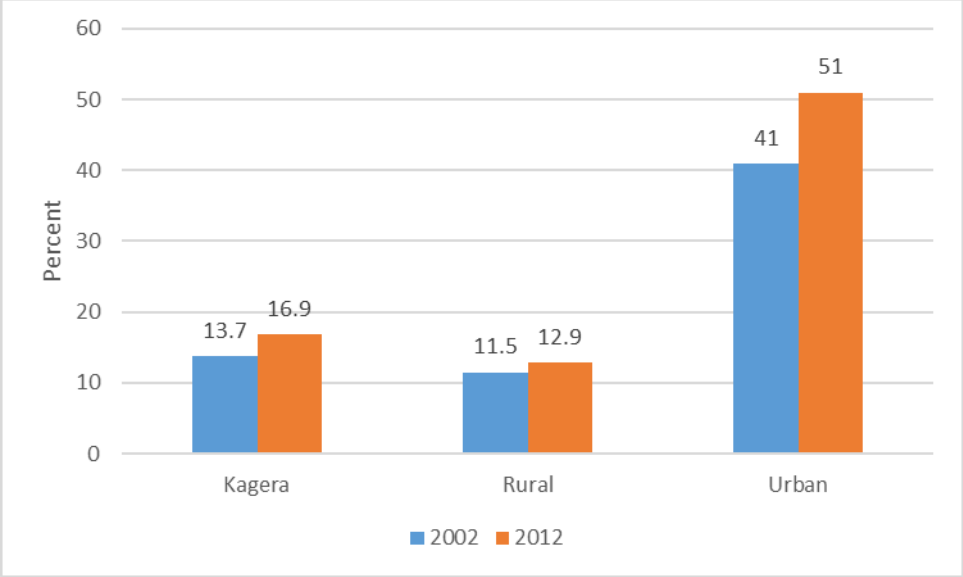
	Not Eaten		Once		Twice		Thrice		Four or More	
Council	**Meat**	**Fish**	**Meat**	**Fish**	**Meat**	**Fish**	**Meat**	**Fish**	**Meat**	**Fish**
Karagwe DC	40	31	25	21	26	26	8	14	1	8
Bukoba DC	67	15	24	20	6	17	2	16	1	32
Muleba DC	56	12	21	18	17	20	5	21	0	29
Biharamulo DC	45	41	39	33	12	16	3	5	0	5
Ngara DC	73	82	22	13	3	5	1	0	0	0
Bukoba MC	27	7	35	27	28	23	7	16	3	27
Missenyi DC	29	11	44	24	21	21	4	13	1	31
Kyerwa DC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	**51**	**28**	**27**	**20**	**16**	**19**	**4**	**13**	**2**	**20**

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

2.3.6 Access to Drinking Water

The National Water Policy requires that every person gets water within a short distance from an improved source such as piped water, protected boreholes, dug wells and springs.The 2012 Population and Housing Census results show that 16.9 percent of private households in Kagera Region had access to piped water as the main source of drinking water in 2012 Census compared to 13.7 percent in 2002. Access to piped water was more common in Kagera urban areas (51.0 percent) than in rural areas (12.9 percent). The proportion of private households with piped water in Kagera urban increased from 41.0 percent in 2002 to 51.0 percent in 2012.

Figure 2.8: Percentage Distribution of Households Using Piped Water as Main Source of Drinking Water and Residence by Rural - Urban; Kagera Region, 2002 and 2012 Censuses



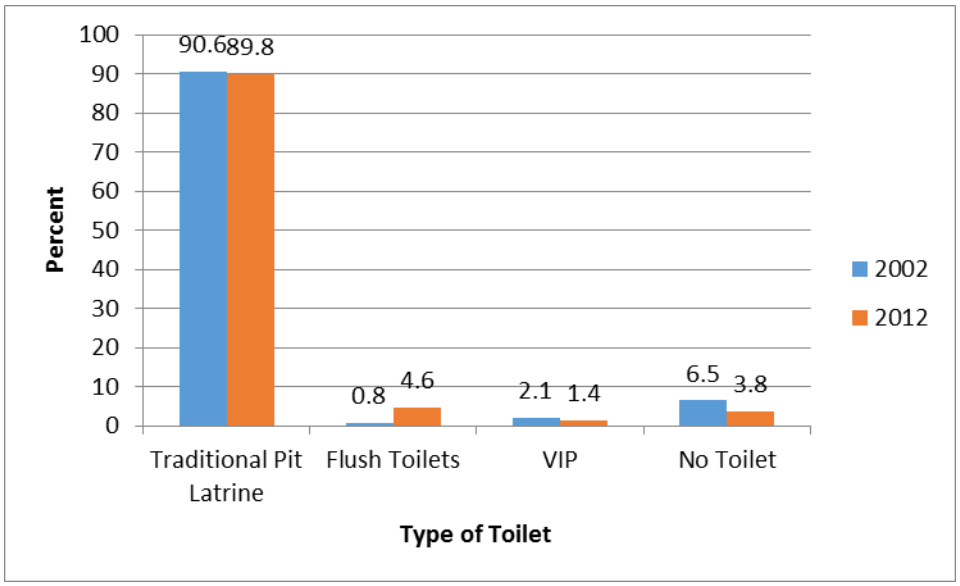
Source: NBS, Population and Housing Census, Kagera Region Profile Report, 2015

The 2012 Population and Housing Census results show that overall 32.6 percent of private households in Kagera Region used unprotected spring as the main source of drinking water, followed by surface water (river, dam, lake, etc) (19.3 percent), piped water (16.9 percent), protected spring (11.0 percent), unprotected dug well (8.6 percent), protected dug well (4.8 percent), tube well/borehole (4.3 percent) and rain water collection (2.0 percent). In urban areas, 22.1 percent of the private households used piped water as their main source of drinking water followed by unprotected spring (18.1 percent) and protected spring (11.4 percent) . In rural areas, a large number of private households used unprotected spring (34.3 percent) followed by surface water (20.7 percent) and piped water (12.9 percent). The fact that 33.2 percent of the rural households have access to improved sources of water and only 13.0 percent have access to piped water indicates that more efforts are needed to ensure the accessibility of safe drinking water in the rural areas of Kagera Region.

2.3.7 Types of Toilets

The type of toilet facility is another non- income poverty indicator of the households. According to 2012 Population and Housing Census results the distribution of households by the type of toilet facility in Kagera Region revealed a slight decrease in the use of traditional pit latrines from 90.6 percent in 2002 to 89.8 percent in 2012 while households with flush toilets increased from less than one (0.8) percent to 4.6 percent in the same period. On the other hand there was a slight decrease in households with ventilated improved pit latrine (VIP) from 2.1 percent in 2002 to 1.4 percent in 2012. The 2012 Population and Housing Census (Kagera Profile) show a slight decrease in households with no toilet facility from 6.5 percent in 2002 to 3.8 percent in 2012 (Figure 2.9).

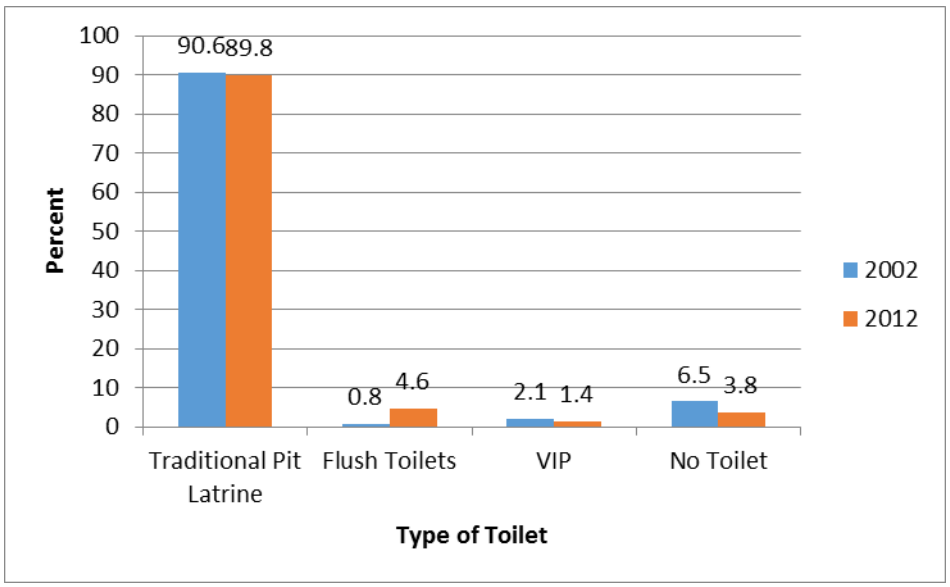
Figure 2.9: Percentage Distribution of Households by Type of Toilet Facility, Kagera Region, 2002 and 2012 Censuses



Source: NBS, Population and Housing Census, Kagera Region Profile Report, 2015

The availability of toilet facilities in rural and urban areas in Kagera Region differs significantly. Percentage of households with flush toilets was 30.7 percent in urban areas and 1.1 percent in rural areas. Percentage of households using tradition pit latrines in rural areas was 28.3 percent and in urban areas was 7.5 percent. Households with VIP toilets were more in urban areas (5.9 percent) than in rural areas (0.9 percent) whereas 0.4 percent of the households in urban areas had no toilet facilities as compared to 4.2 percent in rural areas of Kagera Region (Figure 2.10).

Figure 2.10: Percentage Distribution of Households by Type of Toilet Facility and Location, Kagera Region, 2012



Source: NBS, Population and Housing Census, Kagera Region Profile Report, 2015

2.3.8 Housing Condition

Information on housing conditions is an indicator of household prosperity. Analysis of the condition of housing units is looked at in terms of building materials used for main elements of houses, namely, the roof, the walls and the floor. The availability of social amenities in or around the house is also considered. It is evident from the census results that an improvement in housing conditions has been made in Kagera Region between 2002 and 2012.

2.3.8.1 Roofing Materials

Table 2.12 shows that 73.4 percent of private households in Kagera Region used iron sheets as the main roofing material; followed by grass or leaves (22.7 percent); and mud and leaves (3.3 percent). About 97.8 percent of the households in urban areas used modern roofing materials (iron sheets, tiles, concrete and asbestos) compared with 70.8 percent of households in rural areas. Significant variations were observed across councils. The percentage of households that used modern roofing materials ranged from 52.9 percent in Biharamulo DC to 98.1 percent in Bukoba MC.

Table 2.12: Percentage Distribution of Households by Council and Type of Materials Used for Roofing; Kagera Region, 2012 Census.

		Roofing Materials of Main Dwelling Unit							
Council	**Total**	**Iron Sheets**	**Tiles**	**Concrete**	**Asbestos**	**Grass/ Leaves**	**Mud and Leaves**	**Plastics /Box Paper**	**Canvass**
Kagera Region	**521,028**	**73.4**	**0.2**	**0.0**	**0.1**	**22.7**	**3.3**	**0.1**	**0.1**
Rural	465,595	70.6	0.1	0.0	0.1	25.2	3.7	0.2	0.1
Urban	55,433	96.8	0.7	0.1	0.2	1.8	0.2	0.1	0
Karagwe DC	72,339	84.1	0.0	0.0	0.0	13.4	2.2	0.0	0.3
Bukoba DC	65,375	70.2	0.0	0.0	0.1	25.7	3.9	0.0	0
Muleba DC	113,380	75.1	0.1	0.0	0.1	20.9	3.2	0.4	0.1
Biharamulo DC	55,674	52.7	0.0	0.0	0.2	41.3	5.5	0.2	0.1
Ngara DC	67,477	58.4	0.5	0.0	0.2	36.1	4.5	0.1	0.3
Bukoba MC	32,296	96.5	1.2	0.2	0.2	1.6	0.1	0.2	0
Missenyi DC	48,104	73.1	0.0	0.0	0.1	22.5	4.1	0.0	0
Kyerwa DC	66,383	83.6	0.1	0.0	0.0	14.3	1.8	0.1	0.1

Source: The 2012 Population and Housing Census, Kagera Region Profile Report.

2.3.8.2 Wall Materials

Table 2.13 shows that 54.1 percent of all private households in Kagera Region had their main house walls built of poles and mud. Other materials commonly used for walls were baked bricks (24.7 percent) and sundried bricks (14.4) percent. The table also shows that most of the households in urban areas used baked bricks (64.1 percent) as wall materials, followed by sundried bricks nine (12.6) percent, while in rural areas, the main wall materials used were poles and mud (59.6 percent), followed by baked bricks (20.0 percent) and sundried bricks (14.6 percent). Poles and mud were used as the main wall material

for the main building in all councils except Bukoba MC which used baked bricks as the main wall material.

Table 2.13: Percentage Distribution of Households by Council and Type of Wall Materials Used; Kagera Region, 2012 Census

		Wall Materials of Main Dwelling Unit								
Council	**Total**	**Stones**	**Cement Bricks**	**Sundried Bricks**	**Baked Bricks**	**Timber**	**Timber and Iron Sheets**	**Poles and Mud**	**Grass**	**Canvass**
Kagera Region	**521,028**	**0.4**	**2.1**	**14.4**	**24.7**	**0.4**	**0.8**	**54.1**	**3.1**	**0.1**
Rural	465,595	0.3	0.8	14.6	20.0	0.4	0.8	59.6	3.4	0.1
Urban	55,433	0.5	12.3	12.6	64.1	0.5	1.3	8.3	0.4	0.1
Karagwe DC	72,339	0.1	1.6	3.1	24.0	0.0	0.4	66.7	3.9	0.2
Bukoba DC	65,375	0.6	1.1	22.4	28.1	0.3	0.3	45.4	1.9	0.0
Muleba DC	113,380	0.4	1.3	9.1	27.1	1.5	2.1	55.8	2.6	0.1
Biharamulo DC	55,674	0.1	0.4	33.2	19.4	0.1	0.1	44.1	2.6	0.1
Ngara DC	67,477	0.2	0.9	23.6	6.4	0.1	0.2	64.1	4.4	0.1
Bukoba MC	32,296	0.5	15.6	12.0	65.6	0.7	1.9	3.3	0.4	0.1
Missenyi DC	48,104	0.9	1.5	12.3	32.1	0.3	0.4	49.1	3.4	0.0
Kyerwa DC	66,383	0.1	1.1	5.3	16.0	0.0	0.6	72.6	4.1	0.1

Source: NBS, 2012 Population and Housing Census, Kagera Region Profile Report.

2.3.8.3 Floor Materials

Table 2.14 presents the percentage of households by council and type of flooring materials used for the main dwelling in Kagera Region. The table indicates that 77.5 percent of the total private households used earth or sand as the main flooring materials, followed by cement (21.2 percent). In Kagera urban areas, cement was the most common flooring material used (74.8 percent), followed by earth or sand (22.8 percent). On the other hand, 84.1 percent of Kagera rural households used earth or sand as the main flooring material, followed by cement (14.9 percent). Across councils, 80.7 percent of the total private households in Bukoba Municipal Council used modern flooring materials (cement, ceramic tiles and parquet or polished wood) followed by 25.8 percent of households in Missenyi District Council and 21.3 percent of households in Bukoba District Council. The majority of households in rural councils used earth/sand as the main flooring material.

Table 2.14: Percentage Distribution of Households by Council and Main Material Used for Flooring; Kagera Region, 2012 Census

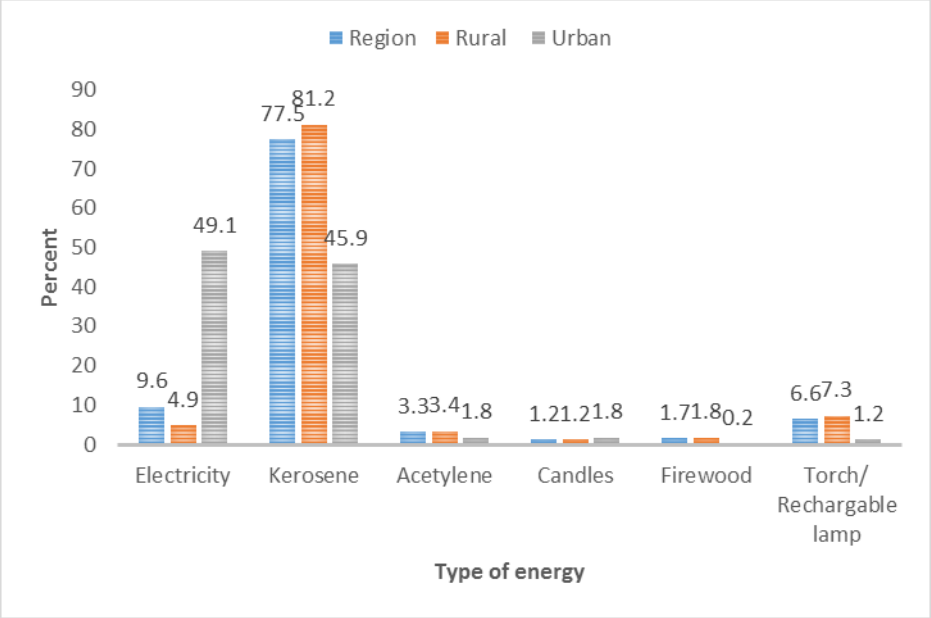
Council	Floor Material of Main Dwelling Unit									
	Total	Cement	Ceramic Tiles	Parquet or Polished Wood	Terrazzo	Vinyl or Asphalt Strips	Wood Planks	Palm/Bamboo Planks	Earth/Sand	Animal Dung
Kagera Region	**521,028**	**21.2**	**0.3**	**0.0**	**0.1**	**0.0**	**0.2**	**0.5**	**77.5**	**0.1**
Rural	465,595	14.9	0.1	0.0	0.1	0.0	0.2	0.5	84.1	0.2
Urban	55,433	74.8	2.0	0.0	0.0	0.0	0.1	0.2	22.8	0.0
Karagwe DC	72,339	18.6	0.4	0.0	0.0	0.0	0.1	0.5	80.0	0.5
Bukoba DC	65,375	21.1	0.2	0.0	0.0	0.0	0.1	0.5	78.0	0.0
Muleba DC	113,380	20.0	0.2	0.0	0.3	0.0	0.3	0.5	78.7	0.0
Biharamulo DC	55,674	14.9	0.2	0.0	0.0	0.0	0.1	0.3	84.3	0.2
Ngara DC	67,477	10.9	0.2	0.0	0.0	0.0	0.1	0.5	88.2	0.1
Bukoba MC	32,296	78.7	2.0	0.0	0.0.	0.0	0.1	0.1	19.0	0.0
Missenyi DC	48,104	25.5	0.3	0.0	0.0	0.0	0.2	0.7	73.3	0.1
Kyerwa DC	66,383	11.2	0.1	0.0	0.1	0.0	0.3	0.6	87.4	0.2

Source: NBS, 2012 Population and Housing Census, Kagera Region Profile Report.

2.3.9 Source of Lighting Energy

Figure 2.11 presents the percentage of households by residence and main source of energy for lighting in Kagera Region. It shows that 77.5 percent of all households used kerosine (wick lamp, hurricane lamp or chimney) as their main source of energy for lighting followed by electricity (TANESCO, solar and generator) (9.6 percent). Only 6.6 percent of households in Kagera Region reported using torch/rechargeable lamps as their main source of energy for lighting. There are noticeable variations between rural and urban areas. In urban areas, 49.1 percent of households used electricity as their main source of energy for lighting followed by kerosene (lantern or chimney and wick lamps), (45.9 percent). On the other hand, kerosene was the main source of energy for lighting in Kagera rural areas (81.2 percent), followed by torch/rechargeable lamps (7.3 percent). Firewood, as a source of energy for lighting, was used by a very small percent of the households in both rural (1.8 percent) and urban areas (0.2 percent).

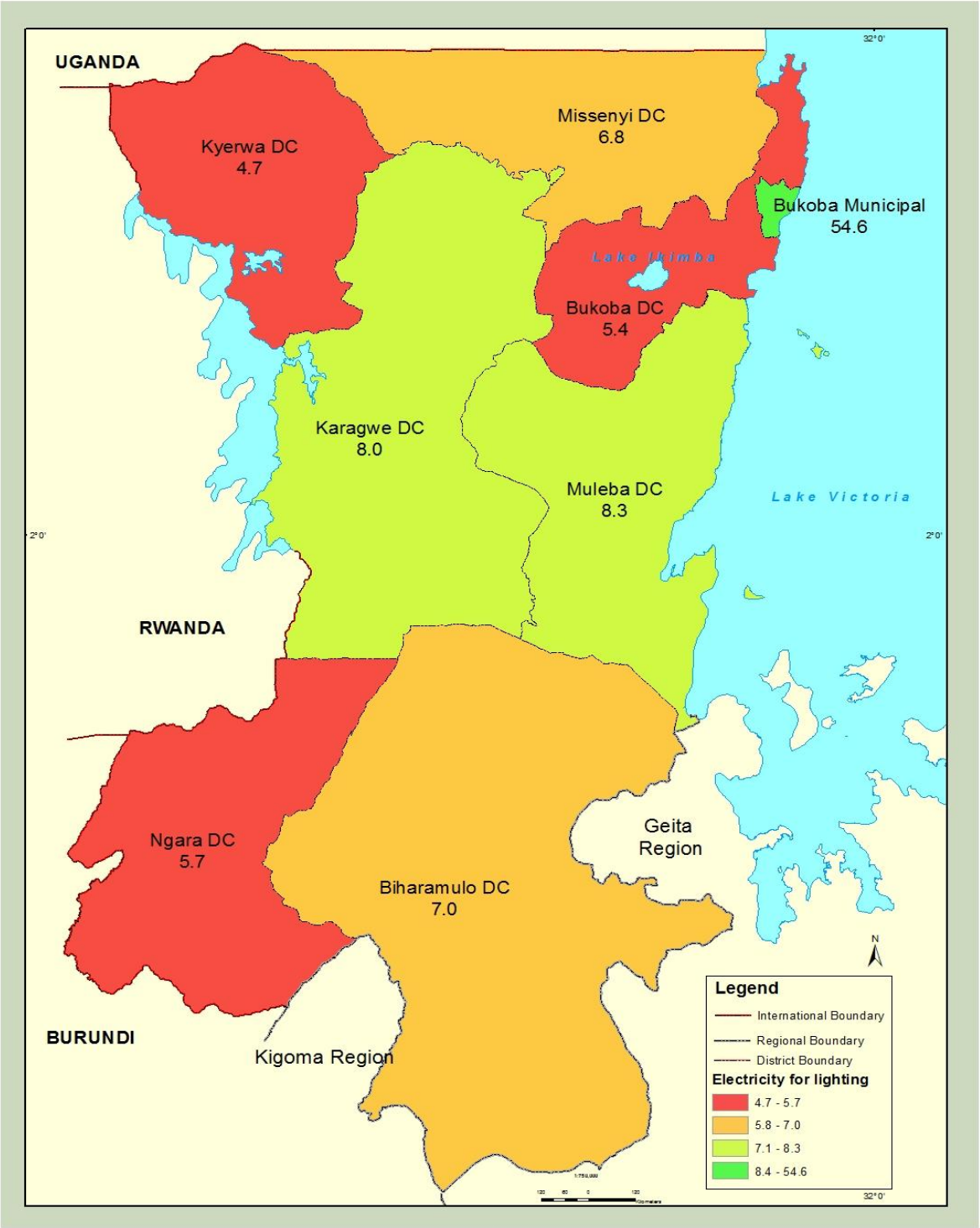
Figure 2.11: Percentage Distribution of Households by Main Source of Energy for Lighting; Kagera Region, 2012 Census



Source: NBS, Population and Housing Census, Kagera Region Profile Report, 2015

Use of electricity as a source of energy for lighting varies considerably across councils. Bukoba Municipal had the largest percentage of households using electricity for lighting (54.6 percent) followed by Muleba DC (8.3 percent) and Karagwe District Council eight percent (Map 1).

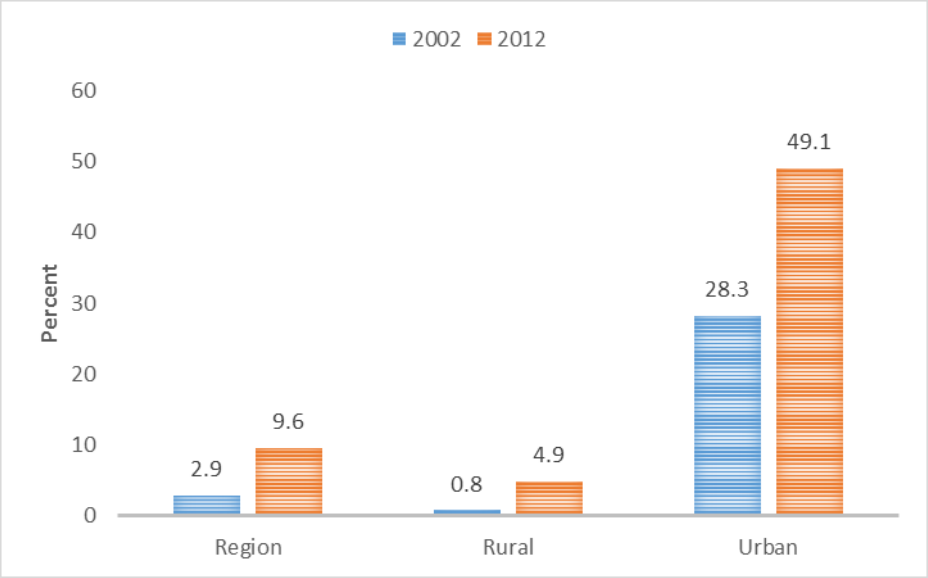
Map 4:Percentage of Households Using Electricity as Their Main Source of Energy for Lighting by Council; Kagera Region, 2012 Census



Source: NBS, 2012 Population and Housing Census, Kagera Region Profile Report

Figure 2.12 indicates that in 2012 9.6 percent of households in Kagera Region reported using electricity as their main source of energy for lighting compared to 2.9 percent in 2002. More households in urban areas reported using electricity (49.1 percent) in 2012 compared to 28.3 percent of urban households in 2002. In rural areas 4.9 percent of households in 2012 reported using electricity as the main source of energy for lighting compared to 0.8 percent of Kagera rural households in 2002.

Figure 2.12: Percentage of Households by Location and Use of Electricity as the Main Source of Energy for Lighting, Kagera Region, 2002 and 2012



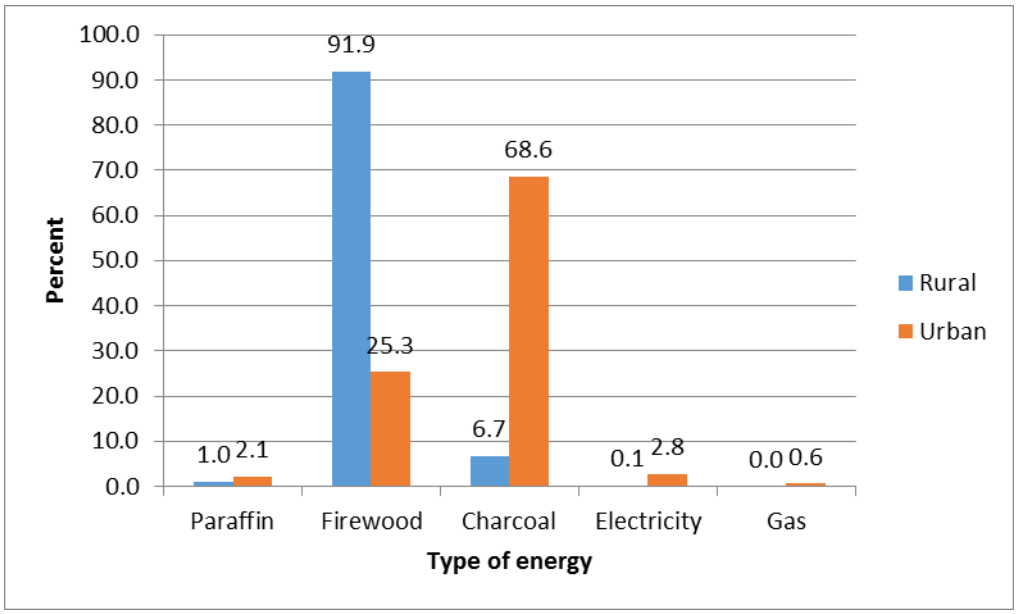
Source: NBS, 2012 Population and Housing Census, Kagera Region Profile Report.

2.3.10 Source of Energy for Cooking

The sources of energy for cooking, among social amenities is also a key indicator used for monitoring poverty level of households. The 2012 Population and Housing Census results revealed that although most prevalent sources of energy for cooking were firewood and charcoal, the use of modern and/or environmental friendly sources of energy for cooking (such as electricity and gas) used by private households in Kagera Region was 3.4 percent in urban areas and 0.1 percent in the rural areas (Figure 2.13).

In Kagera urban areas, 68.6 percent of the households used charcoal as the main source of energy for cooking compared to 25.3 percent of household that used firewood as the main source of energy for cooking. Moreover, 91.9 percent of the households in rural areas of Kagera Region used firewood as the main source of energy for cooking compared to 6.7 percent of household that used charcoal as the main source of energy for cooking.

Figure 2.13: Percentage of Households by Main Source of Energy Used for Cooking and Rural - Urban,Kagera Region, 2012



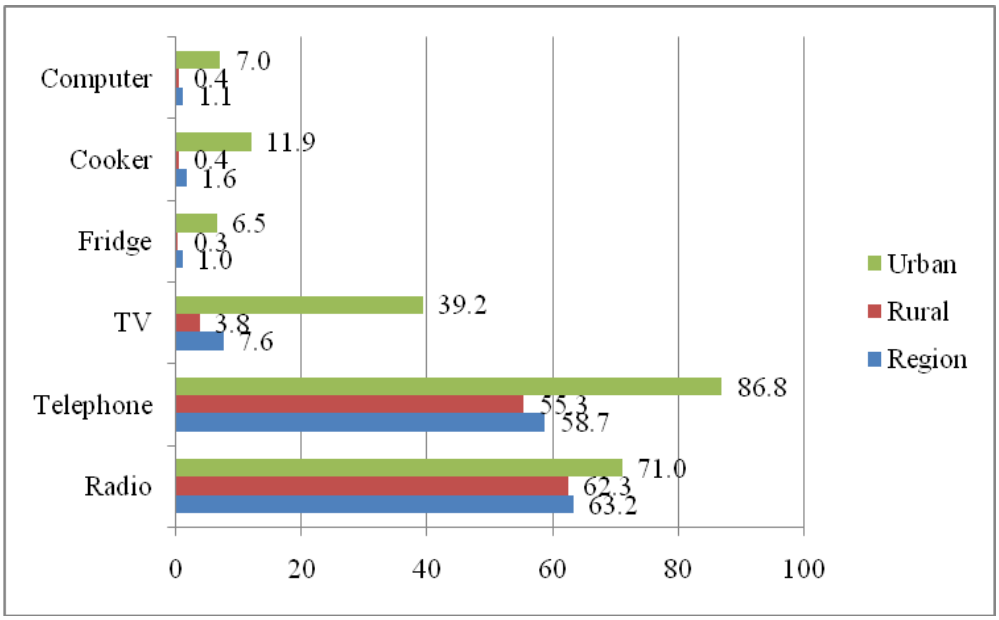
Source: NBS, 2012 Population and Housing Census, Kagera Region Profile Report

2.3.11 Assets

The 2012 population and housing census results revealed that, the majority of households in Kagera Region (87.4 percent) owned land, followed by ownership of a house (87.2 percent), hand hoe (86.6 percent), radio 63.8 percent and telephone (58.7 percent). Ownership of the most common assets differs between rural and urban areas, with 91.2 percent of households in rural areas owning land against 55.0 percent in urban areas. While, ownership of a house was 91.6 percent in rural areas, in urban areas it was 50.3 percent. In the case of a hand hoe, ownership was 90.1 percent in rural areas and 67.3 percent in urban areas. On the other hand, ownership of telephone and radio was more common in urban areas (86.8 and 71.0 percent respectively) than in rural areas (55.3 and 62.2 percent respectively) as shown in Figure 2.13a.

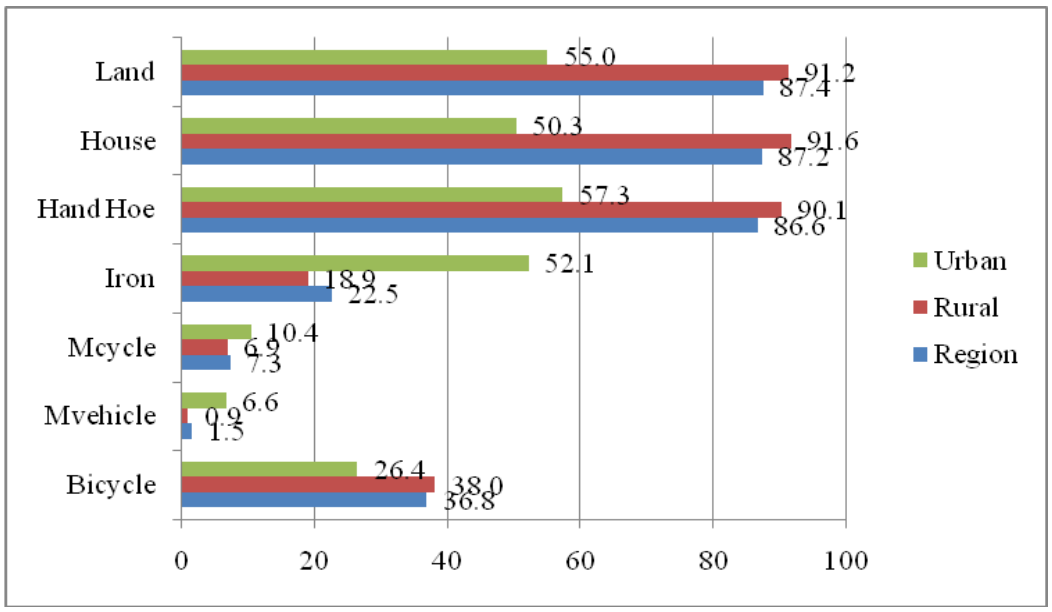
Interesting, is the difference in the ownership of modern assets between rural and urban areas. For instance, the percentage of the households owning TV was 39.2 percent in urban areas compared to 3.8 percent in rural areas (Figure 2.13a); households owning motorvehicles was 6.6 percent in urban areas compared to 0.9 percent in rural areas; while 10.4 percent of households in urban areas owned motorcycles against 6.9 percent of rural households (Figure 2.13b).

Figure 2.13a: Percentage of Households Owned Communication and Household Facilities by Type, Rural - Urban Kagera Region, 2012



Source: NBS, Population and Housing Census, Kagera Region Profile Report, 2012

Figure 2.13b: Percentage of Households Owned Transport and Other Facilities by Type, Rural & Urban Kagera Region, 2012



Source: NBS, Population and Housing Census, Kagera Region Profile Report, 2012

2.3.12 Land Development

There is bound to be conflict over land use. The demands for arable land, grazing land, forestry, wildlife, tourism and urban development are greater than the land resources available. In the face of scarcity, the degradation of farmland, forest or water resources may be clear for all to see but individual land users lack the incentive or resources to stop it.

Land-use planning is the systematic assessment of land and water potential, alternatives for land use and economic and social conditions in order to select and adopt the best land-use options. Its

purpose is to select and put into practice those land uses that will best meet the needs of the people while safeguarding resources for the future. The driving force in planning is the need for change, the need for improved management or the need for a quite different pattern of land use dictated by changing circumstances.
Planning also provides guidance in cases of conflict between rural land use and urban or industrial expansion, by indicating which areas of land are most valuable under rural use.

The 2000 Land Policy recognizes the importance of land as a key factor of production of goods and services in the country and has been prepared to suite the current and future demands of land in order to minimize if not finish land conflict within the communities. Therefore, land use planning is a key aspect for development of both urban and rural areas of any region in the country. The land needs in urban areas are dominated by the demand for building plots for residential, commercial, institutional and industrial purposes. In rural areas, major needs for land include crop production, grazing land, building plots for residential, commercial, institutional and other production activities. Hence, the demand for surveyed land plots has been of great importance in recent times due to the increase of population in the country.

The 2012 Population and Housing census results reveals that the majority of households in Kagera Region owned land customary (57.2 percent) followed by those who had no legal right over the land where their main dwelling is built (33.2 percent). Nonetheless, only 4.3 percent of the households had title deed over the land where the main dwelling is located (Table 2.15).

General observation of the census results shows that the proportion of households in urban areas with customary ownership was (32.5 percent) highest followed by those with no legal right (23.4 percent) and households with title deed (19.5 percent). Table 2.15 also reveals that, the majority of households in the rural areas owned land customary (58.6 percent) followed by those which their land has no legal rights (33.8 percent), while households which owned land with title deed were about three percent (3.2 percent). Very few households had only offers (one percent for the region, 0.8 percent for rural areas and five percent for urban areas).

Table 2.15: Percentage Distribution of Households by Residence and Type of Legal Rights over the Ownership of the Land where the Main Dwelling is Located; Kagera Region, 2012

Administrative Area	Total	Title Deed	Residential License	Offer	Customary Ownership	Contract	No Legal Right
Kagera Region	**440,574**	**4.3**	**0.6**	**1.0**	**57.2**	**3.7**	**33.2**
Rural	416,575	3.2	0.3	0.8	58.6	3.3	33.8
Urban	23,999	21.9	6.6	5	32.5	10.6	23.4

Source: NBS, Population and Housing Census, Kagera Region Profile Report, 2015

According to Table 2.16, out of 12,196 plots which were demanded in urban areas of the region in 2015, about 86.8 percent (12,046 plots) were allocated out of 13,885 plots which were surveyed. Karagwe District Council managed to survey about 4,463 plots and 3,615 plots were allocated and was number one council in having the largest number of surveyed plots. Muleba DC had the highest demand for plots (9,000) but managed to survey only 3,753 plots which were all allocated. Kyerwa District Council had no surveyed plots as it is reported that they do not have urban areas. Bukoba MC had the least number of demanded plots as well as the least number of plots surveyed.
It is obvious that lack of surveyed building plots in most areas creates a problem of crowded environment and mushrooming of slums or shanty town at the end, and also the delay in issuing Title deeds creates problems to owners of the land when they need collateral from banks. The Council Authorities should make sure that the plots allocated go together with Title Deeds.

Table 2.16: Demand and supply of Building Plots (urban)

Council	No. of Mitaa	Demand for Plots	No. of Plots Surveyed	No. of Plots Allocated	Percent of Plots Allocated
Karagwe DC	35	Nil	4,463	3,615	81
Bukoba DC	0	880	639	546	85
Muleba DC	9	9,000	3,753	3,753	100
Biharamulo DC	5	n/a	1,250	1,125	90
Ngara DC	34	Nil	2,169	2,022	92
Bukoba MC	66	492	113	74	65.5
Missenyi DC	3	1,824	1,498	911	60.8
Kyerwa DC	0	0	0	0	0
Total	**152**	**12,196**	**13,885**	**12,046**	**86.8**

Source: District Executive Directors' Offices (Land and Human Settlement Department)

2.3.12.1 Village Land use Planning

In the planning of farms, grazing areas and human settlements in rural areas, the village is the first step. Table 2.17 shows that out of 662 villages in Kagera Region, about 59.4 percent have been surveyed and demarcated. Missenyi DC is leading with 94.8 percent of its villages surveyed and demarcated. It is followed by Bukoba DC (93.0 percent) and Muleba District Council (92.2 percent).

Table 2.13: Village land use plan (rural)

Council	No. of Wards	No. of Villages	Villages Surveyed and Demarcated		Villages Offered Certificates	
			Number	Percent	Number	Percent
Karagwe DC	23	77	15	19.5	0	0
Bukoba DC	29	94	87	93.0	73	78
Muleba DC	43	166	153	92.2	153	92.2
Biharamulo DC	17	74	8	10.8	8	100.0
Ngara DC	22	75	5	23.8	60	80
Bukoba MC	14	0	0	0	0	0
Missenyi DC	20	77	73	94.8	42	54.5
Kyerwa DC	24	99	52	52.5	27	51.4
Total	**192**	**662**	**393**	**59.4**	**363**	**54.8**

Source: District Executive Directors' Offices (Land and Human Settlement Department)

2.4 Policy Implication on Land sector

Availability of Land Use Planning in Kagera Region is not yet developed. The Region still has inadequate number of demarcated building plots, areas for business and social facilities, play grounds and investment areas. Moreover, inadequate number of villages demarcated and offered certificate limits residents to use their land as source of getting loans from financial institutions. Low performance on land management in the Region has created land conflict and disputes among residents in all councils of Kagera Region. Implementation of Land policy is very crucial in order to reduce if not finish conflicts among people in the region. Likewise, the policy of surveying and demarcating boundaries and preparing land use planning in every village for each council should be adhered to for increasing accessibility of land to rural population in order to reduce squatter areas in Kagera Region.

2.5 Investment Opportunities for Land Sector

This sector faces many problems including resources such as human, equipment and finance. These resources include, modern equipment for land surveying i.e. Geographical Positioning System (GPS), Geo system or program used for drawing maps, transport and other related equipment; shortage of workers especially land surveyors and quantity surveyors, to mention only a few of them. Investment is needed in regards to the demarcation of more building plots, grazing areas, commercial and business areas, village boundaries, areas for human activities including farms and investment areas.

CHAPTER THREE

Production Sectors

3.0 Overview

This Chapter presents the performance of production sectors in Kagera Region. The main productive sectors include crop production, livestock keeping, natural resources, tourism, manufacturing, fishing and mining.

3.1 Agriculture

Agriculture is the main economic activity in Kagera Region. The Region, with a total employed population of 1,084,057 at an age of 10 years and above (2012 Population and Housing Census), 75.4 percent of them were engaged in agriculture. According to the Census results 80.1 percent of females of age 10 or above were engaged in agriculture while for males it was 70.5 percent. Moreover, according to United Nations classifications, agriculture comprises of crop production, livestock, fishing, beekeeping, tourism, forestry, and hunting sub sectors. . It should also be noted that although the agriculture sector accounts for the largest share of the Region's GDP, its contribution has declined due to several factors including inadequate and expensive agricultural inputs used in traditional cash crops production (coffee, tea, cotton), low prices, inadequate markets, poor road infrastructure and lack of credit facilities .

Table 3.1 shows that agriculture households in Kagera Region decreased at a rate of 0.7 percent from 405,910 households in 2007/08 to 403,107 households in 2012. The decrease in agricultural households had positive impact on agricultural land since density of agricultural households per square Kilometre of agriculture land also decreased. It decreased from 16.5 households per square kilometre in 2007/08 to 16.4 households per square kilometre in 2012. A remarkable decrease of 21.5 percent of density was observed in Bukoba DC. Contrary to decrease in land pressure, Table 3.1 also shows an increased density Ngara DC, Missenyi DC, Kyerwa DC, Muleba DC and Bukoba MC ranging from 15.3 households per square kilometre in Ngara DC to 110.5 households per square kilometer in Bukoba MC. The remarkable increase in density observed in Bukoba MC may have been due to rural – urban migration.

Table 3.1: Distribution of Agriculture Households by Council, Kagera Region, 2007/08 and 2012

Council	Agriculture Households During Censuses		Change in Agriculture Households		Land Area (sq.km)	Density of Agriculture Households (households per sq.km)	
	2007/08	2012	Number	Percent		2007/08	2012
Karagwe DC	94,263	52,356	-41,907	-44.5	4,342.0	21.7	12.1
Bukoba DC	59,667	55,887	-3780	-6.3	2,595.5	23.0	21.5
Muleba DC	82,598	87,970	5,372	6.5	3,444.0	24.0	25.5
Biharamulo DC	73,038	45,963	-27,075	-37.1	5,617.0	13.0	8.2
Ngara DC	52,159	57,399	5,240	10.0	3,744.0	13.9	15.3
Bukoba MC	6,902	9,170	2,268	32.9	83.0	83.2	110.5
Missenyi DC	37,283	37,664	381	1.0	2,000.0	18.6	18.8
Kyerwa DC	n/a	56,698	n/a	n/a	2,783.4	n/a	20.4
Regional Total	**405,910**	**403,107**	**-2,803**	**-0.7**	**24,608.9**	**16.5**	**16.4**

n/a: Kyerwa DC was established in December 2012 from Karagwe DC.

Source: NBS, Kagera Region Agriculture Sample Census - 2007/08 and Population Census (2012), Kagera Region Basic Demographic and Social Economic Profile

3.1.1 Distribution of Arable Land

Table 3.1a shows that the total arable land in Kagera Region was 1,116,757.3 ha accounting for 45.4 percent of the region's total land area of 2,460,890.0 ha. With 97.0 percent of the region's total arable land, Muleba DC had the largest arable land in the Region. The smallest arable land area of 4,200.0 ha (0.4 percent of the region's total arable) was found in Bukoba MC.

Table 3.1a also shows that by the end of the crop season of 2015, more than half (59.0 percent) of the region's arable land area was under cultivation with Bukoba MC having the smallest arable land under cultivation of 2,969.0 ha (0.5 percent of the region's total cultivated arable land area of 658,653.0 ha). Karagwe DC had the largest area under cultivation (185,209.0 ha, 28.1 percent). At council level, the table shows that Biharamulo DC utilized only 41.3 percent of its respective arable land area of 184,368.0 ha for cultivation leaving 58.7 percent (108,253.0 ha) idle or used for other economic activities. Ngara DC utilized the largest percentage (77.9 percent) of its arable land area of 101,589.0 ha.

Table 3.1a: Percentage Distribution of Arable Land by Council; Kagera Region, 2015

Council	Total Land Area (ha)	Arable land		Arable Land Under Cultivation (ha)		Percent Share of	
		Area (ha)	Percent	Area (ha)	Percent	Arable Land Under Cultivation	Arable Land Area
Karagwe DC	434,200.0	248,991.0	57.3	185,209.0	74.4	28.1	22.3
Bukoba DC	259,550.0	50,376.0	19.4	23,195.0	46.0	3.5	4.5
Muleba DC	344,400.0	334,111.0	97.0	170,897.0	51.1	25.9	29.9
Biharamulo DC	561,700.0	184,368.0	32.8	76,115.0	41.3	11.6	16.5
Ngara DC	374,400.0	101,589.8	27.1	79,113.3	77.9	12.0	9.1
Bukoba MC	8,300.0	4,200.0	50.6	2,969.0	70.7	0.5	0.4
Missenyi DC	200,000.0	105,298.4	52.6	53,532.1	50.8	8.1	9.4
Kyerwa DC	278,340.0	87,823.1	31.6	67,622.6	77.0	10.3	7.9
Regional Total	**2,460,890.0**	**1,116,757.3**	**45.4**	**658,653.0**	**59.0**	**100**	**100**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

3.1.2 Food Crops

3.1.2.1 Area under Major Food Crops Cultivation

Figure 3.1 and Table 3.2 show major food crops grown in Kagera Region namely maize, banana, cassava and beans. Sweet pototatoes, groundnuts and paddy were also grown in a small scale. Over the 2011 – 2015 period, Kagera Region had an average annual land area of 496,519.4 ha planted with major food crops. Bananas were planted on an average annual land area of 143,233.0 ha accounting for 28.8 percent of the regions' average annual land areaplanted with major food crops. Beans which accounted for 26.9 percent of the average annual land area planted with major food crops are normally intercropped with other crops. This was followed by cassava (13.1 percent), sweet potatoes (4.0 percent), paddy (1.3 percent) and groundnuts (0.9 percent). In 2015, the Region cultivated largest annual land area of 541,949 ha under food crops. Year 2011 had the smallest annual land area of 466,116.0 ha planted with food crops in the Region.

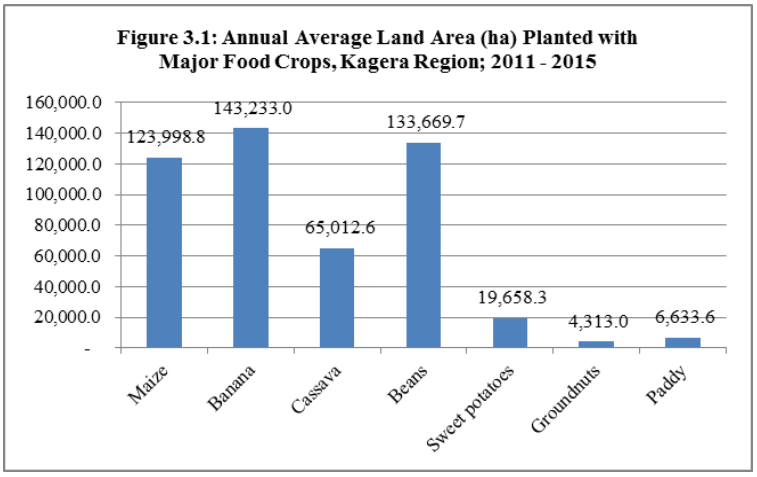
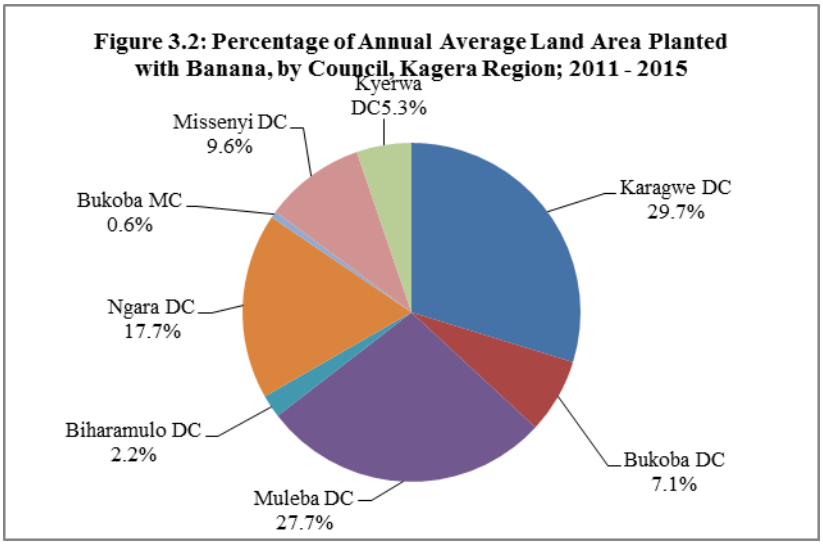


Table 3.2: Estimated Land Area (ha) under Major Food Crops, Kagera Region, 2011 – 2015

Crop	Estimated Land Area (ha)					Total Area	Average Annual
	2011	2012	2013	2014	2015		
Maize	116,075	123,398	127,535	120,014	132,971	619,993	123,998.6
Banana	140,729	146,345	129,344	147,297	152,450	716,165	143,233.0
Cassava	62,692	63,935	62,604	67,017	68,816	325,064	65,012.8
Beans	117,202	118,969	118,987	156,955	156,236	668,349	133,669.8
Sweet potatoes	19,575	19,925	18,751	20,692	19,349	98,292	19,658.4
Groundnuts	3,872	3,983	4,297	4,619	4,795	21,566	4,313.2
Paddy	5,971	6,264	6,623	6,978	7,332	33,168	6,633.6
Regional Total	**466,116**	**482,819**	**468,141**	**523,572**	**541,949**	**2,482,597**	**496,519.4**
Percent of the Total Area (Annually)							
Maize	24.9	25.6	27.2	22.9	24.5	25.0	25.0
Banana	30.2	30.3	27.6	28.1	28.1	28.8	28.8
Cassava	13.4	13.2	13.4	12.8	12.7	13.1	13.1
Beans	25.1	24.6	25.4	30.0	28.8	26.9	26.9
Sweet potatoes	4.2	4.1	4.0	4.0	3.6	4.0	4.0
Groundnuts	0.8	0.8	0.9	0.9	0.9	0.9	0.9
Paddy	1.3	1.3	1.4	1.3	1.4	1.3	1.3
Regional Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

(i) Banana



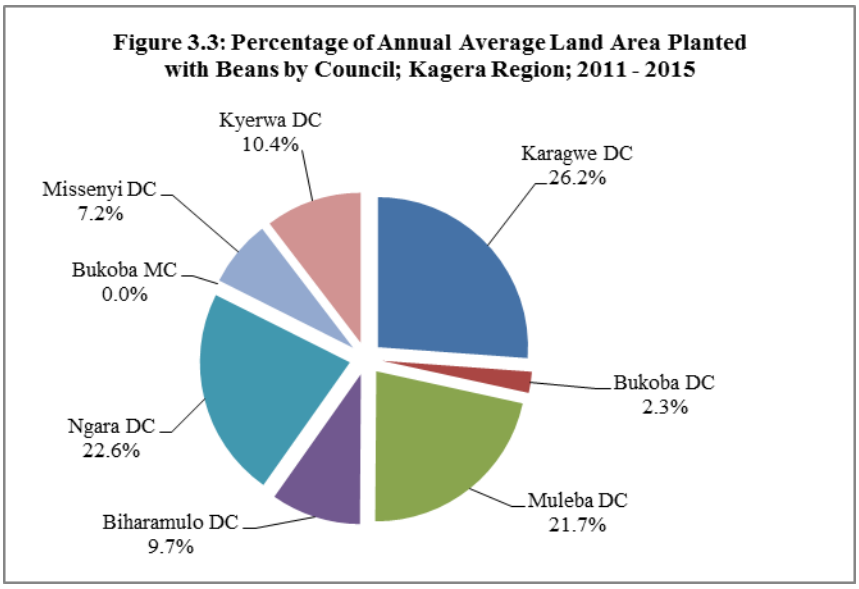
It is an annual crop which is widely grown in all councils in Kagera Region as both food and cash crop. In terms of land area planted with major food crops, banana ranked first and iwas planted on average annual land area of 143,233.0 ha (28.8 percent of the region's average annual land area planted with major food crops). Karagwe DC had the largest average annual land area planted with banana (143,233.0 ha, 29.7 percent) in Kagera Region, followed by Muleba DC (39,613.0 ha, 27.7 percent) and Ngara DC (25,417.8 ha, 17.7 percent). Bukoba MC had the smallest average annual land area planted with banana (917.3 ha, 0.6 percent) (Figure 3.2 and Table 3.2a).

Table 3.2a: Estimated Area (Ha) Under Major Food Crops (Banana) by Council; Kagera Region; 2011– 2015

Council	2011	2012	2013	2014	2015	Total Area (ha)	Average Annual Area (ha)
Karagwe DC	41,622.0	42,215.0	42,634.0	43,087.0	43,500.0	213,058.0	42,611.6
Bukoba DC	10,343.0	10,343.0	10,343.0	10,054.0	10,050.0	51,133.0	10,226.6
Muleba DC	39,343.0	37,706.0	40,211.0	39,573.0	41,232.0	198,065.0	39,613.0
Biharamulo DC	2,819.0	2,967.0	3,124.0	3,288.0	3,461.0	15,659.0	3,131.8
Ngara DC	32,177.08	38,589.08	18,166.0	18,331.0	19,826.0	127,089.2	25,417.8
Bukoba MC	1,055.6	859.0	958.0	873.0	841.0	4,586.6	917.3
Missenyi DC	13,369.0	13,666.0	13,908.0	13,293.0	14,724.0	68,960.0	13,792.0
Kyerwa DC	N/A	N/A	N/A	18,798.0	18,816.0	37,614.0	18,807.0
Total	**140,728.7**	**146,345.1**	**129,344.0**	**147,297.0**	**152,450.0**	**716,164.8**	**143,232.9**
Percent of the Total Annual Area							
Karagwe DC	29.6	28.8	33.0	29.3	28.5	29.7	29.7
Bukoba DC	7.3	7.1	8.0	6.8	6.6	7.1	7.1
Muleba DC	28.0	25.8	31.1	26.9	27.0	27.7	27.7
Biharamulo DC	2.0	2.0	2.4	2.2	2.3	2.2	2.2
Ngara DC	22.9	26.4	14.0	12.4	13.0	17.7	17.7
Bukoba MC	0.8	0.6	0.7	0.6	0.6	0.6	0.6
Missenyi DC	9.5	9.3	10.8	9.0	9.7	9.6	9.6
Kyerwa DC	N/A	N/A	N/A	12.8	12.3	5.3	13.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

(ii) Beans



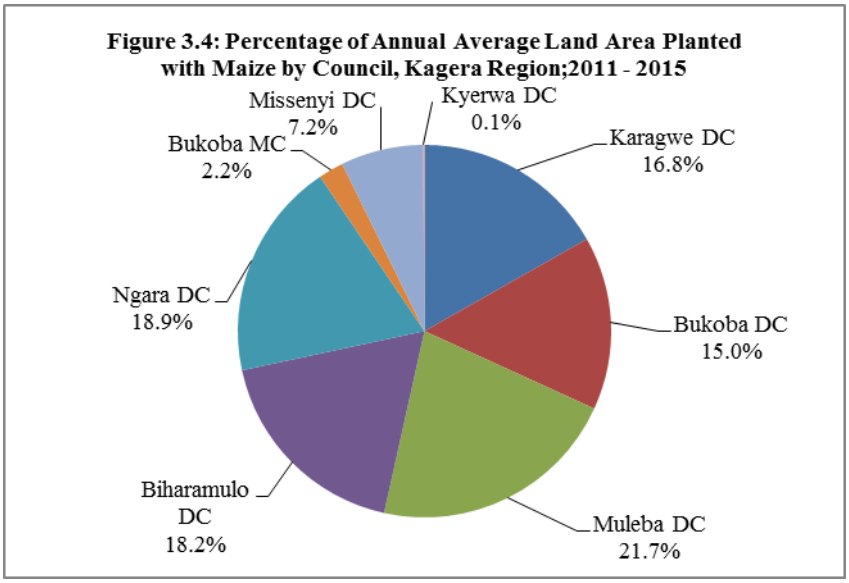
Beans are the most popular leguminous or pulse crop grown in Kagera Region. Beans are commonly interplanted randomly with other crops such as maize. In terms of planted area, beans ranked second as a major food crop occupying 26.9 percent of the region's average annual land area under major food crops in the five-year period from 2011 to 2015. Although the crop is widely planted in all councils in the Region, Karagwe DC was the leading council in beans' cultivation (34,975.2 ha, 26.2 percent) while Bukoba MC had none of its arable land area under beans cultivation (Figure 3.3 and Table 3.2b).

Table 3.2b: Estimated Area (ha) Under Major Food Crops (Beans) by Council, Kagera Region, 2011– 2015

Council	2011	2012	2013	2014	2015	Total Area (ha)	Average Annual Area (ha)
Karagwe DC	33,951.0	34,687.0	35,038.0	35,406.0	35,794.0	174,876.0	34,975.2
Bukoba DC	3,102.0	3,103.0	3,103.0	2,941.0	2,940.0	15,189.0	3,037.8
Muleba DC	28,602.0	29,526.0	30,134.0	29,465.0	27,076.0	144,803.0	28,960.6
Biharamulo DC	11,646.0	12,259.0	12,904.0	13,583.0	14,298.0	64,690.0	12,938.0
Ngara DC	29,926.8	29,440.0	30,466.0	30,422.0	30,964.0	151,218.8	30,243.8
Bukoba MC	-	-	-	-	-	-	-
Missenyi DC	9,974.0	9,954.0	7,342.0	10,442.0	10,460.0	48,172.0	9,634.4
Kyerwa DC	N/A	N/A	N/A	34,695.5	34,704.0	69,399.5	34,699.8
Total	**117,201.8**	**118,969.0**	**118,987.0**	**156,954.5**	**156,236.0**	**668,348.5**	**133,669.7**
Percent of the Total Area (Annual)							
Karagwe DC	29.0	29.2	29.4	22.6	22.9	26.2	26.2
Bukoba DC	2.6	2.6	2.6	1.9	1.9	2.3	2.3
Muleba DC	24.4	24.8	25.3	18.8	17.3	21.7	21.7
Biharamulo DC	9.9	10.3	10.8	8.7	9.2	9.7	9.7
Ngara DC	25.5	24.7	25.6	19.4	19.8	22.6	22.6
Bukoba MC	-	-	-	-	-	-	-
Missenyi DC	8.5	8.4	6.2	6.7	6.7	7.2	7.2
Kyerwa DC	N/A	N/A	N/A	22.1	22.2	10.4	26.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Kagera Region, Compiled Data from Councils (Agriculture Departments), 2017

(iii) Maize



In terms of area under major food crop cultivation, maize ranked third by accounting for 25.0 percent of the region's average annual land area planted with major food crops. Over the specified crop seasons in Table 3.2c and Figure 3.4, In the 2011 – 2015, Muleba DC with an average annual land area of 26,848.8 ha (21.7 percent) had the largest land area under maize cultivation, followed by Ngara DC (23,471.5 ha, 18.9 percent), Biharamulo DC (22,512.4 ha, 18.2 percent) and Karagwe DC (20,805.8 ha, 16.8 percent). The smallest average annual land area of 356.0 ha (0.3 percent) planted with maize was observed in Kyerwa DC.

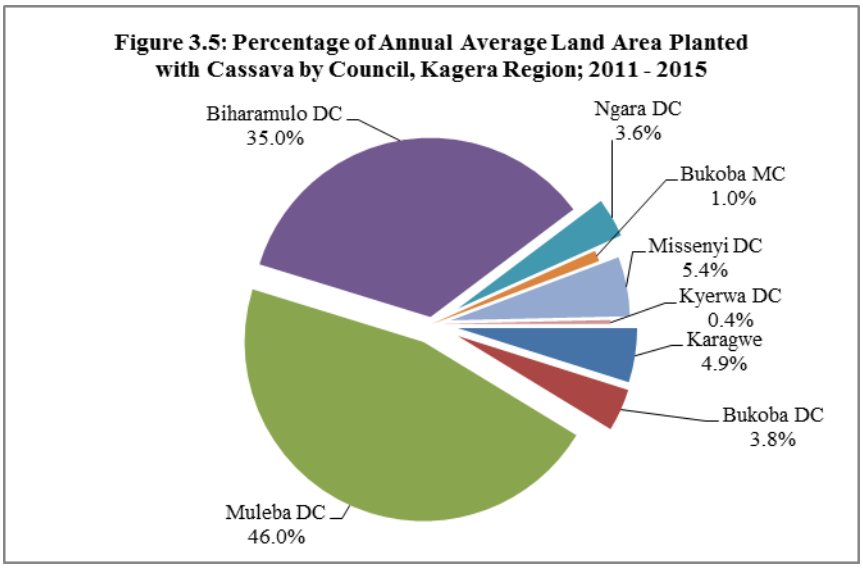
Table 3.2c: Estimated Area (ha) Under Major Food Crops (Maize) by Council, Kagera Region, 2011– 2015

Council	2011	2012	2013	2014	2015	Total Area (ha)	Annual Average Area (ha)
Karagwe DC	19,903.0	20,454.0	20,864.0	21,253.0	21,555.2	104,029.2	20,805.8
Bukoba DC	18,671.0	18,672.0	18,661.0	18,618.0	18,636.0	93,258.0	18,651.6
Muleba DC	26,421.0	26,435.0	27,007.0	26,509.0	27,872.0	134,244.0	26,848.8
Biharamulo DC	20,264.0	21,331.0	22,453.0	23,635.0	24,879.0	112,562.0	22,512.4
Ngara DC	19,398.3	25,205.3	26,811.0	18,755.0	27,188.0	117,357.6	23,471.5
Bukoba MC	2,990.0	2,778.0	2,749.0	2,598.0	2,369.0	13,484.0	2,696.8
Missenyi DC	8,428.0	8,523.0	8,990.0	8,290.0	10,116.0	44,347.0	8,869.4
Kyerwa DC	N/A	N/A	N/A	356.0	356.0	712.0	356.0
Total	**116,075.3**	**123,398.3**	**127,535.0**	**120,014.0**	**132,971.2**	**619,993.8**	**123,998.8**
Percent of the Total Annual Area							
Karagwe DC	17.1	16.6	16.4	17.7	16.2	16.8	16.8
Bukoba DC	16.1	15.1	14.6	15.5	14.0	15.0	15.0
Muleba DC	22.8	21.4	21.2	22.1	21.0	21.7	21.7
Biharamulo DC	17.5	17.3	17.6	19.7	18.7	18.2	18.2
Ngara DC	16.7	20.4	21.0	15.6	20.4	18.9	18.9
Bukoba MC	2.6	2.3	2.2	2.2	1.8	2.2	2.2
Missenyi DC	7.3	6.9	7.0	6.9	7.6	7.2	7.2
Kyerwa DC	NA	NA	NA	0.3	0.3	0.1	0.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	100.0

N/A: Not applicable

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

(iv) Cassava



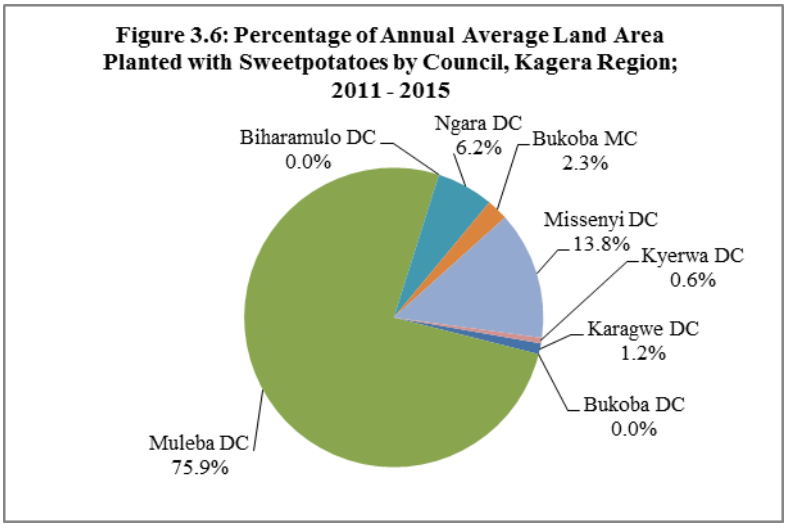
The fourth major food crop grown in Kagera Region during the five-year period (2011-2015) was cassava covering 13.1 percent (65,012.8 ha) of the regional average annual land area planted with major food crops. Figure 3.5 and Table 3.2d show that Muleba DC had the largest average annual land area of 29,933.6 ha planted with cassava accounting for 46.0 percent of the Region's average annual land area planted with cassava. Bukoba MC had the smallest average annual land area of 636.7 ha (1.0 percent) planted with cassava.

Table 3.2d: Estimated Area (ha) Under Major Food Crops (Cassava) by Council, Kagera Region, 2011– 2015

Council	2011	2012	2013	2014	2015	Total Area (ha)	Average Annual Area (ha)
Karagwe DC	2,865.0	3,073.0	3,202.0	3,197.6	3,533.6	15,871.2	3,174.2
Bukoba DC	2,177.0	2,177.0	2,166.0	2,973.0	2,960.0	12,453.0	2,490.6
Muleba DC	31,177.0	30,758.0	28,324.0	29,730.0	29,679.0	149,668.0	29,933.6
Biharamulo DC	20,470.0	21,547.0	22,682.0	23,875.0	25,132.0	113,706.0	22,741.2
Ngara DC	2,120.6	2,272.0	2,360.0	2,309.0	2,509.0	11,570.6	2,314.1
Bukoba MC	655.1	727.0	655.2	606.0	540.0	3,183.3	636.7
Missenyi DC	3,227.2	3,381.3	3,214.4	3,738.0	3,872.9	17,433.8	3,486.8
Kyerwa DC	N/A	N/A	N/A	588.0	589.0	1,177.0	588.5
Total	**62,691.9**	**63,935.3**	**62,603.6**	**67,016.6**	**68,815.5**	**325,062.9**	**65,012.6**
Percent of the Total Annual Area							
Karagwe DC	4.6	4.8	5.1	4.8	5.1	4.9	4.9
Bukoba DC	3.5	3.4	3.5	4.4	4.3	3.8	3.8
Muleba DC	49.7	48.1	45.2	44.4	43.1	46	46
Biharamulo DC	32.7	33.7	36.2	35.6	36.5	35	35
Ngara DC	3.4	3.6	3.8	3.4	3.6	3.6	3.6
Bukoba MC	1	1.1	1	0.9	0.8	1.0	1.0
Missenyi DC	5.1	5.3	5.1	5.6	5.6	5.4	5.4
Kyerwa DC	N/A	N/A	N/A	0.9	0.9	0.4	0.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

(v) Sweet potatoes



Sweet potato is a root tuber crop grown in almost all councils in Kagera Region. In terms of land area it ranked fifth. During the 2011-2015 period sweet potatoes was planted on average annual land area of 19,658.4 ha (4.0 percent of the region's average annual land area planted with major food crops). At council level, 75.9 percent) of the region's average annual land area planted with sweet potatoes was in Muleba DC. Muleba DC was followed by Missenyi DC (2714.8.0 ha, 13.8 percent) and Ngara DC (1210.8.0 ha, 6.2 percent). Kyerwa DC had the smallest planted area with sweet potatoes (297.0 ha, 1.5 percent).

Table 3.2e: Estimated Area (ha) Under Major Food Crops (Sweet potatoes) by Council, Kagera Region, 2011–2015

Council	2011	2012	2013	2014	2015	Total Area (ha)	Average Annual Area (ha)
Karagwe DC	180.0	204.0	234.0	257.9	272.9	1,148.8	229.8
Bukoba DC	-	-	-	-	-	-	-
Muleba DC	15,038.0	15,284.0	14,599.0	15,179.0	14,542.0	74,642.0	14,928.4
Biharamulo DC	-	-	-	-	-	-	-
Ngara DC	1,252.6	1,250.1	1,105.0	1,309.0	1,137.0	6,053.8	1,210.8
Bukoba MC	470.5	497.0	456.6	442.8	412.0	2,278.9	455.8
Missenyi DC	2,634.0	2,690.0	2,356.0	3,206.0	2,688.0	13,574.0	2,714.8
Kyerwa DC	N/A	N/A	N/A	297.0	297.0	594.0	297.0
Total	**19,575.1**	**19,925.1**	**18,750.6**	**20,691.7**	**19,348.9**	**98,291.5**	**19,658.3**
Percent of the Total Annual Area							
Karagwe DC	0.9	1	1.2	1.2	1.4	1.2	1.2
Bukoba DC	-	-	-	-	-	-	-
Muleba DC	76.8	76.7	77.9	73.4	75.2	75.9	75.9
Biharamulo DC	-	-	-	-	-	-	-
Ngara DC	6.4	6.3	5.9	6.3	5.9	6.2	6.2
Bukoba MC	2.4	2.5	2.4	2.1	2.1	2.3	2.3
Missenyi DC	13.5	13.5	12.6	15.5	13.9	13.8	13.8
Kyerwa DC	N/A	N/A	N/A	1.4	1.5	0.6	1.5
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Kagera Region, Compiled Data from Councils (Agriculture Departments), 2017

(vi) Paddy

Paddy is another cereal crop which is mainly grown in Biharamulo and Bukoba DCs of Kagera Region. In terms of land area planted with major food crops, paddy ranked sixth. It was planted on average annual land area of 6,633.6 ha (1.3 percent of the region's average annual land areaplanted with major food crops). Overninety percent (93.3 percent) of the average annual land area planted with paddy was in Biharamulo DC (Figure 3.6a and Table 3.2f).

Table 3.2f: Estimated Area (ha) Under Major Food Crops (Paddy) by Council, Kagera Region, 2011– 2015

Council	2011	2012	2013	2014	2015	Total Area (ha)	Average Annual Area (ha)
Karagwe DC	-	-	-	-	-	-	
Bukoba DC							
Muleba DC	400.0	400.0	450.0	480.0	492.0	2,222.0	444.4
Biharamulo DC	-	-	-	-	-	-	-
Ngara DC	5,571.0	5,864.0	6,173.0	6,498.0	6,840.0	30,946.0	6,189.20
Bukoba MC	-	-	-	-	-	-	-
Missenyi DC	-	-	-	-	-	-	-
Kyerwa DC	-	-	-	-	-	-	-
Total	**5,971.0**	**6,264.0**	**6,623.0**	**6,978.0**	**7,332.0**	**33,168.0**	**6,633.6**
Percent of the Total Annua Area							
Karagwe DC	-	-	-	-	-	-	-
Bukoba DC	6.7	6.4	6.8	6.9	6.7	6.7	6.7
Muleba DC	-	-	-	-	-	-	-
Biharamulo DC	93.3	93.6	93.2	93.1	93.3	93.3	93.3
Ngara DC	-	-	-	-	-	-	-
Bukoba MC	-	-	-	-	-	-	-
Missenyi DC	-	-	-	-	-	-	-
Kyerwa DC	-	-	-	-	-	-	-
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

(vii) Other food crops

Kagera Region which has fertile agricultural land in most councils and a favourable amount of rainfall grows other types of food crops though at a smaller scale. The crops include finger millet, Irish potatoes, millet, sorghum and groundnuts.

3.1.2.2 Production of Major Food Crops

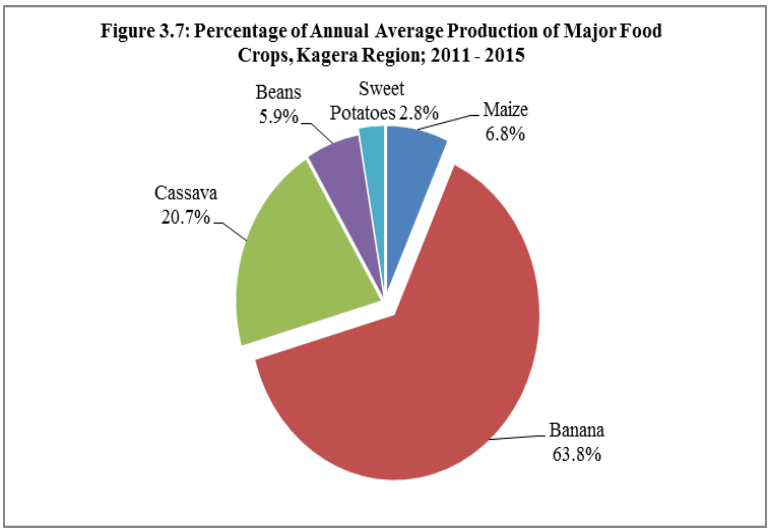


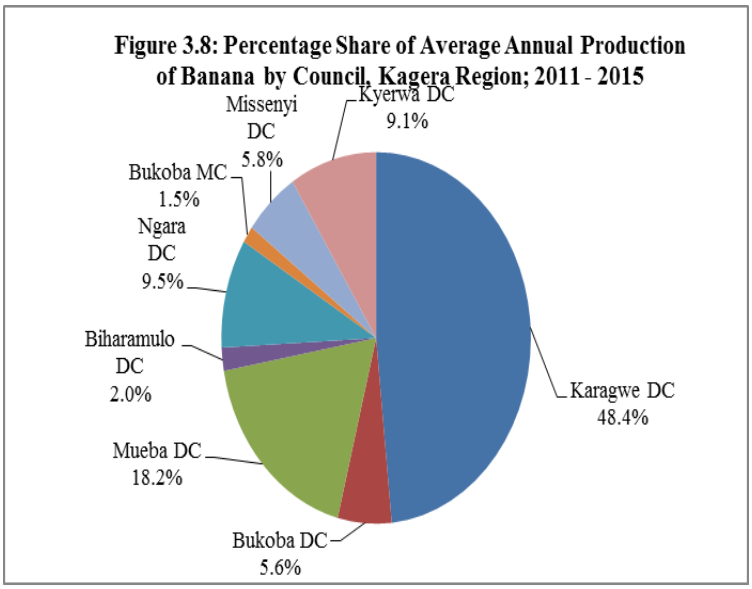
Figure 3.7 and Table 3.3 present the production in tonnes and percentages of major food crops in Kagera Region from 2011 – 2015. The table further shows that a total of 14,083,449 tonnes of food crops (at an average annual tonnage of 2,816,689.8) were harvested in Kagera Region during the reference period. It was further observed that 63.8 percent of the Region's average annual production of food crops was banana which makes banana the leading food crops in terms of production. This was followed by cassava (582,725.8 ha, 20.7 percent), maize (190,299.0 ha, 6.8 percent), beans (165,261.4 ha, 5.9 percent) and sweet potatoes (80,160.2 ha, 2.8 percent). In the five-year period, production was largest in 2015 (3,231,324.0 tonnes) and smallest in 2013 (2,574,270.0 tonnes).

Table 3.3: Estimated Production (in tonnes) of Major Food Crops, Kagera Region, 2011 – 2015

Crop	2011	2012	2013	2014	2015	Total Production	Average Annual Production
Estimated Annual Production (tonnes)							
Maize	172,792.0	176,208.0	189,151.0	194,786.0	218,558.0	951,495.0	190,299.0
Banana	1,665,175.0	1,683,701.0	1,580,330.0	1,978,744.0	2,083,267.0	8,991,217.0	1,798,243.4
Cassava	533,797.0	537,615.0	577,786.0	617,960.0	646,471.0	2,913,629.0	582,725.8
Beans	139,444.0	138,931.0	153,593.0	200,989.0	193,350.0	826,307.0	165,261.4
Sweet Potatoes	70,150.0	73,334.0	73,410.0	94,229.0	89,678.0	400,801.0	80,160.2
Total	**2,581,358.0**	**2,609,789.0**	**2,574,270.0**	**3,086,708.0**	**3,231,324.0**	**14,083,449.0**	**2,816,689.8**
Percent of the Total Annual Production							
Maize	6.7	6.8	7.3	6.3	6.8	6.8	6.8
Banana	64.5	64.5	61.4	64.1	64.5	63.8	63.8
Cassava	20.7	20.6	22.4	20	20	20.7	20.7
Beans	5.4	5.3	6	6.5	6	5.9	5.9
Sweet Potatoes	2.7	2.8	2.9	3.1	2.8	2.8	2.8
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Kagera Region, Compiled Data from Councils (Agriculture Departments), 2017

(i) Production of Banana



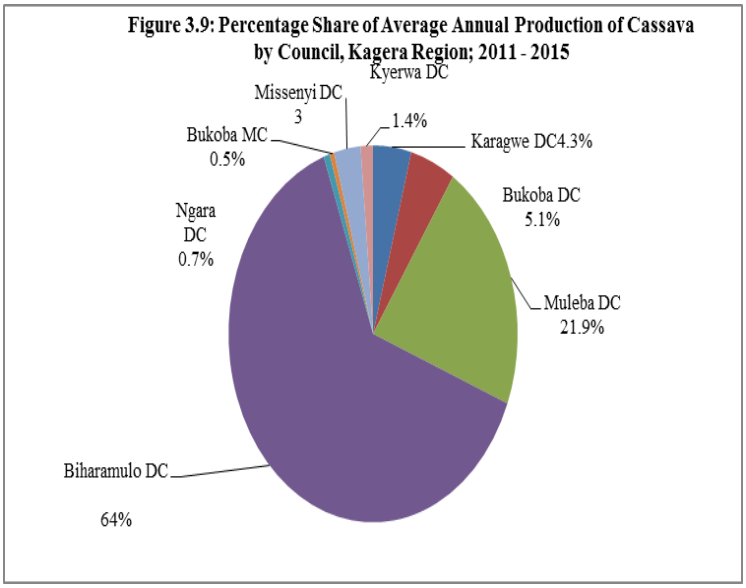
As Table 3.3a shows, over the 2011-2015 period Kagera Region harvested a total of 8,991,216.6 tonnes of banana at an average annual production of 1,798,243.4 tonnes accounting for 65.6 percent of the Region's total production of 13,713,859 tonnes (an average of 2,742,772 tonnes of major food crops per annum). Banana was produced in all councils in the Region but at different levels of production. Karagwe DC led in banana production in the Region with an average annual production of 870,108.8 tonnes. It accounted for 48.4 percent of the Region's average annual banana production of 1,798,243.4 tonnes in the reference period (Figure 3.8). Bukoba MC produced the smallest quantity of 26,154 tonnes per annum (1.5 percent of the regional average annual production of banana).

Table 3.3a: Estimated Production (Tonness) of Major Food Crops (Banana), Kagera Region, 2011 – 2015

Council	2011	2012	2013	2014	2015	Total Production	Average Annual Production
Estimated Annual Production (tonnes)							
Karagwe DC	835,001.0	864,714.0	873,876.0	883,428.0	893,525.0	4,350,544.0	870,108.8
Bukoba DC	100,445.0	100,448.0	100,418.0	100,403.0	103,142.0	504,856.0	100,971.2
Muleba DC	308,863.9	302,972.5	332,473.5	333,175.0	354,548.0	1,632,032.9	326,406.6
Biharamulo DC	34,119.0	34,103.0	35,898.0	37,787.0	39,776.0	181,683.0	36,336.6
Ngara DC	283,927.1	266,649.4	87,884.5	98,742.1	117,554.8	854,757.9	170,951.6
Bukoba MC	14,369.0	23,621.0	25,559.0	32,421.0	34,799.0	130,769.0	26,153.8
Missenyi DC	88,450.4	91,192.9	124,221.1	87,614.9	127,915.7	519,395.0	86,188.9
Kyerwa DC	N/A	N/A	N/A	405,173.0	412,006.3	817,179.3	408,589.7
Total	**1,665,175.4**	**1,683,700.8**	**1,580,330.1**	**1,978,744.0**	**2,083,266.8**	**8,991,217.1**	**1,798,243.4**
Percent of the Total Annual Production							
Karagwe DC	50.1	51.4	55.3	44.6	42.9	48.4	48.4
Bukoba DC	6.0	6.0	6.4	5.1	5.0	5.6	5.6
Muleba DC	18.5	18.0	21.0	16.8	17.0	18.2	18.2
Biharamulo DC	2.0	2.0	2.3	1.9	1.9	2.0	2.0
Ngara DC	17.1	15.8	5.6	5.0	5.6	9.5	9.5
Bukoba MC	0.9	1.4	1.6	1.6	1.7	1.5	1.5
Missenyi DC	5.3	5.4	7.9	4.4	6.1	5.8	5.8
Kyerwa DC	N/A	N/A	N/A	20.5	19.8	9.1	22.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

(ii) Production of Cassava



Cassava was another major food crop produced in Kagera Region. As Table 3.3b shows, over the 2011-2015 period cassava was produced at an average annual tonnage of 582,726. Figure 3.9 and Table 3.4b also show that 64.0 percent of cassava production in Region was in Biharamulo DC, followed by Muleba DC (21.9 percent). Bukoba MC harvested the smallest tonnage of 2,707 (0.5 percent) per annum, followed by Ngara DC (3,831.9 tonnes, 0.7 percent).

Table 3.3b: Estimated Production in Tons of Major Food Crops (Cassava), Kagera Region; 2011 – 2015

Council	2011	2012	2013	2014	2015	Total Production	Average Annual Production
Estimated Annual Production (Tonnes)							
Karagwe DC	21,674.0	24,081.0	24,536.0	25,806.0	27,791.0	123,888.0	24,777.6
Bukoba DC	30,383.0	30,290.0	29,790.0	29,551.0	29,790.0	149,804.0	29,960.8
Muleba DC	110,383.0	109,898.0	132,718.0	141,587.0	144,581.0	639,167.0	127,833.4
Biharamulo DC	350,163.8	350,147.7	368,576.5	387,975.3	408,395.0	1,865,258.3	373,051.7
Ngara DC	3,419.4	3,571.1	3,738.5	3,981.0	4,449.5	19,159.5	3,831.9
Bukoba MC	1,691.0	2,602.0	2,536.0	2,929.0	3,776.0	13,534.0	2,706.8
Missenyi DC	16,082.8	17,025.0	15,890.5	17,818.1	19,400.2	86,216.6	17,243.3
Kyerwa DC	N/A	N/A	N/A	8,312.6	8,288.4	16,601.0	8300.5
Total	**533,797.0**	**537,614.8**	**577,785.5**	**617,960.0**	**646,471.1**	**2,913,628.4**	**582,725.7**
Percent of the Total Annual Production							
Karagwe DC	4.1	4.5	4.2	4.2	4.3	4.3	4.3
Bukoba DC	5.7	5.6	5.2	4.8	4.6	5.1	5.1
Muleba DC	20.7	20.4	23.0	22.9	22.4	21.9	21.9
Biharamulo DC	65.6	65.1	63.8	62.8	63.2	64.0	64.0
Ngara DC	0.6	0.7	0.6	0.6	0.7	0.7	0.7
Bukoba MC	0.3	0.5	0.4	0.5	0.6	0.5	0.5
Missenyi DC	3.0	3.2	2.8	2.9	3.0	3.0	3.0
Kyerwa DC	N/A	N/A	N/A	1.3	1.3	0.6	1.4
Regional Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

(iii) Production of Maize

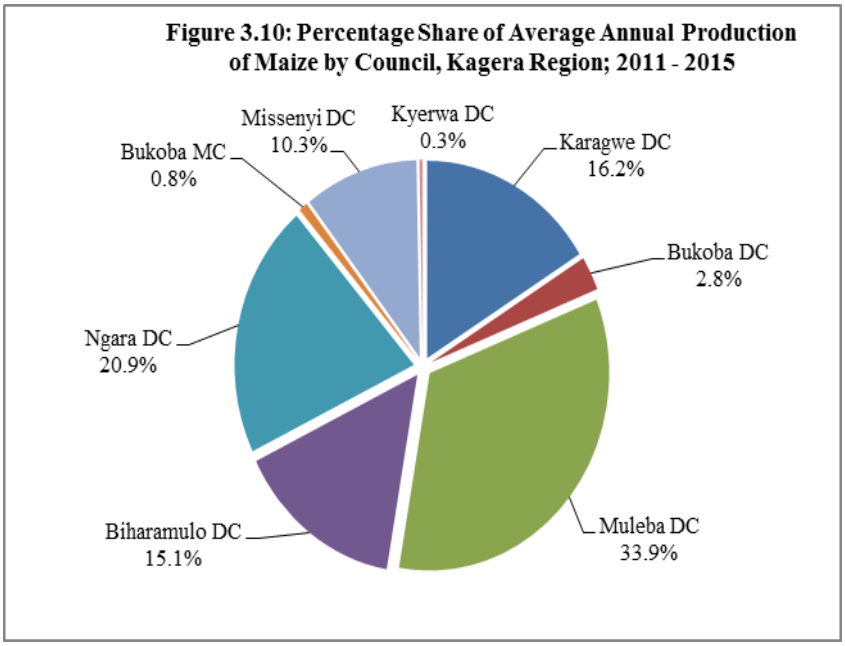


Figure 3.10: Percentage Share of Average Annual Production of Maize by Council, Kagera Region; 2011 - 2015

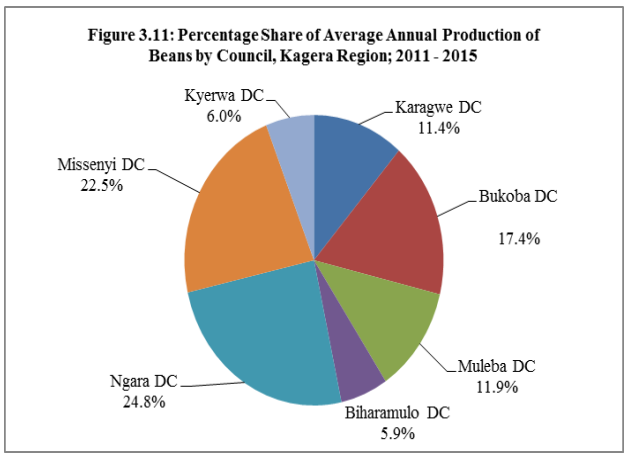
In the period of 2011-2015 maize was produced in all councils in the Kagera Region at an average annual tonnage of 190,299 (Table 3.3c). More than thirty percent (33.9) of maize production in the Region were produced in Muleba DC had the largest production of 64,560.4 tonnes, followed by Ngara DC (39,744.3 tonnes, 20.9 percent). Kyerwa DC had the smallest tonnage of 601.8 (0.3 percent) per annum (Figure 3.10 and Table 3.4c).

Table 3.3c: Estimated Production in Tons of Major Food Crops (Maize), Kagera Region, 2011 – 2015

Council	2011	2012	2013	2014	2015	Total Production	Average Annual Production
Estimated Annual Production (Tonnes)							
Karagwe DC	31,329.0	27,884.0	31,873.0	30,318.0	32,276.0	153,680.0	30,736.0
Bukoba DC	5,309.0	5,481.0	5,485.0	5,296.0	5,306.0	26,877.0	5,375.4
Muleba DC	55,309.0	60,474.0	66,078.0	69,901.0	71,041.0	322,803.0	64,560.6
Biharamulo DC	26,906.9	26,890.7	28,306.0	29,795.8	31,364.0	143,263.4	28,652.7
Ngara DC	35,353.1	35,987.0	36,688.4	39,593.8	51,099.2	198,721.5	39,744.3
Bukoba MC	1,013.0	1,507.0	1,570.0	1,474.0	1,727.0	7,291.0	1,458.2
Missenyi DC	17,571.6	17,984.1	19,150.7	17,825.2	25,123.8	97,655.4	19,531.1
Kyerwa DC	N/A	N/A	N/A	582.4	621.2	1,203.6	601.8
Regional Total	**172,791.6**	**176,207.8**	**189,151.1**	**194,786.2**	**218,558.2**	**951,494.9**	190,299.0
Percent of the Total Annual Production							
Karagwe DC	18.1	15.8	16.9	15.6	14.8	16.2	16.2
Bukoba DC	3.1	3.1	2.9	2.7	2.4	2.8	2.8
Muleba DC	32	34.3	34.9	35.9	32.5	33.9	33.9
Biharamulo DC	15.6	15.3	15	15.3	14.4	15.1	15.1
Ngara DC	20.5	20.4	19.4	20.3	23.4	20.9	20.9
Bukoba MC	0.6	0.9	0.8	0.8	0.8	0.8	0.8
Missenyi DC	10.2	10.2	10.1	9.2	11.5	10.3	10.3
Kyerwa DC	N/A	N/A	N/A	0.3	0.3	0.1	0.3
Regional Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

(iv) Production of Beans



Beans were produced in all councils in the Region at an average annual tonnage of 165,261.3. As Figure 3.11 and Table 3.3d show, Ngara led other councils in beans production. It accounted for 24.8 percent of the average annual production of beans. It was followed by Missenyi DC with 22.5 percent and Bukoba DC (17.4 percent).

Table 3.3d: Estimated Production in Tons of Major Food Crops (Beans), Kagera Region, 2011 – 2015

Council	2011	2012	2013	2014	2015	Total Production	Average Annual Production
Estimated Annual Production (Tonnes)							
Karagwe DC	18,388.0	18,521.0	18,700.0	19,020.0	19,381.0	94,010.0	18,802.0
Bukoba DC	28,880.0	28,888.0	28,680.0	28,680.0	28,680.0	143,808.0	28,761.6
Muleba DC	18,880.0	19,200.0	20,223.0	19,626.5	20,262.3	98,191.8	19,638.4
Biharamulo DC	9,210.0	9,194.0	9,678.0	10,187.0	10,723.0	48,992.0	9,798.4
Ngara DC	38,876.0	39,024.4	39,786.6	39,172.8	48,451.2	205,311.0	41,062.2
Bukoba MC	-	-	-	-	-	-	-
Missenyi DC	25,209.8	24,103.8	36,525.1	59,548.7	40,932.4	186,319.8	37,264.0
Kyerwa DC	N/A	N/A	N/A	24,753.7	24,920.2	49,673.9	24,837.0
Total	**139,443.8**	**138,931.2**	**153,592.7**	**200,988.7**	**193,350.1**	**826,306.5**	**165,261.3**
Percent of the Total Annual Production							
Karagwe DC	13.2	13.3	12.2	9.5	10	11.4	11.4
Bukoba DC	20.7	20.8	18.7	14.3	14.8	17.4	17.4
Muleba DC	13.5	13.8	13.2	9.8	10.5	11.9	11.9
Biharamulo DC	6.6	6.6	6.3	5.1	5.5	5.9	5.9
Ngara DC	27.9	28.1	25.9	19.5	25.1	24.8	24.8
Bukoba MC	-	-	-	-	-	-	-
Missenyi DC	18.1	17.3	23.8	29.6	21.2	22.5	22.5
Kyerwa DC	N/A	N/A	N/A	12.3	12.9	6	15.0
Regional Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

(v) Production of Sweet Potatoes

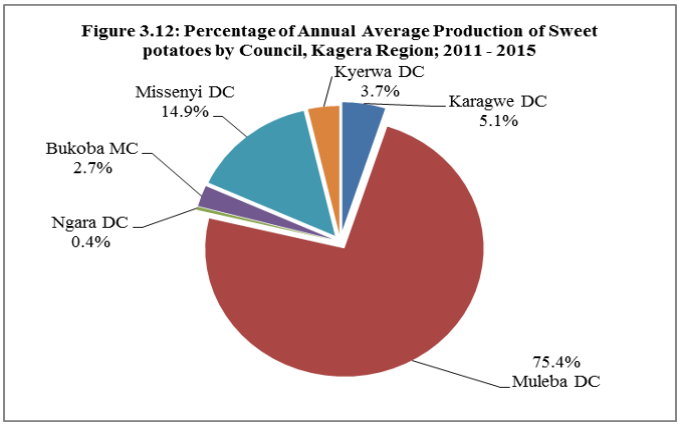


Figure 3.12 and Table 3.3e show that sweet potatoes were produced in six councils in Kagera Region at an average annual tonnage of 80,160.3. The largest production of sweet potatoes (75.4 percent) was from Muleba DC, followed by Missenyi DC (14.9 percent) and Karagwe DC (5.1 percent). The smallest production was from Ngara DC (0.4 percent).

Table 3.3e: Estimated Production in Tons of Major Food Crops (Sweet potatoes), Kagera Region, 2011 – 2015

Council	2011	2012	2013	2014	2015	Total Production	Average Annual Production
Estimated Annual Production (Tonnes)							
Karagwe DC	3,270.0	4,251.0	2,676.0	4,934.0	5,471.0	20,602.0	4,120.4
Bukoba DC	-	-	-	-	-	-	-
Muleba DC	53,770.8	55,640.2	61,965.6	65,658.8	65,132.8	302,168.2	60,433.6
Biharamulo DC	-	-	-	-	-	-	-
Ngara DC	298.7	383.2	293.3	298.8	290.4	1,564.4	312.9
Bukoba MC	1,073.0	1,306.0	1,437.0	3,728.0	3,236.0	10,780.0	2,156.0
Missenyi DC	11,737.8	11,754.0	7,038.2	16,648.3	12,501.7	59,680.0	11,936.0
Kyerwa DC	N/A	N/A	N/A	2,960.7	3,046.3	6,007.0	3,003.5
Total	**70,150.3**	**73,334.4**	**73,410.1**	**94,228.6**	**89,678.2**	**400,801.6**	**80,160.3**
Percent of the Total Annual Production							
Karagwe DC	4.7	5.8	3.6	5.2	6.1	5.1	5.1
Bukoba DC	-	-	-	-	-	-	-
Muleba DC	76.7	75.9	84.4	69.7	72.6	75.4	75.4
Biharamulo DC	-	-	-	-	-	-	-
Ngara DC	0.4	0.5	0.4	0.3	0.3	0.4	0.4
Bukoba MC	1.5	1.8	2	4	3.6	2.7	2.7
Missenyi DC	16.7	16	9.6	17.7	13.9	14.9	14.9
Kyerwa DC	N/A	N/A	N/A	3.1	3.4	1.5	3.7
Regional Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

3.1.3 Cash Crops

3.1.3.1 Area under Major Cash Crops Cultivation

Banana and beans are both the major food and cash crops grown in Kagera Region. However, for the purpose of this publication they are included under major food crops only. Other cash crops which contribute significantly to the regional economy are coffee and tea. Cotton, tobacco, sugar cane, finger millet, millet, vanilla and groundnuts are relatively minor sources of livelihood to the residents of Kagera Region.

Figure 3.13: Percentage of Annual Average Land Area Planted with Major Cash Crops, Kagera Region; 2011 - 2015

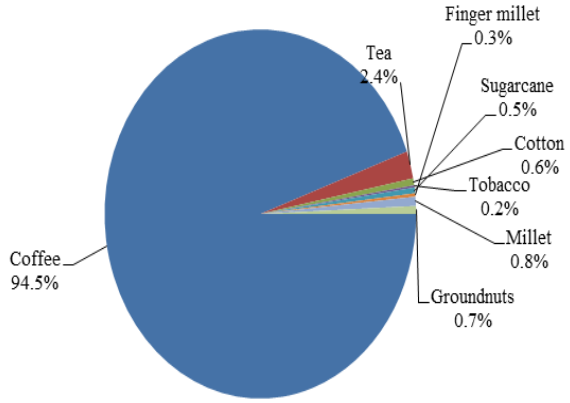


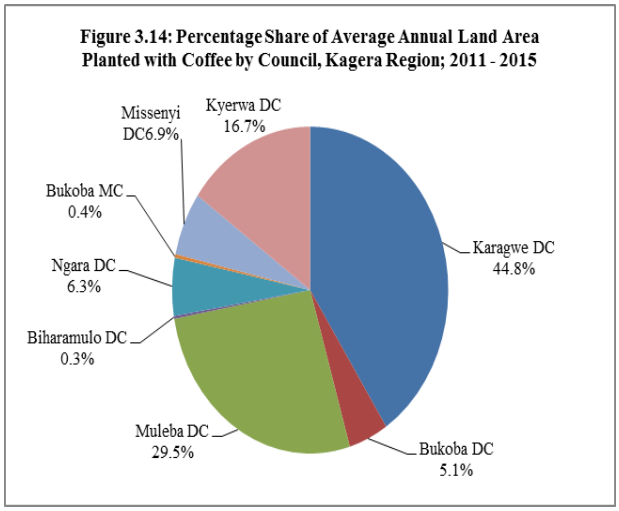
Figure 3.13 and Table 3.4 show that from 2011 – 2015 Kagera Region had an average annual land area of 68,776.2 ha planted with cash crops. Coffee was the leading cash crop, planted on average annual land area of 65,016.4 ha which accounted for 94.5 percent of the region's average annual land area planted with cash crops. It was followed by tea (1,645.2 ha, 2.4 percent), millet (561.6 ha, 0.8 percent) and groundnuts (465.6 ha, 0.7 percent). Table 3.4 further shows that in the five-year period (2011 – 2015), the largest land area planted with cash crops was in 2015 (78,036.7 ha) while the smallest was in 2011 (62,741.2 ha).

Table 3.4: Estimated Land Area (ha) under Major Cash Crops by Council, Kagera Region, 2011 – 2015

Crop	Estimated Land Area (ha)					Total Area	Average Annual
	2011	2012	2013	2014	2015		
Coffee	59,166.0	59,403.0	60,601.0	71,783.0	74,129.0	325,082.0	65,016.4
Tea	1,606.0	1,576.0	1,667.0	1,738.0	1,639.0	8,226.0	1,645.2
Cotton	386.0	387.0	390.0	384.0	407.0	1,954.0	390.8
Tobacco	156.5	159.7	162.9	166.3	175.0	820.4	164.1
Sugarcane	319.0	319.2	322.3	325.0	327.7	1,613.2	322.6
Finger millet	155.5	165.0	175.0	186.0	198.0	879.5	175.9
Millet	498.0	596.0	542.0	571.0	601.0	2,808.0	561.6
Vanilla	36.0	34.0	33.0	33.0	34.0	170.0	34.0
Groundnuts	418.4	443.0	449.4	491.0	526.0	2,327.8	465.6
Regional Total	**62,741.4**	**63,082.9**	**64,342.6**	**75,677.3**	**78,036.7**	**343,880.9**	**68,776.2**
Percent of the Total Annual Area							
Coffee	94.3	94.2	94.2	94.9	95.0	94.5	94.5
Tea	2.6	2.5	2.6	2.3	2.1	2.4	2.4
Cotton	0.6	0.6	0.6	0.5	0.5	0.6	0.6
Tobacco	0.2	0.3	0.3	0.2	0.2	0.2	0.2
Sugarcane	0.5	0.5	0.5	0.4	0.4	0.5	0.5
Finger millet	0.2	0.3	0.3	0.2	0.3	0.3	0.3
Millet	0.8	0.9	0.8	0.8	0.8	0.8	0.8
Vanilla	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Groundnuts	0.7	0.7	0.7	0.6	0.7	0.7	0.7
Regional Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Kagera Region, Compiled Data from Councils (Agriculture Departments), 2017

(i) Coffee



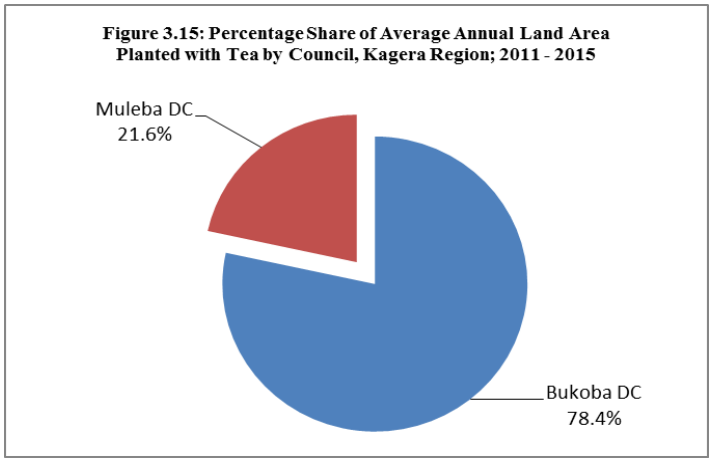
In terms of cultivated land area, coffee was the leading cash crop in Kagera Region which was planted on an average annual land area of 65,016.2 ha (94.5 percent of the Region's average annual land area of 68,776.2 ha planted with major cash crops). Figure 3.14 and Table 3.4a further shows that more than fourty percent (44.8 percent) of the region's average annual land area planted with coffee was in Karagwe DC, followed by Muleba DC (19,161.4 ha, 29.5 percent) and Kyerwa DC (10,885.7 ha, 16.7 percent). Biharamulo DC had the smallest average annual land area of 164.0 ha (0.3 percent) planted with coffee.

Table 3.4a: Estimated Land Area (ha) under Major Cash Crops (Coffee) by Council, Kagera Region, 2011 – 2015

Council	2011	2012	2013	2014	2015	Total Area (ha)	Average Annual Area (ha)
Karagwe DC	28,168.0	29,098.0	29,234.0	29,472.0	29,770.0	145,742.0	29,148.4
Bukoba DC	3,306.0	3,300.0	3,310.0	3,310.0	3,312.0	16,538.0	3,307.6
Muleba DC	18,542.0	18,140.0	19,319.0	19,317.0	20,489.0	95,807.0	19,161.4
Biharamulo DC	156.0	160.0	163.0	166.0	175.0	820.0	164.0
Ngara DC	4,268.8	3,957.1	3,822.0	3,955.0	4,638.0	20,640.9	4,128.2
Bukoba MC	286.0	284.0	276.5	270.4	266.5	1,383.4	276.7
Missenyi DC	4,439.0	4,463.7	4,476.0	4,505.7	4,493.9	22,378.3	4,475.7
Kyerwa DC	N/A	N/A	N/A	10,786.42	10,985	21,771.42	10,885.7
Total	**59,165.8**	**59,402.8**	**60,600.5**	**71,782.5**	**74,129.4**	**325,081.1**	**65,016.2**
Percent of the Total Annual Area							
Karagwe DC	47.6	49	48.2	41.1	40.2	44.8	44.8
Bukoba DC	5.6	5.6	5.5	4.6	4.5	5.1	5.1
Muleba DC	31.3	30.5	31.9	26.9	27.6	29.5	29.5
Biharamulo DC	0.3	0.3	0.3	0.2	0.2	0.3	0.3
Ngara DC	7.2	6.7	6.3	5.5	6.3	6.3	6.3
Bukoba MC	0.5	0.5	0.5	0.4	0.4	0.4	0.4
Missenyi DC	7.5	7.5	7.4	6.3	6.1	6.9	6.9
Kyerwa DC	N/A	N/A	N/A	15	14.8	6.7	16.7
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

(ii) Tea



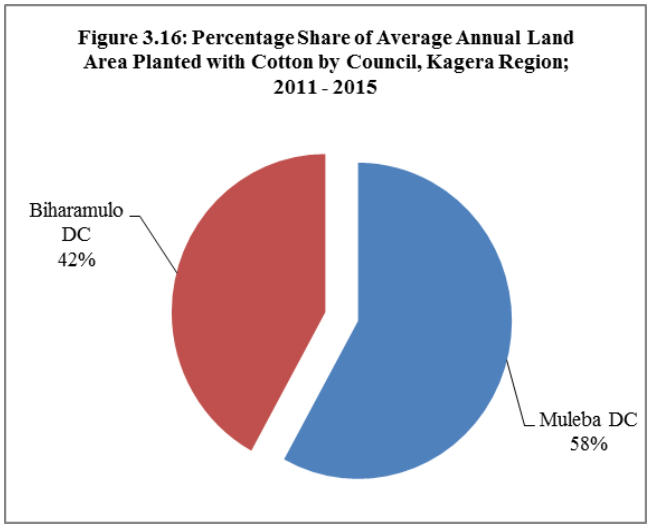
Tea is another traditional cash crop grown in Kagera Region. In terms of cultivated land area in the 2011 – 2015 period, tea ranked second after coffee. It was planted on an average annual land area of 1,645.2 ha (2.4 percent of the Region's average annual land area planted with major cash crops). In the reference period, only two councils in the Region Bukoba and Muleba grew tea. Bukoba DC had the largest average annual land area of 1,290.0 ha (78.4 percent) planted with tea (Figure 3.15 and Table 3.4b).

Table 3.4b: Estimated Land Area (ha) under Major Cash Crops (Tea) by Council, Kagera Region, 2011 – 2015

Council	2011	2012	2013	2014	2015	Total Area (ha)	Average Annual Area (ha)
Karagwe DC	-	-	-	-	-	-	-
Bukoba DC	1,300.0	1,286.0	1,288.0	1,288.0	1,289.0	6,451.0	1,290.2
Muleba DC	306.0	290.0	379.0	450.0	350.0	1,775.0	355.0
Biharamulo DC	-	-	-	-	-	-	-
Ngara DC	-	-	-	-	-	-	-
Bukoba MC	-	-	-	-	-	-	-
Missenyi DC	-	-	-	-	-	-	-
Kyerwa DC	-	-	-	-	-	-	-
Total	**1,606.0**	**1,576.0**	**1,667.0**	**1,738.0**	**1,639.0**	**8,226.0**	**1,645.2**
Percent of the Total Annual Area							
Karagwe DC	-	-	-	-	-	-	-
Bukoba DC	80.9	81.6	77.3	74.1	78.6	78.4	78.4
Muleba DC	19.1	18.4	22.7	25.9	21.4	21.6	21.6
Biharamulo DC	-	-	-	-	-	-	-
Ngara DC	-	-	-	-	-	-	-
Bukoba MC	-	-	-	-	-	-	-
Missenyi DC	-	-	-	-	-	-	-
Kyerwa DC	-	-	-	-	-	-	-
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

(iii) Cotton



Out of eight councils in Kagera Region, Muleba and Biharamulo were the only councils which grew cotton over the five-year period (2011 – 2015). During the reference period, cotton was planted on an average land area of 390.8 ha (0.6 percent) of the average annual land area under cash crops in the Region. As Figure 3.16 and Table 3.4c show, Muleba DC had a relatively larger average annual land area (226.8 ha, 58.0 percent) planted with cotton than Biharamulo DC (164.0 ha, 42.0 percent).

Table 3.4c: Estimated Land Area (ha) under Major Cash Crops (Cotton) by Council, Kagera Region, 2011 – 2015

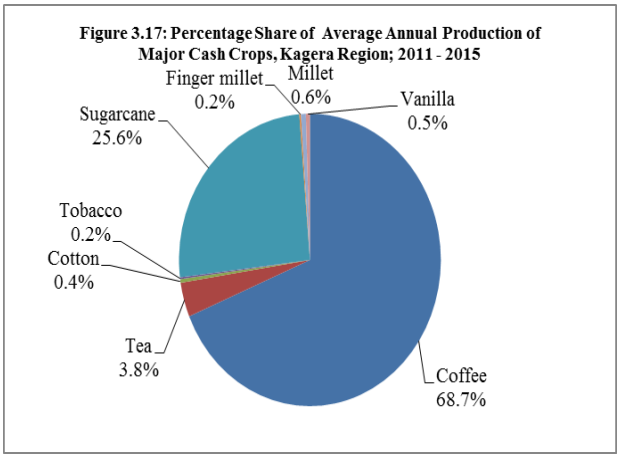
Council	2011	2012	2013	2014	2015	Total Area (ha)	Average Annual Area (ha)
Karagwe DC	-	-	-	-	-	-	-
Bukoba DC	-	-	-	-	-	-	-
Muleba DC	230.0	227.0	227.0	218.0	232.0	1134.0	226.8
Biharamulo DC	156.0	160.0	163.0	166.0	175.0	820.0	164.0
Ngara DC	-	-	-	-	-	-	-
Bukoba MC	-	-	-	-	-	-	-
Missenyi DC	-	-	-	-	-	-	-
Kyerwa DC	-	-	-	-	-	-	-
Total	**386.0**	**387.0**	**390.0**	**384.0**	**407.0**	**1954.0**	**390.8**
Percent of the Total Annual Area							
Karagwe DC	-	-	-	-	-	-	-
Bukoba DC	-	-	-	-	-	-	-
Muleba DC	59.6	58.7	58.2	56.8	57.0	58.0	58.0
Biharamulo DC	40.4	41.3	41.8	43.2	43.0	42.0	42.0
Ngara DC	-	-	-	-	-	-	-
Bukoba MC	-	-	-	-	-	-	-
Missenyi DC	-	-	-	-	-	-	-
Kyerwa DC	-	-	-	-	-	-	-
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Kagera Region, Compiled Data from Councils (Agriculture Departments), 2017

(iv) Other Major Cash Crops

Information received from councils shows the other les important cash crops grown in Kagera Region including tobacco (planted only in Biharamulo on an average annual land area of 164.1 ha), sugarcane (mainly planted in Missenyi DC on an average annual land area of 322.6 ha). Finger millet and millet were mainly planted in Karagwe DC at an average annual land area of 175.9 ha and 561.6 ha respectively. Vanilla which was planted on an average annual land area of 34.0 ha was mainly planted in Muleba DC.

3.1.4 Major Cash Crops Production



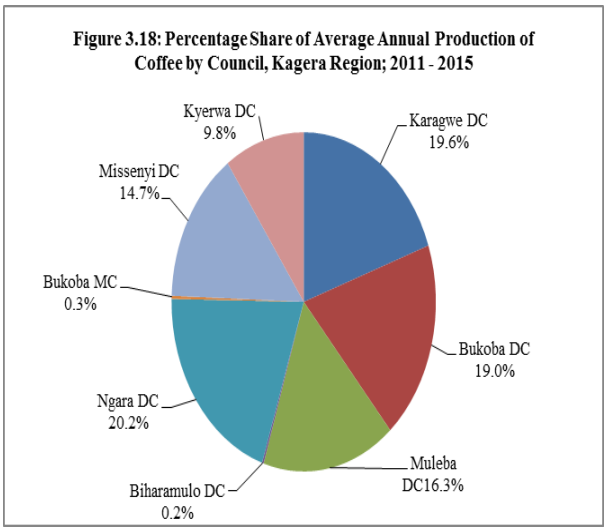
Over the 2011 - 2015 period, Kagera Region produced a total of 456,059.9 tonnes of cash crops at an average of 91,212.0 tonnes per annum. Figure 3.17 and Table 3.5 show that 68.7 percent of the region's average annual production of cash crops was from coffee. This was followed by sugarcane (25.6 percent) and tea (3.8 percent).

Table 3.5: Estimated Production in Tons of Major Cash Crops, Kagera Region; 2011 – 2015

Crop	2011	2012	2013	2014	2015	Total Production	Average Annual Production
Estimated Annual Production (Tonnes)							
Coffee	56,182.0	55,878.0	55,911.0	70,904.0	74,563.0	313,438.0	62,687.6
Tea	3,449.0	3,442.0	3,434.0	3,425.0	3,425.0	17,175.0	3,435.0
Cotton	327.4	353.1	364.6	396.9	432.2	1,874.2	374.8
Tobacco	150.7	158.6	166.9	175.7	185.0	836.9	167.4
Sugarcane	22,704.5	23,079.0	23,285.5	23,716.5	24,007.0	116,792.5	23,358.5
Fingermillet	155.5	165.0	175.0	185.0	196.5	877.0	175.4
Millet	504.0	604.0	548.0	579.0	610.0	2,845.0	569.0
Vanilla	450.2	447.2	446.1	438.4	439.4	2,221.3	444.3
Total	**83,923.3**	**84,126.9**	**84,331.1**	**99,820.5**	**103,858.1**	**456,059.9**	**91,212.0**
Percent of the Total Annual Production							
Coffee	66.9	66.4	66.3	71.0	71.8	68.7	68.7
Tea	4.1	4.1	4.1	3.4	3.3	3.8	3.8
Cotton	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Tobacco	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Sugarcane	27.1	27.4	27.6	23.8	23.1	25.6	25.6
Fingermillet	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Millet	0.6	0.7	0.6	0.6	0.6	0.6	0.6
Vanilla	0.5	0.5	0.5	0.4	0.4	0.5	0.5
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

(i) Production of Coffee



Coffee is grown by small holders in homested plots in all councils of Kagera Region and is normally intercropped with banana. Robusta is the main coffee type produced in the region.

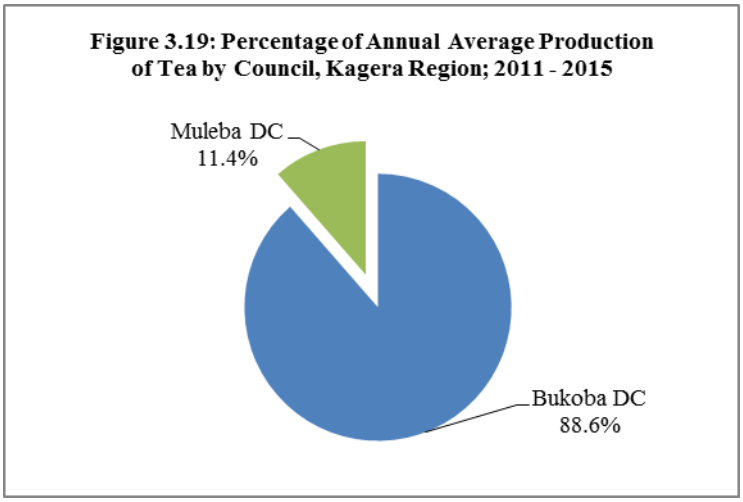
Table 3.5a shows that in the 2011 – 2015 period, a total of 313,437.7 tonnes of coffee were produced in Kagera Region at an average of 62,687.5 tonnes per year. Likewise, Table 3.5a and Figure 3.18 show that most of coffee production came from Ngara DC (12,643.3 tonnes, 20.2 percent), followed by Karagwe DC (12,294.6 tonnes, 19.6 percent), Bukoba DC (11,935.0 tonnes, 19.0 percent), Muleba DC (10,196.1 tonnes, 16.3 percent), Missenyi DC (9,190.1 tonnes, 14.7 percent), Bukoba MC (185.4 tonnes, 0.3 percent) and Biharamulo DC (122.2 tonnes, 0.2 percent).

Table 3.5a: Estimated Production in Tons of Major Cash Crops (Coffee), Kagera Region, 2011 – 2015

Council	2011	2012	2013	2014	2015	Total Production	Average Annual Production
Estimated Annual Production (Tonnes)							
Karagwe DC	11,891.00	12,114.00	12,352.00	12,410.00	12,706.00	61,473.00	12,294.6
Bukoba DC	11,934.00	11,933.00	11,959.00	11,927.00	11,922.00	59,675.00	11,935.0
Muleba DC	10,623.80	10,286.10	9,968.90	9,606.10	10,495.70	50,980.60	10,196.1
Biharamulo DC	110	115.7	121.8	128.3	135	610.8	122.2
Ngara DC	12,646.10	12,517.10	12,590.40	12,458.90	13,003.90	63,216.40	12,643.3
Bukoba MC	229	200	186	167	145	927	185.4
Missenyi DC	8,748.00	8,712.00	8,732.80	8,740.90	11,016.90	45,950.6	9,190.1
Kyerwa DC	N/A	N/A	N/A	15,465.40	15,138.90	30,604.3	6,120.9
Total	**56,181.90**	**55,877.90**	**55,910.90**	**70,903.60**	**74,563.40**	**313,437.7**	**62,687.5**
Percent of the Total Annual Production							
Karagwe DC	21.2	21.7	22.1	17.5	17	19.6	19.6
Bukoba DC	21.2	21.4	21.4	16.8	16	19	19.0
Muleba DC	18.9	18.4	17.8	13.5	14.1	16.3	16.3
Biharamulo DC	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Ngara DC	22.5	22.4	22.5	17.6	17.4	20.2	20.2
Bukoba MC	0.4	0.4	0.3	0.2	0.2	0.3	0.3
Missenyi DC	15.6	15.6	15.6	12.3	14.8	14.7	14.7
Kyerwa DC	N/A	N/A	N/A	21.8	20.3	9.8	9.8
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

(ii) Production of Tea



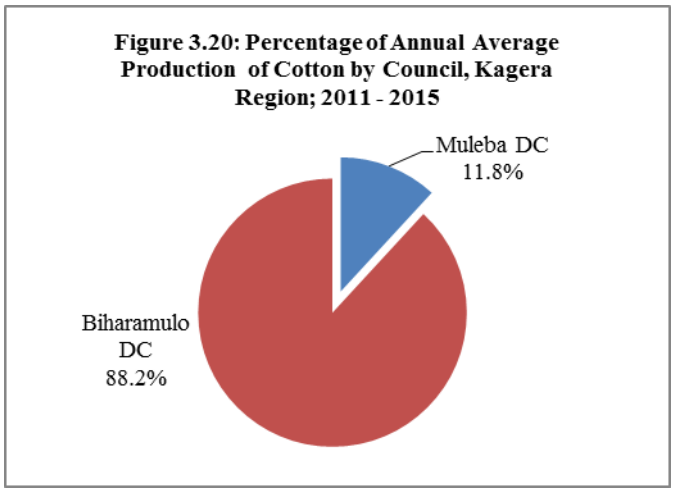
In the period 2011 – 2015, a total of 17,175 tonnes of tea was produced in Kagera Region at an average of 3,435.0 tonnes per annum (Table 3.5b). Bukoba and Muleba DCs were the only producers of tea in Kagera Region during that period. The largest average annual production was from Bukoba DC (3,042.4 tonnes, 88.6 percent), followed by Muleba DC (392.6 tonnes, 11.4 percent).

Table 3.5b: Estimated Production in Tons of Major Cash Crops (Tea), Kagera Region, 2011 – 2015

Council	2011	2012	2013	2014	2015	Total Production	Average Annual Production
Estimated Annual Production (Tonnes)							
Karagwe DC	-	-	-	-	-	-	-
Bukoba DC	3,056.0	3,050.0	3,042.0	3,032.0	3,032.0	15,212.0	3,042.4
Muleba DC	393.2	392.0	392.0	393.0	393.0	1,963.2	392.6
Biharamulo DC							
Ngara DC	-	-	-	-	-	-	-
Bukoba MC	-	-	-	-	-	-	-
Missenyi DC	-	-	-	-	-	-	-
Kyerwa DC	-	-	-	-	-	-	-
Total	**3,449.2**	**3,442.0**	**3,434.0**	**3,425.0**	**3,425.0**	**17,175.2**	**3,435.0**
Percent of the Total Annual Production							
Karagwe DC	-	-	-	-	-	-	-
Bukoba DC	88.6	88.6	88.6	88.5	88.5	88.6	88.6
Muleba DC	11.4	11.4	11.4	11.5	11.5	11.4	11.4
Biharamulo DC	-	-	-	-	-	-	-
Ngara DC	-	-	-	-	-	-	-
Bukoba MC	-	-	-	-	-	-	-
Missenyi DC	-	-	-	-	-	-	-
Kyerwa DC	-	-	-	-	-	-	-
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

(iii) Production of Cotton



Cotton was another cash crop produced in Kagera Region in the 2011 – 2015 period. Cotton was mainly produced in Muleba and Biharamulo DCs with 88.2 percent of the cotton coming from Biharamulo DC while Muleba DC produced the remaining 11.8 percent (Figure 3.20 and Table 3.5c).

Table 3.5c: Estimated Production in Tons of Major Cash Crops (Cotton), Kagera Region, 2011 – 2015

Council	2011	2012	2013	2014	2015	Total Production	Average Annual Production
Estimated Annual Production (Tons)							
Karagwe DC	-	-	-	-	-	-	-
Bukoba DC	-	-	-	-	-	-	-
Muleba DC	30.0	40.0	35.0	50.0	67.0	222.0	44.4
Biharamulo DC	297.4	313.1	329.6	346.9	365.2	1,652.20	330.4
Ngara DC	-	-	-	-	-	-	-
Bukoba MC	-	-	-	-	-	-	-
Missenyi DC	-	-	-	-	-	-	-
Kyerwa DC	-	-	-	-	-	-	-
Total	**327.4**	**353.1**	**364.6**	**396.9**	**432.2**	**1,874.2**	**374.8**
Percent of the Total Annual Production							
Karagwe DC	-	-	-	-	-	-	-
Bukoba DC	-	-	-	-	-	-	-
Muleba DC	9.2	11.3	9.6	12.6	15.5	11.8	11.8
Biharamulo DC	90.8	88.7	90.4	87.4	84.5	88.2	88.2
Ngara DC	-	-	-	-	-	-	-
Bukoba MC	-	-	-	-	-	-	-
Missenyi DC	-	-	-	-	-	-	-
Kyerwa DC	-	-	-	-	-	-	-
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

(iv) Production of Tobacco

In the 2011 – 2015 period, Kagera Region produced a total of 836.9 tonnes of tobacco at an average of 167.4 tonnes per annum. Out of eighty councils in Kagera Region, only Biharamulo DC produced tobacco

(v) Production of Sugarcane

During the five year period (2011 -2015), Kagera Region produced a total of 116,792.5 tonnes of sugarcane with an average of 23,358.5 tonnes per annum. All the sugarcane was produced in Missenyi DC.

(vi) Production of Vanilla

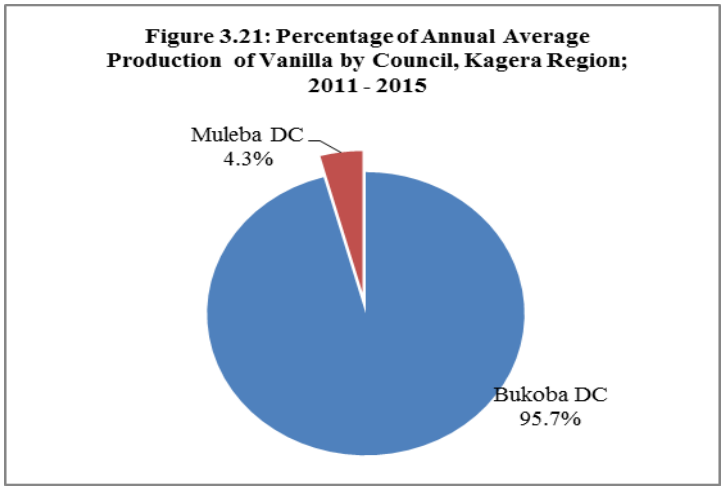


Figure 3.21 and Table 3.5d show that Bukoba and Muleba DCs were the main producers of vanilla in Kagera Region in 2011 - 2015. At council level, 95.7 percent of the total vanilla production in the Region (2,221.3 tonnes) was from Bukoba DC, followed by Muleba DC (4.3 percent).

Table 3.5d: Estimated Production in Tons of Major Cash Crops (Vanilla), Kagera Region, 2011 – 2015

Council	2011	2012	2013	2014	2015	Total Production	Annual Average Production
Estimated Annual Production (Tons)							
Karagwe DC	-	-	-	-	-	-	-
Bukoba DC	430.0	428.0	428.0	420.0	420.0	2,126.0	425.2
Muleba DC	20.2	19.2	18.1	18.4	19.4	95.3	19.1
Biharamulo DC							
Ngara DC	-	-	-	-	-	-	-
Bukoba MC	-	-	-	-	-	-	-
Missenyi DC	-	-	-	-	-	-	-
Kyerwa DC	-	-	-	-	-	-	-
Total	**450.2**	**447.2**	**446.1**	**438.4**	**439.4**	**2,221.3**	**444.3**
Percent of the Total Annual Production							
Karagwe DC	-	-	-	-	-	-	-
Bukoba DC	95.5	95.7	95.9	95.8	95.6	95.7	95.7
Muleba DC	4.5	4.3	4.1	4.2	4.4	4.3	4.3
Biharamulo DC							
Ngara DC	-	-	-	-	-	-	-
Bukoba MC	-	-	-	-	-	-	-
Missenyi DC	-	-	-	-	-	-	-
Kyerwa DC	-	-	-	-	-	-	-
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

3.1.5 Crop Marketing

According to Kagera Region Agriculture Sample Census of 2007/08, Karagwe DC including Kyerwa had the largest number of households reporting selling of crops (116,141), followed by Biharamulo DC (78,738), Ngara DC (63,879), Muleba DC (61,388), Missenyi DC (50,723) and Bukoba Rural (41,546) while Bukoba Urban/Municipal had the smallest number of households (1,035). Karagwe which includes Kyerwa had the highest percentage of crop selling households (87.39%), followed by Missenyi DC (85.69%), Biharamulo DC (77.82%), Ngara DC (66.49%), Muleba DC (65.835), Bukoba Rural (53.92%), while Bukoba Urban had the lowest percentage (23.39).

3.1.6 Irrigation

Irrigation is not common in Kagera Region although it is feasible considering the existence of Lake Victoria and numerous permanent rivers in the region. The Region also has many fertile valleys where crops can be grown under irrigation.

Table 3.6 shows that Kagera Region has a potential area for irrigation of 31,547.1 hactares. The largest suitable land for irrigation was found in Ngara DC (11,140.1 ha, 35.3 percent), followed by Muleba DC (8,795.0 ha, 27.9 percent), Missenyi Dc (8,144.0 ha, 25.8 percent), Biharamulo DC (2,035.0 ha, 6.5 percent), Karagwe DC (723.0 ha, 2.3 percent), Bukoba DC (430.0 ha, 1.4 percent) and Kyerwa DC (280.0 ha, 0.9 percent). (In 2015 the Region utilized only 16,113.0 hectares (51.1 percent of the irrigatable area). The council with the largest unutilized irrigatable land was Missenyi DC with 6,880.0 ha), followed by Ngara DC (5,360.1 ha) and Biharamulo DC (2,035.0 ha). Muleba DC had utilized 99.1 percent of its suitable land for irrigation.

Table 3.6: Distribution of Area Suitable for Irrigation and Crop Grown by Council, Kagera Region, 2015

	Irrigatable (Potential) Area		Irrigated Area		Not Irrigated Area		
Council	**Hacters**	**Percent**	**Hacters**	**Percent**	**Hacters**	**Percent**	**Major crops**
Karagwe DC	723.0	2.3	202.0	27.9	521.0	72.1	Horticultural crops, Paddv
Bukoba DC	430.0	1.4	0.0	0	430.0	100.0	Horticultural crops
Muleba DC	8,795.0	27.9	8,720.0	99.1	75.0	0.9	Paddy
Biharamulo DC	2,035.0	6.5	0.0	0	2,035.0	100.0	-
Ngara DC	11,140.1	35.3	5,780.0	51.9	5,360.1	48.1	Maize, horticultural crops
Bukoba MC	0.0	0	0.0	0	0.0	0.0	-
Missenyi DC	8,144.0	25.8	1,264.0	15.5	6,880.0	84.5	Maize, horticultural crops and sugar cane
Kyerwa DC	280.0	0.9	147.0	52.5	133.0	47.5	Horticultural crops
Total	**31,547.10**	**100**	**16,113.00**	**51.1**	**15,434.10**	**48.9**	

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

3.1.7 Farm Inputs

3.1.7.1 Introduction

Increased yields require use of improved seeds and adequate fertilizers, fungicides, insecticides and other inputs.

3.1.7.2 Improved Seeds

Use of improved seeds is important for increasing agricultural productivity (output per unit of land). Table 3.7 presents different types of improved seeds distributed to farmers in the 2015 crop season in Kagera Region. A total of 6,867,292.0 kilograms of various types of improved seeds were distributed to farmers in Kagera Region in 2015. Improved seeds for sweet potatoes accounted for71.8 percent of all improved seeds in the Region. This was followed by far with improved seeds for maize (26.9 percent) and beans (0.7 percent). Improved seeds for horticultural cropsspecifically tomato and cabbage were the least distributed.

Table 3.7: Type and Quantity of Improved Seeds (in Kgs) Distributed to Farmers; Kagera Region; 2015

Council	Type and Quantity of Improved Seeds (in Kgs)								Total	Percent
	Maize	Beans	Tomato	Gabbage	Sweet potatoes	Cotton	Banana	Coffee		
Karagwe DC	1,471,760	4,740	9.9	8.6	-	-	-	-	1,476,518.5	21.5
Bukoba DC	55,430	22563	-	-	1611		-	6000	85,604	1.2
Muleba DC	6,600	2,728	-	-	2,728	8,000	-	-	20,056	0.3
Biharamulo DC	46,000	-	-	-	-	-	-	-	46,000	0.7
Ngara DC	21,575	-	-	-	-	-	-	-	21,575	0.3
Bukoba MC	31630	20,250	-	-	4,926,071	-	16,577	7880	5,002,408	72.8
Missenyi DC	300	-	-	-	-	-	-	-	300	0.0
Kyerwa DC	214,830	-	-	-	-	-	-	-	214,830	3.1
Regional Total	**1,848,125**	**50,281**	**9.9**	**8.6**	**4,930,410**	**8,000**	**16,577**	**13880**	**6,867,292**	**100**
Percent	**26.9**	**0.7**	**0.0**	**0.0**	**71.8**	**0.1**	**0.2**	**0.2**	**100**	

Source: Kagera Region, Compiled Data from Councils (Agriculture Departments), 2017.

3.1.7.3 Chemical Fertilizers

Table 3.8 shows various types of fertilizers distributed to farmers in Kagera Region during the 2015 crop season. Table 3.8 shows that in 2015 a total of 42,526,554 kilograms of fertilizers were distributed to farmers in the Region The largest quantity of fertilizers was distributed to farmers in Muleba DC (30,232,500.0 kgs,71.1 percent), while the smallest quantity of fertilizers was distributed to farmers in Missenyi DC (3,997 kgs). The most distributed and applied fertilizer in crops production in Kagera Region was CAN accounting for 72.5 percent of the total quantity of fertilizers distributed to farmers in the Region. Other types of fertilizers mostly distributed to

farmers in the region include UREA (14.4 percent), DAP (12.3 percent), MINJINGU (0.6 percent) and NPK (0.1 percent).

Table 3.8: Quantity of Fertilizers (kilograms) Distributed to Farmers by Council and Type, Kagera Region, 2015

Council	UREA	N.P.K	MINJINGU	DAP	CAN	TSP	Basal fertilizers	Nitrogenous fertilizers	Total (Kgs)	
Karagwe DC	5,589,700	6,900	210,560	4,662,800	759,000	-	-	-	11,228,960	26.4
Bukoba DC	1,621	67	59	27	1,404	88	1,621	67	4,954	0.0
Muleba DC	75,000	9,000	-	145,000	30,000,000	3,500	-	-	30,232,500	71.1
Biharamulo DC	-	-	-	-	-	-	19,000	14,000	33,000	0.1
Ngara DC	106,203	400	57,200	46,750	53,115	-	-	-	263,668	0.6
Bukoba MC	2,000	17,100		10,900	14,750	1725			46,475	0.1
Missenyi DC	520	-	-	2,000	1,477	-	-	-	3,997	0.0
Kyerwa DC	356,500	-	-	356,500	-	-	-	-	713,000	1.7
Total	**6,131,544**	**33,467**	**267,819**	**5,223,977**	**30,829,746**	**5,313**	**20,621**	**14,067**	**42,526,554**	**100.0**
Percent	**14.4**	**0.1**	**0.6**	**12.3**	**72.5**	**0.0**	**0.0**	**0.0**	**100**	

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

3.1.7.4 Fungicides

Table 3.9 shows the distribution of different types of fungicides in Kagera Region in 2015. Out of 12 different types of fungicides applied by farmes in Kagera Region, Victory (16,000 kg) and Blue Copper (1,000 kg and 7,033 litres)were the most distributed fungicides, while Grider was the least distributed fungicide (212 litres) in 2015.

Table 3.9: Quantity (litres/kgs)of Fungicides Distributed to Farmers, by Council and Type of Fungicide, Kagera Region, 2015

Council	Mupacron	Blue copper	Tankopa 50 WP	Dithein	Xantho	Ridomil	Victory	Mancozeb	Farmzeb	Bravo	Grider	Linkonil
Karagwe DC	570	520	105	70	90	65	0	0	0	0	0	0
Bukoba DC	0	0	0	0	0	0	0	0	0	0	0	0
Muleba DC	0	1,000*	0	0	0	0	16,000*	0	10,000*	600	0	300
Biharamulo DC	0	4,692	0	0	0	0	0	0	0	0	0	0
Ngara DC	0	0	0	0	0	0	0	0	0	0	0	0
Bukoba MC	0	0	0	0	0	0	282	266	241	191	212	0
Missenyi DC	0	0	0	0	0	0	0	0	0	0	0	0
Kyerwa DC	0	1,821	0	0	0	0	0	0	0	0	0	0
Total: Litres	**570**	**7,033**					**282**	**266**	**241**	**791**	**212**	**300**
Total: Kilogram		**1,000**	**105**	**70**	**90**	**65**	**16,000**		**10,000**			

*** Kilogram**

Source: Kagera Region, Compiled Data from Councils (Agriculture Departments), 2017

3.1.7.5 Insecticides/Pesticides

Table 3.10 shows types and quantity of insecticides/pesticides distributed to farmers in Kagera Region in 2015. Of the listed insecticides/pesticides, the most distributed insecticides/pesticides was Organophosphorus (18,503 litres), followed by farmguard (7,951 litres) and Malathion (4,870 litres). Table 3.10 further shows that 47.0 percent of all the distributed insecticides/pesticides were distributed to farmers in Biharamulo DC, followed by those distributed to farmers in Muleba DC (22.0 percent) and Kyerwa DC (18.0 percent).

Table 3.10: Quantity (litres) of Insecticides/Pesticides Distributed to Farmers, by Council and Type of Insecticides/Pesticides, Kagera Region, 2015

Council	Novathion	Thionex	Goldquat 24%SI	Suracron 720 EC.	Suraban 480 EC.	Duduthrin	Farmguard	Ninja	Vitasheld	Actelic	Organophosphorus	Malathion	Selecron	Supercron	Sumuthion	Alphacypermethrin	Mukpar-Dimethoate	Total	
																		Litres	Percent
Karagwe DC	130	206	98	51	10	115	0	0	0	0	0	0	0	0	0	0	0	610	1.7
Bukoba DC	0	0	0	1,794	0	0	451	0	114	0	1455	0	0	0	0	0	0	3,814	10.5
Muleba DC	0	0	0	0	0	0	7,500	170	170	100*	0	0	0	0	0	0	0	7,840	21.6
Biharamulo DC	0	0	0	0	0	0	0	0	0	0	17,048	0	0	0	0	0	0	17,048	46.9
Ngara DC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bukoba MC	0	0	0	0	0	0	0	0	0	0	0	92	133	110	72	91	64	562	1.5
Missenyi DC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kyerwa DC		1,685	0	0	0	0	0	0	0	0	0	4,778	0	0	0	0	0	6,463	17.7
Total	**130**	**1,891**	**98**	**1845**	**10**	**115**	**7,951**	**170**	**284**	**0**	**18,503**	**4,870**	**133**	**110**	**72**	**91**	**64**	**36,337**	**100.0**

*** Kilogram**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

3.1.8 Agricultural Implements

Modern agricultural implements are necessary in terms of time saving, reducing muscular work as well as improving crop production as far as the size of cultivated land is concerned. Besides a hand hoe being a predominant means of cultivation in the Region, some efforts to introduce mechanized farming has been done through the use of modern farming implements. Table 3.11 presents farming implements which were available in the Region in 2015. Missenyi DC had the largest number of tractors (33) while Ngara DC and Bukoba MC had no tractors.

Table 3.11: Availability of Agriculture Implements by Council, Kagera Region, 2015

Council	Tractor	Power tiller	Ox plough	Oxcart	Ox chain	Ox shares	Ox-harrow	Ox-bridge	Ox-cultivator	Planter	Ox-ridger
Karagwe DC	7	2	3	2	3	3	2		0	0	0
Bukoba DC	4	0	0	0	0	0	0	0	0	0	0
Muleba DC	6	18	448	0	448	0	0	0	100	0	0
Biharamulo DC	8	15	706	174	0	0	0	0	0	0	0
Ngara DC	0	1	0	0	0	0	0	0	0	0	0
Bukoba MC	0	1	0	0	0	0	0	0	0	0	0
Missenyi DC	33	9	0	0	0	0	0	0	0	0	0
Kyerwa DC	2	0	0	0	0	0	0	0	0	0	0
Total	**60**	**46**	**1157**	**176**	**451**	**3**	**2**	**0**	**100**	**0**	**0**

Source: Kagera Region, Compiled data from Councils (Agriculture Departments), 2017

3.1.9 Policy Implications in Agriculture Sector

Favourable climate supported with optimum use of improved seeds and other inputs will contribute positively to the better performance of the agriculture sector in the Region in terms of food and cash crop production. Better performance in agricultural production will eventually transilate into improving the livelihood of peasant farmers in the Region. Banana and beans, which have a dual purpose as both food and cash crops, are potential crops which can be used to alleviate income poverty of the majority of peasant farmers in the Region if reliable markets can be found. Moreover, the current Government's initiative to strengthen co-operative unions will also help in securing reliable markets for crops.

3.1.10 Investment Opportunities in Agriculture Sector

Kagera Region has a range of potential areas for agriculture investment. The idea to invest in agriculture sector in the region is viable due to the following facts:-

- Ecology and climate of the region favours production of a wide range of both cash and food crops
- Availability of fertile arable land,
- Irrigation potential using waters from River Kagera and Lake Victoria basin offers opportunity for development and use of existing irrigation facilities,
- Available workforce as well as training institutions,
- Transport links with other regions and proximity to neighbouring countries of Uganda, Kenya, Burundi, Rwanda and Democratic Republic of Congo. These countries as well as other regions connected with tarmac roads to Kagera region are ideal for movements of goods and people,

Investment areas include supply of agriculture inputs such as fertilizers, insecticides and improved seeds; supply of farm implements such as power tillers, tractors, ploughs and ox-cats; agro-processing and packaging industries especially for tea. Coffee is another area for investment in the agriculture sector in the Region.

3.2 Livestock

Kagera Region has a significant number of livestock mostly owned by individual households. Livestock keeping is the second most important economic activity after crop production in Kagera Region.

Table 3.12 presents the number and percentage of livestock by region and type in Tanzania Mainland. It shows that in 2012 Kagera Region had the following percentage of total livestock and ranks: cattle (3.5 percent, ranked 12th), goat (4.9 percent, ranked 9th), sheep (1.7 percent, ranked 14th) and poultry (3.3 percent, ranked 16th).

Table 3.12: Number and Percentage of Livestock Population by Type and Region, Tanzania Mainland, 2012 Population Housing Census

Region	Cattle	Percent	Rank	Goats	Percent	Rank	Sheep	Percent	Rank	Poultry	Percent	Rank
Dodoma	1,504,632	6.30	6	1,025,756	6.9	3	258,011	5.9	7	1,549,452	4.3	11
Arusha	1,605,735	6.70	4	1,884,783	12.6	1	842,453	19.2	1	1,094,205	3.1	21
Kilimanjaro	654,468	2.70	16	693,824	4.7	10	246,210	5.6	8	1,640,672	4.6	8
Tanga	772,600	3.20	14	816,588	5.5	7	223,149	5.1	9	1,765,218	4.9	6
Morogoro	881,766	3.70	11	489,060	3.3	14	128,360	2.9	12	2,077,975	5.8	3
Pwani	535,289	2.20	18	191,472	1.3	21	43,395	1	17	1,271,132	3.6	14
Dar es Salaam	272,937	1.10	22	160,367	1.1	23	17,043	0.4	23	1,957,649	5.5	4
Lindi	264,163	1.10	24	98,328	0.7	25	6,968	0.2	25	1,125,695	3.2	19
Mtwara	167,200	0.70	25	226,077	1.5	19	15,886	0.4	24	1,134,864	3.2	17
Ruvuma	465,058	1.90	20	315,626	2.1	17	25,828	0.6	20	1,456,422	4.1	12
Iringa	664,272	2.80	15	201,648	1.4	20	43,147	1	18	1,131,241	3.2	18
Mbeya	1,452,698	6.10	7	557,030	3.7	13	76,967	1.8	13	2,452,569	6.9	2
Singida	1,371,975	5.70	8	829,155	5.6	6	292,579	6.7	5	1,387,484	3.9	13
Tabora	2,227,637	9.30	1	953,991	6.4	4	269,456	6.1	6	2,477,071	6.9	1
Rukwa	640,014	2.70	17	233,399	1.6	18	35,488	0.8	19	747,384	2.1	24
Kigoma	506,929	2.10	19	361,526	2.4	16	53,137	1.2	15	796,001	2.2	23
Shinyanga	1,299,261	5.40	10	620,795	4.2	11	196,998	4.5	10	1,634,373	4.6	9
Kagera	**845,449**	**3.50**	**12**	**730,300**	**4.9**	**9**	**75,478**	**1.7**	**14**	**1,172,304**	**3.3**	**16**
Mwanza	1,333,569	5.60	9	574,942	3.9	12	129,678	3	11	1,829,259	5.1	5
Mara	1,651,355	6.90	3	757,428	5.1	8	342,892	7.8	4	1,612,672	4.5	10
Manyara	1,807,094	7.50	2	1,542,414	10.3	2	581,246	13.2	2	1,103,236	3.1	20
Njombe	267,681	1.10	23	113,681	0.8	24	21,747	0.5	22	851,730	2.4	22
Katavi	363,036	1.50	21	177,808	1.2	22	25,703	0.6	21	550,571	1.5	25
Simiyu	1,595,889	6.70	5	929,895	6.2	5	389,366	8.9	3	1,673,455	4.7	7
Geita	817,195	3.40	13	427,622	2.9	15	47,692	1.1	16	1,183,162	3.3	15
Tanzania Mainland	**23,967,902**	**100.00**		**14,913,515**	**100**		**4,388,877**	**100**		**35,675,796**	**100**	

Source: NBS, Basic Demographic and Socio- Economic Profile, 2012 Population and Housing Census, Volume III D, 2014

Comparison between the 2007/2008 National Sample Census of Agriculture and the 2012 Population and Housing Census show that the cattle population in Kagera Region increased by 1.0 percent from 837,204 cattle in 2007/2008 to 845,449 in 2012. On the other hand, the number of goats, sheep and poultry decreased by 10.5, 1.6 and 12.9 percent respectively Table 3.12a.

Table 3.12a: Livestock Population 2007/2008 and 2012, Kagera Region

Type of Livstock	2007/2008 Agriculture Census	2012 Population Census	Change in Livestock Population	Percent change
Cattle	837,204	845,449	8,245	1
Goats	816,260	730,300	-85,960	-10.5
Sheep	76,713	75,478	-1,235	-1.6
Poultry	1,346,650	1,172,304	-174,346	-12.9

Source: NBS, Kagera Regional Agriculture Sample Census Report, 2008 and 2012 Population Housing Census Report

The estimated number of livestock in Kagera Region for the year 2015 was 575,926 cattle, 541,156 goats, 56,575 sheep, 108 donkeys, 61,257 pigs, 788,026 indigenous chickens and 26,497 improved chicken (broilers and layers). At council level, Muleba DC had the largest number of cattle population (110,600. 19.2 percent), followed by Biharamulo (100,981, 17.5 percent). In regard to goats, Ngara DC had the largest number (134,118, 24.8 percent) and indigenous chicken (217,868, 27.6 percent). The table further shows that Muleba DC had the largest number of sheep (23,702, 41.9 percent) while pigs were mostly found in Kyerwa DC (13,924, 22.7 percent). On the other hand, Bukoba MC had the largest number of improved chicken (broilers and layers) of 12,312 (46.5 percent of the Region's total improved chicken of 26,497).

Table 3.12b: Estimated Livestock Population by Council, Kagera Region, 2015

Council	Cattle	Percent	Goats	Percent	Sheep	Percent	Donkeys	Percent	Pigs	Percent	Indigenous chicken	Percent	Chicken (Broilers& Layers)	Percent
Karagwe DC	87,610	15.2	94,475	17.5	4,780	8.4	0	0.0	7,927	12.9	103,725	13.2	2971	11.2
Bukoba DC	34,287	6.0	38,064	7.0	3,255	5.8	0	0.0	6,128	10.0	105,590	13.4	2,865	10.8
Muleba DC	110,600	19.2	101,289	18.7	23,702	41.9	0	0.0	10,206	16.7	133,251	16.9	0	0
Biharamulo DC	100,981	17.5	49,470	9.1	4,742	8.4	108	100.0	1,865	3.1	80,670	10.2	5,807	21.9
Ngara DC	75,915	13.2	134,118	24.8	7,984	14.1	0	0.0	13,243	21.6	217,868	27.6	438	1.65
Bukoba MC	2,132	0.4	1,454	0.3	261	0.5	0	0.0	1,069	1.7	13,321	1.7	12,312	46.5
Missenyi DC	88,474	15.4	49,118	9.1	3,459	6.1	0	0.0	6,895	11.3	60,066	7.6	2,104	7.9
Kyerwa DC	75,927	13.2	73,168	13.5	8,392	14.8	0	0.0	13,924	22.7	73,535	9.3	0	0
Total	**575,926**	**100.0**	**541,156**	**100.0**	**56,575**	**100.0**	**108**	**100.0**	**61,257**	**100.0**	**788,026**	**100.0**	**26,497**	**100.0**

Source: Kagera Region, Compiled data from Councils (Livestock Departments), 2017

(i) Cattle

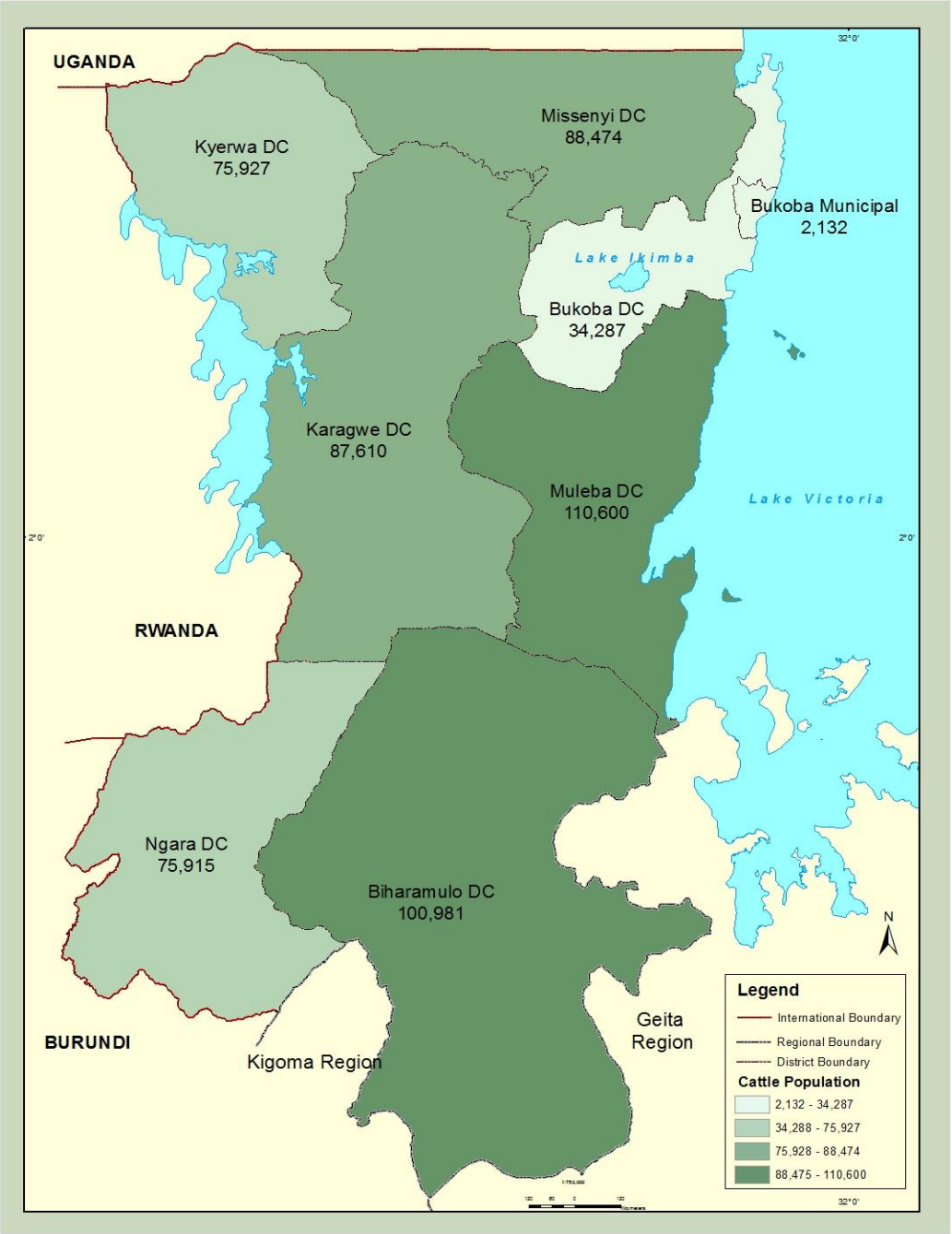
Table 3.12c shows that indigenous cattle were the dominant cattle type in Kagera Region. In 2015, they accounted for 95.7 percent of the region's total cattle population of 575,926. This was followed by dairy cattle (16,999, 3.0 percent) and beef cattle (7,612, 1.3 percent). At council level, Muleba DC led other councils in cattle population accounting for 19.2 percent of the region's total cattle population. Bukoba MC had the smallest cattle population (2,132) equivalent to 0.4 percent of the region's total cattle population. Likewise, Map 5 shows population of cattle by council in the region in 2015.

Table 3.12c: Number and Percentage of Cattle by Type and Council, Kagera Region, 2015

Council	Indigenous Cattle	Percent of Indigeneous Cattle	Dairy Cattle	Percent of Dairy Cattle	Beef Cattle	Percent of Beef Cattle	Region Total	Percent of Region
Karagwe DC	84,600	15.3	3,010	17.7	0	0	87,610	15.2
Bukoba DC	32,349	5.9	1,938	11.4	0	0	34,287	6.0
Muleba DC	105,788	19.2	4,812	28.3	0	0	110,600	19.2
Biharamulo DC	100,736	18.3	245	1.4	0	0	100,981	17.5
Ngara DC	68,658	12.5	2,252	13.2	5,005	65.8	75,915	13.2
Bukoba MC	583	0.1	1,549	9.1	0	0.0	2,132	0.4
Missenyi DC	84,367	15.3	1,500	8.8	2,607	34.2	88,474	15.4
Kyerwa DC	74,234	13.5	1,693	10.0	0	0.0	75,927	13.2
Total	**551,315**	**100.0**	**16,999**	**100.0**	**7,612**	**100.0**	**575,926**	**100.0**
Percent	**95.7**		**3.0**		**1.3**		**100.0**	

Source: Kagera Region, Compiled data from Councils (Livestock Departments), 2017

Map 5: Map of Kagera Region showing Population of Cattle by Council, 2015



Source: NBS, Cartographic Unit, Dsm, 2017

(ii) Goats

Table 3.12d show that indigenous goats were the dominant goat type in the Region and accounted for 97.9 percent of the region's total goats population of 541,156 while dairy goats accounted for only 2.1 percent of the regional total goats population. Almost a quarter (24.8 percent) of goats population in the Region were in Ngara DC, followed by Muleba DC (109,289, 18.7 percent),

Karagwe DC (94,475, 17.5 percent) and Kyerwa DC (73,168, 13.5 percent). Bukoba MC had the smallest number of goats (1,454, 0.3 percent of the region's total goats population).

Table 3.12d: Number and Percentage of Goats by Type and Council, Kagera Region, 2015

Council	Indigenous Goats	Percent	Dairy Goats	Percent	Regional Total	Percent of Region
Karagwe DC	94,109	17.8	366	3.3	94,475	17.5
Bukoba DC	35,863	6.8	2201	19.6	38,064	7.0
Muleba DC	95,409	18.0	5880	52.3	101,289	18.7
Biharamulo DC	49,470	9.3	0	0.0	49,470	9.1
Ngara DC	133,881	25.3	237	2.1	134,118	24.8
Bukoba MC	1,216	0.2	238	2.1	1,454	0.3
Missenyi DC	46,826	8.8	2,292	20.4	49,118	9.1
Kyerwa DC	73,142	13.8	26	0.2	73,168	13.5
Total	**529,916**	**100.0**	**11,240**	**100.0**	**541,156**	**100**
Percent	**97.9**		**2.1**		**100.0**	

Source: Kagera Region, Compiled data from Councils (Livestock Departments), 2017

(iii) Pigs

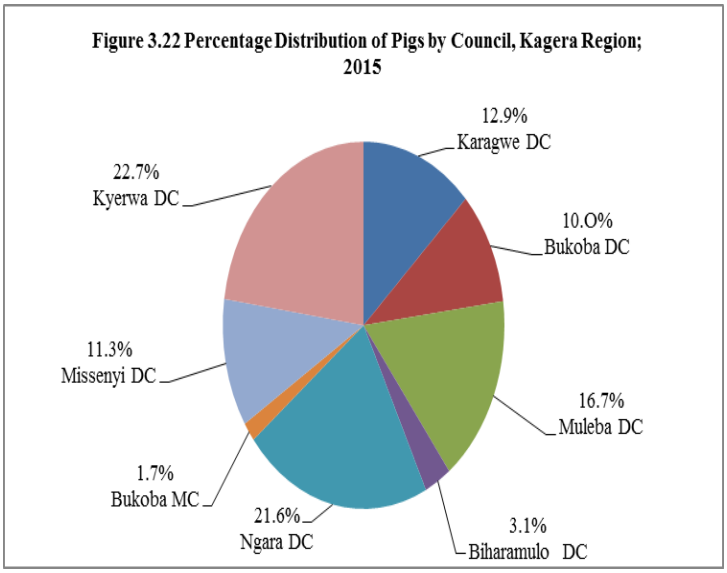
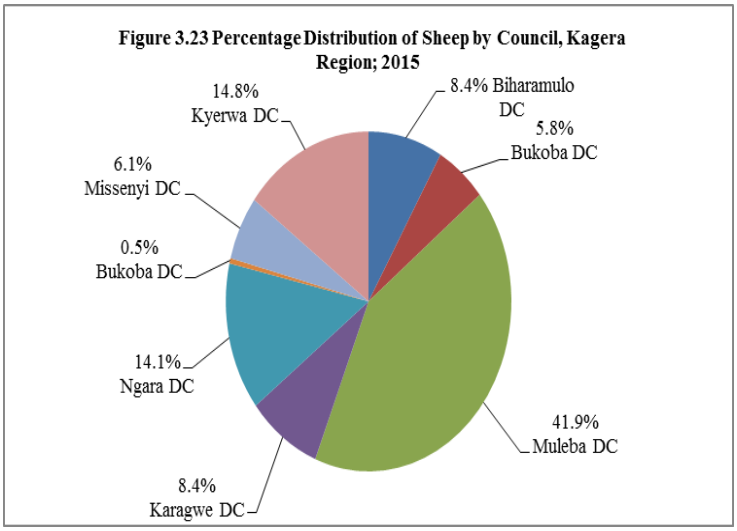


Table 3.12b shows that in 2015 in Kagera Region, pigs with a population of 61,257 were the third largest livestock in number. Kyerwa DC had the largest pig population of 13,924 (22.7 percent), followed by Ngara DC (13,243, 21.6 percent). Bukoba MC had the smallest number of pigs (1,069, 1.7 percent of the regional total pigs population) (Figure 3.22).

(iv) Sheep



Sheep rearing in Kagera Region is not common and ranked fourth in terms of population (Table 3.12b). In 2015 the Region had a total of 56,575 sheep. Most of them were in Muleba DC (23,702 sheep, 41.9 percent). Bukoba MC had the smallest number of sheep (261, 0.5 percent of the regional total sheep population) (Figure 3.23).

(v) Poultry

Table 3.13 shows that in 2015 the estimated poultry population in Kagera Region was dominated by indigenous chicken (788,026) which accounted for 96.7 percent of the regional total poultry population of 814,523. The table further shows that Bukoba MC led other councils in the Region in number of improved chicken (12,312, 46.5 percent of the total improved chicken in the Region).

Table 3.13: Estimated Poultry Population by Type and Council, Kagera Region, 2015

	Indigenous Chicken		Improved Chicken (Broilers& Layers)		Total	
Council	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Karagwe DC	103,725	13.2	2,971	11.2	106,696	13.1
Bukoba DC	105,590	13.4	2,865	10.8	108,455	13.3
Muleba DC	133,251	16.9	0	0.0	133,251	16.4
Biharamulo DC	80,670	10.2	5,807	21.9	86,477	10.6
Ngara DC	217,868	27.6	438	1.7	218,306	26.8
Bukoba MC	13,321	1.7	12,312	46.5	25,633	3.1
Missenyi DC	60,066	7.6	2,104	7.9	62,170	7.6
Kyerwa DC	73,535	9.3	0	0.0	73,535	9.0
Total	**788,026**	**100.0**	**26,497**	**100**	**814,523**	**100.0**
Percent	**96.7**		**3.3**		**100**	

Source: Kagera Region, Compiled data from Councils (Livestock Departments), 2017

In terms of percentage distribution of chicken population by type, Figure 3.24 and 3.24a shows that more than a quarter (27.6 percent) of the indigenous chicken population in Kagera Region were in Ngara DC while Bukoba MC had 1.7 percent. For improved chicken, nearly half of them (46.5 percent) were in Bukoba MC. Muleba and Kyerwa DCs did not have improved chicken.

Figure 3.24 and 3.24a: Percentage Distribution of Chicken Population by Type and Council; Kagera Region; 2015

Figure 3.24 Percentage Distribution of Indigenous Chicken Population by Council, Kagera Region; 2015

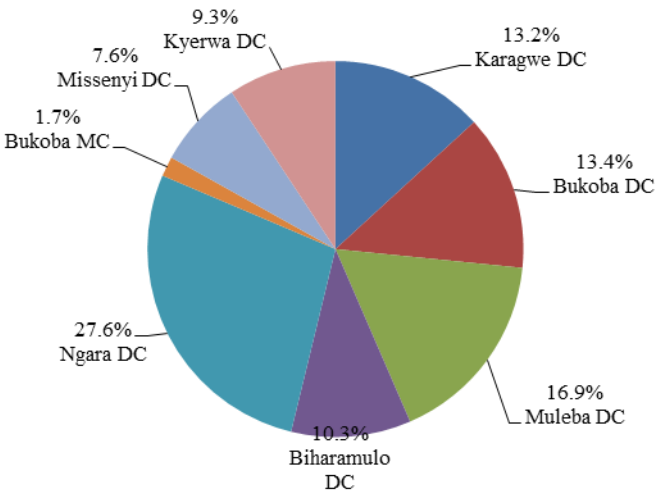
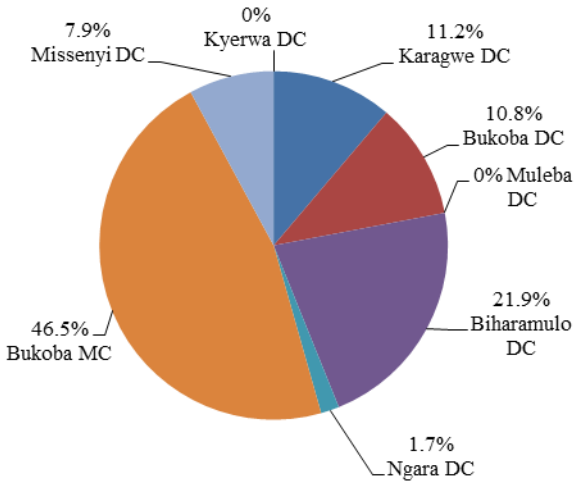


Figure 3.24a Percentage Distribution of Broilers and Layers Chicken Population by Council, Kagera Region; 2015



Source: Kagera Region, Compiled data from Councils (Livestock Departments), 2017

3.2.1 Grazing Area

Grazing land is defined as the land that is available for the grazing needs of livestock. It excludes all tsetse fly areas, wildlife and forest reserves and tree plantations, but it includes game controlled areas. Table 3.14 shows that in 2015 the estimated land for grazing in Kagera Region was 355,961 ha while the land actually used for grazing was 339,428 ha (95.4 percent). As most of the councils had used more than ninety percent of their grazing land, this implies existence of land pressure for grazing. Land used annually for crop production can also be used for grazing after crop harvests.

Table 3.14: Estimated Land Area for Grazing by Council, Kagera Region, 2015

Council	Land Fit for Grazing (Ha)	Land Used for Grazing (Ha)	
		Hacters	Percent
Karagwe DC	171,721.0	162,502.0	94.6
Bukoba DC	-	-	-
Muleba DC	31,927.2	31,927.2	100.0
Biharamulo DC	-	-	-
Ngara DC	17,282.9	16,217.0	93.8
Bukoba MC	-	-	-
Missenyi DC	96,500.0	90,252.0	93.5
Kyerwa DC	38,530.0	38,530.0	100.0
Total	**355,961.1**	**339,428.2**	**95.4**

Source: Kagera Region, Compiled data from Councils (Livestock Departments), 2017

3.2.2 Livestock Infrastructure

Livestock quality improvement is limited by access to preventive and curative facilities capable of controlling or preventing livestock morbidities and mortalities. Diseases affect animal health and reduce quantity and quality of both meat and milk. Diseases are prevented by availability of livestock infrastructure including dips and vertenaries centres together with medicines, while crushes, abattoirs, hides and skin sheds, slaughter slabs, livestock market or auctions and accessibility of water improve the quality of livestock products.

Table 3.15 shows out of 124 dips available in the Region in 2015, 55 dips (44.4 percent) were working and 69 dips (55.6 percent) were not working. However, out of 15 veterinary centres available in the Region in 2015, 13 veterinary centres (86.7 percent) were working. Muleba DC had the largest number of working dips (21) and veterinary centres (7) respectively. With not even a single working dip, Kyerwa DC had 16 dips but all of them were not working while Biharamulo and Missenyi DCs had critical shortage of veterinary centres.

Table 3.15: Number and Percentage of Livestock Infrastructure by Council, Kagera Region, 2015

Council	Dips				Veterinary Centres			
	Working	Not Working	Total	Percent	Working	Not Working	Total	Percent
Karagwe DC	4	15	19	15.3	0	0	0	0
Bukoba DC	18	7	25	20.2	0	0	0	0
Muleba DC	21	7	28	22.6	7	0	7	46.7
Biharamulo DC	1	4	5	4.0	-	-	-	-
Ngara DC	9	14	23	18.5	5	2	7	46.7
Bukoba MC	-	-	-	-	1	0	1	6.7
Missenyi DC	2	6	8	6.5	-	-	-	-
Kyerwa DC	0	16	16	12.9	0	0	0	0
Total	**55**	**69**	**124**	**100.0**	**13**	**2**	**15**	**100.0**
Percent	**44.4**	**55.6**	**100.0**		**86.7**	**13.3**	**100.0**	

Source: Kagera Region, Compiled data from Councils (Livestock Departments), 2017

The quality of livestock products such as meat, milk, hide and skins and other related products mostly depend on availability, status and quality of infrastructure such as crushes, abattoirs, hide and skin sheds, slaughter slabs, livestock market or auctions and accessibility of water. Table 3.15a shows that in 2015, the Region had 69 crushes, 11 hide and skin sheds, 4 abattoirs, 40 slaughter slabs, 18 livestock markets/auctions and 28 charco dams.

Table 3.15a: Number of Livestock Infrastructure by Council, Kagera Region, 2015

Council	Crushes	Hides/Skin Sheds	Abattoirs	Slaughter Slabs	Livestock Markets/ Auctions	Charco Dams
Karagwe DC	2	5	2	10	2	2
Bukoba DC	3	0	0	0	1	2
Muleba DC	19	2	-	3	3	3
Biharamulo DC	8	2	-	9	3	8
Ngara DC	27	0	0	9	3	0
Bukoba MC	-	1	1	-	-	-
Missenyi DC	2	1	1	1	4	13
Kyerwa DC	8	0	0	8	2	0
Total	**69**	**11**	**4**	**40**	**18**	**28**

Source: Kagera Region, Compiled data from Councils (Livestock Departments), 2017

3.2.2.1 Causes of Livestock Morbidity and Mortality

Diseases, among other reasons, were the main causes of livestock morbidity and mortality in Kagera Region. Data provided by livestock officers in the region show different types of diseases which are the sources of morbidity and mortality for domestic livestock available in the region.

(i) Causes of Cattle Morbidity

Morbidity

Table 3.16 shows that five diseases which were the main source of cattle illnesses in Kagera Region in 2013 and 2015. East coast fever (44.9 percent) and Babesiosis (54.6 percent) were the leading diseases for cattle morbidity in 2013 and 2015. Likewise, in both years Heart water caused illness to the least number of cattle.

Table 3.16: Five Common Cattle Diseases Causes Morbidity, Kagera Region; 2013 and 2015

Disease	2013		Disease	2015	
	No. of Cases	Percent		No. of Cases	Percent
Helminthiasis	1367	16.3	Helminthiasis	1235	8.8
East Coast Fever	3,754	44.9	East Coast Fever	2,789	19.8
Babesiosis	833	10.0	Babesiosis	7,702	54.6
Heart water	4	0.0	Heart water	104	0.7
Anaplasmosis	2,409	28.8	Anaplasmosis	2276	16.1
Total	**8,367**	**100**		**14,106**	**100**

Source: Kagera Region, Compiled Data from Councils (Livestock Departments), 2017

Mortality

About half (50.1 percent) of the reported mortality cases for cattle in 2013 was caused by East coast fever (Table 3.16a). It was followed by Anaplasmosis disease (42.0 percent). In 2015, Babesiosis disease was the main source of cattle deaths (44.7 percent) followed by East coast fever (40.1 percent).

Table 3.16a: Five Common Cattle Diseases Causes Mortality, Kagera Region; 2013 and 2015

Disease	2013		Disease	2015	
	No. of Cases	Percent		No. of Cases	Percent
Helminthiasis	15	1.6	Helminthiasis	16	0.9
East Coast Fever	477	50.1	East Coast Fever	746	40.1
Babesiosis	34	3.6	Babesiosis	832	44.7
Heart water	26	2.7	Heart water	9	0.5
Anaplasmosis	400	42.0	Anaplasmosis	258	13.9
Total	**952**	**100**		**1,861**	**100**

Source: Kagera Region, Compiled Data from Councils (Livestock Departments), 2017

(ii) Causes of Goats Morbidity and Mortality

Morbidity

Table 3.17 shows three common which were the sources of goats illnesses in Kagera Region. The region recorded 24,623 morbidity cases of goats in 2013 which increased to 28,029 in 2015. In both years, skin mange was the main source of illness for goats while diarrhea caused illness to the least number of goats.

Table 3.17: Three Common Goat Diseases Causes Morbidity, Kagera Region; 2013 and 2015

Disease	2013		Disease	2015	
	No. of Cases	Percent		No. of Cases	Percent
Worms	10,956	44.5	Worms	12,606	45.0
Diarrhoea	1,589	6.5	Diarrhoea	1479	5.3
Skin mange	12,078	49.1	Skin mange	13,944	49.7
Total	**24,623**	**100**		**28,029**	**100**

Source: Kagera Region, Compiled Data from Councils (Livestock Departments), 2017

Mortality

Table 3.17a shows three common which were the sources of goats' deaths in Kagera Region. The region recorded 2,494 mortality cases of goats in 2013 and 2,556 cases in 2015. More than half (61.5 percent) of the reported mortality cases for goats in 2013 were due to worms. The same diseases were also the main source of goats' deaths in 2015.

Table 3.17a: Three Common Goat Diseases Causes Morbidity, Kagera Region; 2013 and 2015

Disease	2013		Disease	2015	
	No. of Cases	Percent		No. of Cases	Percent
Worms	1534	61.5	Worms	1279	50.0
Salmonellosis	31	1.2	Pneumonia	865	33.8
Pneumonia	929	37.2	CPPP	412	16.1
Total	**2,494**	100.0		**2,556**	**100**

Source: Kagera Region, Compiled Data from Councils (Livestock Departments), 2017

(iii) Causes of Poultry Morbidity and Mortality

Morbidity

As Table 3.18 shows, four diseases were the main sources of poultry illnesses. Of the reported cases of 207,470, new castle (63.1 percent) were the leading source of poultry morbidity in 2013. The same disease, New castle was also the main source of poultry illness in 2015.

Table 3.18: Four Common Poultry Diseases Causes Morbidity, Kagera Region; 2013 and 2015

Disease	2013		Disease	2015	
	No. of Cases	Percent		No. of Cases	Percent
Coccidiosis	60,947	29.4	Coccidiosis	68,546	28.3
New castle disease	130,868	63.1	New castle disease	137,970.0	57.1
Fowly typhoid	14,600	7.0	Fowly typhoid	33,733.0	14.0
Diarrhoea	1,055	0.5	Diarrhoea	1563	0.6
Total	**207,470**	100.0		**241,812**	**100**

Source: Kagera Region, Compiled Data from Councils (Livestock Departments), 2017

Mortality

Table 3.19 shows, four diseases were the main sources of poultry deaths. Of the reported cases of 70,255, new castle (84.0 percent) was the leading source of poultry deaths in 2013. The same disease, New castle (79.8 percent) was also the main source of poultry illness in 2015.

Table 3.19: Four Common Poultry Diseases Causes Morbidity, Kagera Region; 2013 and 2015

Disease	2013		Disease	2015	
	No. of Cases	Percent		No. of Cases	Percent
Coccidiosis	10,904	13.8	Coccidiosis	10,230	15.1
New castle disease	66,550	84.0	New castle disease	54,238.0	79.8
Fowly typhoid	1,523	1.9	Fowly typhoid	3,078.0	4.5
Diarrhea	278	0.4	Diarrhea	388	0.6
Total	**79,255**	100.0		**67,934**	**100**

Source: Kagera Region, Compiled Data from Councils (Livestock Departments), 2017

3.2.3 Marketing for Livestock and Their Products

With economic growth, consumption patterns tend to change towards high value and high protein foods, such as those derived from livestock. This implies that, given the economic growth in Tanzania, the market demand for livestock and livestock products is likely to continue in the future. Unfortunately, lack of reliable data on number of livestock and livestock products sold remain a challenge in Kagera Region. Improving data collection system by allocating staff on livestock marketing places to monitor and collect information would be among strategies towards improving availability of information on the marketed livestock and livestock products.

3.2.4 Establishment and Personnel

Table 3.20 shows the number and percentage of livestock personnel by Council in Kagera Region in 2015. Kagera Region had a total of 191 livestock staff, out of whom 161 staff (84.3 percent) were livestock field officers, followed by livestock officers (13 staff, 6.8 percent). At council level, Kyerwa DC had the largest number of livestock staff (38 staff, 19.9 percent) while Biharamulo DC had the smallest (14 staff, 7.3 percent).

Table 3.20: Number and Percentage of Livestock Personnel by Type and Council, Kagera Region, 2015

Council	Veterinary Officers	Livestock Officers	Livestock Field Officers	Pests and Tsetse Field Officers	Livestock Auxiliary	Total	
						Number	Percent
Karagwe DC	0	3	25	0	1	29	15.2
Bukoba DC	0	0	21	0	0	21	11
Muleba DC	1	0	19	1	1	22	11.5
Biharamulo DC	1	1	12	-	-	14	7.3
Ngara DC	2	1	20	1	2	26	13.6
Bukoba MC	0	1	16	0	0	17	8.9
Missenyi DC	2	3	18	1	-	24	12.6
Kyerwa DC	0	4	30	0	4	38	19.9
Total	**6**	**13**	**161**	**3**	**8**	**191**	**100.0**
Percent	**3.1**	**6.8**	**84.3**	**1.6**	**4.2**	**100.0**	

Source: Kagera Region, Compiled data from Councils (Livestock Departments), 2017

3.2.5 Policy Implication

Kagera Region, like other regions in Tanzania Mainland, has a significant number of livestock population including cattle, goats, sheep and poultry. Livestock keeping is the second most important economic activity in the Region after crop production. However, its performance is constrained by shortage of staff and poor livestock infrastructure. These have negatively affected the implementation of livestock policy which emphasizes on livestock quality improvement. In this regard, employment of more staff and construction of modern livestock infrastructures such as dips, veterinary centres and abattoirs are important for the development of livestock sector in the Region.

3.2.6 Investment Opportunities in Livestock Subsector

Kagera Region has inadequate livestock infrastructure that are working such as dips, veterinary centres, water points and abattoirs. Therefore, construction of livestock infrastructures might be a priority area for investing in livestock sector. Other areas which highly need investors are dairy farming and meat processing industries. Furthermore, improvement of the quality of livestock and livestock products could benefit the region's cattle keepers as well as those of neighbouring regions of Mara, Mwanza, Shinyanga, Geita and Simiyu. Morover, expansion of dairy cattle keeping in the Region, would further increase people incomes, improve their nutrition andmaintain soil fertility. With increased milk production in the Region, investment in milk collection centres together with milk processing and packaging industries are viable investments.

3.3 Forestry, Fishing and Beekeeping

These activities contribute to the country's GDP and play an important role in the maintenance of climatic stability, protection of water sources, soil fertility, controlling land degradation, is a source of wood fuel and industrial raw materials. Involvment of the community in these activities is very important in attaining sustainability in the use of the country's natural resources.

3.3.1 Forestry

Table 3.21 presents forest reserves by council in Kagera Region in 2017. Out of five forest reserves, Burigi accounts for more than half (57.0 percent) of the regions' total land area of 5,161.0 sq. km covered with forest reserves followed by Kimisi Forest Reserve (20.0 percent) and Rumanyika (15.5 percent). Ibanda Forest Reserves covers the smallest land area of 200 sq. km (3.9 percent).

Table 3.21: Forest Reserves Areas (sq.km)by Council, Kagera Region, 2015

Council	Biharamulo/Nyantakara	Burigi	Ibanda	Kimisi	Rumanyika	Total
Karagwe DC	-	566	-	650	-	1,216
Bukoba DC	-		-	-	-	-
Muleba DC	26	29	-	-	-	55
Biharamulo DC	164	2,122	-	-	-	2,286
Ngara DC	-	224	-	380	-	604
Bukoba MC	-	-	-	-	-	-
Missenyi DC	-	-	-	-	-	-
Kyerwa DC	-	-	200	-	800	1,000
Total	**190**	**2,941**	**200**	**1,030**	**800**	**5,161**
Percent	**3.7**	**57.0**	**3.9**	**20.0**	**15.5**	**100.0**

Source: Kagera Region, Compiled data from Councils (Land and Natural resources Departments), 2017

Though the Region has adequate natural forestry resources, increased human activities such as cutting trees for fire wood, charcoal, timber poles and agriculture activities may lead to deforestation in future. Therefore, the Region has taken necessary initiatives of planting trees to prevent deforestation.

Table 3.22 indicates that in the five-years period (2011 - 2015) Kagera Region raised a total of 49,345,498 tree seedlings at an average of 9,869,100 seedlings per annum. Muleba DC was the leading council in raising 1,979,519 tree seedlings which accounted for 20.1 percent of the region's total seedlings raised. Bukoba MC raised the smallest number of seedlings (61,389, 0.6 percent).

Table 3.22: Number of Tree Seedlings Raised by Council, Kagera Region; 2011 – 2015

Council	2011	2012	2013	2014	2015	Total Number	Average Anuual	Percent
Karagwe DC	1,026,793	1,129,272	1,241,999	1,365,999	1,502,599	6,266,662.0	1,253,332.4	12.7
Bukoba DC	799,748	1,048,936	1,385,402	1,788,412	3,113,238	8,135,736.0	1,627,147.2	16.5
Muleba DC	2,537,328	1,630,370	1,845,000	1,767,000	2,117,896	9,897,594.0	1,979,518.8	20.1
Biharamulo DC	1,000,000	1,200,000	1,500,000	1,500,000	2,000,000	7,200,000.0	1,440,000.0	14.6
Ngara DC	1382436	1323880	1,196,779	1,134,291	786,811	5,824,197.0	1,164,839.4	11.8
Bukoba MC	24,385	60,615	60,132	71,642	90170	306,944.0	61,388.8	0.6
Missenyi DC	1,952,420	2,190,400	1,850,749	1,678,090	1,832,706	9,504,365.0	1,900,873.0	19.3
Kyerwa DC	-	-	-	1,225,500	984,500	2,210,000.0	1,105,000.0	11.2
Total	**8,723,110**	**8,583,473**	**9,080,061**	**10,530,934**	**12,427,920**	**49,345,498.0**	**9,869,099.6**	**100.0**
Percent	**17.7**	**17.4**	**18.4**	**21.3**	**25.2**	**100**		

Source: Kagera Region, Compiled data from Councils (Land and Natural resources Departments), 2017

3.3.2 Beekeeping

Beekeeping is particulary well suited to the Region given its extensive forest cover and well watered land. It is an activity that could provide the peasant farmer with financial gain. However, the potential in this activity has not been fully exploited due to low technical know how on modern beekeeping methods. Table 3.23 shows that the Region had 63,739 traditional beehives while modern beehives were 15,812 (Table 3.23a). In terms of number of beehives, Karagwe DC led other councils in both traditional (26,996 and 42.2 percent) and modern beehives (9,954 or 63.0 percent). Bukoba MC having a limited number of natural forests had the smallest number of both traditional (149, 0.2 percent) and modern (293, 1.9 percent) beehives (tables 3.23 and 3.23a).

Traditional Beehives

Table 3.23: Number of Traditional Beehives by Council, Kagera Region, 2011 -2015

Council	2011	2012	2013	2014	2015	Total	Average Annual	Percent
Karagwe DC	3,692	3,830	5,330	5,478	8,666	26,996	5,399.2	42.4
Bukoba DC	0	0	0	1,251	190	1,441	720.5	5.7
Muleba DC	-	-	17	55	767	839	279.7	2.2
Biharamulo DC	1,883	2,650	3,154	3,211	3,221	14,119	2,823.8	22.2
Ngara DC	1,655	2,118	2,573	2,761	3,906	13,013	2,602.6	20.4
Bukoba MC	22	26	32	32	37	149	29.8	0.2
Missenyi DC	203	271	358	386	419	1,637	327.4	2.6
Kyerwa DC	-	-	-	4,500	1,045	5,545	2,772.5	21.7
Total	**7,455**	**8,895**	**11,464**	**17,674**	**18,251**	**63,739**	**12,747.8**	**100.0**

Source: Kagera Region, Compiled data from Councils (Land and Natural resources Departments), 2017

Modern Beehives

Table 3.23a: Number of Modern Beehives by Council, Kagera Region, 2011 -2015

Council	2011	2012	2013	2014	2015	Total	Average Annual	Percent
Karagwe DC	1,435	1,615	1,964	2,303	2,637	9,954	1,990.8	63.0
Bukoba DC	0	0	0	162	186	348	174.0	5.5
Muleba DC	-	-	-	19	730	749	374.5	11.8
Biharamulo DC	-	-	-	20	539	559	279.5	8.8
Ngara DC	0	0	0	305	954	1,259	629.5	19.9
Bukoba MC	4	43	63	88	95	293	58.6	1.9
Missenyi DC	90	301	362	469	658	1,880	376.0	11.9
Kyerwa DC	-	-	-	290	480	770	385.0	12.2
Total	**1,529**	**1,959**	**2,389**	**3,656**	**6,279**	**15,812**	**3162.4**	**100.0**

Source: Kagera Region, Compiled data from Councils (Land and Natural resources Departments), 2017

3.3.3 Fisheries

Kagera Region has a large water body (part of Lake Victoria) covering an area of 10,017 sq. km on which sizeable fishing activities is carried out. Other fishing areas are in Burigi, Ikimba, Rushwa and Rumanyika lakes. Fishing activities are also done in Kagera, Ruvuvu and Ngono rivers. The major fishing activities are carried out in Lake Victoria. Some 97.2 percent of the lake area is within Muleba and Bukoba DCs. The former accounts for 72.8 percentage points of the lake water body and the latter 24.4. The remaining 2.8 percent is shared among Karagwe DC, Biharamulo DC and Bukoba MC. Ngara DC does not have any share in the lake area.

Table 3.24 presents fisheries statistics of Kagera Region. In 2015, the Region had 3,898 fishing licenses and 11,362 fishermen. The number of registered fishing vessels was 3,097 and the un registered were 1,153. At council level, Muleba and Bukoba DCs which had the largest party of the Lake Victoria also had the largest number of fishing licenses, fishermen as well as the number of registered fishing vessels. Table 3.24 also shows that a total of 6,200,857 kilograms of fish valued at TZS 42,507,117,275 caught in 2015.

Table 3.24: Fishery Resources and Production by Council, Kagera Region, 2015

Council	Number of				Fish Production	
	Fishing licenses	Fishermen	Registered Fishing Vessels	Unregistered Fishing Vessels	Weight (kgs)	Value (TZS)
Karagwe DC	257	257	11	95	165,230	774,380,000
Bukoba DC	1,123	3,889	657	862	-	-
Muleba DC	2,256	6,768	2,256	-	4,128,480	10,321,200,000
Biharamulo DC	-	-	-	-	-	-
Ngara DC	-	-	-	-	-	-
Bukoba MC	125	125	89	42	1,776,147	30,976,569,425
Missenyi DC	39	22	39	11	48,200	241,000,000
Kyerwa DC	98	301	45	143	82,800	193,967,850
Total	**3,898**	**11,362**	**3,097**	**1,153**	**6,200,857**	**42,507,117,275**

Source: Kagera Region, Compiled data from Councils (Land and Natural resources Departments), 2017

Fishing industry in Bukoba Municipal

Table 3.25 shows the estimated amount of revenues collected from the fishing industry in Kagera Region over the period of 2011 to 2015. Muleba DC which has most of the fishing area collected 89.5 percent of the revenue from fishing in the Region. It was followed by Bukoba MC (8.2 percent) and Bukoba DC (2.1 percent). . While major fishing activities are being done in Lake Victoria, minor activities especially for household consumption was done in natural ponds and rivers in Kagera Region.

Table 3.25: Revenue (000 TZS) Collected from Fishermen by Council, Kagera Region, 2011-2015

Council	2011	2012	2013	2014	2015	Total	
						Number	Percent
Karagwe DC	-	4.9	4.2	96.0	774.4	879.5	0.0
Bukoba DC	10,044.5	7,838.0	5,370.0	17,760.0	33,792.0	74,804.5	2.1
Muleba DC	557,186.6	571,598.9	664,777.6	589,124.5	782,286.7	3,164,974.3	89.5
Biharamulo DC	-	-	-	-	-	-	-
Ngara DC	-	-	-	-	-	-	-
Bukoba MC	61,026.0	66,628.1	55,133.8	55,060.2	51,901.2	289,749.3	8.2
Missenyi DC	-	-	768.0	1,168.0	1,368.0	3,304.0	0.1
Kyerwa DC	-	-	-	1,290.0	2,345.0	3,635.0	0.1
Total	**628,257.1**	**646,069.9**	**726,053.6**	**664,498.7**	**872,467.3**	**3,537,346.6**	**100.0**
Percent	**17.8**	**18.3**	**20.5**	**18.8**	**24.7**	**100.0**	

Source: Kagera Region, Compiled data from Councils (Land and Natural resources Departments), 2017

3.3.3.1 Problems Facing Fishing Communities

Fishing communities in Kagera Region are facing the following problems:

i. **Lack of fishing inputs:** Very few fishing communities in the Region have access to fishing inputs such as credit through an extended revolving loan;

ii. **Limited range of fishing techniques**: Reliance on limited range of fishing techniques. This limits yields, fishing range and potential for generating more income. Low income and lack of credit reinforces the tendency to use simple fishing techniques;

iii. **Limited markets and fish processing facilities:** Inadequate markets and fish processing facilities to a lot of post harvest losses and restriction of the range over which fresh and smoked fish is marketed. These also reduce the value of the catch (sardines (*dagaa*) from Bukoba, for example, are sold at 70.0 percent to 80.0 percent the price in Mwanza area). Long distance marketing of both fresh and processed fish has considerable potential in internal and export markets. Performance is however restricted by the limited shelf life caused by inadequate fish processing techniques. The current best techniques are not widespread and the prime aim of the fisheries programme will be to seek the general adoption of these best techniques. This alone would ensure a considerable improvement in overall quality;

iv. **Excessive demand for employment**: Opportunities for employment are restricted due to lack of investment in other sectors of the local economy. The poor producer prices for cash crops have had a downward multiplier effect on farm and farm linked incomes. As a result, more members of the farming community are turning to fishing as a means of supplementing falling farm cash incomes. Fishing and associated activities have, in consequence, become more important to the local economy than in the past;

v. Little access to existing fishing and fish processing techniques, which have proved useful elsewhere in Tanzania;

vi. Considerable difficulty in transporting and storing processed fish especially between the offshore islands and Mainland markets;

vii. A chronic inability to finance even small improvements in fishing, fishing canoes, and fish processing technology due to low incomes and creditworthy security;

viii. **Lack of access to credit among fishermen, including the best, to facilitate adoption of capital intensive and efficient methods of fish capture.** In this context capital intensive does not mean industrial fishing it means employing a slightly safer and more lakeworthy fishing canoe (most are seriously inadequate) and adopting efficient forms of fish capture;

ix. Under-exploitation of existing sardines and Nile Perch stocks on both the shore areas and offshore islands of Kagera Region;

x. **Increasing fuel wood consumption and cost:** This leads to over exploitation of fuel wood resources around fishing/farming communities of the Kagera shores; and

xi. Severe unemployment and underemployment of rural youth and severity of the HIV/ AIDS among fishing communities.

3.3.4 Wildlife Tourism

Wildlife is a valuable resource in Tanzania as it is one of the country's major tourist attractions and a major source of foreign exchange earnings. Roles of tourism in the economy include job creation, foreign currency generation and being an important source of revenue for the Government. Categories of the wildlife management in Tanzania are as follows:

i) National Parks

These are protected areas where there are no human settlements. The activities permitted in these parks include viewing and photographic safaris, research and training activities.

ii) Game Reserves

In these areas, human settlements are prohibited. However, game cropping, tourist hunting, photographic safaris and training activities are permitted.

iii) Game Controlled Areas

In these areas, people have access to wildlife use under supervision and control by the government through hunting licenses and payment of fees.

Kagera Region has four game reserves namely, Biharamulo (731 sq. kms), Burigi (2,941 sq. kms), Ibandu (200 sq kms), Kimosi (1,030 sq. kms) and Rumanyika (800 sq kms). These game reserves are the homes to elephants, buffaloes, wild dogs, giraffes, leopards, wild beast, lions, bushbucks, impalas, zebras, elands and other wildlife types. Although, poaching is a problem, there are no reliable data to quantify the severity of the problem and make informed decisions.

3.3.5 Historical Site Viewing Tourism

Church building walls remained in Kyaka in Missenyi DC after the church was bombard by Ugandans' soldiers during Uganda and Tanzania war in 1978/79

Grave of Tanzania soldiers in Mutukura Ward in Missenyi DC who died during Uganda and Tanzania war in 1978/79

The national tourism industry's mission statement which forms the basis of the tourism policy aims at developing sustainable quality tourism that is ecologically friendly to the conservation and restoration of the environment and the people's culture. Kagera is among regions with the unique tourist attractions which have not yet been discovered by many. It is a land of much wonder holding an unparalleled diversity of fauna, flora and many natural features. The wonders include rocks, the scenery and topography which harbour the growth of excellent cultural tourism, game hunting, historical buildings and archaeological ventures as well as wildlife photographic safaris. Table 3.26 shows the historical sites that are potential for tourism in Kagera Region.

Table 3.26: Historical Sites That are Potential/Attractive for Tourism, By Council, Kagera Region, 2015

Council	Type of Site	Village/*Mtaa*	Ward
Karagwe DC	Bweranyange Museum	Kijumbura	Bweranyange
	Kawela Cemetery	Mguruka	Bweranyange
	Nyakahanga historical building	Nyakahanga	Nyakahanya
	Kafuro Arabs traditional market	Kafuro	Nyabiyonza
	Karagwe ka Nono mountain (source of Karagwe name)	Kaiho	Nyakakika
	Kituntu caves	Kituntu	Kituntu
	Ruins of Rugimbana (The first African prison commissioner)	Nyakahanga	Nyakahanga
	Ndagara iron smith sites	Kijumbura	Bweranyange
Bukoba DC	Rubale Forest waterfall and cave	Rubale	Rubale
	Kaboya Cemetery	-	-
Muleba DC	Mushonge House	Kamachumu	Kamachumu

Council	Type of Site	Village/*Mtaa*	Ward
Biharamulo DC	German fortress	Biharamulo Mjini	Biharamulo Mjini
	Graves of 2nd world war German victims in Kasozibakaya and Biharamulo.	Kasozibakaya	Nyamigogo
	Caves	Bisibo and Musenyi	Bisibo
	Subi chief Kasusula's headquarters and his historical tools	Nyarubungo Village	Nyarubungo
Ngara DC	Chiefdom home(house for the chief)	Kanazi	Kanazi
	Kirushya	Geographical features (mafiga matatu)	Kasange
Bukoba MC	-	-	-
Missenyi DC	-	-	-
Kyerwa DC	Mutagata hotspring	Rwabigaga	Kamuli
	Ibanda/Rumanyika game reserve		Murongo
			Nyakantutu
			Businde
			Kibare
			Isingiro
			Kamuli

Source: Compiled data from the District Executive Directors' Offices, Kagera Region, 2017

3.3.6 Economics of Tourism

Victorious hotel in Bukoba Municipal is among the best hotels in Kagera Region

JB picnic is among the hotels providing accommodation services in Karagwe District Council

Availability of good infrastructure such as accommodation facilities, telecommunication services, roads, banking/bureau de change services and tour operators is essential in the development of competitive tourism industry. The Region is connected with other regions of Tanzania Mainland as well as neighbouring countries of Uganda and Rwanda by tarmac roads. The Region is also be accessed by air from some regions especially Dar es Salaam and Mwanza.These connections are potential attributors to development of economics of tourism in the Region. Beside road and air infrastructure, Kagera Region especially in Bukoba MC has a significant number of banking

services offered by National Microfinance Bank (NMB), Co-operative Rural Development Bank (CRDB), Mkombozi Bank, National Bank of Commerce (NBC) and Tanzania Postal Bank (TPB).

Accommodation facilities in Kagera Region include guest houses and hotels. Table 3.27 shows that in 2015 there were 630 accomodation facilities of which 586 (93.0 percent) were guest houses and 44 (7.0 percent) were hotels. Availability of accomodation facilities was highest in Bukoba MC (151 facilities, 24.0 percent) and lowest in Kyerwa DC (23 facilities, 3.7 percent). Table 3.27 further shows that Muleba DC had the largest number of guest houses (140) while Bukoba MC led other councils in number of hotels (18).

Table 3.27: Number and Percentage of Accommodation Facilities by Council, Kagera Region, 2015

	Guest Houses		Hotels		Total	
Council	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Karagwe DC	56	9.6	6	13.6	62	9.8
Bukoba DC	46	7.8	0	0	46	7.3
Muleba DC	140	23.9	0	0	140	22.2
Biharamulo DC	84	14.3	3	6.8	87	13.8
Ngara DC	56	9.6	3	6.8	59	9.4
Bukoba MC	133	22.7	18	40.9	151	24
Missenyi DC	50	8.5	12	27.3	62	9.8
Kyerwa DC	21	3.6	2	4.5	23	3.7
Total	**586**	**100.0**	**44**	**100.0**	**630**	**100.0**
Percent	**93**		**7**		**100.0**	

Source: Kagera Region, Compiled data from Councils (Trade and Industry Departments), 2017

3.3.7 Mining Sector

The Region has not played a significant role in mineral production. The sector however, could contribute greatly to the regional economy if proper mineral reseach are carried out. Besides, several types of minerals believed to be existing in the Region. These are tin, nickel, iron ores, cobalt, zinc and gold.

3.3.8 Investment Opportunities in Natural Resources

(i) Agro-forestry

Sustainable agro-forestry is an area the Region can take advantage of and invest accodingly. Afforestation programmes can be established for environmental conservation in the Region.

(ii) Beekeeping

Presence of large natural forests including miombo woodlands provides the Region with a great potential forbeekeeping. People organized in groups can make beekeeping a part-time activity and

an alternative source of income for low income earners in the Region. Investments in this sub-sector can be made as follows:

***Medium Scale Investors*:** Private companies or individuals with adequate resources who can invest profitably in this sub sector and use modern technology. Such investors should be encouraged so as to tap the full potential of this economic activity; and

***Small Scale Beekeepers*:** include individual households in the Region. They could be developed by being trained in modern beekeeping which involves the use of modern beehives instead of the traditional ones. The Government and other development stakeholders in the Region should think of introducing micro-credit schemes so as to enable bee-keepers purchase modern beehives and the necessary gear for this activity.

(iii) Tourism: Wildlife and Historical Sites

With four game reserves, wildlife tourism is viable in the Region. Advertising supported by establishing offices for tour guide operators as well as other services such as transport and accomodation facilities may promote wildlife potentials for tourism. Besides wildlife, culture and history of Uganda - Tanzania war contribute to potential tourists attaractions in the Region.

***Lake Victoria*:** Offers opportunities which Kagera Region can make use of for growth and development of tourism sector. If the shore of the Lake is well developed, it will have many things to offer such as nice beaches for swimming, diving and numerous water sports as it is already happening in Bukoba MC where large numbers of people flock to the Lake shore during week ends for recreation. Developing beaches will not only make people happy but will also create employement and raise revenue for councils. Public Private Partnership (PPP) is thought to be the best way of investing along the shore of Lake Victoria not only in Bukoba MC but also in other councils which are lucky to have Lake Victoria water shores.

(iv) Eco Tourism

Initiaves aimed at promoting tourists attractions in the Region should go hand in hand with improvement of roads, investment in accommodation facilities (guest houses, lodges and hotels) as well as banking services. Development of Lake Victoria beaches need to go hand in hand with promoting water sports. However, this is one of the strategies that the region can take to boost its economy through tourism sector. That Kagera Region is accessible from Dar es Salaam and other regions by tarmac road and air transport is an opportunity for increasing the number of both local and intenational tourists visiting the Region for tourism purposes. Moreover, proximity of the Region to neighbouring countries of Uganda, Rwanda, Burundi, Kenya and Democratic Republic of Congo (DRC) provides opportunity for growth and development of a multi economic sector in the Region.

(v) Environmental Conservation

Environment destruction brought about by refugees needs to be rectified. Wildlife was ravaged and forests cut down to make way for settlements, agricultural production and fuelwood needs. Investment is therefore needed in providing education in agro forestry and forest resource management as well as wildlife conservation. On the other hand, efforts already in place of providing effective in the control of the water weed (hyacinth) should be intensified to effect eradication.

(iv) Fisheries

Kagera Region has an adequate number of natural water bodies like Lake Victoria, and Kagera River which play a big role in income generation for the local people through fishing. However, dynamic and well-funded fisheries programs are needed for fishermen in the region to increase their income and improve their nutritional status at household level. Since most of fish filleting factories are in Mwanza and Mara regions, raw materials (fish) have to be transported those regions. This provides an opportunity to establish a large scale fish processing factory in Kagera Region specifically in Muleba DC which constitutes 72.8 percent of Lake Victoria water body.

(vii) Mining

Kagera Region has reserves of unexploited tin, nickel, iron ore, cobalt, zinc and gold due to lack of quantitative exploration. In this regard, encouragement of small scale mining could be the best way out.

3.4 Industry

Industries all over Tanzania are known to play a major role in socio-economic development. This is also the case in Kagera Region, where industries, mostly micro and small scale contribute significantly to jobs creation. However, according to international recommendation which has also been adopted in Tanzania, industries categorized as follows:

- Micro scale industry: Establishments which employ 1 to 9 staff;
- Small scale industry: Establishments which employ 10 to 19 staff;
- Medium scale industry: Establishments which employ 20 to 99 staff; and
- Large scale industry: Establishments which employ 100 and above staff.

3.4.1 Micro and Small Scale Industries

Basing on the given definitions, analysis of industries available in Kagera Region shows that most of industries fall into micro and small scale industries. Table 3.28 shows that in 2015a total of 2,245 micro and small scale industries where available in the Region. The majority of them (891 industries, 39.7 percent) were involved in grain milling specifically maize and paddy.. It was

followed by carpentry industries (564 industries, 25.1 percent), welding (221 industries, 9.9 percent) and timber processing (216 industries, 9.6 percent). The region had one bottled drinking water industry and one juice, wine and hard drink industry..

At council level, the table further shows that more than a quarter (25.6 percent) of micro and small scale industries available in Kagera Region in 2015 were in Kyerwa DC, followed by Ngara DC (17.3 percent), Bukoba DC (13.0 percent), Missenyi (10.8 percent) and Bukoba MC (9.6 percent). Muleba DC had the smallest number of industries (143, 6.4 percent).

Table 3.28: Number of Micro and Small Scale Industries (establishments) by Type of Industry and Council, Kagera Region, 2015

Type of Industry	Karagwe DC	Bukoba DC	Muleba DC	Biharamulo DC	Ngara DC	Bukoba MC	Missenyi DC	Kyerwa DC	Total	Percent
Tailoring	10	0	0	48	0	1	40	0	99	4.4
Garage	54	32	8	3	18	14	4	13	146	6.5
Carpentry	34	94	51	33	77	61	50	164	564	25.1
Grain Milling (Maize and Paddy)	39	62	61	105	253	42	60	269	891	39.7
Food Processing and Bread Factory	0	35	0	18	0	22	3	0	78	3.5
Welding	23	22	17	10	35	20	16	78	221	9.8
Sunflower oil processing	0	21	0	2	0	1	1	0	25	1.1
Bricks factory	0	0	0	1	0	0	2	0	3	0.1
Bottled Drinking water	0	0	1	0	0	0	0	0	1	0.0
Juice, Wine and Hard drinks processing	0	0	1	0	0	0	0	0	1	0.0
Timber processing	19	26	4	0	5	55	66	41	216	9.6
Total Industries	**179**	**292**	**143**	**220**	**388**	**216**	**242**	**565**	**2,245**	**100.0**
Percent	**8.0**	**13.0**	**6.4**	**9.8**	**17.3**	**9.6**	**10.8**	**25.2**	**100.0**	

Source: Kagera Region, Compiled data from Councils (Trade and Industry Departments), 2017

3.4.2 Medium Scale Industries

These are industries which employ 20 to 99 persons. According to the report from the Regional Trade and Business Officer, in 2015, there were three medium scale industries operating in Kagera Region namely Bukop Limited dealing with coffee processing, Bunena Development Co. Limited and NK Bottling Co Limited which produce bottled water. All these industries are in Bukoba MC.

3.4.3 Large Scale Industries

These are industries which employ 100 persons or above. Table 3.28a, shows that by 2015, Kagera Region had 13 large scale industries of which 7 industriess (53.8 percent) of the total industries were dealing with coffee processing. Fish and bottled drinking water processing industries were the second in number (each with two industries, 15.4 percent) respectively. Table 3.28a further shows that 6 industries (46.2 percent) of all large scale industries in the Region were in Bukoba MC.

Table 3.28a: Number of Large Scale Industries (establishments)by Type and Council, Kagera Region, 2015

Type of Industry	Karagwe DC	Bukoba DC	Muleba DC	Biharamulo DC	Ngara DC	Bukoba MC	Missenyi DC	Kyerwa DC	Total	Percent
Coffee processing	3	1	-	-	-	3	-	-	7	53.8
Tea processing	-	1	-	-	-	-	-	-	1	7.7
Fishing processing	-	1	-	-	-	1	-	-	2	15.4
Bottled Drinking Water	-	-	0	-	-	2	-	-	2	15.4
Sugar Company	-	-	-	-	-	-	1	-	1	7.7
Total Industries	**3**	**3**	**0**	**-**	**-**	**6**	**1**	**-**	**13**	**100.0**
Percent	**23.1**	**23.1**	**0**	**-**	**-**	**46.2**	**7.7**	**-**	**100.0**	

Source: Kagera Region, Compiled data from Councils (Trade and Industry Departments), 2017

3.4.4 Policy Issues on Industrial Development

For sustainable development of industries, Kagera Region has to address the following policy issues:

i. Create an enabling environment for sustainable development in agribusiness value chains;

ii. Develop and allocate industrial extension officers to councils in order to support rural industrialization and organize local enterprises at council and sector levels to create business linkages;

iii. Establish financial support programs to improve financial access for Small and Medium Enterprises (SMEs); and

iv. Expand institutional support to agro-allied industries on human resource development and financing.

3.4.5 Investment in Industrial Sector

Given that Kagera Region has reliable supply of electricity from Uganda, opportunities for expansion and installation of industrial establishments is viable. Likewise, agriculture sector, being the main source of raw materials for industrial establishments, the sector still has much to offer in expansion of the existing industries as well as establishing new industries.

CHAPTER FOUR

Economic Infrastructure

4.0 Introduction

Chapter four discusses the existing economic infrastructure in Kagera Region. It covers the road network development in terms of road classification, type of road surface and pass-ability. It also covers, air, marine and postal services including radio and television facilities. In the energy sector, developments with regard to hydro-electricity, biogas, solar energy, fuel wood and fossil fuels are also discussed.

As a result, the region has recently been integrated into the national road network following the construction of a tarmac road from Bukoba to Dar es Salaam via Kahama in Shinyanga Region and Dodoma. Henceforth, construction of this road is expected to accelerate socio-economic development of all regions in the Lake and Central Zones.

4.1 Roads

This section describes the road network in Kagera Region by types such as trunk, regional, district, urban and feeder roads. Trunk roads are the primary national and international routes to regions, border posts and ports. Regional roads are the secondary routes which connect district centers in a region or from another important centre to a trunk road. District roads are tertiary routes providing linkages between district headquarters to ward centres, important centres within districts and important centres to regional or trunk roads. 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 centre. These form the road network in the region as illustrated in subsequent tables.

Table 4.1 shows that trunk roads (512.1km) accounted for 6.5 percent of the road network in Kagera Region, while regional roads accounted for 13.4 percent (1,053.7 km) and district roads accounted for 35.7 percent (2,814.3 km). Feeder roads covered 44.5 percent (3,505.2 km) of the road network. Out of the 7,885.3 kilometres of the road network in the Region, Muleba DC had the longest road network of 1,498.5 km, followed by Kyerwa DC (1,395.7 km) and Karagwe DC (1,394.7 km). Bukoba MC had the shortest road network of 166.0 kilometres.

Table 4.1: Length of Road Network (km) by Type of Road and Council, Kagera Region, 2015

Council	Type of Road				Total
	Trunk	Regional	District/Urban	Feeder	
Karagwe DC	0.0	67.0	276.9	1,050.8	1,394.7
Bukoba DC	0.0	111.7	640.2	0.0	751.9
Muleba DC	87.9	105.6	1,043.0	262.0	1,498.5
Biharamulo DC	195.0	233.0	65.9	383.6	877.5
Ngara DC	87.4	246.4	185.4	446.8	966.0
Bukoba MC	11.0	25.5	90.1	39.4	166.0
Missenyi DC	71.7	191.0	172.2	400.1	835.0
Kyerwa DC	59.1	73.5	340.6	922.5	1,395.7
Total	**512.1**	**1,053.7**	**2,814.3**	**3,505.2**	**7,885.3**
Percent	**6.5**	**13.4**	**35.7**	**44.5**	**100.0**

Source: Districts Executive Directors' Offices, Kagera Region, 2017

4.1.1 Road Network Classification

Table 4.2 shows that 659.1 kilometres (8.4 percent of the Kagera Region road network in 2015) was tarmacked. Gravel roads covered 3,192.9 km (40.5 percent) and the remaining 4,033.3 km (51.1 percent) were earth roads. Tarmac and gravel roads accounted for 48.9 percent of the road network and since there is a close affinity between road worthiness and tarmac/gravel surfaces it can generally be said that about 49 percent of the region's road network is passable throughout the year. Biharamulo DC has the longest kilometers of tarmac (292.0 km) followed by Muleba DC (112.6 km) while Muleba DC had the longest gravel roads (1,004.6 km), followed by Ngara DC (499.9 km). Kyerwa DC had the longest earth roads (1,140.1 km), followed by Karagwe DC (1,050.8 km).

Table 4.2: Length of Road Network (km) by Type of Road Surface and Council, Kagera Region, 2015

Council	Type of Surface			Total
	Tarmac	Gravel	Earth	
Karagwe DC	20.4	323.5	1,050.8	1,394.7
Bukoba DC	14.5	321.6	415.9	751.9
Muleba DC	112.6	1,004.6	381.2	1,498.4
Biharamulo DC	292.0	328.6	256.9	877.5
Ngara DC	96.2	499.9	369.9	966.0
Bukoba MC	43.2	73.9	49.0	166.1
Missenyi DC	76.7	388.8	369.5	835.0
Kyerwa DC	3.5	252.1	1,140.1	1,395.7
Total	**659.1**	**3,193.0**	**4,033.3**	**7,885.3**
Percent	**8.4**	**40.5**	**51.1**	**100.0**

Source: Districts Directors Offices, Kagera Region, 2017

4.1.2 Road Passability

The term road passability refers to the capability of the road to enable vehicles of all types to use it smoothly without any hindrance or unnecessary waste of time possibly due to damage caused by both natural and human factors such as heavy rains that cause soil erosion and floods among others. Human factors include negligence or failure to repair roads regularly and sustainably.

Passable roads are economically useful to all users throughout the year despite occurring changes caused by fluctuating weather or seasonal conditions that might be prevailing in a particular area.

Roadworthiness during the rainy season measures the effectiveness of the road network.

Table 4.3 shows that in 2015, out of 7,885.3 km of the road network of Kagera Region, 5,400.3 km (68.5 percent of the road network) is passable throughout the year, whereas 2,156.9 km (27.4 percent) are passable during a greater part of the year, and only 328.1 km, equivalent to 4.4 percent of the road network are not passable most of the year. In general, a total of 7,557.2 km (95.8 percent) were passable (throughout the year and passable a greater part of the year). Karagwe DC had the longest road network of 171.3 km that was not passable throughout the year.

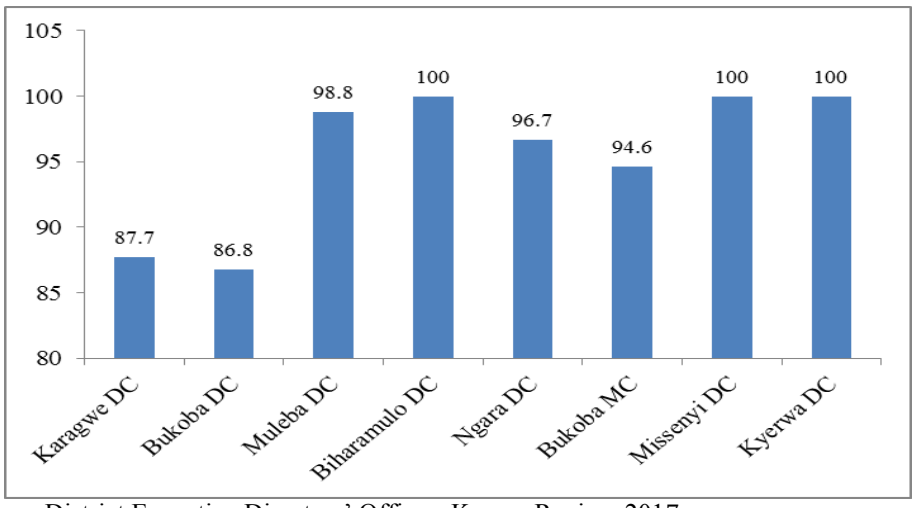
Table 4.3: Length of Road Network (km) by Period Passable and Council, Kagera Region, 2015

Council	Passable Throughout the Year	Passable a Greater Part of the Year	Not Passable Most of the Year	Total Road Network	Total Passable (columns 2+3)	Percent Passable
Karagwe DC	662.4	561.0	171.3	**1,394.7**	1,223.4	87.7
Bukoba DC	404.4	248.5	99.0	**751.9**	652.9	86.8
Muleba DC	1,096.4	384.7	17.3	**1,498.4**	1,481.1	98.8
Biharamulo DC	877.5	0	0	**877.5**	877.5	100.0
Ngara DC	469.8	464.7	31.5	**966.0**	934.5	96.7
Bukoba MC	130.0	27.1	9.0	**166.1**	157.1	94.6
Missenyi DC	685.7	149.3	0	**835.0**	835.0	100.0
Kyerwa DC	1,074.1	321.6	0	**1,395.7**	1,395.7	100.0
Total	**5,400.3**	**2,156.9**	**328.1**	**7,885.3**	**7,557.2**	**95.8**
Percent	**68.5**	**27.4**	**4.2**			

Source: District Executive Directors' Offices, Kagera Region, 2017

Figure 4.1 illustrates percentage distribution of passable roads by council in Kagera Region in 2015, whereby Biharamulo, Missenyi DC and Kyerwa DCs had their entire road network passable (100 percent), followed by Muleba DC (98.8 percent). A relatively small percentage of passable road networks was recorded in Bukoba DC (86.8 percent).

Figure 4.1: Percentage of Passable Roads by Council, Kagera Region, 2015



Source: District Executive Directors' Offices, Kagera Region, 2017

4.1.3 Major Road Connections

Table 4.4 highlights road connections and road links which connect Kagera Region with the vicinity. As the table depicts most of the roads are in good condition and are easily passable in all seasons. In this respect, these roads need to be maintained and improved regularly to ease transportation of goods and provision of services to the population in the council.

Table 4.4: Major Road Connections and Links, Kagera Region, 2015

Major Inter - District Road Connection	Length of road link in kms	Quality of road surface	Type of Road
Bukoba - Kyaka- Karagwe - Murongo	210.0	Good	Regional - Tarmac - Gravel
Bukoba - Kyaka -Mutukula	80.0	Good	Regional/Trunk -Tarmac
Bukoba - Muleba - Biharamulo	172.0	Good	Regional - Tarmac
Bukoba -Muleba - Benaco - Rwanda	280.0	Good	Regional - Tarmac
Bukoba -Muleba - Ngara - Burundi	312.0	Good	Regional/Trunk -Tarmac

Source: District Executive Directors' Offices, Kagera Region, 2017

4.1.4 Agricultural Productivity and Road Network

Road network influences agricultural productivity since it helps in transporting agricultural implements and inputs which are important for agricultural production as well as transporting agricultural products to the market. In 2014/15 Kagera Region had an average annual agricultural production of 2,816,689.8 tonnes of food crops and 2,054,716.8 tonnes of cash crops. These crops were transported through 7,885.3 km in the Region. This was an average of 357.2 tonnes/km (for food crops) and 260.6 tonnes/km (for cash crops) per annum. The total regional data was 617.8 tonnes/km per annum.

4.2 Marine Transport

Currently, there is no passenger ship in Lake Victoria plying between Bukoba and Mwanza ports. According to the available official records, there are two ports along the shore of the lake namely, Bukoba Port and Kemondo Bay.

4.3 Air Transport

Kagera Region is served by Bukoba Airport that is located within Bukoba MC about one kilometre from municipal centre. Currently, Bukoba Airport is geared to serve an increasing demand of customers not only in Kagera Region but also in neighbouring districts. As a result, Air Tanzania which is a publicly owned airline together with Precision Air had regular daily flights to meet the demand of customers in that part of Tanzania. In addition there are other scheduled flights with light airplanes like Auric Air.In addition to Air Tanzania and Precision Air domestic flights, private sector companies do operate regularly in Ngara and Biharamulo DCs to serve missionaries, tourists and owners of mines. A total of 15,932 passengers used the Region's airport in 2015 while 2,420 tons of cargo were ferried through the airport. Most of the passengers and cargo were ferried from Bukoba airport.

Table 4.5: Air Services by Council, Kagera Region, 2015

Council	Number of			Quantity of Cargo (tonnes)
	Airport	Airstrip	Passengers	
Karagwe DC	0	0	0	0
Bukoba DC	0	0	0	0
Muleba DC	0	0	0	0
Biharamulo DC	0	2	0	0
Ngara DC	0	1	10	12
Bukoba MC	1	0	15,922	2,408
Missenyi DC	0	0	0	0
Kyerwa DC	0	0	0	0
Total	**1**	**3**	**15,932**	**2,420**

Source: District Executive Directors' Offices, Kagera Region, 2017

4.4 Telecommunication Services

Kagera Region enjoys internet and telephone services (both cellular phone and land line telephone services) and postal services. Table 4.6 shows a limited number of such services that are available in all councils. Postal services were found in all councils except in Missenyi and Kyerwa DCs. Sub-postal services were available in Biharamulo DC (6), Ngara DC (1) and Missenyi DC (1). Land line telephones were found in all councils except Karagwe, Bukoba and Kyerwa DCs. Internet Centres were found in all councils except in Bukoba, Missenyi and Kyerwa DCs.

Table 4.6: Number of Communications Facilities by Council, Kagera Region, 2015

Council	Tel. Lines (land Lines)	Radio Stations	Internet Centres	Post Offices	Sub-Post Offices
Karagwe DC	N/A	2	11	1	0
Bukoba DC	0	0	0	1	0
Muleba DC	40	0	2	1	0
Biharamulo DC	361	0	2	1	6
Ngara DC	20	1	4	1	1
Bukoba MC	1,948	4	3	1	0
Missenyi DC	1	0	0	0	1
Kyerwa DC	0	0	0	0	0

Source: Telecommunication Offices, Kagera Region, 2017

In 2015 the Region has a good coverage network for private mobile phones, including Tigo, Vodacom, Airtel, Zantel, Halotel and TTCL Mobile. Table 4.7 shows that Halotel had the largest coverage in the Region (66.4 percent), followed by Vodacom (58.8 percent), Airtel (50.7 percent), Tigo (32.5), Zantel (6.8 percent) and TTCL mobile (14.4 percent).

Table 4.7: Percentage Distribution of Telecommunications (Mobile) Services by Council, Kagera Region; 2015

Council	Tigo	Vodacom	Airtel	Zantel	Halotel	TTCL (Mobile)
Karagwe DC	8.0	22.0	18.0	3.0	47.0	2.0
Bukoba DC	75.0	85.0	83.0	0.0	90.0	75.0
Muleba DC	65.0	88.0	70.0	5.0	100.0	2.0
Biharamulo DC	9.0	47.0	31.0	2.0	9.0	2.0
Ngara DC	0.7	58.0	81.0	0.0	75.0	1.0
Bukoba MC	34.0	78.0	37.0	34.0	93.0	20.0
Missenyi DC	60.0	75.0	60.0	10.0	80.0	2.0
Kyerwa DC	8.6	17.1	25.7	0.0	37.2	11.4
Average Coverage per Council	**32.5**	**58.8**	**50.7**	**6.8**	**66.4**	**14.4**

Source: Telecommunication Offices, Kagera Region, 2017

4.5 Energy Sector Development

Energy is a prerequisite for proper functioning of nearly all sectors in the economy. It is an essential service whose availability and quality determines success or failure of development programmes. As such, the importance of energy as a sector in the regional economy cannot be over-emphasized. The main sources of energy in Kagera Region are electricity, gas, paraffin, solar, firewood and charcoal. Electricity is used for economic and domestic purposes in both urban and rural areas.

4.5.1 Electricity

Electricity is a common type of energy that helps to support and accelerate both social and economic development in any country. It is also used for lighting and cooking purposes. It therefore contributes to improvement of the quality of life and social well being in rural and urban areas. Unlike other regions, Kagera Region receives its electric power from Uganda and like other regions; TANESCO is the main supplier of electricity in the region. Electricity supply in the region is not yet stable and faces a number of challenges such as intermittent power supply, low voltage, rationing, and outages. Consequently, most of these challenges and limitations constrain production of goods and services in the Region.

Table 4.8 shows different types of customers using electricity from TANESCO, which is a National company responsible for generating and supplying electricity in Tanzania. In 2011, 2013 and 2015 the number of institutions connected with electricity in the Region increased from 612 in 2011 to 922 in 2013 and 2,006 in 2015. The number of domestic installations increased from 49,560 customers in 2011 to 63,038 in 2013 and 98,834 customers in 2015. Commercial customers increased from 33,996 in 2011 to 41,417 in 2013 and 57,318 in 2015.

Table 4.8: Number of Customers Using/Connected to Electricity, Kagera Region, 2011, 2013 and 2015

	Institutions			Domestic			Commercial		
Council	**2011**	**2013**	**2015**	**2011**	**2013**	**2015**	**2011**	**2013**	**2015**
Karagwe DC	21	55	127	2,210	3,410	7,099	167	298	307
Bukoba DC	20	25	50	4,520	5,220	7,089	102	118	150
Muleba DC	20	40	70	8,520	11,500	20,112	98	140	181
Biharamulo DC	9	15	24	1,020	2,020	3,127	5	36	43
Ngara DC	23	27	14	216	549	720	4	10	135
Bukoba MC	519	747	1,526	33,074	40,019	54,869	33,620	40,798	56,438
Missenyi DC	0	13	45	0	320	3,731	0	17	44
Kyerwa DC	0	0	150	0	0	2,087	0	0	20
Total	**612**	**922**	**2,006**	**49,560**	**63,038**	**98,834**	**33,996**	**41,417**	**57,318**

0: not available

Source: TANESCO, Kagera Region, 2017

Table 4.9 shows that in 2012, 9.6 percent of households in Kagera Region had electricity. At council level, Bukoba MC (32,296 households, 54.6 percent), followed by Muleba DC (113,380 households, 8.3 percent), Karagwe DC (72,339 households, 8.0 percent), Biharamulo DC (55,674 households, 7.0 percent), Missenyi DC (48,104 households, 6.8 percent), Ngara DC (67,477 households, 5.8 percent), Bukoba DC (65,375 households, 5.4 percent) and Kyerwa DC (66,383 households, 4.8 percent).

Table 4.9: Percentage Distribution of Households Connected to Electricity by Region and Source of Energy in Tanzania Mainland, 2016

Council	Total	Percent of Households with Electricity	Percent of Households without Electricity
Karagwe DC	72,339	8.0	92.0
Bukoba DC	65,375	5.4	94.6
Muleba DC	113,380	8.3	91.7
Biharamulo DC	55,674	7.0	93.0
Ngara DC	67,477	5.8	94.2
Bukoba MC	32,296	54.6	45.4
Missenyi DC	48,104	6.8	93.2
Kyerwa DC	66,383	4.8	95.3
Total	**521,028**	**9.6**	**90.4**

Source: NBS, 2012 Population and Housing Census, Kagera Regional Profile

4.5.2 Fuelwood

Fuelwood is a dominant source of energy for domestic consumption in Kagera Region. The main use of fuelwood is for cooking and lighting which leads to high consumption wood in the Region. Data on energy consumption are normally captured during the National Population and Housing Census undertaken. Table 4.10 shows that 1.7 percent of the households used firewood for lighting while 84.9 percent used it for cooking. At council level, Biharamulo DC was leading with 31.3 percent of its households using fuelwood for lighting while 80.8 percent used it for cooking. Bukoba DC had the smallest percentage of households using fuelwood for lighting (0.4 percent) but led with 94.2 percent using fuelwood for cooking.

Table 4.10: Percentage of Households Using Firewood as the Source of Energy for Lighting and Cooking by Council, Kagera Region, 2012 Population Census

Council	Lighting	Cooking
Karagwe DC	2.7	88
Bukoba DC	0.4	94.2
Muleba DC	2.4	87.7
Biharamulo DC	31.3	80.8
Ngara DC	13.2	91.5
Bukoba MC	0.7	23.3
Missenyi DC	1.2	86.8
Kyerwa DC	3.8	92.6
Total	**1.7**	**84.9**

Source: NBS, Kagera Regional Census Profile, 2015

4.5.3 Biogas and Solar Energy

There are no official records on the use of biogas in the Region, but biogas can be used as an alternative source of energy in order to reduce the excessive use of fuel wood and charcoal for cooking purposes. Data from the 2012 Population and Housing Census show that 32.2 percent of the households in Kagera Region used solar energy. There is however no accurate data showing the number of households that used solar as the source of energy for lighting at the council level. It is believed that there were many households that used this type of energy for lighting in the councils as electric power is mostly available in urban areas.

4.5.4 Fossil Fuel

The 2012 Population and Housing Census (Housing Condition Monograph) indicates that 77.5 percent of the households in Kagera Region used kerosene/paraffin for lighting while only 1.1 percent used it for cooking. Bukoba MC had the smallest percentage of it households using kerosene/paraffin for lighting (41.8 percent) and the highest percentage of its households using kerosene/paraffin as a source of energy for cooking (2.2 percent) Table 4.11.

Table 4.11: Percentage of Households Using of Kerosene/Paraffin as the Source of Energy for Lighting and Cooking by Council, Kagera Region, 2012

Council	Lighting	Cooking
Karagwe DC	83.5	0.8
Bukoba DC	89.4	0.7
Muleba DC	84.5	1.6
Biharamulo DC	54.9	0.6
Ngara DC	70.3	0.8
Bukoba MC	41.8	2.2
Missenyi DC	85.7	1.5
Kyerwa DC	85.1	0.9
Region	**77.5**	**1.1**

Source: NBS, Kagera Regional Census Profile, 2015

Policy Implication on Economic Infrastructures

Of the council's total road network of 7,885.3 km, a total distance of earth roads was 4,033.3 km which accounted for 51.1 percent. The regional and district authorities should find ways of upgrading those roads to tarmac or gravel level. Increasing the budget for road maintenance/rehabilitation and construction through the use of council's own funds or funds received from the central government might be among the strategies. The improved roads will have a multiplier effect such as facilitating easy transportation of goods and services. It will also improve accessibility of social services even in remote areas of the region and thus improve the social welfare of Kagera residents.

Since the 2012 Population and Housing Census results show that the majority of households in Kagera Region were using firewood and charcoal as their main source of energy for cooking, sensitization campaigns of promoting the use of alternative sources of energy for cooking is important to curb the accelerated deforestation. Solar power which is more affordable than electricity to low income earners should also be encouraged and supported as an alternative source of energy for lighting. The fact that very few households use electricity in the Region, efforts should be made to make electricity available in all councils. Regarding the telecommunication industry, the Region should make use of the country's policy of allowing investors to invest in the telecommunication industry and find possible strategies of attracting such investors.

CHAPTER FIVE

Social Services

5.0 An Overview

Chapter Five discusses the status of social services in Kagera Region and covering 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 as well as mother and child health. It also covers the prevalence of HIV/AIDS and related diseases as well as its impact to the community.

Education is the second sector discussed in this chapter. It highlights education performance based on the increase of school facilities; pre-primary, primary and secondary education; colleges/universities and vocational training. Enrolment performance, school infrastructure and quality of education are also discussed.

Water supply and sanitation is also discussed in this chapter. Water supply for both rural and urban areas of Kagera Region is highlighted in terms of sources, technology and accessibility. Sanitation at the Region level is also briefly discussed.

5.1 Health Sector

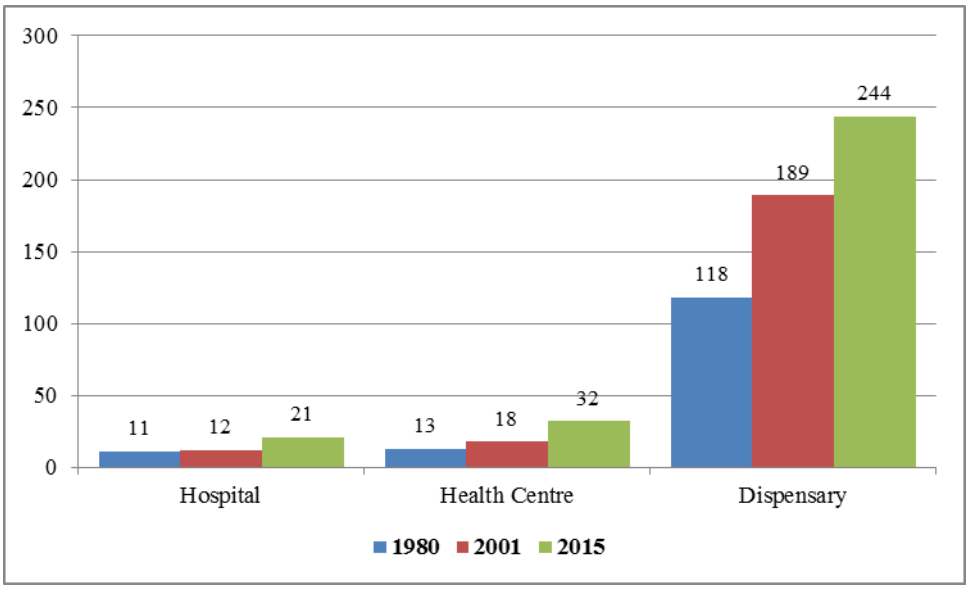
The status of public health services can be visualized through the health infrastructure, availability and commitment of health practitioners, implementation of preventive and curative measures and availability of medicines. Kagera Region experiences shortages of health practitioners such as medical specialists, radiographers, doctors, pharmacists, assistant medical officers (AMOs) and nursing officers (NOs); equipment and medicines. This has been causing unnecessary loss of peoples' lives through preventable diseases. The major killer diseases in Kagera Region include: Malaria, Anemia, Pneumonia, Clinical AIDS, hypertension and other diseases.

5.1.1 Health Facilities

Kagera Region has made remarkable achievements in the health sector reflected by increased number of facilities, from 142 in 1980 to 219 in 2001 and 297 in 2015 (Figure 5.1). For instance in Kagera Region the number of dispensaries increased from 118 in 1980 to 189 and 244 in 2015.

The number of health centers increased from 13 in 1980 to 18 in 2001 and 32 in 2015, while the number of hospitals increased from 11 in 1980 to 21 in 2015.

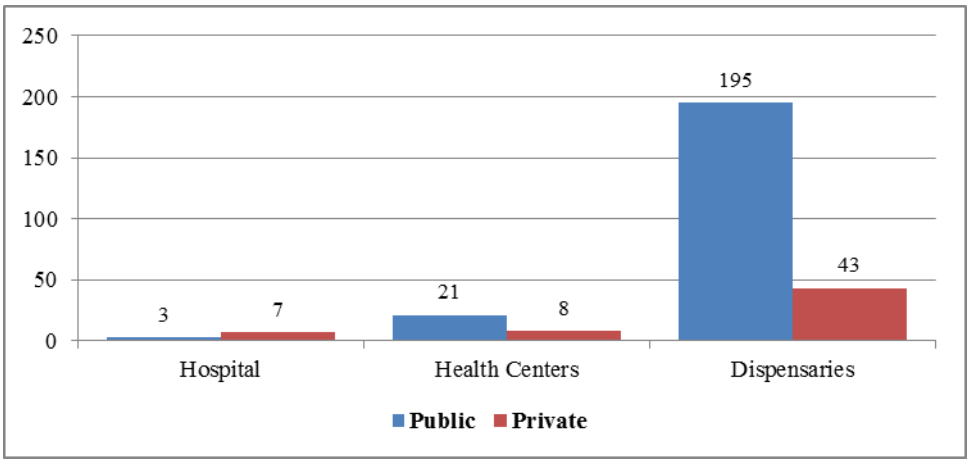
Figure 5.1: Number of Health Facilities by Type, Kagera Region, 1980, 2001 and 2015



Source: *Compiled data from Council Executive Directors' Offices, Kagera Region, 2017*

In regard to ownership, private participation in the provision of health services as stipulated in the health policy is significant in the region. Figure 5.2 shows that, out of 277 health facilities that were available in the Region by the end of 2015, 58 facilities, (25.6 percent) were privately owned; 7 hospitals, 8 health centers and 43 dispensaries.

Figure 5.2: Number of Health Facilities by Type and Ownership, Kagera Region, 2015



Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

In spite of the achievement reached so far in health sector, the Region lags behind in the implementation of the health policy which requires each ward to have a health center and a dispensary in each Village or Mtaa. Table 5.1 shows that among eight councils in the Region, none of the councils have implemented the policy of one health centre per Ward and one dispensary for

each Village/Mtaa.For health centres the best served council were Biharamulo DC and Missenyi DC with 0.3 health centres per ward each, followed by Bukoba DC, Ngara DC and Bukoba MC (0.2 health centres per ward each). Karagwe DC, Muleba DC and Kyerwa DC had the smallest number of health centres per ward (0.1 each). In regard to dispensaries, the best served council was Ngara DC with 0.6 dispensaries per village, followed by Karagwe DC (0.5 dispensaries per village) and Bukoba DC and Missenyi DC with 0.4 dispensaries per village each. Bukoba MC had the smallest number dispensaries per mtaa (0.1).

Table 5.1: Distribution of Public Health Facilities by Council, Kagera Region, 2015

Council	No. of Wards	No. of Health Centers	Health Centres per Ward	No. of Village/ Mitaa	No of Dispensaries	Dispensaries per Village/ Mtaa
Karagwe DC	23	2	0.1	76	37	0.5
Bukoba DC	29	6	0.2	94	34	0.4
Muleba DC	43	4	0.1	166	39	0.2
Biharamulo DC	17	5	0.3	74	22	0.3
Ngara DC	22	4	0.2	75	45	0.6
Bukoba MC	14	3	0.2	66	8	0.1
Missenyi DC	20	5	0.3	77	29	0.4
Kyerwa DC	24	3	0.1	99	28	0.3
Total	**192**	**32**	**0.2**	**727**	**242**	**0.3**

Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

5.1.2 Health Indicators

5.1.2.1 Infant and Under Five Mortality Rates

The availability of health facilities in Kagera Region though falls below WHO standards, to a large extent, has helped in reducing the infant mortality (IMR) and the Under Five Mortality Rate (U5MR) in the Region. According to the the 2002 and 2012 population and housing censuses Infant mortality rate was reduced by 48.2 percent from 110 deaths per 1,000 live births in 2002 to 48.2 deaths per thousand live births in 2012. The U5MR declined from 182 deaths per 1,000 live births to 94 deaths per thousand live births in the same period, a decrease of 48.3 percent (Table 5.2). The table further shows that Kagera Region registered the highest infant mortality rate (61.8 deaths per 1,000 live births) among Lake Zone regions followed by Mara Region (50.7 deaths per 1,000 live births) and Shinyanga (46.2 deaths per 1,000 live births), while Simiyu, which is a new region in the Lake Zone, had the lowest IMR of 39.4 deaths per 1,000 live births followed by Geita Region, (41.0 deaths per 1,000 live births). A similar pattern is observed for under five mortality rate with Kagera Region having the highest rate (93.9 deaths per 1,000 live births) followed by Mara (73.6 deaths per 1,000 live births) and Shinyanga (66.7 deaths per 1,000 live births) regions, while Simiyu continues to have the the lowest U5MR of 54.3 deaths per 1,000 live births.

Table 5.2: Percentage Change for Infant Mortality Rates and Under Five Mortality Rates by Region, Lake Zone, 2002 and 2012

Region	Infant Mortality Rate (IMR)			Under Five Mortality Rate (U5MR)		
	2002	2012	Percent Change	2002	2012	Percent Change
Mwanza	87.0	44.3	-49.1	139	63.8	-54.1
Mara	113.0	50.7	-55.1	188	73.6	-60.9
Shinyanga	92.0	46.2	-49.8	149	66.7	-55.2
Kagera	**110.0**	**61.8**	**-43.8**	**182**	**93.9**	**-48.4**
Geita	-	41.0	-	-	57.8	-
Simiyu	-	39.4	-	-	54.3	-
Tanzania Mainland	**95.0**	**46.2**	**-51.4**	**154**	**66.5**	**-56.8**

Source: NBS, 2012 Population and Housing Census, Mortality and Health Monograph Report, 2015

Table 5.3 shows the IMR and U5MR by council in Kagera Region in 2012. The infant mortality rate was lowest in Biharamulo DC (50.9 deaths per 1,000 live births) followed by Missenyi DC (55.1 deaths per 1,000 live births) and Karagwe DC (56.5 deaths per 1,000 live births). Bukoba DC had highest infant mortality rate of 69.8 deaths per 1,000 live births in the Region. The table further shows that infant mortality rates were higher among males (67.1 deaths per 1,000 live births) than females (56.4 deaths per 1,000 live births). A similar pattern is observed in all councils.

In 2012 Kagera Region, with an under five mortality rate of 93.9 deaths per 1,000 live births, was among few regions in Tanzania Mainland with high rates of under five mortality rates and ranked first in the Lake Zone. At council level, Biharamulo DC had the lowest under five mortality rate of 73.8 deaths per 1,000 live births followed by Missenyi DC (81.0 deaths per 1,000 live births) and Karagwe DC (83.8 deaths per 1,000 live births). Unde five mortality rate was highest in Bukoba DC (107.6 deaths per 1,000 live births) followed by Kyerwa DC (105.5 deaths per 1,000 live births) and Ngara DC (103.6 deaths per 1,000 live births) The table further shows that under five mortality rate was higher among males (100.3 deaths per 1,000 live births) than females (87.2 deaths per 1,000 live births). A similar pattern was observed in all councils (Table 5.3).

The Ministry of Health and Social Welfare (Tanzania Mainland) through its Health Sector Strategic Plan II (HSSP II) seeks to reduce IMR and U5MR to 50 and 48 deaths per 1,000 live births respectively by 2015. Kagera Region was not able to attain the set targets for both IMR and U5MR by 2015.

Table 5.3: Infant and Under Five Mortality Rates by Sec and Council, Kagera Region, 2012

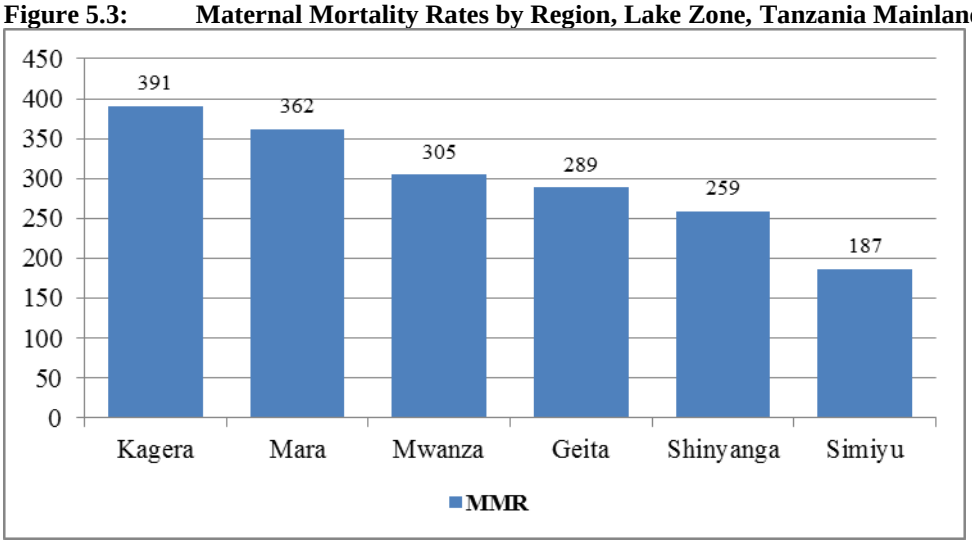
Council	Infant Mortality Rate (IMR)			Under Five Mortality Rate (U5MR)		
	Males	Females	Both Sexes	Males	Females	Both Sexes
Karagwe DC	61.7	51.1	56.5	89.9	77.6	83.8
Bukoba DC	76.7	62.7	69.8	115.9	99.0	107.6
Muleba DC	70.8	58.2	64.6	105.9	90.6	98.3
Biharamulo DC	57.6	44.1	50.9	82.6	64.7	73.8
Ngara DC	73.1	63.2	68.2	108.5	98.5	103.6
Bukoba MC	71.2	53.1	62.3	107.3	82.2	94.9
Missenyi DC	57.7	52.3	55.1	83.8	78.0	81.0
Kyerwa DC	67.7	64.6	66.1	108.5	102.4	105.5
Region	**67.1**	**56.4**	**61.8**	**100.3**	**87.2**	**93.9**

Source: *NBS,2012 Population and Housing Census, Mortality and Health Monograph Report, 2015*

5.1.2.2 Maternal Mortality Rate

Maternal mortality refers to deaths occurring to women of reproductive age due to causes related to pregnancy and child birth. Such deaths can occur during pregnancy, during delivery or within a period of 42 days after delivery due to complications associated with child bearing. Figure 5.3 shows that there were marked differences in maternal mortality rates across regions in the Lake Zone, ranging from 187 maternal deaths per 100,000 live births in Simiyu Region to 391 maternal deaths per 100,000 live births in Kagera Region. One important observation is that all Lake Zone regions had lower maternal mortality rates compared to the national rates of 432 deaths per 100,000 live births.

Figure 5.3: Maternal Mortality Rates by Region, Lake Zone, Tanzania Mainland, 2015



Source: *NBS, 2012 Population and Housing Census, Mortality and Health Monograph Report, 2015*

5.1.2.3 Life Expectancy at Birth

The reduction of mortality incidences in a society is normally reflected by the estimated average number of years a new born baby is expected to live subject to the mortality risks prevailing for the cross-section of the population at the time of its birth. It provides the most useful summary measure of the overall level of mortality in a population. Table 5.4 shows that the estimated number of years a new born baby expected to live in Kagera Region increased from 52.6 years in 2002 to 57.5 years in 2012. In 2012 the Region had the second smallest expectation of life at birth in Lake Zone after Mwanza Region which had the smallest (46.2 years). In 2012, five councils in Kagera Region had life expectancy at birth below the national of 61.8 years: 63.8 years for females and 59.8 years for males.

Table 5.4: Life Expectancy at Birth by Sex and Region, Lake Zone, 2012

Council	2002			2012		
	Males	**Females**	**Both Sexes**	**Males**	**Females**	**Both Sexes**
Mwanza	51.9	54.5	53.2	60.3	64.6	46.2
Shinyanga	50.8	52.7	51.4	57.0	62.3	59.6
Kagera	**51.7**	**54.2**	**52.6**	**55.5**	**59.7**	**57.5**
Mara	49.6	49.3	49.3	58.9	62.8	60.8
Geita	-	-	-	61.6	64.8	63.3
Simiyu	-	-	-	63.2	66.0	64.6
National	**51.0**	**51.0**	**50.9**	**59.8**	**63.8**	**61.8**

Source: NBS, 2012 Population and Housing Census, Mortality and Health Monograph Report, 2015

5.1.2.4 Status of Health Personnel

According to the information obtained from councils of Kagera Region the number of health facilities were not enough to serve the growing population of the Region. Local authorities have made significant efforts in the establishment of primary rural health centres to complement the existing health facilities in all councils. Table 5.5 shows the efforts made so far by the local authorities in the region. The Region had a total of 671 trained traditional birth attendants allocated in Karagwe DC (271), Bukoba DC council (204), Ngara DC (129), Bukoba MC (40), Missenyi DC (17) and Biharamulo DC (10). The Region had also registered 265 traditional medical practitioners (TMP) in all councils. However, despite the efforts made in a stablishing rural health centres, the Region still had a shortage of health personnel to provide health services to the growing population. In 2015, the Region had 671 trainned TBAs with an average of 1 TBA per village; 1,219 VHWs with an average of 2 VHWs per vaillage and 265 VHPs with an average of less 1 VHP per village. The council with the largest number of trained TBAs per village in 2015 was Karagwe DC (3.6), followed by Bukoba DC (2.2). In regard to VHWs the council with the largest number was

Karagwe DC with an average of 2.5 VHWs per village. Most of the other councils had 1.9 to 2.2 VHWs per village except Bukoba MC and Kyerwa DC which had less than 1 VHW per village/mtaa. Only Muleba and Ngara DCs had VHPs with an average of 0.7 and 0.2 VHPs per village respectively.

Table 5.5: Average Number of TBAs, VHW and VHP per Village by Council, Kagera Region, 2015

Council	No. of Villages/ Mitaa	No. of TBAs (Trained)	No. of VHWs	No. of VHP	No. of TMP (Registered)	Average TBAs per Village	Average VHWs per Village	Average VHP per Village
Karagwe DC	76	271	192	0	17	3.6	2.5	0.0
Bukoba DC	94	204	199	0	37	2.2	2.1	0.0
Muleba DC	166	0	372	123	77	0.0	2.2	0.7
Biharamulo DC	74	10	138	0	95	0.1	1.9	0.0
Ngara DC	75	129	148	3	10	1.7	2.0	0.0
Bukoba MC	66	40	0	0	29	0.6	0.0	0.0
Missenyi DC	77	17	170	0	0	0.2	2.2	0.0
Kyerwa DC	99	0	0	0	0	0.0	0.0	0.0
Total	**727**	**671**	**1,219**	**126**	**265**	**0.9**	**1.7**	**0.2**

Source: *Compiled data from District Executive Directors' Offices, Kagera region; 2017*

Table 5.6 shows that in 2015, the region was still experiencing a significant shortage of health personnel in regard to specialized doctors, medical doctors, dental surgeon, radiologists, dental therapists, radiographer, radiographic assistants and pharmacists. In 2015, the health personnel were dominated by medical attendants (31.8 percent), trained nurses - NM/PHN (26.0 percent) and clinical officers (7.5 percent). Table 5.6 also shows that, out of 1,782 medical personnel, 57.4 percent were females, while 42.6 percent were males.

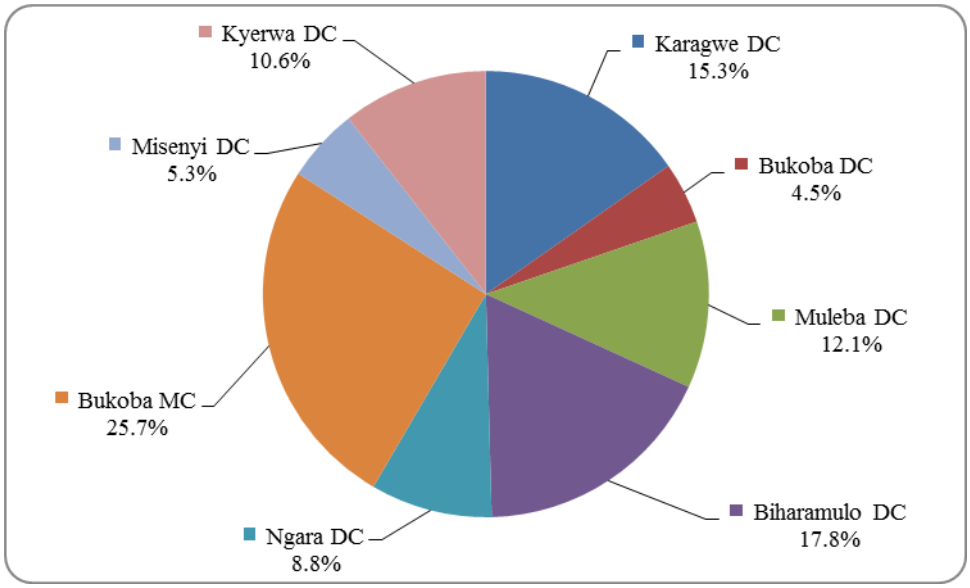
Table 5.6: Number and Percentageof Medical Personnel by Type and Sex, Kagera Region, 2015

	Male		Female		Total	
Type	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Specialist Doctors	3	60	2	40	5	0.3
Medical doctors	33	91.7	3	8.3	36	2
Ass. Medical Officers	57	72.2	22	27.8	79	4.4
Clinical Officers	99	74.4	34	25.6	133	7.5
Ass. Clinical Officers	11	64.7	6	35.3	17	1
Dental Surgeons	2	100	0	0	2	0.1
Ass. Dental Officers	7	77.8	2	22.2	9	0.5
Dental Therapists	3	75	1	25	4	0.2
Pharmacists	9	69.2	4	30.8	13	0.7
Pharmaceutical Technicians	4	50	4	50	8	0.4
Pharmaceutical Assistants	7	24.1	22	75.9	29	1.6
Laboratory Technicians	13	81.3	3	18.8	16	0.9
Laboratory Assistant.	18	60	12	40	30	1.7
Radiologists	0	0	0	0	0	0
Radiographers	5	100	0	0	5	0.3
Radiographic Assistants	5	100	0	0	5	0.3
Nursing Officers	38	35.2	70	64.8	108	6.1
Trained Nurse/NM/PHN-	113	24.4	351	75.6	464	26.0
Asst. Nurse Officers	20	27.8	52	72.2	72	4
Medical Attendants	181	32	385	68	566	31.8
Health Officers	15	71.4	6	28.6	21	1.2
Health Assistants	13	61.9	8	38.1	21	1.2
Health Secretaries	7	77.8	2	22.2	9	0.5
Other Medical Carders	97	74.6	33	25.4	130	7.3
Total	**760**	**42.6**	**1,022**	**57.4**	**1,782**	**100**

Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

At council level, Figure 5.4 shows that health personnel were unevenly distributed with Bukoba MC having 25.7 percent of the total 1,782 medical personnel found in Kagera region in 2015. It was followed by Biharamulo DC (17.8 percent), Karagwe DC (15.3 percent) and Muleba DC (12.1 percent). Bukoba DC and Missenyi DC had minimum percentages of medical personnel of 4.5 and 5.3 percent respectively.

Figure 5.4: Percentage Distribution of Medical Personnel by Council, Kagera Region, 2015



Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

5.1.3 Morbidity

Health services aim at solving problems of morbidity or sickness. However, in order to solve problems of morbidity, the Government needs an inventory of health problems. Inventory of health problems show that the nine most common causes of illness in Kagera Region in 2015 were malaria, URI, UTI, intestinal worms, diarrhoea, pneumonia, Acute respiratory infections (ARI), peptic ulcer and skin disease (Table 5.7).

Out-patients

Out of 324,175 out-patients recorded in 2011, 87.8 percent were suffering from one or the other of the first five illnesses listed in Table 5.7. The table shows that the most common cause of morbidity in Kagera Region in 2011 was malaria with 34.1 percent of the ten most commonly reported cases, followed by ARI (27.6 percent) and pneumonia (10.3 percent). Other important causes of morbidity in Kagera Region were diarrhoea (8.8 percent) and intestine worms (7.0 percent). The remaining five causes of morbidity accounted for 12.2 percent of the most commonly reported cases. .

In 2015, a similar pattern was observed to those of 2011 except for the magnitude and proportion of cases. Out of 776,016 recorded cases, again malaria ranked first with a total of 318,022 (41.0 percent) out-patients, followed by URI (17.2 percent) and UTI (8.7 percent). The fourth and fifth diseases were intestinal worms (6.9 percent) and diarrhoea (6.8 percent). One observation from the table is that there has been a decline in the percentage of certain types of morbidity cases reported between 2011 and 2015. For instance, for ARI the percentage declined from 27.6 percent in 2011 to 4.9 percent in 2015; for pneumonia the decline was from 10.3 percent in 2011 to 5.8 percent in

2015 and for diarrhoea it was from 8.8 percent to 6.8 percent respectively. On the other hand the percentage of reported cases for malaria increased from 34.1 percent in 2011 to 41.0 percent in 2015, followed by UTI which increased from 3.8 percent in 2011 to 8.7 percent in 2015.

Table 5.7: Ten Most Commonly Reported Causes of Morbidity (Out Patients), Kagera Region, 2011 and 2015

S/No.	2011			2015		
	Disease	**No. of Cases**	**Percent**	**Disease**	**No. of Cases**	**Percent**
1	Malaria	110,673	34.1	Malaria	318,022	41.0
2	ARI	89,313	27.6	URI	133,157	17.2
3	Pneumonia	33,407	10.3	UTI	67,214	8.7
4	Diarrhoea	28,577	8.8	Intestinal Worm	53,475	6.9
5	Intestinal Worms	22,701	7.0	Diarrhoea	52,823	6.8
	Sub Total	**284,671**	**87.8**	**Sub Total**	**624,691**	**80.5**
6	UTI	12,411	3.8	Pneumonia	44,815	5.8
7	Eye Disorders	10,364	3.2	Other Diagnosis	42,290	5.4
8	Skin Disease	10,246	3.2	ARI	37,873	4.9
9	Other Fungal Infection	4,550	1.4	Peptic Ulcer	14,778	1.9
10	Ear Disorders	1,933	0.6	Skin Disease	11,569	1.5
	Total	**324,175**	**100.0**	**Total**	**776,016**	**100.0**

Source: Complied data from District Executive Directors' Offices, Kagera Region, 2017

In-patients

In 2011, malaria was the first cause of illness for inpatients recorded in Kagera Region, followed by pneumonia, diarrhoea, anaemia and acute respiratory infection (Table 5.8). Slight change of observations were also experienced for in patients in 2015 when upper respiratory infection ranked number one, while malaria, UTI, other diagnosis and pneumonia were the second, third, fourth and fifth causes of morbidity in Kagera Region (Table 5.8).

Two general observations have been drawn from this analysis. The first one is that over 82 percent of patients recorded in both years were suffering the first five illnesses described above. Second observation is rose of uncommon diseases appeared in the list of ten common illnesses not normally occurred in the region. These diseases are fractures caused by accidents and mostly by motorcycles, clinical aids, cardiovascular disease, hypertension and diabetes mellitus.

Table 5.8: Ten Most Commonly Reported Causes of Morbidity (In Patients), Kagera Region, 2011 and 2015

S/No.	2011			2015		
	Disease	**No. of Cases**	**Percent**	**Disease**	**No. of Cases**	**Percent**
1	Malaria	13,477	51.5	URI	38,776	24.0
2	Pneumonia	5,123	19.6	Malaria	31,242	19.3
3	Diarrhoea Diseases	3,406	13.0	UTI	25,846	16.0
4	Anaemia	1,287	4.9	Other diagnosis	25,737	15.9
5	ARI	1,015	3.9	Pneumonia	15,831	9.8
	Sub Total	**24,308**	**92.8**	**Sub Total**	**137,432**	**85.0**
6	Other Diagnosis	788	3.0	Peptic ulcer	13,415	8.3
7	Clinical AIDS	572	2.2	Anemia	4,504	2.8
8	Cardiovascular Diseases	229	0.9	ARI	3,667	2.3
9	Fractures	171	0.7	Hypertension	2,670	1.7
10	UTI	113	0.4	Diabetes mellitus	1.888	0.0
	Total	**26,181**	**100.0**	**Total**	**161,690**	**100.0**

Source: Complied data from District Executive Directors' Offices, Kagera Region, 2017

5.1.4 Mortality

The available data does not give the true picture of the mortality level in Kagera Region. However, the medical records indicate that a dominant cause of mortality for inpatients of all ages in 2011 was malaria (Table 5.9). Out of 3,328 reported deaths in 2011, 752 (22.6 percent) were caused by malaria, followed by pneumonia (17.0 percent), diarrhea (12.3 percent), other diagnosis (10.3 percent) and clinical aids (7.2 percent). Other diseases were cardiovascular diseases, CCF, new natal asphyxia, renal failure and diarrhea.

Likewise, among the causes of mortality for inpatients of all ages in 2015 were malaria (43.0 percent) followed by acute respiratory infection (22.5 percent), pneumonia (19.6 percent), clinical aids (17.0 percent) and anemia (7.0 percent). Other diseases were UTI, malaria, septicemia, poisoning and skin infection (Table 5.9). These data portray a new picture of illnesses that rise concerned about the imaging of modern diseases in the region, including cardiovascular, septicemias and road accidents.

Table 5.9: Ten Most Commonly Reported Causes of Mortality (In Patients), Kagera Region; 2011 and 2015

Number	2011			2015		
	Disease	**No. of Cases**	**Percent**	**Disease**	**No. of Cases**	**Percent**
1	Diarrhoea	752	22.6	Normal Deliveries	5,617	41.5
2	ARI	750	22.5	Malaria	3,497	25.8
3	Pneumonia	651	19.6	Pneumonia	1,657	12.2
4	Clinical AIDS	566	17.0	Cardiovascular diseases	612	4.5
5	Anaemia	232	7.0	Diarrhoea diseases	585	4.3
	Sub Total	**2,951**	**88.7**	**Sub Total**	**11,968**	**88.4**
6	UTI	113	3.4	Other injuries	410	3.0
7	Malaria	100	3.0	ARI	389	2.9
8	Septicaemia	90	2.7	Emergency Surgical Condition	350	2.6
9	Poisoning	39	1.2	Anaemia	256	1.9
10	Skin Infection	35	1.1	Other diagnosis	162	1.2
	Total	**3,328**	**100.0**	**Total**	**13,535**	**100.0**

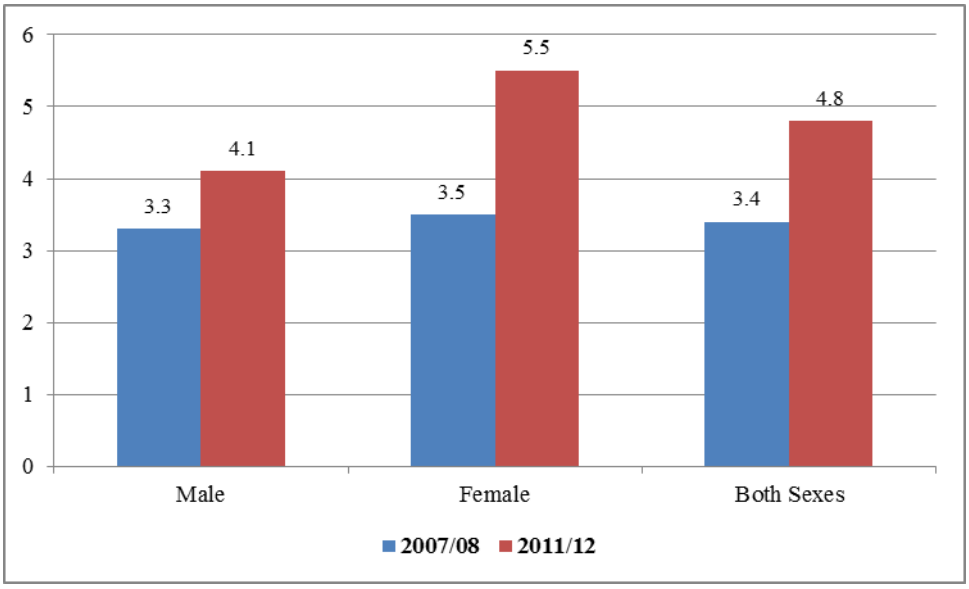
Source: Complied data from District Executive Directors' Offices, Kagera Region, 2017

5.1.5 HIV/AIDS Infections

Information provided by the Government shows that the HIV/AIDs epidemic started in Kagera Region with diagnosis and reporting of three cases in 1983. By 1986 it has been reported in all regions. Since then, HIV has continued to spread and there was a dramatic increase in the number of AID cases caused by different reasons based on socio-economic differences and cultural behaviours, predominantly by heterosexual contact.

The second and third Tanzania HIV/AIDs and Malaria Indicator Surveys (THMIS) conducted in 2007/8 and 2011/12 confirmed that Kagera Region had an average level of HIV prevalence of 3.4 percent and 4.8 percent respectively, with females having a higher HIV/AIDS prevalence than males. In 2007/08, the highest HIV prevalence rate was found in Iringa (15.7 percent), followed by Dar es Salaam (9.3 percent) and Mbeya (9.2 percent), while the lowest prevalence was recorded in Manyara (1.5 percent) and Arusha (1.6 percent) regions. In the 2011/12 THMIS Njombe Region was found to be the most affected region with HIV/AIDS prevalence rate of 14.8 percent, followed by Iringa (9.1 percent) and Mbeya (9.0 percent). Manyara continued to be the least affected region on Tanzania Mainland with an HIV/AIDS prevalence rate of 1.5 percent, followed by Tanga (2.4 percent). One general observation from these data is that, though Kagera Region had a moderate level of HIV/AIDS prevalence rate, there is a sign of increasing HIV/AIDS prevalence rate in recent years as affirmed by these two surveys (Figure 5.4).

Figure 5.5: HIV/AIDS Prevalence Rates Among Adults Age 15 – 49 by Sex, Kagera Region, 2007/8 and 2011/12



Source: NBS, Compiled from the 2007/08 and 2011/12 HIV/AIDS and Malaria Indicator Surveys

Besides efforts done by the government, Kagera Region, like other regions in the country, uses three approaches to measure the extent and trend of the HIV/AIDS prevalence among its people. These approaches are testing family blood donors, VCT volunteers and expectant mothers participating in the PMTCT services.

Though family blood donation is not a reliable indicator of the extent and the trend of the HIV/AIDS problem, Table 5.10 shows that out of 34,368 (30,096 males and 4,272 females) blood donors screened between 2011 and 2015, 920 (774 males and 146 females) blood donors were identified to be HIV positive (2.7 percent). The table shows that the percentage of HIV infected persons from family blood donors decreased from 5.6 percent in 2011 to 2.0 percent in 2013, but increased slightly to 2.4 percent in 2015. The percentage of family blood donors with HIV/AIDS infection was higher for females than males in all referred years.

Table 5.10: HIV Infections Among Family Blood Donors by Sex, Kagera Region, 2011 - 2015

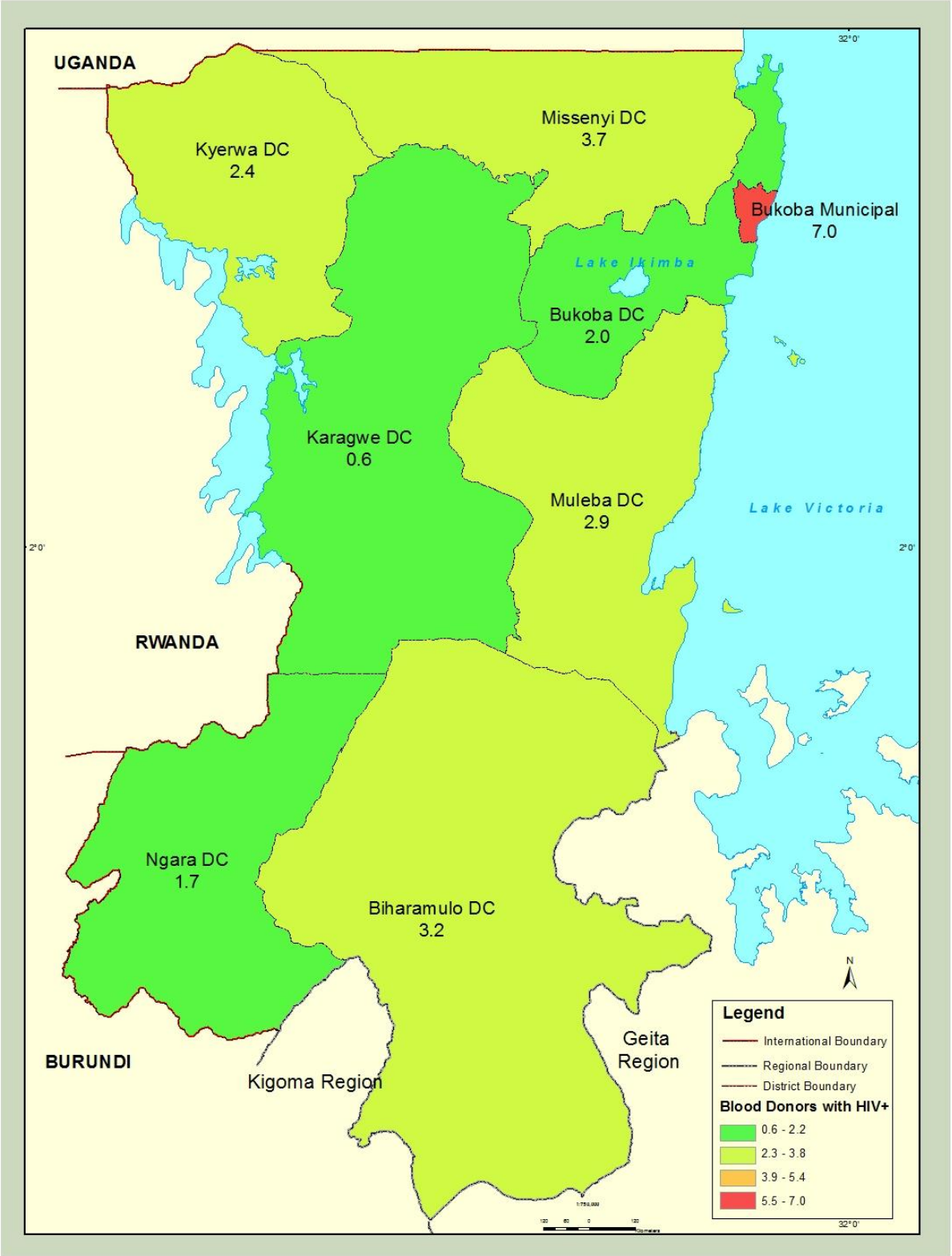
Year	No. of Blood Donors			No. of HIV+			Percent of HIV+		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
2011	3,784	647	4,431	210	39	249	5.5	6.0	5.6
2012	5,296	492	5,788	144	24	168	2.7	4.9	2.9
2013	6,739	949	7,688	137	20	157	2.0	2.1	2.0
2014	8,039	1,125	9,164	140	32	172	1.7	2.8	1.9
2015	6,238	1,059	7,297	143	31	174	2.3	2.9	2.4
Total	**30,096**	**4,272**	**34,368**	**774**	**146**	**920**	**2.6**	**3.4**	**2.7**

Source: Complied data from District Executive Directors' Offices, Kagera Region, 2017

Table 5.11 shows that the HIV/AIDS prevalence rates of blood donors in Kagera Region differ from council to council. In 2011 Muleba DC had the highest HIV/AIDS prevalence rate of 8.4 percent, followed by Biharamulo DC (7.9 percent) and Kyerwa DC (5.6 percent), while Karagwe DC had the lowest rates (1.3 percent). In 2013, Missenyi DC had the highest HIV/AIDS prevalence rate of 4.6 percent for family blood donors, followed by Bukoba MC (3.9 percent) and Biharamulo DC (2.4 percent) while Karagwe DC council had the lowest prevalent rate of 0.2 percent.

Map 6 and Table 5.11 show that in 2015, Bukoba MC had the highest HIV/AIDS prevalence rate (7.0 percent) in the region followed by Missenyi and Biharamulo DCs with HIV/AIDS prevalence rates of 3.7 percent and 3.2 percent respectively. Nevertheless, observations on the table further show a positive sign on the declining trend of HIV/AIDS prevalence rates from 3.8 percent in 2011 to 2.9 percent in 2013 and 2.7 percent in 2015.

Map 6:Map of Kagera Region Showing Percent of Family Blood Donors with HIV+ by Council, 2015



Source: NBS, Cartographic Unit, Dsm, 2017

Table 5.11: HIV Infections Among Family Blood Donors by Council, Kagera Region, 2015

	No. of Blood Donors			No. of HIV+			Percent of HIV+		
Council	**2011**	**2013**	**2015**	**2011**	**2013**	**2015**	**2011**	**2013**	**2015**
Karagwe DC	151	1,650	1,985	2	3	11	1.3	0.2	0.6
Bukoba DC	n.a	n.a	n.a	n.a	n.a	n.a	0.0	1.0	2.0
Muleba DC	1,944	2,940	2,339	164	69	67	8.4	2.3	2.9
Biharamulo DC	303	1,027	720	24	25	23	7.9	2.4	3.2
Ngara DC	805	948	1,433	22	13	24	2.7	1.4	1.7
Bukoba MC	825	668	575	23	26	40	2.8	3.9	7.0
Missenyi DC	403	455	245	14	21	9	3.5	4.6	3.7
Kyerwa DC	4,431	7,688	7,297	249	157	174	5.6	2.0	2.4
Total	**8,862**	**15,376**	**14,594**	**498**	**314**	348	**5.6**	**2.0**	**2.4**

Source: Complied data from District Executive Directors' Offices, Kagera Region, 2017

The prevalence of HIV/AIDS in Kagera Region for 2015 can also be obtained from PMTCT service reports. Table 5.12 shows that out of 87,596 expectant mothers participated in PMTCT services and hence were screened, 2.5 percent of them were found to be HIV positive and 89.9 percent of them were given a dose of Niverapine. At Council level, the table shows that Bukoba MC had the highest HIV/AIDS infection rate (8.0 percent), followed by Bukoba DC (4.1 percent), Missenyi DC (3.7 percent) and Muleba DC (3.4 percent). Ngara DC had the lowest prevalence rate (1.0 percent) in the Region.

Table 5.12: Number of Expectant Mothers Who were Screened for HIV Through PMTCT Service and Those Received Niverapine by Council, Kagera Region, 2015

Council	No. of ANC Attendants	No. Screened	No. HIV+	Percent of HIV+	No. of ANC Attendants Given Niverapine	Percent Given Niverapine
Karagwe DC	11,376	10,080	239	2.4	187	78.2
Bukoba DC	8,180	8,512	353	4.1	335	94.9
Muleba DC	19,919	18,236	613	3.4	406	66.2
Biharamulo DC	19,927	13,860	342	2.5	342	100.0
Ngara DC	15,030	14,480	146	1	131	89.7
Bukoba MC	5,071	4,918	393	8.0	373	94.9
Missenyi DC	11,972	6,190	232	3.7	224	96.6
Kyerwa DC	11,962	11,320	149	1.3	219	147.0
Total	**103,437**	**87,596**	**2,467**	**2.5**	**2,217**	**89.9**

Source: Complied Data from District Executive Directors' Offices, Kagera region, 2017

One general observation from the table is that not all expectant mothers who are HIV positive attend clinics and receive Niverapine. The most affected councils were Muleba and Karagwe DCs with only 66.2 percent and 78.2 percent of HIV positive expectant mothers received Niverapine respectively. Biharamulo and Kyerwa DCs were the only councils with all expectant mothers who were HIV positive and received Niverapine in the Region.

The Government's initiative of protecting a child from HIV infection has, to a large extent, resulted in a large number of expectant mothers who receive Niverapine in Kagera Region. Table 5.13 shows that out of 3,065 children born in 2015, only 2.3 percent of them were infected with the HIV. The most affected council was Bukoba Municipality with 8.5 percent of HIV positive children, followed by Muleba DC (7.6 percent) and Missenyi DC (4.5 percent). On the other hand, Biharamulo DC had the lowest HIV infection rate of 0.9 percent for children with HIV positive expectant mothers followed by Ngara DC (2.0 percent).

Table 5.13: Number of Expectant Mothers Screened and Number of Children Born by HIV Status and Council, Kagera Region, 2015

Council	No. of Screened Expectant Mothers	No. Expectant Mothers with HIV+	Total Infants Born	With Negative HIV status	With Positive HIV Status	Percent of Infants with HIV+
Karagwe DC	10,080	239	247	241	6	2.4
Bukoba DC	8,512	353	536	522	14	2.6
Muleba DC	18,236	613	172	159	13	7.6
Biharamulo DC	13,860	342	342	339	3	0.9
Ngara DC	14,480	146	849	832	17	2
Bukoba MC	4,918	393	281	257	24	8.5
Misenyi DC	6,190	232	374	357	17	4.5
Kyerwa DC	11,320	149	264	257	7	2.7
Total	**87,596**	**2467**	**3065**	**2964**	**101**	**3.3**

Establishment of VCT services in remote areas, to a large extent, enabled the Region to establish a reliable source of data on the extent and significance of HIV prevalence since it helped in raising confidence and willingness of the people to examine and monitor their health. Table 5.14 shows a slight increase of HIV/AIDS prevalence rate of VCT volunteers in Kagera Region from 5.0 percent in 2011 to 5.2 percent in 2013 before it dropped slightly to 5.1 in 2015.

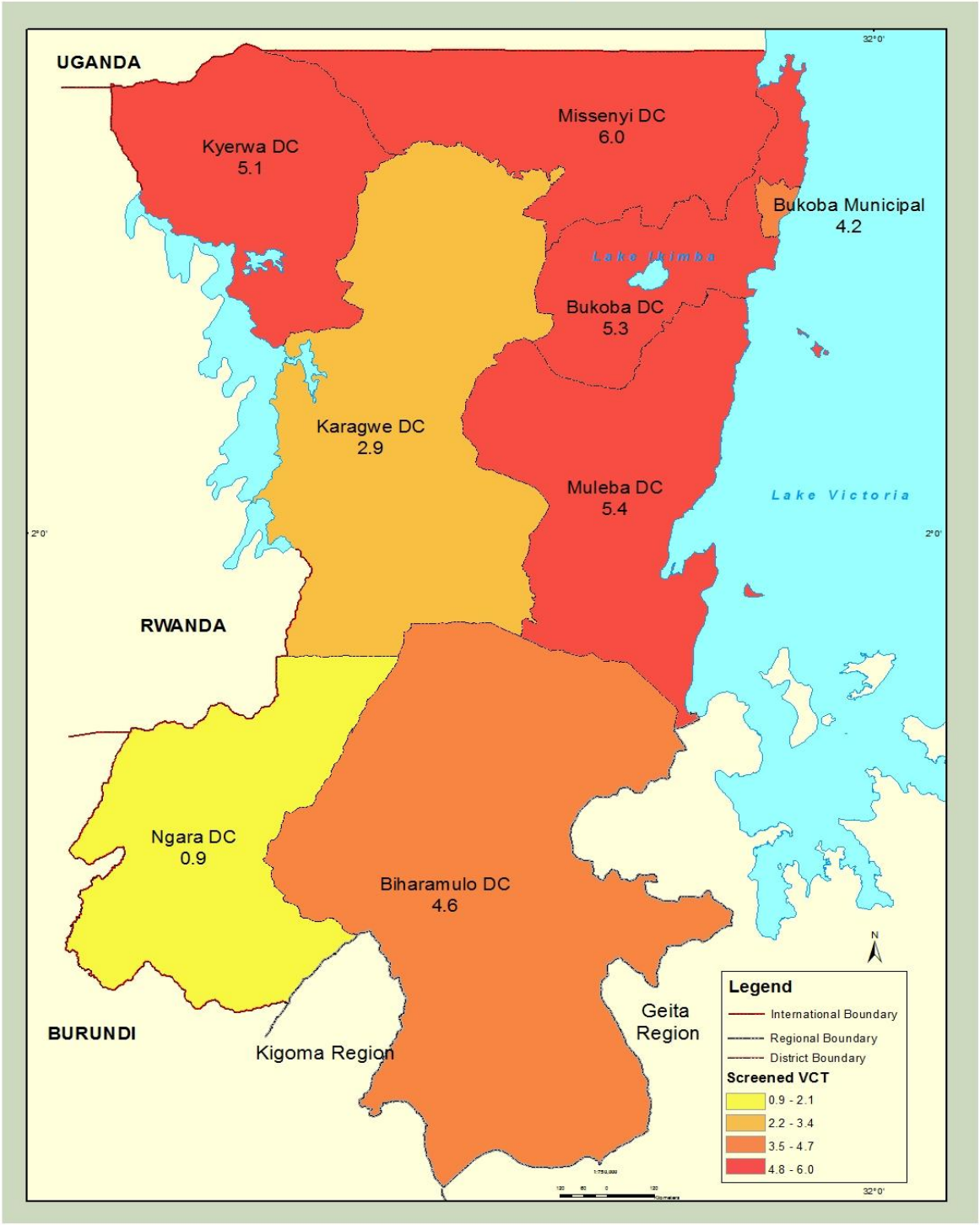
Table 5.14: HIV Prevalence Rates of VCT Volunteers Screened by Sex, Kagera Region, 2011, 2013 and 2015

Year	No. of Screened Persons			No. of Persons with HIV+			Percent of HIV+		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
2011	27,347	44,284	71,631	1,773	2,887	4,660	6.5	6.5	6.5
2013	33,625	47,580	81,205	2,209	2,718	4,927	6.6	5.7	6.1
2015	101,668	140,280	241,948	4,089	6,544	10,633	4.0	4.7	4.4
Total	**162,640**	**232,144**	**394,784**	**8,071**	**12,149**	**20,220**	**5.0**	**5.2**	**5.1**

Source: Complied data from District Executive Directors' Offices, Kagera Region, 2017

Map 7 and Table 5.15 reveal that in 2011, 8.2 percent of VCT volunteers who were screened in Bukoba MC were HIV positive, followed by Muleba DC (8.0 percent) and Karagwe DC (6.8 percent). Ngara DC had the lowest HIV/AIDS prevalence rate of 2.0 percent. In 2013, again, Bukoba MC recorded a relatively high HIV/AIDS prevalence rate of 10.0 percent, followed by Muleba DC (8.5 percent) and Biharamulo DC (5.7 percent). Ngara DC remained to be the least effected council in the Region with HIV/AIDS prevalence of 1.2 percent. The table further reveals that, Missenyi DC had the highest HIV/AIDS prevalence rate of 6.0 percent. It was followed by Muleba DC (5.4 percent) and Bukoba DC (5.3 percent), while Ngara DC had low HIV prevalence rates of less than one percent.

Map7:Map of Kagera Region Showing Percent of HIV+ Prevalence Rate for Screened VCT Volunteers by Council, 2015



Source: NBS, Cartographic Unit, Dsm, 2017

Table 5.15: HIV Prevalence Rate for Screened VCT Volunteers by Council, Kagera Region, 2011, 2013 and 2015

Council	Numbers of Screened			Number of HIV+			Percent of HIV+		
	2011	2013	2015	2011	2013	2015	2011	2013	2015
Karagwe DC	10,103	18,872	35,186	683	899	1,003	6.8	4.8	2.9
Bukoba DC	7,747	10,525	34,987	465	488	1,857	6.0	4.6	5.3
Muleba DC	14,506	5,565	44,431	1,164	473	2,418	8.0	8.5	5.4
Biharamulo DC	6,814	9,100	6,159	405	521	285	5.9	5.7	4.6
Ngara DC	3,987	6,343	8,035	81	76	70	2.0	1.2	0.9
Bukoba MC	20,972	24,668	78,703	1,695	2,458	3,322	8.1	10.0	4.2
Misenyi DC	770	956	7,968	30	33	476	3.9	3.5	6.0
Kyerwa DC	n.a	n.a	8,593	n.a	n.a	441	0.0	0.0	5.1
Total	**64,899**	**76,029**	**224,062**	**4523**	**4,948**	**9,872**	**7.0**	**6.5**	**4.4**

Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

5.1.5.1 Impact of HIV/AIDS

The socio-economic assessment of Kagera Region is not complete without addressing the extreme challenges caused by the HIV/AIDS and the efforts made so far by various local and international organisations to combat the epidemic. HIV/AIDS is discussed in detail in this documentbecause it is one of major health problems 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 vunerable children due to the loss of bread-earners in their families.

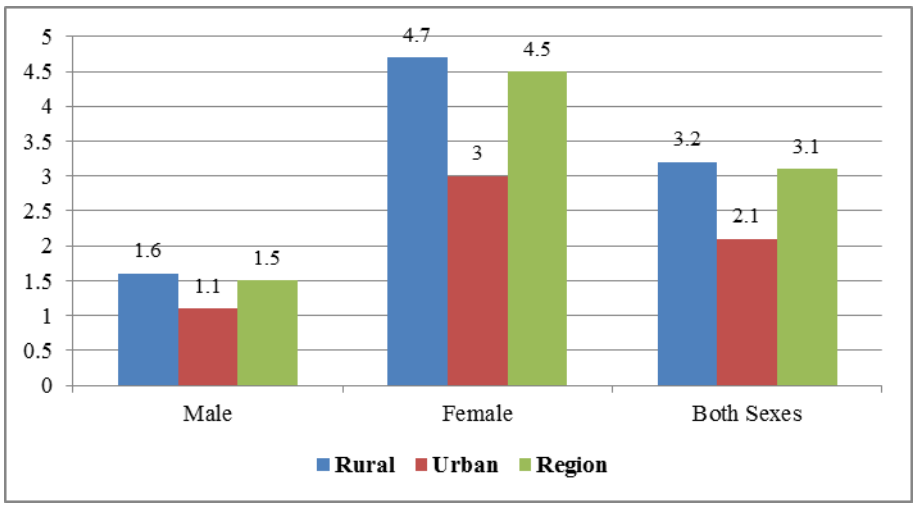
The report from the HIV and Malaria Survey and medical records provided by councils qualifies Kagera Region as being among few regions with increasing rates of HIV/AIDS prevalence in the country.

(i) Increase of Widows

Understanding the status of HIV/AIDS prevelance in Kagera Regionis very difficult since a lot of people consider HIV/AIDs as a shamefull disease to the extent that many people die at home without receiving medical care. Lack of VCT centres in remote areas, where people could go and be tested in order to know their HIV status is a problem since some people live with the HIV/AIDS virus without knowing that they are infected.

Indicators of the high HIV/AIDS prevalence rate in Kagera Region are rates of widowhood and orphanhood. The 2012 population census results show that the percentage of widowhood was higher in rural than urban areas and the percentage of widowhood was higher for females (4.5 percent) than males (1.5 percent). HIV/AIDS prevalence rate was much higher in rural (3.2 percent) than urban areas (2.1 percent).

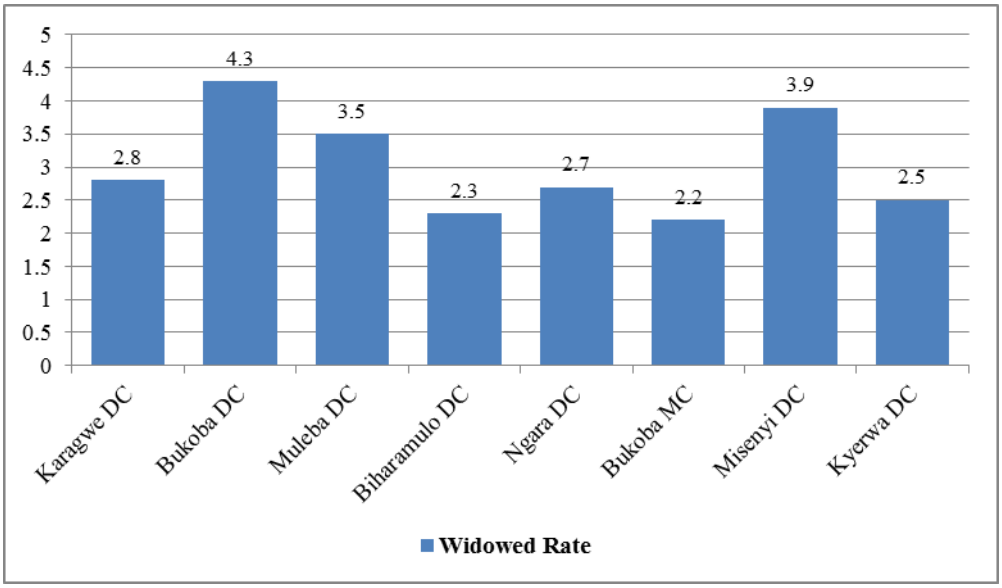
Figure 5.6: Percentage of the Widowed by Sex, Kagera Region, 2012



Source:NBS, 2012 Population and Housing Census Report (Kagera Profile), 2015

The percentage of widowed population across councils differs signifantly with the largest rate of widowed reported in Bukoba DC (4.3 percent) followed by Missenyi DC (3.9 percent) and Muleba DC (3.5 percent). Bukoba MC had lowest rate of widowhood in Kagera Region (Figure 5.7).

Figure 5.7: Percentage of the Widowed by Council, Kagera Region, 2012



Source: NBS, Population Census Reports, 2012, Kagera Region Socio-Economic Report, 2015.

(ii) Increase of Orphans

An orphan is a child under the age of 18 years who has lost one or both parents. Table 5.16 shows variations of orphan hood among councils by sex. The largest percentage of orphan hood was observed in Missenyi DC (10.8 percent), followed by Bukoba DC (10.2 percent) and Bukoba MC (10.0 percent). Biharamulo DC had the smallest percentage of orphan hood (6.1 percent) in Kagera Region. The further shows that the percentage of orphan hood among female aged 0 to 17 years was slightly lower (7.9 percent) than among male orphans (8.4 percent), but varies across councils.

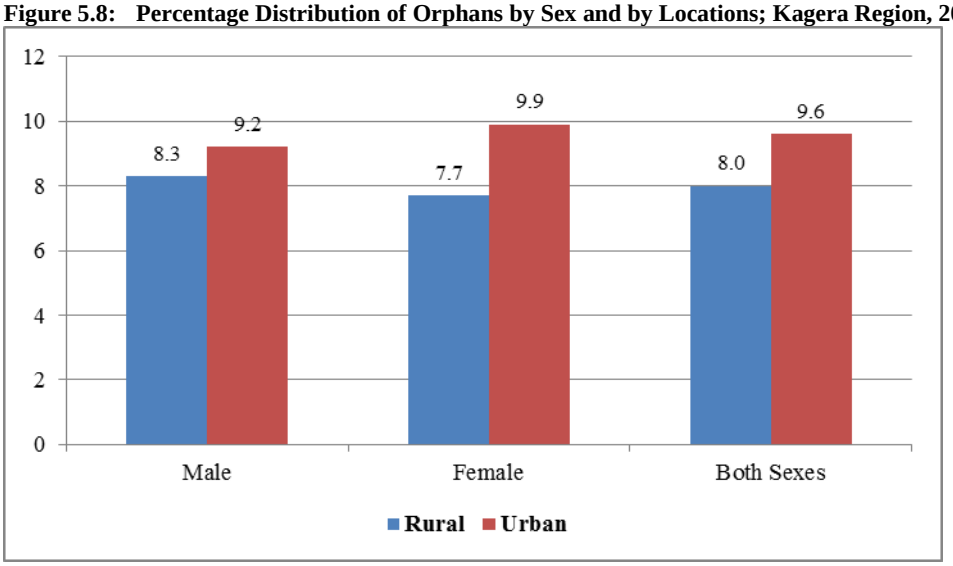
Table 5.16: Percentage Distribution of Orphans by Council and Sex; Kagera Region, 2012 Census

Council	Male			Female			Both Sexes		
	0 – 17 Years	Number of Orphans	Percent Orphans	0 – 17 Years	Number of Orphans	Percent Orphans	0 – 17 Years	Number of Orphans	Percent Orphans
Karagwe DC	87,369	6,291	7.2	88,122	6,257	7.1	175,491	12,548	7.1
Bukoba DC	76,752	8,212	10.7	74,415	7,218	9.7	151,167	15,430	10.2
Muleba DC	143,057	12,303	8.6	141,982	11,217	7.9	285,039	23,520	8.3
Biharamulo DC	93,232	5,780	6.2	93,415	5,698	6.1	186,647	11,478	6.1
Ngara DC	87,201	7,238	8.3	88,814	7,016	7.9	176,015	14,254	8.1
Bukoba MC	28,048	2,693	9.6	30,211	3,112	10.3	58,259	5,805	10.0
Missenyi DC	52,254	5,643	10.8	50,984	5,506	10.8	103,238	11,149	10.8
Kyerwa DC	88,989	6,763	7.6	89,213	6,156	6.9	178,202	12,919	7.2
Total	**656,902**	**55,180**	**8.4**	**657,156**	**51,915**	**7.9**	**1,314,058**	**107,103**	**8.1**

Source: NBS, Population Census Reports, 2012, Kagera Region Socio-Economic Report, 2015.

Figure 5.8 shows that 8.1 percent of children below 18 years were orphans due to the loss of one or both parents. The incidence of orphan hood is slightly higher for male children (8.4 percent) than female children (7.9 percent). The percentage of orphanhood is higher in urban areas (9.6 percent) than rural areas (8.0 percent). In Urban areas, the percentage of orphanhood was higher for female children (9.9 percent) than for male children (9.2 percent) while in rural areas the percentage of orphanhood was higher for male children (8.3 percent) than for female children (7.7 percent).

Figure 5.8: Percentage Distribution of Orphans by Sex and by Locations; Kagera Region, 2012 Census



Source: NBS, Population Census Reports, 2012, Kagera Region Socio-Economic Report, 2015

Currently the Region does not have updated data on the most vulnerable children therefore, there is a need of devising strategies of obtaining and documenting information on most vulnerable children in the Region.. Understanding the status of orphans and most vulnerable children will enable the

regional authority to adopt policies that will improve their welfare of the most vulnerable children including orphans.

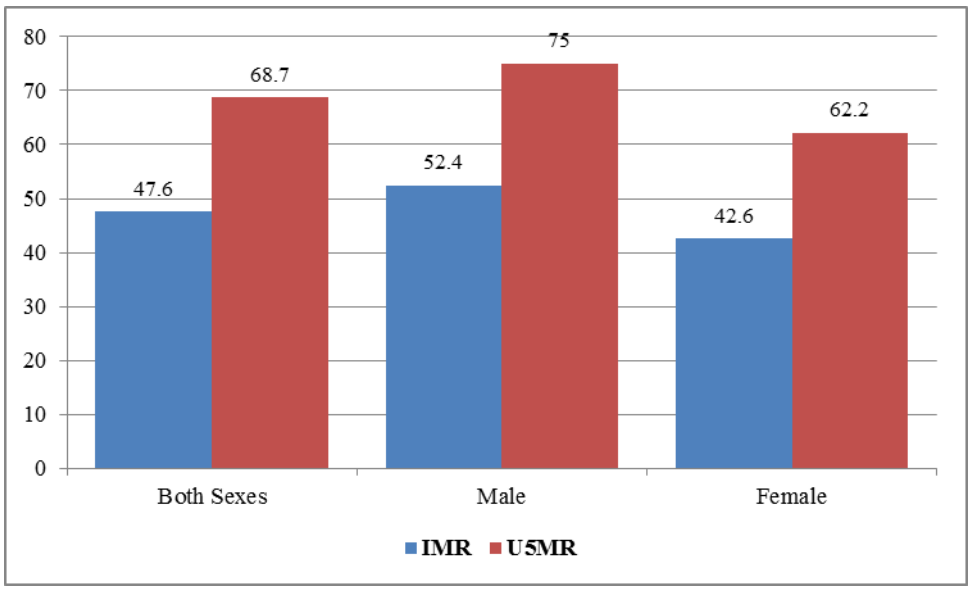
5.1.6 Child Nutrition

Children, from the stage of foetuses to under - five years and their mothers are the most vulnerable group in any society. Therefore, reproductive and child health services are the most vital services for the survival of this group. Besides the vaccination programme, children are also weighed to reveal the prevalence of underweight children 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 may lead to high infant and child mortality rates.

5.1.6.1 Mother and Child Health Care

Protection of expectant/lactating mothers and children from measles and tuberculosis through the immunisation programme (CSPD) with the support from development partners has greatly reduced the risk of their being infected. This is evidenced by the decline of infant and under five years' mortality rates in Kagera Region. The 2012 census results show that, IMR in Kagera Region declined from 102 deaths per 1,000 live births in 2002 to 47.6 deaths per 1,000 live births in 2012. The rate of deaths for children under five years dropped from 171 deaths per 1,000 live births in 2002 to 68.7 deaths per 1,000 live births in 2012 (Figure 5.9). Furthermore, Maternal Mortality Rate (MMR) of the Region is still high (365 maternal deaths per 100,000 live births) in 2012 which is below the national figure of 432 deaths per 100,000 live births. These achievements to a large extent have contributed in improving the life expectancy at birth of Kagera residents from 52.2 years in 2002 to 60.2 years in 2012.

Figure 5.9: Infant and Under Five Years Mortality Rates by Sex, Kagera Region, 2012

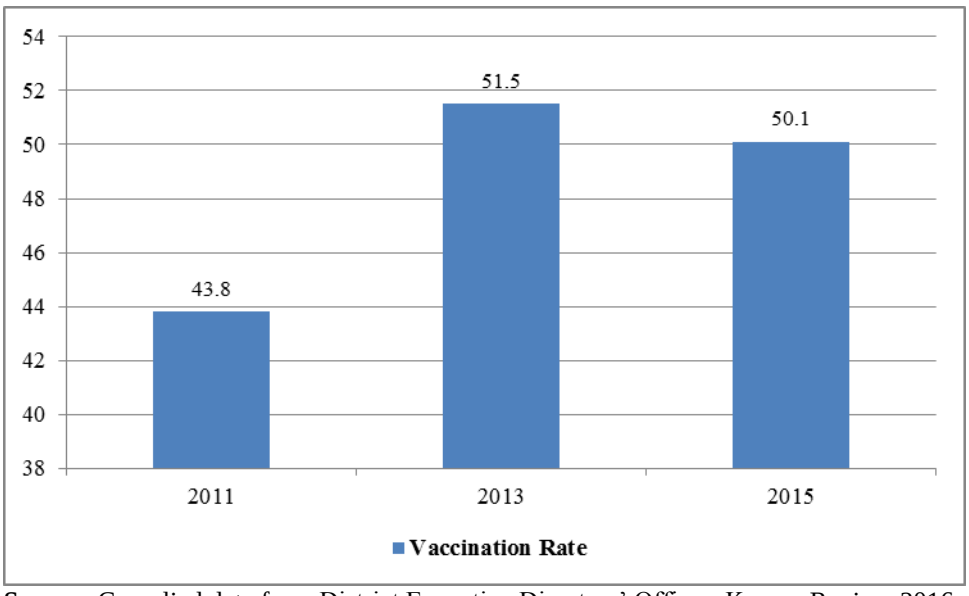


Source: NBS, Population Census Reports, 2012, Kagera Region Socio-Economic Report, 2015.

Immunization Coverage

Reduction of deaths among children and their mothers is attributed to the wide coverage of immunization campaigns in the region. However, the percentage of expectant mothers vaccinated with TT2 in Kagera Region has not been satisfactory in recent years; increasing from 43.8 percent in 2011 to 51.5 percent in 2013 and to 50.1 percent in 2015 (Figure 5.10). One of the reasons of having low levels of TT2 vaccination among women is lack of awareness on the purpose and importance of vaccinations to both children and their mothers by expectant mothers.

Figure 5.10: Percentage of Expectant Mothers Vaccinated TT2, Kagera Region; 2011, 2013 and 2015



Source: Complied data from District Executive Directors' Offices, Kagera Region, 2016

At council level, in 2011, Bukoba MC had the best TT2 vaccination coverage of 93.9 percent, followed by Karagwe DC (77.2 percent), while Biharamulo DC had the smallest coverage of 29.3 percent of expectant mothers immunised with TT2 vaccine. In 2013, only Biharamulo DC had vaccinated 61.6 percent of targeted 15,158 expectant mothers in the council, with the rest of councils having vaccinated less than 50.0 percent of their targeted expectant mothers. In 2015, Ngara and Bukoba DCs had the highest coverage of TT2 in the Region by vaccinating 88.5 percent and 88.2 percent of targeted expectant mothers respectively. Muleba DC had the smallest TT2 vaccination coverage of 34.6 percent of targeted expectant mothers in the council (Table 5.17).

Table 5.17: Percentage of Expectant Mothers Vaccinated TT2 by Council, Kagera Region, 2011, 2013 and 2015

Council	2011			2013			2015		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage
Karagwe DC	27,709	21,400	77.2	71,997	10,603	14.7	14,597	9,357	64.1
Bukoba DC	12,530	6,468	51.6	14,013	6,979	49.8	11,751	10,370	88.2
Muleba DC	n,a	n,a	na	19,036	5,965	31.3	22,013	7,611	34.6
Biharamulo DC	14,685	4,310	29.3	15,158	9,330	61.6	16,720	7,223	43.2
Ngara DC	12,586	4,123	32.8	13,528	3,467	25.6	6,174	5,461	88.5
Bukoba MC	5,062	4,751	93.9	11,465	4,490	39.2	4,303	3,390	78.8
Misenyi DC	n,a	n,a	n,a	6,895	2,942	42.7	9,332	4,619	49.5
Kyerwa DC	n,a	n,a	n,a	n,a	9,588	na	14,148	7,755	54.8
Total	**72,572**	**41,052**	**56.6**	**152,092**	**53,364**	**35.1**	**99,038**	**55,786**	**56.3**

Source: Complied data from District Executive Directors' Offices, Kagera Region, 2017

The trend of BCG vaccination for children under one year in Kagera Region shows an increase in the proportion of children vaccinated from 75.0 percent in 2011 to 86.7 percent in 2013 and 92.7 percent in 2015 (Table 5.18).

In 2011, only Missenyi and Biharamulo DCs had BCG coverage of more than 90.0 percent for children under one year at 97.1 percent and 94.7 percent respectively. These increased to four councils in 2013 (Biharamulo DC (131.8 percent), Missenyi DC (102.1 percent), Bukoba MC (99.7 percent) and Muleba DC (91.2 percent)). However, in 2015 five councils had more than 90.0 percent of BCG vaccination coverage (Biharamulo DC (143.0 percent), Missenyi DC (97.3 percent), Bukoba MC (95.9 percent), Kyerwa DC (93.0 percent) and Karagwe DC (92.9 percent)). Ngara DC had the smallest BCG vaccination coverage for children under one year in 2011, 2013 and 2015 (45.7 percent, 37.9 percent and 43.7 percent respectively).

Table 5.18: Percentage of Children Under One Year Vaccinated BCG by Council, Kagera Region, 2011, 2013 and 2015

Council	2011			2013			2015		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage
Karagwe DC	13,327	11,089	83.2	12,255	9,445	77.1	13,114	12,180	92.9
Bukoba DC	12,158	7,866	64.7	13,432	10,039	74.7	11,456	8,658	75.6
Muleba DC	12,485	11,831	94.8	13,721	12,518	91.2	15,544	13,765	88.6
Biharamulo DC	14,685	10,637	72.4	15,157	19,976	131.8	16,720	23,908	143
Ngara DC	12,337	5,632	45.7	12,705	4,820	37.9	12,829	5,607	43.7
Bukoba MC	1,008	726	72	965	962	99.7	1,140	1,093	95.9
Misenyi DC	7,701	7,477	97.1	6,582	6,718	102.1	8,240	8,016	97.3
Kyerwa DC	n,a	n,a	n,a	13,367	11,940	89.3	14,114	13,128	93
Total	**73,701**	**55,258**	**75.0**	**88,184**	**76,418**	**86.7**	**93,157**	**86,355**	**92.7**

Source: Complied data from District Executive Directors' Offices, Kagera Region, 2017

In regard to DPT3, the immunization coverage of children uner 1 year in the Region was good with the percentages of vaccinated children increasing from 76.1 percent of targeted children in 2011 to 81.5 percent in 2013 and 93.7 percent in 2015. At council level, Ngara DC, Bukoba MC and Biharamulo DC were the best vaccinated councils in 2011, 2013 and 2015, immunized 108.9 percent, 102.5 and 114.6 percent of their targeted children respectively. While, Biharamulo DC had the lowest coverage of 52.4 percent of targeted children in 2011, Bukoba DC had the lowest vaccination coverage in 2013 (60.3 percent) and Karagwe DC had the lowest coverage in 2015 (82.5 percent) (Table 5.19).

Table 5.19: Percentage of Children under One Year Vaccinated with DPT3 by Council, Kagera Region, 2011, 2013 and 2015

Council	2011			2013			2015		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage
Karagwe DC	13,327	10,693	80.2	12,255	8,324	67.9	13,523	11,162	82.5
Bukoba DC	12,165	8,789	72.2	13,590	8,199	60.3	11,420	9,860	86.3
Muleba DC	13,236	12,392	93.6	14,234	12,917	90.7	16,533	14,759	89.3
Biharamulo DC	14,685	7,699	52.4	15,157	14,989	98.9	16,720	19,169	114.6
Ngara DC	941	1,025	108.9	1,094	1,029	94.1	996	917	92.1
Bukoba MC	1,008	879	87.2	965	989	102.5	1,140	1,241	108.9
Misenyi DC	7,701	6,535	84.9	6,582	4,678	71.1	8,240	7,022	85.2
Kyerwa DC	n,a	n,a	n,a	12,650	11,259	89	13,055	12,389	94.9
Total	**63,063**	**48,012**	**76.1**	**76,527**	**62,384**	**81.5**	**81,627**	**76,519**	**93.7**

Source: Complied data from District Executive Directors' Offices, Kagera Region, 2016

OPV3 vaccination coverage for children under one year in Kagera Region potrays a similar pattern to that of other vaccines with increasing percentages of vaccinated children over a period of time. The percentage of vaccinated children in the Region increased from 82.9 percent in 2011 to 87.1 percent in 2013 and 93.7 percent in 2015. At council level, Ngara DC had the largest OPV3 vaccing coverage in 2011 and 2013 vaccinating 123.4 percent and 110.5 percent of children under one year respectively. Muleba DC had the largest OPV3 vaccination coverage in 2015 vaccinating 101.4 percent of targeted children in the district. The council with the smallest percentage of vaccinated children in 2011 was Biharamulo DC (64.1 percent) and in 2013 it was Bukoba DC (60.3 percent) while in 2015 Karagwe DC had the smallest percentage of OPV3 vaccinated children (86.3 percent) (Table 5.20).

Table 5.20: Percentage of Children under One Year Vaccinated OPV3 by Council, Kagera Region, 2011, 2013 and 2015

Council	2011			2013			2015		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage
Karagwe DC	13,327	10,693	80.2	12,255	8,324	67.9	13,523	11,162	82.5
Bukoba DC	12,165	8,789	72.2	13,590	8,199	60.3	11,420	9,860	86.3
Muleba DC	13,595	13,002	95.6	14,222	13,231	93.0	16,577	16,802	101.4
Biharamulo DC	14,685	9,413	64.1	15,157	15,086	99.5	16,720	16,653	99.6
Ngara DC	4,353	5,372	123.4	5,938	6,564	110.5	5,705	5,609	98.3
Bukoba MC	5,062	4,857	96.0	4,465	4,522	101.3	5,306	4,986	94
Misenyi DC	7,701	6,619	85.9	6,582	6,740	102.4	8,240	7,152	86.8
Kyerwa DC	n,a	n,a	n,a	12,650	11,259	89.0	13,055	12,632	96.8
Total	**70,888**	**58,745**	**82.9**	**84,859**	**73,925**	**87.1**	**90,546**	**84,856**	**93.7**

Source: Complied data from District Executive Directors' Offices, Kagera Region, 2017

Measles vaccination is performed to protect children against measles. Table 5.21 shows medical records from all councils of Kagera Region for year 2011, 2013 and 2015. Out of 72,048 targeted children in Kagera Region in 2011 81.7 percent were vaccinated against measles (83.9 percent), of the 84,827 targeted children were vaccinated in 2013 and 82.8 percent of the 90,527 targeted children were vaccinated in 2015.

At council level, coverage of children under one year against measles vaccination differed across councils. In 2011, the proportion of vaccinated children, ranged from 64.5 percent in Biharamulo DC to 105.6 percent in Ngara DC. In 2013 measles vaccination levels ranged from 60.3 percent in Bukoba DC and 102.4 percent in Missenyi DC. In 2015, Ngara DC had the largest measles

vaccination coverage of 107.4 percent and Biharamulo DC had the smallest coverage of 54.1 percent of targeted children (Table 5.21).

Table 5.21: Number of Children under One Year Vaccinated Measles by Council, Kagera Region, 2011, 2013 and 2015

Council	2011			2013			2015		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage
Karagwe DC	13,327	10,638	79.8	12,255	8,878	72.4	13,523	10,858	80.3
Bukoba DC	12,165	8,789	72.2	13,590	8,199	60.3	11,420	9,860	86.3
Muleba DC	14,565	13,592	93.3	14,396	13,273	92.2	16,710	15,258	91.3
Biharamulo DC	14,685	9,472	64.5	15,157	13,311	87.8	16,720	9,052	54.1
Ngara DC	4,543	4,797	105.6	5,732	5,283	92.2	5,583	5,997	107.4
Bukoba MC	5,062	4,468	88.3	4,465	4,076	91.3	5,276	4,548	86.2
Misenyi DC	7,701	7,119	92.4	6,582	6,740	102.4	8,240	7,152	86.8
Kyerwa DC	n,a	n,a	n,a	12,650	11,385	90.0	13,055	12,216	93.6
Total	**72,048**	**58,875**	**81.7**	**84,827**	**71,145**	**83.9**	**90,527**	**74,941**	**82.8**

Source: Complied data from District Executive Directors' Offices, Kagera Region, 2017

5.1.7 Policy Implication on Health Sector

The Region still has inadequate number of doctors, health infrastructure and facilities. Moreover, inadequate number of doctors limits provision of curative and preventive health services such as operations, professional assistance and advices, mother and child health services, diagnosis of illness due to shortage or lack of medical machines and equipment, to mention a few. This is evidenced by high rates of infant and child mortality as well as maternal mortality rate prevailing in the Region. However, health services can be improved through, among other things, availability of good health infrastructure and conducive working environment to motivate doctors and other health workers to work in rural areas. Likewise, the strategy of constructing dispensaries in every village and one health center in every ward by both public and private sectors should be adhered to for increasing accessibility of health services to the rural population.

5.1.8 Investment Opportunities for Health Sector

This sub-sector faces many challenges including prevalence of diseases such as malaria, ARI, pneumonia, diarrhea, clinical Aids, etc; shortage of workers especially nurses and medicines. Investment is needed in regard to the construction of more health facilities e.g. health centers, instruments/medicines and training of health/medical personnel.

5.2 Education Sector

5.2.1 An Overview

Development of education sector examines the quantitative and qualitative aspects of the entire education system covering pre-primary, primary, secondary and tertiary education which includes vocational education, colleges, and higher learning institutions as well as adult education. Therefore, the development of the sector in Kagera Region involves improving all the above mentioned areas. This understanding is attested by steps so far taken by individuals and the local government authorities to increase the intake to pre-primary, primary, secondary and tertiary schools in recent years.

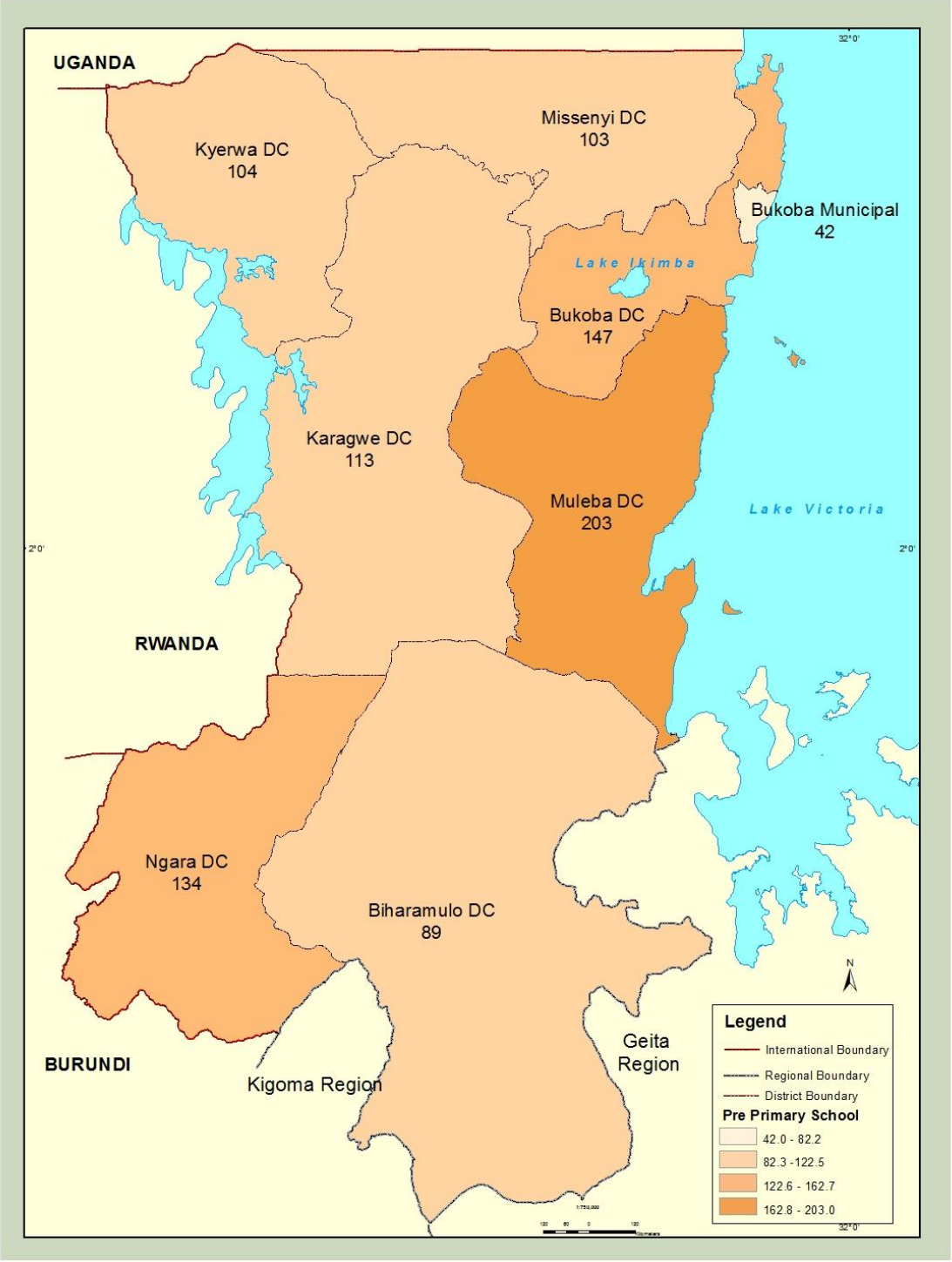
5.2.2 Pre-Primary Education

The condition set by the Ministry of Educationrequiring all children who start Standard One to have attended pre-primary education has accelerated the establishment of pre-primary schools all over the country including Kagera Region. Pre-schools are meant for children of ages 5 and 6 years.

Table 5.22 shows that the Region increased the number of pre-primary schools from 318 in 2000 to 783 in 2011 and 935 schools in 2015. In terms of ownership, most of pre-primary schools were annexed to government primary school compounds. As a result, publically owned pre-primary schools were 73.0 percent in 2000, 93.6 percent in 2011 and 92.7 percent in 2015.

Map 8 and Table 5.22 also show that in 2015 the council with the largest number of pre-primary schools was Muleba (203), followed by Bukoba (147) and Ngara (134) district councils, while Bukoba MC (42) had the smallest number followed by Biharamulo DC (89). In regard to private pre-primary schools, Bukoba MC (17) had the largest number, followed by Muleba DC (16) and Missenyi DC (9). One general observation is a significant decrease of private pre-primary schools in 2015 compared to 2000. The reason for these is the closure of these schools due to failure to comply with conditions set by the Ministry of Education in regard to qualification of teachers, school environment and availability of teaching materials and tools.

Map 8:Map of Kagera Region Showing Total Number of Pre-Primary Schools by Council, 2015



Source: NBS, Cartographic Unit, Dsm, 2017

Table 5.22: Number of Pre-Primary Schools by Council; Kagera Region, 2000, 2011 and 2015

Council	2000			2011			2015		
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Karagwe DC	20	13	33	108	4	112	109	4	113
Bukoba DC	146	16	162	141	5	146	141	6	147
Muleba DC	11	25	36	170	8	178	187	16	203
Biharamulo DC	27	19	46	85	3	88	85	4	89
Ngara DC	15	9	24	110	8	118	129	5	134
Bukoba MC	13	4	17	25	15	40	25	17	42
Misenyi DC	*	*	*	94	7	101	94	9	103
Kyerwa DC	**	**	**	**	**	**	97	7	104
Total	**232**	**86**	**318**	**733**	**50**	**783**	**867**	**68**	**935**
Percent	**73**	**27**	**100**	**93.6**	**6.4**	**100**	**92.7**	**7.3**	**100**

*****Data for Missenyi are included in its former district council of Bukoba
******Data for Kyerwa are included in its former district council of Karagwe
Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

The reason for introducing pre-primary school classes in government primary schools all over the country was to increase enrolment of children aged 5 and 6 years. This being for the purpose of fulfilling the condition set by the government that requires children to understand 3 Ks (to read, to write and to count numbers) before enrolling into primary schools.

Table 5.23 shows that enrolment in pre-primary schools increased from 30,054 pupils in 2000 to 48,894 in 2011 and 67,587 in 2015. However, enrolment of pupils in private schools decreased from 12,707 pupils in 2000 to 8,120 in 2011 but increased slightly to 8,020 pupils in 2015. One general observation is the significant increase in enrolment in public pre-primary schools due to the increased of awareness of the importance of education among parents together with improved accessibility of pre-primary schools.

Table 5.23: Total Enrolment (number) in Pre-Primary Schools by Council, Kagera Region, 2000, 2011 and 2015

Council	2000			2011			2015		
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Karagwe DC	10,541	6,638	17,179	6,934	201	7,135	9,218	150	9,368
Bukoba DC	807	661	1,468	9,024	436	9,460	9,932	312	10,244
Muleba DC	1,757	2,975	4,732	6,409	4,508	10,917	7,794	6,015	13,809
Biharamulo DC	3,325	2,110	5,435	3,499	1,946	5,445	12,097	36	12,133
Ngara DC	244	216	460	10,926	143	11,069	12,310	198	12,508
Bukoba MC	673	107	780	1,453	707	2,160	1,912	849	2,761
Misenyi DC	*	*	*	4,475	179	4,654	5,859	346	6,205
Kyerwa DC	**	**	**	**	**	*	9,663	114	9,777
Total	**17,347**	**12,707**	**30,054**	**42,720**	**8,120**	**50,840**	**61,785**	**8,020**	**67,587**
Percent	**57.7**	**42.3**	**100.0**	**84.0**	**16.0**	**100.0**	**91.4**	**8.6**	**100.0**

*******Data for Missenyi are included in its former district council of Bukoba*
********Data for Kyerwa are included in its former district council of Karagwe*
Source: *Compiled Data from District Executive Directors' Offices, Kagera Region, 2017*

5.2.3 Primary Education

Education is a basic right of every Tanzanian child of school going age (7-13). To achieve this, the Government of Tanzania put in place the policy of Universal Primary Education (UPE) in 1974 making such education compulsory and setting out to make enrolment increase possible. The first task was to have enough primary schools that would ensure enrolment of all school going age children in the region.

In 2015, the region showed a significant improvement in achieving the target of giving enrolling all eligible children into Standard One. Table 5.24 shows that, on average, each ward had at most 5 public primary schools and a primary school in each village/mtaa. The region had 192 wards, 728 villages/mitaa and 946 primary schools in 2015. Ngara DC had the largest average number of schools per ward (5.4) and together with Bukoba DC per village/mtaa (1.6 each). At ward level, it was followed by Ngara DC Muleba DC (5.3) then Biharamulo and Missenyi DCs (5.2 each). Bukoba MC had the smallest number of schools per ward (3.0) and mtaa (0.6).

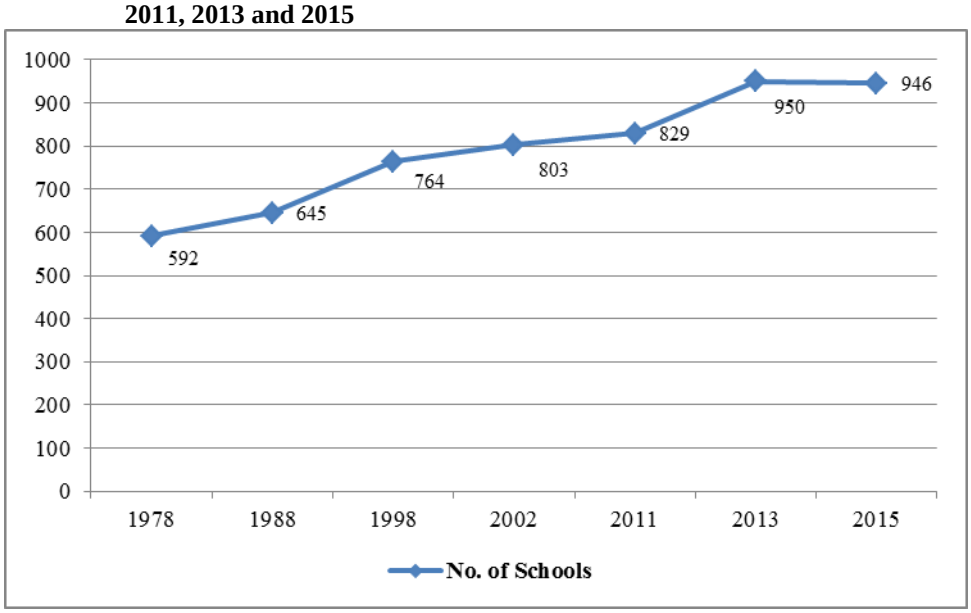
Table 5.24: Number of Primary Schools and Average Number of Schools per Ward and Village by Council, Kagera Region, 2015

Council	Number of			Average Number of Schools per	
	Wards	Villages/ Mitaa	Schools	Ward	Village
Karagwe DC	23	77	117	5.1	1.5
Bukoba DC	29	94	147	5.1	1.6
Muleba DC	43	166	226	5.3	1.4
Biharamulo DC	17	74	88	5.2	1.2
Ngara DC	22	75	119	5.4	1.6
Bukoba MC	14	66	42	3.0	0.6
Misenyi DC	20	77	103	5.2	1.3
Kyerwa DC	24	99	104	4.3	1.1
Total	**192**	**728**	**946**	**4.9**	**1.3**

Source: Compiled Data from District Executive Directors' Offices, Kagera Region, 2017

Figure 5.11 shows that a lot of progress has been made by local authorities in Kagera Region in constructing primary school infrastructure in the last three decades. The number of primary schools both public and private increased from 592 in 1978 to 803 schools in 2002 and reached 946 schools in 2015.

Figure 5.11: Number of Primary Schools (Public and Private) in Kagera Region, 1978, 1988, 1998, 2002, 2011, 2013 and 2015



Source: Compiled data from Local Government Authorities, Kagera Region, 2017

Table 5.25 shows that, out of 945 schools registered in 2015, 226 (23.9 percent) were located in Muleba DC, followed by Bukoba DC 147 (15.5 percent) and Ngara DC 119 (12.6 percent).While Bukoba MC had the smallest number of primary schools 42 (4.4 percent) in the Region, followed by Biharamulo DC 88 (9.3 percent) and Missenyi and Kyerwa DC 104 (10.9 percent each).

With regards to ownership, percentage share of schools for the private sector has remained steady in recent years. It was 15.6 percent in 2011, 16.2 percent in 2013 and 16.4 percent in 2015 (Table 5.25). The Region and local government authorities should take more initiatives to motivate private sector to increase their participation in the provision of primary education in the Region.

Table 5.25: Number of Primary Schools by Ownership and by Council, Kagera Region, 2011, 2013 and 2015

Council	2011			2013			2015			
	Public	Private	Total	Public	Private	Total	Public	Private	Total	Percent Share
Karagwe DC	108	5	113	110	6	116	110	7	117	12.4
Bukoba DC	141	5	146	141	6	147	141	6	147	15.6
Muleba DC	120	103	223	125	103	228	123	103	226	23.9
Biharamulo DC	85	2	87	85	3	88	85	3	88	9.3
Ngara DC	115	4	119	118	4	122	115	4	119	12.6
Bukoba MC	25	15	40	25	17	42	25	17	42	4.4
Misenyi DC	94	7	101	94	9	103	94	9	103	10.9
Kyerwa DC	99	5	104	95	5	100	97	7	104	10.9
Total	**787**	**146**	**933**	**793**	**153**	**946**	**790**	**156**	**946**	**100**
Percent	**84.4**	**15.6**	**100**	**83.8**	**16.2**	**100**	**83.6**	**16.4**	**100**	

Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

5.2.3.1 Standard One Enrolment

Table 5.26 shows enrolments in Standard One of primary schools by council in 2011, 2013 and 2015. The total Standard One enrolment in Kagera Region increased from 66,225 in 2011 to 71,863 in 2013 before increasing to 80,937 in 2015.However in private primary schools enrolment increased from 1,525 in 2011 to 1,767 in 2013 and 1,825 in 2015. Nevertheless, the percentage of enrolments was much higher in public schools than private schools. It was 97.9 percent in 2011, 97.5 percent in 2013 and 97.7 percent in 2015.

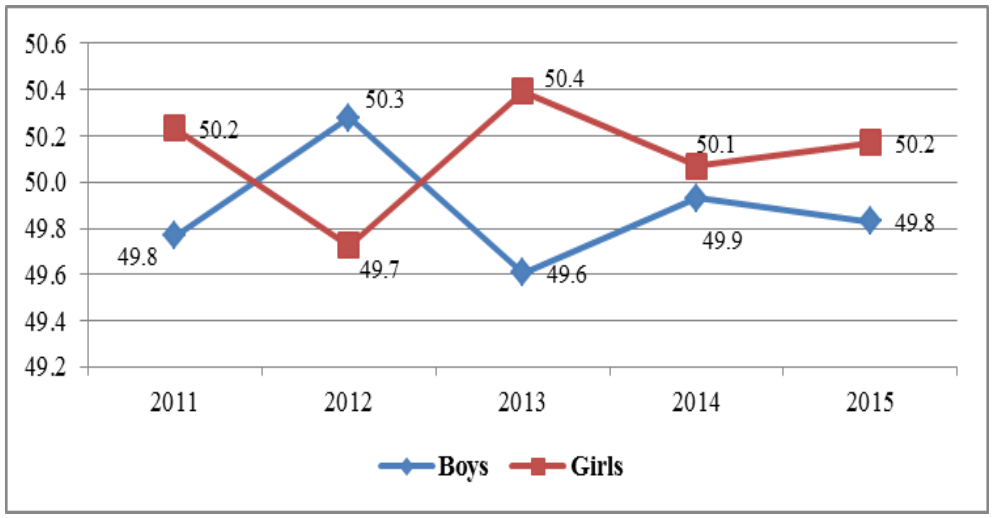
Table 5.26: Standard I Enrolment by School Ownership and Council, Kagera Region, 2011, 2013 and 2015

Council	2011			2013			2015		
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Karagwe DC	8,766	118	8,884	7,615	172	7,787	6,592	179	6,771
Bukoba DC	10,003	223	10,226	11,400	258	11,658	9,620	274	9,894
Muleba DC	16,113	228	16,341	16,622	269	16,891	18,054	199	18,253
Biharamulo DC	4,243	76	4,319	8,210	86	8,296	13,041	140	13,181
Ngara DC	8,924	43	8,967	9,719	55	9,774	10,214	57	10,271
Bukoba MC	2,213	663	2,876	2,743	657	3,400	2,486	675	3,161
Misenyi DC	5,281	91	5,372	5,563	174	5,737	6,120	169	6,289
Kyerwa DC	9,157	83	9,240	8,224	96	8,320	12,985	132	13,117
Total	**64,700**	**1,525**	**66,225**	**70,096**	**1,767**	**71,863**	**79,112**	**1,825**	**80,937**
Percent	**97.7**	**2.3**	**100**	**97.5**	**2.5**	**100**	**97.7**	**2.3**	**100**

Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

In terms of the enrolment by sex, Figure 5.12 shows that the Region has done well as both boys and girls had equal chances of being enrolled in Standard One over the five – year period from 2011 to 2015. However, except for 2012, the share of girls in Standard One enrolment was slightly higher than that of boys.

Figuree 5.12: Standard One Enrolment by Sex; Kagera Region, 2011 - 2015



Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

Althrough enrolment into Standard One is open to children of age 7 according to the education policy, the age limit has been expanded to cover ages 7 to 13 years. This is due to lack of classrooms, culture and norms of the people of Tanzania. Table 5.27 shows that the percentage of total number of children enrolled in Standard One at the age of 7 years in the last five years was 64.5 percent and those of age 8 or above was 35.5 percent. Enrolment of children of age 7 years varied from 60.6 percent in 2015 to 68.1 percent in 2011, while that of pupils of age 8 or above years ranged from 31.9 percent in 2011 to 39.4 percent in 2014.

The analysis also shows variations of standard one enrolment between years in the last five years. Table 5.27 shows that there was an increase of 13,712 pupils between 2011 and 2015, while pupils enrolled in 2012 was higher by 8.7 percent of the enrolled pupils in 2011, but declined by 0.2 percent in 2013. It also shows an increase in enrolment by 0.7 percent in 2014and 11.9 percent in 2015. One general observation is that the region had not yet complied with the enrolment policy on the age of enrolment into Standard One since almost a third of all children enrolled in Standard One were of age 8 years or above.

Among other reasons, lack of classrooms together with increase of awareness of the importance of education caused by the community participation in school committees and through MEMM and MEMKWA which motivate parents in the region to enroll their children as per policy instruction.

Table 5.27: Distribution of Standard I Enrolment by Age Group, Kagera Region, 2011 – 2015

Years	7 Years		8 To 10 Years		Total Enrolment	Enrolment Change	
	Number	Percent	Number	Percent		Number	Percent
2011	45,083	68.1	21,142	31.9	66,225		
2012	46,761	65.0	25,222	35.0	71,983	5,758	8.7
2013	47,117	65.6	24,746	34.4	71,863	-120	-0.2
2014	46,251	63.9	26,097	36.1	72,348	485	0.7
2015	49,032	60.6	31,905	39.4	80,937	8,589	11.9
Total	**234,244**	64.5	**129,112**	35.5	**363,356**	**14,712**	**18.2**

Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

Table 5.28 also shows that the proportion of girls enrolled into standard one at age seven was almost the same as of boys, while boys were more than girls in older age group, 8 to 10 years, although there were some variations between years. The cumulative enrolment between 2011 and 2015 shows that 50.3 percent out of 234,244 Standard One pupils aged seven years were girls but were less (49.8 percent) for older ages (8 – 10 years (Table 5.28). Table 5.28 also shows that, with exception of 2014 and 2015, rest of years more girls were enrolled standard one at age seven than boys, while more boys than girls were enrolled at age group 8 to 10 years, with exception of 2014

and 2015. The analysis of data has shown an increase of girls even at old ages in 2014 and 2015 than previous years (Table 5.28). Among other reasons, increase of awareness and understanding of the importance of educating girls is crucial for betterment of family as a whole than boys.

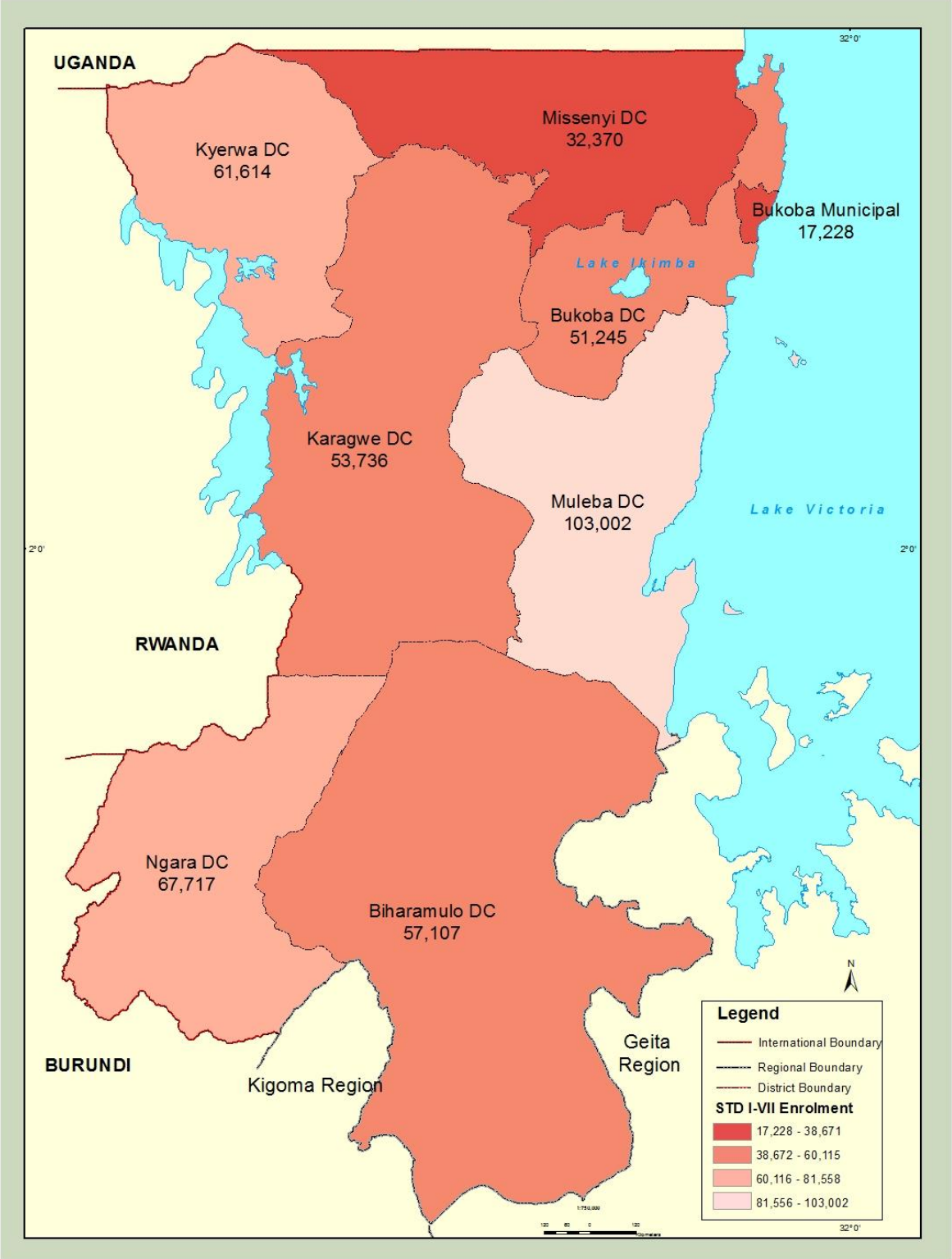
Table 5.28: Standard I Enrolment by Age and by Sex, Kagera Region, 2011 – 2015

Year	Registered Children						Total Registered		
	Age Seven			Age 8-10					
	Boys	Percent Girls	Total	Boys	Percent Girls	Total	Boys	Percent Girls	Total
2011	22,046	51.1	45,083	10,867	48.6	21,142	32,980	50.2	66,225
2012	22,819	51.2	46,761	12,939	48.7	25,222	36,207	49.7	71,983
2013	23,323	50.5	47,117	12,645	48.9	24,746	35,644	50.4	71,863
2014	23,449	49.3	46,251	12,814	50.9	26,097	36,102	50.1	72,348
2015	24,810	49.4	49,032	15,633	51.0	31,905	40,307	50.2	80,937
Total	**116,447**	**50.3**	**234,244**	**64,898**	**49.8**	**129,112**	**181,240**	**50.1**	**363,356**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

For three years 2011, 2013 and 2015 Kagera Region implemented unsuccessfully the call of the Government to increase primary school enrolment. Table 5.29 shows that, the enrolment in primary schools increased from 446,842 in 2011 to 447,108 in 2013 but decreased to 444,019 in 2015.In 2011, girl's enrolment was more than 50 percent in Karagwe DC, Bukoba DC, Ngara DC, Kyerwa DC and Bukoba MC. In 2013 it was more than 50 percent in all councils except Missenye Dc while in 2015 it was more than 50 percent in all councils except Karagwe DC. Likewise, Map 9 shows total standard One to Seven pupils enrolled in public primary schools in the region in 2015.

Map 9:Map of Kagera Region Showing Total (STD I – VII) Enrolment in Public Primary Schools by Council, 2015



Source: NBS, Cartographic Unit, Dsm, 2017

Table 5.29: Total (STD I – VII) Enrolment in Public Primary Schools by Sex and Council Kagera Region, 2011, 2013 and 2015

Council	2011			2013			2015		
	Boys	Percent Girls	Total	Boys	Percent Girls	Total	Boys	Percent Girls	Total
Karagwe DC	30,042	52.2	62,822	27,327	51.4	56,257	28,067	47.8	53,736
Bukoba DC	32,128	50.4	64,835	27,737	50.9	56,518	25,082	51.1	51,245
Muleba DC	49,577	49.7	98,656	49,548	50.4	99,809	51,127	50.4	103,002
Biharamulo DC	21,374	49	41,907	24,047	52	50,097	28,577	50	57,107
Ngara DC	32,984	50.8	67,064	36,758	50.3	73,978	29,795	56	67,717
Bukoba MC	8,102	51.4	16,666	8,432	51.1	17,247	8,424	51.1	17,228
Misenyi DC	18,468	49.8	36,756	17,308	49.4	34,182	16,162	50.1	32,370
Kyerwa DC	28,290	51.3	58,136	29,266	50.4	59,020	29,592	51.9	61,614
Total	**220,965**	**50.5**	**446,842**	**220,423**	**50.7**	**447,108**	**188,474**	**57.6**	**444,019**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

5.2.3.2 Completion Rate of Primary School

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 completes the primary education cycle irrespective of whether they sit for the final examination or not.

Table 5.30 shows the performance of two cohorts. The average completion rate for the 2007 cohort was 60.5 percent. This cohort enrolled in 2007 and finished in primary education in 2013. The average completion rate for the 2008 cohort increased to 71.1 percent and this cohort enrolled in 2008 and finished in 2014. In regard to sex differences, retention was higher for girls than boys. In the 2007 cohort, completion rate for boys was 51.5 percent compared to 65. 5 percent for girls, while boys' retention in the 2008cohort stood at 68.8 percent compared 73.2 percent for girls.

Table 5.30: Number of Pupils Who Enrolled in STD I in 2007 and Completed STD VII in 2013 and those Who Enrolled in 2008 and Completed STD VII in 2014 by Sex, Kagera Region

Sex	2007 to 2013			2008 to 2014		
	Enrolled 2007	Completed 2013	Completion Rate	Enrolled 2008	Completed 2014	Completion Rate
Boys	27,468	14,810	53.9	23,548	16,200	68.8
Girls	28,450	19,023	66.9	25,262	18,499	73.2
Total	**55,918**	**33,833**	**60.5**	**48,810**	**34,699**	**71.1**

Source: Compiled Data from District Executive Directors' Offices, Kagera Region, 2017

At council level in Kagera Region, there were significant differences in percentage of boys and girls who completed primary education for 2007 and 2008 cohort (Table 5.31 and 33). Missenyi DC had the highest completion rate for the 2007 cohort, while Ngara DC had the lowest completion

rate of 37.4 percent. In regard to sex difference, all councils except Karagwe DC, Kyerwa DC and Bukoba MC, girls had higher completion rate than boys (Table 5.32).

Table 5.31: Number of Pupils Who Enrolled in STD I in 2007 and Completed STD VII in 2013 by Council and by Sex, Kagera Region

Council	Enrolled 2007			Completed 2013			Completion Rates		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Karagwe DC	3,540	3,494	7,034	2,637	2,561	5,198	74.5	73.3	73.9
Bukoba DC	3,453	3,856	7,309	2,600	3,046	5,646	75.3	79.0	77.2
Muleba DC	7,989	8,360	16,349	4,764	5,283	10,047	59.6	63.2	61.5
Biharamulo DC	2,187	2,178	4,365	1,275	1,307	2,582	58.3	60.0	59.2
Ngara DC	4,420	4,326	8,746	1,534	1,738	3,272	34.7	40.2	37.4
Bukoba MC	1,301	1,405	2,706	965	1,023	1,988	74.2	72.8	73.5
Misenyi DC	2,677	2,685	5,362	2,040	2,271	4,311	76.2	84.6	80.4
Kyerwa DC	1,901	2,146	4,047	1,632	1,794	3,426	85.8	83.6	84.7
Total	**27,468**	**28,450**	**55,918**	**14,810**	**19,023**	**33,833**	53.9	66.9	60.5

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

Primary school completion rate was higher for the 2008 cohort than for the 2007 cohort. Completing school in 2014 was 71.1 percent of 48,810 pupils who started school in 2008 while in 2013 it was 58.8 percent of 51,871 pupils who started school in 2007.Table 5.32 shows that the percentage of girls (73.2 percent) completing school was higher than that of boys (68.8 percent) in 2014. This indicates that for the 2008 cohort school dropout problem was more serious for boys than for girls.

Table 5.32: Number of Pupils Who Enrolled in STD I in 2008 and Completed STD VII in 2014 by Sex and Council, Kagera Region, 2008 and 2014

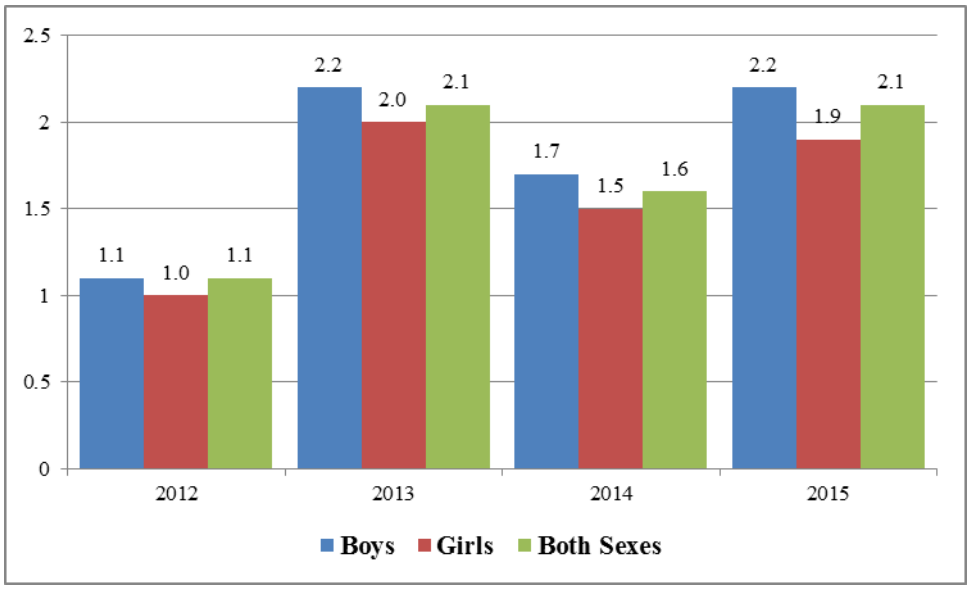
Council	Enrolled 2008			Completed 2014			Completion Rates		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Karagwe DC	2,251	2,862	5,113	2,204	2,830	5,034	97.9	98.9	98.5
Bukoba DC	3,284	3,490	6,774	2,069	2,357	4,426	63.0	67.5	65.3
Muleba DC	7,837	7,867	15,704	4,449	5,087	9,536	56.8	64.7	60.7
Biharamulo DC	2,024	2,073	4,097	1,298	1,331	2,629	64.1	64.2	64.2
Ngara DC	2,602	2,833	5,435	1,628	1,793	3,421	62.6	63.3	62.9
Bukoba MC	1,236	1,272	2,508	893	916	1,809	72.2	72.0	72.1
Misenyi DC	2,417	2,523	4,940	1,781	1,861	3,642	73.7	73.8	73.7
Kyerwa DC	1,897	2,342	4,239	1,878	2,324	4,202	99.0	99.2	99.1
Total	**23,548**	**25,262**	**48,810**	**16,200**	**18,499**	**34,699**	**68.8**	**73.2**	**71.1**

Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

5.2.3.3 Drop- out Rate in Primary Schools

Figure 5.13 shows the situation of primary school pupil's dropouts in the last four years, from 2012 to 2015 in Kagera Region. General observation from the analysis is that the proportion of primary school pupils drop outs has fluctuated in recent years. It increased from 1.1 percent in 2012 to 2.1 percent in 2013 then decreased to 1.6 percent in 2014 before increasing to 2.1 percent in 2015. The proportional of dropouts was higher for boys than girls. in 2012, it was 2.2 percent for boys and 2.0 percent for girls; in 2013, it was 1.7 percent for boys against 1.5 percent for girls; in 2014, it was 2.2 percent for boys and 1.9 percent for girls; while in 2015, it was 2.5 percent for boys against 2.2 percent girls (Figure 5.13).

Figure 5.13: Percentage Dropouts by Sex; Kagera Region, 2012 - 2015



Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

Three major reasons for dropouts are truancy, pregnancy and death. Other reasons include transfers, illnesses and poverty. Table 5.33 shows number and percentage of school dropouts due to truancy, pregnancy, death and other reasons for the last four years. Truancy was the most serious problem hindering Standard Seven completion in Kagera Region. It accounted for 96.2 percent of total drop outs in 2012, 78.4 percent in 2013, 68.6 percent in 2014 and 66.5 percent in 2015). It was followed by death with 1.9 percent in 2012, 0.9 percent in 2013, 1.1 percent in 2014 and 1.0 percent in 2015. Table 5.33 also shows that pregnancy was the least serious cause of dropouts.

Table 5.33: Number and Percentage Distribution of Primary School Dropouts by Reason; Kagera Region, 2012 - 2015

Reason	2012		2013		2014		2015	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Truancy	4,530	96.2	7,499	78.4	4,855	68.6	6,252	66.5
Pregnancy	7	0.1	5	0.1	2	0.03	8	0.1
Death	89	1.9	83	0.9	78	1.1	96	1.0
Other	85	1.8	1,982	20.7	2,147	30.3	3,040	32.4
Total dropouts	**4,711**	**1.1**	**9,569**	**2.1**	**7,082**	**1.6**	**9,396**	**2.1**
Total Enrolment	**446,447**		**447,108**		**446,367**		**444,019**	

Source: Compiled Data from District Executive Directors' Offices, Kagera Region, 2017

Table 5.34 shows that truancy was the main cause of primary school dropouts in each council of Kagera Region in 2012. It was followed by death. The least cause of dropouts in every council was pregnancy. At council level, Biharamulo DC (54.7 percent) had the largest share of primary school dropouts in the Region followed by Karagwe DC (21.6 percent), Bukoba and Ngara DCs (8.2 percent each). Bukoba MC had the lowest rate (0.3 percent) in the Region. The problem of dropouts due to truancy was most serious in Biharamulo DC where the number of dropouts was 2,539 compared to 4,530 for the region caused by truancy (56.0 percent) of its total drop outs, while significant problem of pregnancy was recorded in Karagwe district (57.1 percent).

Table 5.34: Primary School Drop Outs by Reasons and by Council; Kagera Region; 2012

Council	Truancy		Pregnancy		Deaths		Others		Total	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Karagwe DC	971	95.4	4	0.4	17	1.7	25	2.4	1,017	21.6
Bukoba DC	349	90.9	1	0.3	19	4.9	15	3.9	384	8.2
Muleba DC	31	86.1	0	0.0	4	11.1	1	2.8	36	0.8
Biharamulo DC	2,539	98.5	1	0.0	19	0.7	18	0.7	2,577	54.7
Ngara DC	376	97.2	0	0.0	5	1.3	6	1.6	387	8.2
Bukoba MC	15	100.0	0	0.0	0	0.01	0	0.0	15	0.3
Misenyi DC	249	85.0	1	0.3	23	7.8	20	6.3	293	6.2
Kyerwa DC	0	0.0	0	0.0	2	0.7		0.0	2	0.0
Total	**4,530**	**96.2**	**7**	**0.1**	**89**	**1.9**	**85**	**1.8**	**4,711**	**100**

Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

In 2015, truancy was again, the leading cause of dropouts in all councils followed by death. The least cause was once again pregnancy. At council level, Karagwe DC (47.6 percent) had the largest share of primary school dropouts in the Region. . It was followed by Biharamulo DC (35.2 percent) and Ngara DC (9.4 percent) (Table 5.35).

Table 5.35: Primary School Dropouts by Reasons and by Council; Kagera Region, 2015

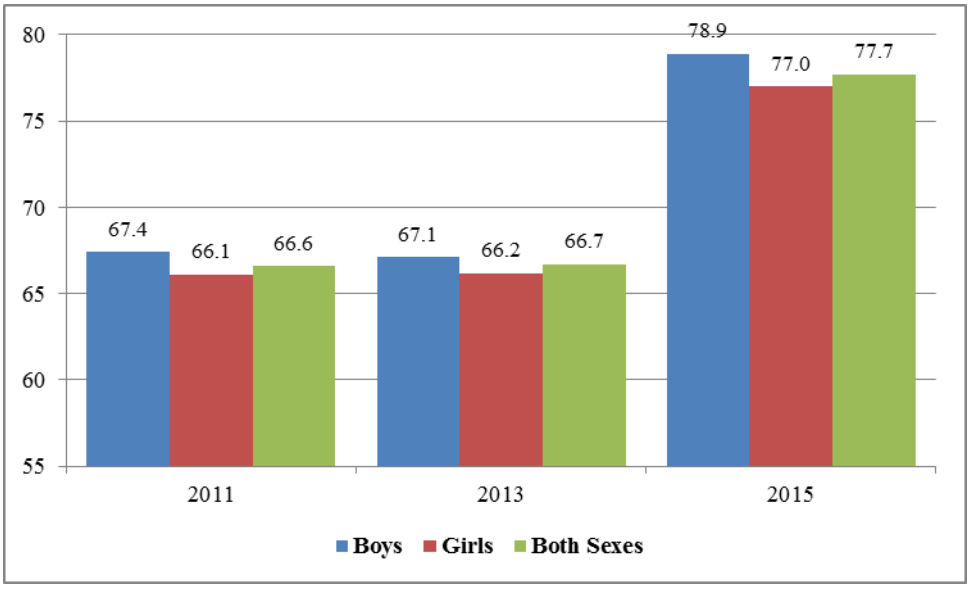
Council	Truancy		Pregnancy		Deaths		Others		Total	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Karagwe DC	1,738	39.6	0	0.0	17	0.4	2,637	60.0	4,392	47.6
Bukoba DC	154	88.5	1	0.6	19	10.9	0	0.0	174	1.9
Muleba DC	43	91.5	0	0.0	4	8.5	0	0.0	47	0.5
Biharamulo DC	2,899	89.1	2	0.1	19	0.6	335	10.3	3,255	35.2
Ngara DC	858	99.3	1	0.1	5	0.6	0	0.0	864	9.4
Bukoba MC	7	100.0	0	0.0	0	0.0	0	0.0	7	0.1
Misenyi DC	127	59.6	2	0.9	23	10.8	61	28.6	213	2.3
Kyerwa DC	267	94.0	0	0.0	2	0.7	15	5.3	284	3.1
Total	**6,252**	**66.5**	**6**	**0.1**	**89**	**1.0**	**3,040**	**32.4**	**9,236**	**100.0**

Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

5.2.3.4 Pass Rate in Primary Schools

Pass rate for primary schools is the percentage of pupils who pass Standard Seven Examination. Figure 5.14 shows that the overall pass rate of Standard Seven pupils was about the same in 2011 (66.6 percent) and 2013 (66.7 percent), but increased significantly to 77.7 percent in 2015. One general observation is that in all three years girls had lower pass rates than boys. The lower pass rate for girls is associated with the tendency of girls spending most of their time attending to home activities instead of studying.

Figure 5.14: Pass Rate of Pupils Who Sat for STD VII Examinations by Sex, Kagera Region, 2011, 2013 and 2015



Source: *Compiled data from District Executive Directors' Offices, Kagera region, 2017*

Table 5.36 shows that at council level, Karagwe DC had the highest pass rates of 89.5 percent in the Region, followed by Bukoba MC (83.1 percent) and Biharamulo DC (78.0 percent). The council with the lowest pass rate was Bukoba DC (52.2 percent), followed by Muleba DC (55.0 percent) and Missenyi DC (66.5 percent). In terms of sex the pass rate was higher for boys than girls in Bukoba DC, Muleba DC, Ngara DC and Bukoba MC. They were higher for girls than boys in Karagwe DC, Biharamulo DC and Missenyi DC.

Table 5.36: Number of Pupils Who Sat and Passed STD VII Examination by Council and by Sex, Kagera Region, 2011

Council	Pupils Sat for STD VII Examination			Pupils Passed STD VII Examination			Percent of Pupils Passed STD VII Examination		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Karagwe DC	1,508	1,478	2,986	1,305	1,368	2,673	86.5	92.6	89.5
Bukoba DC	3,439	3,758	7,197	1,907	1,853	3,760	55.5	49.3	52.2
Muleba DC	4,790	5,277	10,067	3,140	3,402	6,542	65.6	64.5	65.0
Biharamulo DC	1,171	1,192	2,363	910	933	1,843	77.7	78.3	78.0
Ngara DC	1,940	2,298	4,238	1,422	1,607	3,029	73.3	69.9	71.5
Bukoba MC	971	1,058	2,029	831	856	1,687	85.6	80.9	83.1
Misenyi DC	2,472	2,468	4,940	1,626	1,659	3,285	65.8	67.2	66.5
Kyerwa DC	2,382	2,788	5,170	1,682	1,797	3,479	70.6	64.5	67.3
Total	**18,673**	**20,317**	**38,990**	**12,823**	**13,475**	**26,298**	**68.7**	**66.3**	**67.4**

Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

In 2013 at council level, the highest pass rate in Kagera Region was that of Karagwe DC (95.5 percent), followed by Biharamulo DC (81.8 percent) and Missenyi DC (80.7 percent). The council with the lowest pass rate was Bukoba DC (55.2 percent), followed by Muleba DC (57.7 percent) and Kyerwa DC (57.9 percent). The pass rate was higher for boys than for girls in Bukoba DC, Muleba DC, Ngara DC and Bukoba MC. It was higher for girls than for boys in Karagwe DC, Biharamulo DC and Missenyi DC (Table 5.37).

Table 5.37: Number of Pupils Who Sat and Passed STD VII Examinations by Sex and Council, Kagera Region, 2013

Council	Pupils Sat for STD VII Examination			Pupils Passed STD VII Examination			Percent of Pupils Passed STD VII Examination		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Karagwe DC	1,585	1,855	3,440	1,478	1,807	3,285	93.2	97.4	95.5
Bukoba DC	2,600	3,046	5,646	1,478	1,641	3,119	56.8	53.9	55.2
Muleba DC	4,414	4,837	9,251	2,598	2,742	5,340	58.9	56.7	57.7
Biharamulo DC	1,410	1,320	2,730	1,133	1,100	2,233	80.4	83.3	81.8
Ngara DC	1,751	2,048	3,799	1,185	1,315	2,500	67.7	64.2	65.8
Bukoba MC	965	1,023	1,988	791	814	1,605	82.0	79.6	80.7
Misenyi DC	1,973	2,236	4,209	1,225	1,395	2,620	62.1	62.4	62.2
Kyerwa DC	3,020	3,612	6,632	1,800	2,042	3,842	59.6	56.5	57.9
Total	**17,718**	**19,977**	**37,695**	**11,688**	**12,856**	**24,544**	**66.0**	**64.4**	**65.1**

Source: Compiled Data from District Executive Directors' Offices, Kagera Region, 2017

Table 5.38 shows that the overall pass rate for Kagera Region in 2015 was 77.7 percent. It also show that the pass rates for boys (78.9 percent) was higher than that of girls (77.0 percent). At council level, pass rate was higher for girls than for boys in Muleba DC, Ngara DC and Bukoba MC and Missenyi DC but was higher gfor boys than for girls in Karagwe DC, Bukoba DC Biharamulo DC and Kyerwa DC.

Table 5.38: Number of Pupils Who Sat and Passed STD VII Examination by Sex and Council, Kagera Region, 2015

Council	Pupils Sat for STD VII Examination			Pupils Passed STD VII Examination			Percent of Pupils Passed STD VII Examination		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Karagwe DC	1,478	1,807	3,285	1,412	1,613	2,986	95.5	89.3	90.9
Bukoba DC	2,308	2,455	4,763	1,623	1,553	3,176	70.3	63.3	66.7
Muleba DC	4,064	4,685	8,749	2,993	3,599	6,592	73.6	76.8	75.3
Biharamulo DC	1,391	1,511	2,902	1,287	1,385	2,672	92.5	91.7	92.1
Ngara DC	1,487	1,632	3,119	1,227	1,363	2,590	82.5	83.5	83.0
Bukoba MC	896	1,029	1,925	639	740	1,379	71.3	71.9	71.6
Misenyi DC	1,488	1,634	3,122	1,235	1,359	2,594	83.0	83.2	83.1
Kyerwa DC	1,812	2,268	4,080	1,353	1,489	2,842	74.7	65.7	69.7
Total	**14,924**	**17,021**	**31,945**	**11,769**	**13,101**	**24,831**	**78.9**	**77.0**	**77.7**

Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

Table 5.39 shows the extent to which the Region was able to provide secondary education to all pupils who passed Standard 7 Examination. It also reflects the available capacity for secondary education in the Region. In a period of three years 2011, 2013 and 2015 a total of 73,129 pupils were selected to join Form One, and of those 70,150 pupils (95.9 percent) joined Form One. The number of pupils joining Form One decreased slightly from 23,425 in 2011 to 22,648 in 2013 then increased significantly to 24,077 in 2015.

Table 5.39 also in three year combined the percentage of pupils joining Form One was about the same for boys and girls. Factors preventing selected pupils, from joining secondary education include income poverty of some pupils' parents/guardians. It forces the selected pupils to engage in income generating activities in order to supplement their family incomes.

Table 5.39: Number of Pupils Who Were Selected and Joined Form One in Public Secondary Schools by Sex, Kagera Region, 2011, 2013 and 2015

Year	Pupils Selected to Join Form One			Pupils Joined Form One			Percent of Pupils Joined Form One		
	Boys	Girls	Both Sexes	Boys	Girls	Both Sexes	Boys	Girls	Both Sexes
2011	12,089	12,386	24,485	11,510	11,905	23,425	95.2	96.1	95.7
2013	11,361	12,299	23,660	10,905	11,743	22,648	96.0	95.5	95.7
2015	11,925	13,059	24,984	11,541	12,542	24,077	96.8	96.0	96.4
Total	**35,375**	**37,744**	**73,129**	**33,956**	**36,190**	**70,150**	**96.0**	**95.9**	**95.9**

Source: Compiled Data from District Executive Directors' Offices, Kagera Region, 2017

Table 5.40 shows that in 2011, the percentage of pupils joining Form One was largest in Bukoba and Biharamulo DCs and smallest in Missenyi DC. In Bukoba and Biharamulo DCs, the percentage of pupils joining Form One was 100.0 percent that is all pupils selected for Form One joined. In the remaining councils, the number of pupils joining Form one ws less than the number selected.

Table 5.40: Number of Pupils Who Were Selected and Joined Form One in Public Secondary Schools by Sex and Council, Kagera Region, 2011

Council	Pupils Selected to Join Form One			Pupils Joined Form One			Percent of Pupils Joined Form One		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Karagwe DC	1,508	1,478	2,986	1,305	1,368	2,673	86.5	92.6	89.5
Bukoba DC	1,692	1,598	3,300	1,692	1,598	3,300	100.0	100.0	100.0
Muleba DC	2,659	2,727	5,386	2,618	2,697	5,315	98.5	98.9	98.7
Biharamulo DC	910	933	1,843	910	933	1,843	100.0	100.0	100.0
Ngara DC	1,487	1,667	3,154	1,427	1,584	3,011	96.0	95.0	95.5
Bukoba MC	882	904	1,786	850	857	1,707	96.4	94.8	95.6
Misenyi DC	1,744	1,713	3,457	1,537	1,544	3,081	88.1	90.1	89.1
Kyerwa DC	1,207	1,366	2,573	1,171	1,324	2,495	97.0	96.9	97.0
Total	**12,089**	**12,386**	**24,485**	**11,510**	**11,905**	**23,425**	**95.2**	**96.1**	**95.7**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

Table 5.41 shows that in 2013, the percentage of pupils joining Form One was largest in Bukoba and Biharamulo DCs and smallest in Bukoba MC. In Bukoba and Biharamulo DCs, the percentage of pupils joining Form One was 100.0 percent that is all selected pupils joined Form One. In the remaining councils, the number of pupils joining Form One was less than the number selected.

Table 5.41: Number of Pupils Who Were Selected and Joined Form I in Public Secondary Schools by Sex and Council, Kagera Region, 2013

Council	Pupils Selected to Join Form I			Pupils Joined Form I			Percent of Pupils Joined Form I		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Karagwe DC	1,632	1,836	3,468	1,519	1,807	3,326	93.1	98.4	95.9
Bukoba DC	1,478	1,641	3,119	1,478	1,641	3,119	100.0	100.0	100.0
Muleba DC	2,316	2,438	4,754	2,278	2,173	4,451	98.4	89.1	93.6
Biharamulo DC	1,133	1,100	2,233	1,133	1,100	2,233	100.0	100.0	100.0
Ngara DC	1,288	1,427	2,715	1,234	1,371	2,605	95.8	96.1	95.9
Bukoba MC	885	932	1,817	839	852	1,691	94.8	91.4	93.1
Misenyi DC	1,351	1,497	2,848	1,179	1,400	2,579	87.3	93.5	90.6
Kyerwa DC	1,278	1,428	2,706	1,245	1399	2,644	97.4	98.0	97.7
Total	**11,361**	**12,299**	**23,660**	**10,905**	**11,743**	**22,648**	**96.0**	**95.5**	**95.7**

Source: Compiled Data from District Executive Directors' Offices, Kagera Region, 2017

The percentage of selected pupils who joined Form One was largest in Bukoba, Biharamulo, Muleba, Missenyi and Kyerwa DCs and the smallest was in Karagwe DC. In Bukoba, Biharamulo, Muleba, Missenyi and Kyerwa DCs, the percentage of pupils joining Form One was 100.0 percent and all selected joined Form One. In the remaining council pupils joining Form One was less than the number selected (Table 5.42).

Table 5.42: Number of Pupils Who Were Selected and Joined Form I in Public Secondary Schools by Sex and Council, Kagera Region, 2015

Council	Pupils Selected to Join Form I			Pupils Joined Form I			Percent of Pupils Joined Form I		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Karagwe DC	1,585	1,855	3,440	1,412	1,613	3,019	89.1	87.0	87.8
Bukoba DC	1,623	1,553	3,176	1,623	1,553	3,176	100.0	100.0	100.0
Muleba DC	2,730	3,108	5,838	2,571	2,894	5,465	94.2	93.1	93.6
Biharamulo DC	1,287	1,385	2,672	1,287	1,385	2,672	100.0	100.0	100.0
Ngara DC	1,287	1,405	2,692	1,276	1,396	2,672	99.1	99.4	99.3
Bukoba MC	778	854	1,632	737	802	1,539	94.7	93.9	94.3
Misenyi DC	1,282	1,410	2,692	1,282	1,410	2,692	100.0	100.0	100.0
Kyerwa DC	1,353	1,489	2,842	1,353	1,489	2,842	100.0	100.0	100.0
Total	**11,925**	**13,059**	**24,984**	**11,541**	**12,542**	**24,077**	**96.8**	**96.0**	**96.4**

Source: Compiled Data from District Executive Directors' Offices, Kagera Region, 2017

5.2.3.5 Transition to Secondary Education

Transition rate refers to the percentage of pupils who completed primary education and joined Form One. It also reflects available capacity of secondary education provided in the region or council. In the years of 2011, 2012 and 2013 a total of 108,966 pupils completed primary education but only 70,150 pupils (64.4 percent) joined secondary education in public schools and the remaining 38,361 pupils (35.6 percent) did not. Table 5.43 shows that the transition rate increased

from 62.0 percent in 2011 to 65.5 percent in 2013 and 65.7 percent in 2015. One general observation to be made about the results is that although more girls than boys joined secondary schools in absolute numbers, the transition rate was higher for boys than girls. However, more efforts are needed in the Region in order to improve its transition rate and reduce number of children who enter labour market at young ages with low educational levels.

Table 5.43: Number of Pupils Who Completed Primary Education and Joined Secondary Education in Public Secondary Schools by Sex, Kagera Region, 2011, 2013 and 2015

Year	Pupils Completed Primary Education			Pupils Joined Secondary Education			Transition Rate		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2011	18,045	19,712	37,757	11,510	11,905	23,425	63.8	60.4	62.0
2013	15,010	19,573	34,583	10,905	11,743	22,648	72.7	60.0	65.5
2015	16,964	19,662	36,626	11,541	12,542	24,077	68.0	63.8	65.7
Total	**50,019**	**58,947**	**108,966**	**33,956**	**36,190**	**70,150**	**67.9**	**61.4**	**64.4**

Source: Compiled Data from District Executive Directors' Offices, Kagera Region, 2017

At council level, the transition rate was highest Karagwe DC with 89.5 percent in 2011, Biharamulo DC with 86.5 percent in 2013 and again Karagwe DC with 91.9 percent in 2015. It was lowest in Bukoba DC with 55.9 percent in 2011, Muleba DC with 54.3 percent in 2013 and again Muleba DC with 62.5 percent in 2015 (Table 5.44). Local government authorities should consider low transition rates a challenge and should find a solution such as construction of vocation training centers to absorb children who don't join secondary education.

Table 5.44: Number of Pupils Who Completed Primary Education and Joined Secondary Education in Public Secondary Schools by Council, Kagera Region, 2011, 2013 and 2015

Council	Pupils Completed Primary Education			Pupils Joined Secondary Education			Transition Rates		
	2011	2013	2015	2011	2013	2015	2011	2013	2015
Karagwe DC	2,986	5,198	3,285	2,673	3,326	3,019	89.5	64.0	91.9
Bukoba DC	7,197	5,646	4,763	3,300	3,119	3,176	45.9	55.2	66.7
Muleba DC	10,067	10,047	8,749	5,315	4,451	5,465	52.8	44.3	62.5
Biharamulo DC	2,363	2,582	2,902	1,843	2,233	2,672	78.0	86.5	92.1
Ngara DC	4,238	3,272	3,119	3,011	2,605	2,672	71.0	79.6	85.7
Bukoba MC	2,029	1,988	1,925	1,707	1,691	1,539	84.1	85.1	79.9
Misenyi DC	4,940	4,311	3,122	3,081	2,579	2,692	62.4	59.8	86.2
Kyerwa DC	3,937	4,176	4,681	2,495	2,644	2,842	63.4	63.3	60.7
Total	**33,820**	**30,407**	**31,945**	**20,930**	**20,004**	**24,077**	**62.0**	**65.5**	**73.5**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

5.2.3.6 Primary schools Facilities

A teacher may be a single most important factor in the development of primary education, but after the teacher, primary school facilities are the next most important factor. School facilities include classrooms, toilet facilities, teachers' houses, desks, teachers' offices and water sources.

(i) Classrooms

According to the Education Policy, each classroom in primary and secondary schools should accommodate a maximum of 45 pupils/students. A classroom to accommodate more than 45 pupils is an indication of a shortage of classrooms in a school.

Table 5.45 shows that in 2015, Kagera Region had inadequate classrooms since most councils failed to meet the recommended pupils classroom ratio of one classroom per 45 pupils (CPR 1:45). At CPR of 1:69 in 2015, the region experienced a shortage of 34.5 percent of required 10,222 based on national Classroom Pupils Ratio (CPR) of 45 pupils per classroom.

Table 5.45 shows in 2015, all councils in the Region except Bukoba DC experience a critical shortage of classrooms because their classroom pupil ratios were far above the national standard (CPR of 1:45). With a ratio of 115 pupils per classroom, Biharamulo DC had worse shortage of classrooms in the Region followed, by Muleba DC (CPR of 1:82) and Kyerwa DC (CPR of 1:79). Bukoba MC had 77 extra classrooms (5.7 percent). The local government authorities together with communities should find solution for this challenge in order to improve learning environment by constructing more classrooms in their respective areas.

Table 5.45: Availability of Classrooms in Public Primary Schools by Council, Kagera Region; 2015

Council	No. of Schools	Total Pupils	Available Classrooms	Classroom Pupils Ratio	Required Classrooms Based on STD CPR	Deficit of Classrooms	
						Number	Percent
Karagwe DC	110	53,736	864	62	1,194	330	27.6
Bukoba DC	141	51,245	1,440	36	1,139	-301	-26.5
Muleba DC	123	103,002	1,316	78	2,289	973	42.5
Biharamulo DC	85	57,107	539	106	1,269	730	57.5
Ngara DC	115	67,717	946	72	1,505	559	37.1
Bukoba MC	25	17,228	262	66	383	121	31.6
Missenyi DC	94	32,370	667	49	719	52	7.3
Kyerwa DC	97	61,614	660	93	1,369	709	51.8
Total	**790**	**444,019**	**6,694**	**66**	**9,867**	**3,173**	**32.2**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

(ii) Pit Latrine

All primary schools in the Region had a total of 8,310 pit-latrines (4,044 for boys and 4,266 for girls) in 2015. According to the standard set by the Government of Tanzania, each pit-latrine should service 20 girls or 25 boys. Table 5.46 shows a critical shortage of pit-latrines in primary schools as one pit-latrine was used by 55 boys or girls in 2015. Muleba DC experienced the biggest shortage of pit latrines for boys (HPR of 1:79). It was followed by Biharamulo DC (HPR of 1:69) and Ngara DC (HPR of 1:63). In the case of girls, the biggest shortage was in Ngara DC with a HPR of 1:77 followed by Muleba DC with HPR of 1:76 and Biharamulo DC with HPR of 1:62. None of the councils had the required number of pit-latrines for boys or girls (Table 5.46).

Table 5.46: Availability of Pit Latrines (holes) in Public Primary Schools by Sex and Council, Kagera Region; 2015

Council	Total Pupils		Available Pit Latrine(Holes)		Hole Pupils Ratio		Required Pit Latrines Based on STD HPR		Deficit of Latrine	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Karagwe DC	26,086	27,650	678	780	38	35	1,043	1,383	365	603
Bukoba DC	25,081	26,164	625	659	40	40	1,003	1,308	378	649
Muleba DC	51,550	51,452	666	691	77	74	2,062	2,573	1,396	1,882
Biharamulo DC	28,571	28,537	446	498	64	57	1,143	1,427	697	929
Ngara DC	29,795	37,922	476	491	63	77	1,192	1,896	716	1,405
Bukoba MC	8,424	8,804	151	165	56	53	337	440	186	275
Missenyi DC	16,110	16,260	411	449	39	36	644	813	233	364
Kyerwa DC	31,679	29,935	591	533	54	56	1,267	1,497	676	964
Total	**222,548**	**234,911**	**4,044**	**4,266**	**55**	**55**	**8,902**	**11,746**	**4,858**	**7,480**

Source: *Compiled Data from District Executive Directors' Offices, Kagera Region, 2017*

(iii) Teachers Houses

Of the various teaching incentives, the provision of staff quarters is very crucial as it facilitates the retention of teachers the most and also promotes teaching morale. Table 5.47 shows that, Kagera Region had a total of 1,641 teachers' houses and if the required official House Teacher Ratio (HTR) is to be 1:1, the Region had a shortage of 8,473 houses in 2015. The table 5.47 also shows that every council had a big shortage of teacher's houses. The shortage ranged from 434 houses in Bukoba MC to 1,952 in Muleba DC.

Table 5.47: Availability of Primary School Teachers' Houses by Council, Kagera Region; 2015

Council	No. of Schools	Available Teachers	Available Houses	House Teachers Ratio	Required Houses Based on TPR of 1:1	Deficit of Houses	
						Number	Percent
Karagwe	110	1,350	258	5	1,350	1,092	80.9
Bukoba DC	141	1,450	194	7	1,450	1,256	86.6
Muleba DC	123	2,237	285	8	2,237	1,952	87.3
Biharamulo DC	85	1,094	205	5	1,094	889	81.3
Ngara DC	115	1,521	261	6	1,521	1,260	82.8
Bukoba MC	25	484	50	10	484	434	89.7
Missenyi DC	94	730	209	3	730	521	71.4
Kyerwa DC	97	1,248	179	7	1,248	1,069	85.7
Total	**790**	**10,114**	**1,641**	**6**	**10,114**	**8,473**	**83.8**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

(iv) Furniture(Desks)

The average number of pupils per desk is an important indicator of the suitability of pupils' learning environment. Table 5.48 shows that, with a total of 444,019 pupils registered in 2015, Kagera Region needed about 148,006 desks so as to comply with the official Desk Pupils Ratio of 1:3. The region, therefore, had a shortage of 12,472 desks (8.4 percent) in 2015. Four out of eight councils experienced a shortage of desks. The biggest shortage was in Ngara District Council where a shortage was 6,384 desks followed by Muleba District Council (5,947 desks) and Biharamulo district (5,759 desks). Bukoba District Council had a surplus of 4,016, followed by Missenyi (2,884), Karagwe District Council (1,403) and Bukoba Municipal Council (503).

Table 5.48: Availability of Desks in Public Primary Schools Council, Kagera Region; 2015

Council	No. of Schools	Total Pupils	Available Desks	Desk Pupils Ratio	Required Desks	Deficit of Desks	
						Number	Percent
Karagwe	110	53,736	19,315	3	17,912	-1,403	-7.8
Bukoba DC	141	51,245	21,098	2	17,082	-4,016	-23.5
Muleba DC	123	103,002	28,387	4	34,334	5,947	17.3
Biharamulo DC	85	57,107	13,280	4	19,036	5,756	30.2
Ngara DC	115	67,717	16,188	4	22,572	6,384	28.3
Bukoba MC	25	17,228	6,246	3	5,743	-503	-8.8
Missenyi DC	94	32,370	13,674	2	10,790	-2,884	-26.7
Kyerwa DC	97	61,614	17,346	4	20,538	3,192	15.5
Total	**790**	**444,019**	**135,534**	**3**	**148,006**	**12,472**	**8.4**

Source: *Compiled Data from District Executive Directors' Offices, Kagera Region, 2017*

(v) Accessibility of Water

In 2013 and 2015 Kagera Region supplied water to some of its primary schools through water tank, wells and tap water. Table 5.49 shows that the water tank was the major source of water in teams of the number of school supplied, followed by water well and water tap. However, not all schools in the region had water facilities in their compounds. The councils should consider accessibility of water supply in their primary schools as a way of protecting pupils from water-borne diseases.

Table 5.49: Accessibility of Water in Public Primary Schools by Council, Kagera Region, 2013 and 2015

Council	2013				2015			
	No. of Schools	No. of Primary. Schools with working			No. of Schools	No. of Primary Schools with working		
		Water Tanks	Water wells	Tap water		Water Tanks	Water wells	Tap water
Karagwe DC	109	42	0	0	110	42	0	0
Bukoba DC	141	84	0	0	141	84	0	1
Muleba DC	207	78	21	3	123	91	22	14
Biharamulo DC	85	39	13	6	85	45	12	6
Ngara DC	113	24	11	11	115	40	25	17
Bukoba MC	25	28	4	11	25	23	2	15
Misenyi DC	89	35	9	3	94	38	10	4
Kyerwa DC	97	40	0	0	97	40	0	0
Total	**866**	**370**	**58**	**34**	**790**	**403**	**71**	**57**

Source: *Compiled Data from District Executive Directors' Offices, Kagera Region, 2017*

(v) Teachers

The teacher to pupil ratio is an important indicator which influences the quality of education provided in schools. The set standard is for one teacher to teach a class of 45 pupils (1:45). Table 5.50 shows that, although the overall teacher to pupil ratio (TPR) was 1:45 in 2015, the region still had a shortage of 108 teachers (1.1 percent). Table 5.50 shows that Missenyi DC with a TPR of 1:45 had the required number of teachers, five councils had more than the required teachers, while Muleba and Biharamulo DCs had a shortage of teachers. However, the Region should take initiative to reallocate teachers to councils with a shortage of teachers to alleviate the problem.

Table 5.50: Number of Public Primary School's Teachers by Council, Kagera Region; 2015

Council	No. of Schools	Total Pupils	Available Teachers	Teacher Pupils Ratio	Required Teachers Based on TPR	Deficit of Teachers	
						Number	Percent
Karagwe DC	110	58,758	1,350	40	1,306	-44	-3.4
Bukoba DC	141	61,327	1,450	35	1,363	-87	-6.4
Muleba DC	123	108,200	2,237	46	2,404	167	7
Biharamulo DC	85	61,764	1,094	52	1,373	279	20.3
Ngara DC	115	67,717	1,521	45	1,505	-16	-1.1
Bukoba MC	25	17,228	484	36	383	-101	-26.4
Misenyi DC	94	32,857	730	44	730	0	0
Kyerwa DC	97	52,138	1,248	49	1,159	-89	-7.7
Total	**790**	**459,989**	**10,114**	**44**	**10,222**	**108**	**1.1**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

5.2.3.7 Adult Education

Along with the expansion of primary and secondary education, the Region has also expanded adult education using primary schools as centres and with head teachers as the in charge of adult education campaigns through MUKEJA and MEMKWA programs. Table 5.51 shows that for MUKEJA the Region had 373 centres in 2013 and 481 centres in 2015. In 2013, total enrolments in these programs were 7,590 for MUKEJA and 4,463 for MEMKWA. In 2015, adult enrolments in two programs increased from 12,053 in 2013 to 25,853 in 2015. Lack of sensitization campaigns for adults is the main reason for the limited number of adults who joined these programs in Kagera Region. Moreover, all councils should have regular sensitization campaigns for sustainability of the two programs.

Table 5.51: Number of Adult Education Centers and Enrolment by Council, Kagera Region, 2013 and 2015

	MUKEJA ICBAE					
	No. of Centers		Centre Enrolment (number)		MEMKWA (Colbert) Enrolment	
Council	2013	2015	2013	2015	2013	2015
Karagwe DC	8	6	2,366	2,346	292	656
Bukoba DC	157	246	3,283	5,635	459	602
Muleba DC	13	13	9	166	245	488
Biharamulo DC	58	58	58	55	1,578	11,707
Ngara DC	20	30	483	678	950	1,004
Bukoba MC	12	16	132	186	464	606
Misenyi DC	100	107	1,036	1,063	221	229
Kyerwa DC	5	5	223	120	254	312
Total	**373**	**481**	**7,590**	**10,249**	**4,463**	**15,604**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

5.2.3.8 Special Education

The issue of disability has of late gained recognition worldwide. This is because the level of disability appears to be on the increase in most societies. Hence, it is important to prepare a program for disabled pupils to get special education according to their type of impairment. Table 5:52 shows that the number of pupils enrolled in special education increased from 496 in 2013 to 695 in 2015. The number of boys was higher (57.5 percent and 52.6 percent) than girls in both 2013 and 2015. In 2013, most in impaired pupils were deaf (128), followed by those with intellectual impairments (104).In 2015, most impaired pupils were physically disabled, followed by those who were intellectually impaired.

Table 5.52: Number of Pupils Enrolled in Primary Schools by Sex and Type of Impairment, Kagera Region, 2013 and 2015

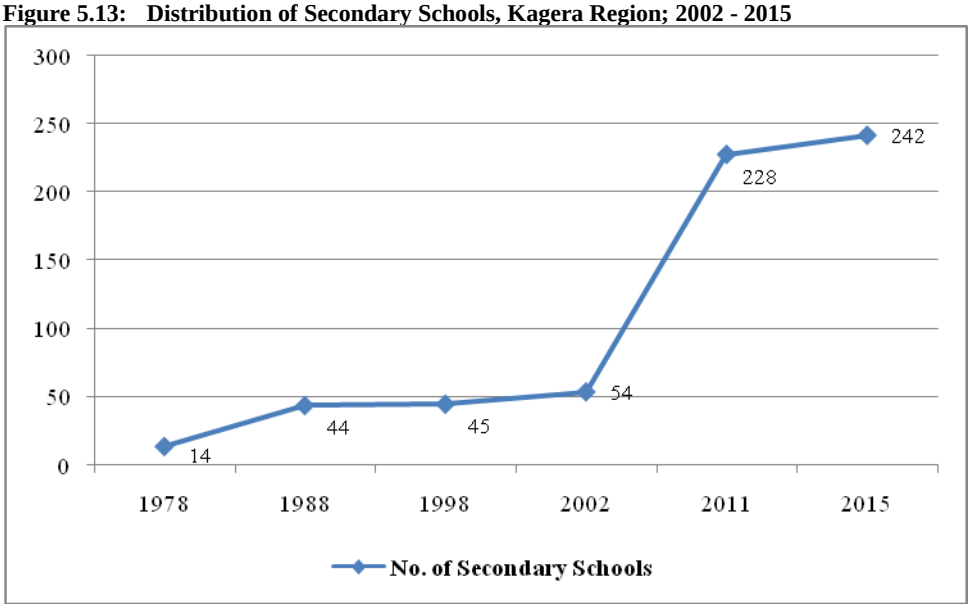
Type of Impairment	2013			2015		
	Male	Female	Total	Male	Female	Total
Physical Disability	53	31	84	102	67	169
Visual Disability	20	13	33	25	19	44
Hearing Disability	0	0	0	16	11	27
Blindness	21	22	43	27	24	51
Deaf	77	51	128	69	52	121
Albinism	4	1	5	7	5	12
Intellectual Impairment	57	47	104	96	54	150
Mental Retardation	5	1	6	2	1	3
Cripples	46	44	90	69	47	116
Other Impairments	2	1	3	1	1	2
Total	**285**	**211**	**496**	**414**	**281**	**695**
Percent	**57.5**	**42.5**	**100.0**	**59.6**	**40.4**	**100.0**

Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

5.2.4 Secondary Education

The development of secondary education in Kagera Region still is in progress. The report from the department of education shows that a lot of progress was made during the last 13 year period from 2002 to 2015. In that period, the number of secondary schools increased from 54 in 2002 to 228 in 2011 and 242 in 2015 (Figure 5.15). That achievement so far reached by the Region, was due to among other things, the Government strategy of establishing at least one secondary school in each ward and receiving significant contribution from the private sector.

Figure 5.13: Distribution of Secondary Schools, Kagera Region; 2002 - 2015



Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

Table 5.53 shows that by 2015, the Region had not yet achieved the target of having at least one secondary school in each ward, since the Region had an average of 0.9 schools (less than a school) per ward and 4 villages/*mitaa* per secondary school. While the number of schools was equal or more than the number of wards in Bukoba DC, Biharamulo DC, Ngara DC, Bukoba MC and Missenyi DC, it was less than the number of wards in Karagwe, Muleba and Kyerwa DCs. The Government campaign of establishing at least one secondary school in each ward should continue so as to meet the demand for secondary school enrolment in the Region.

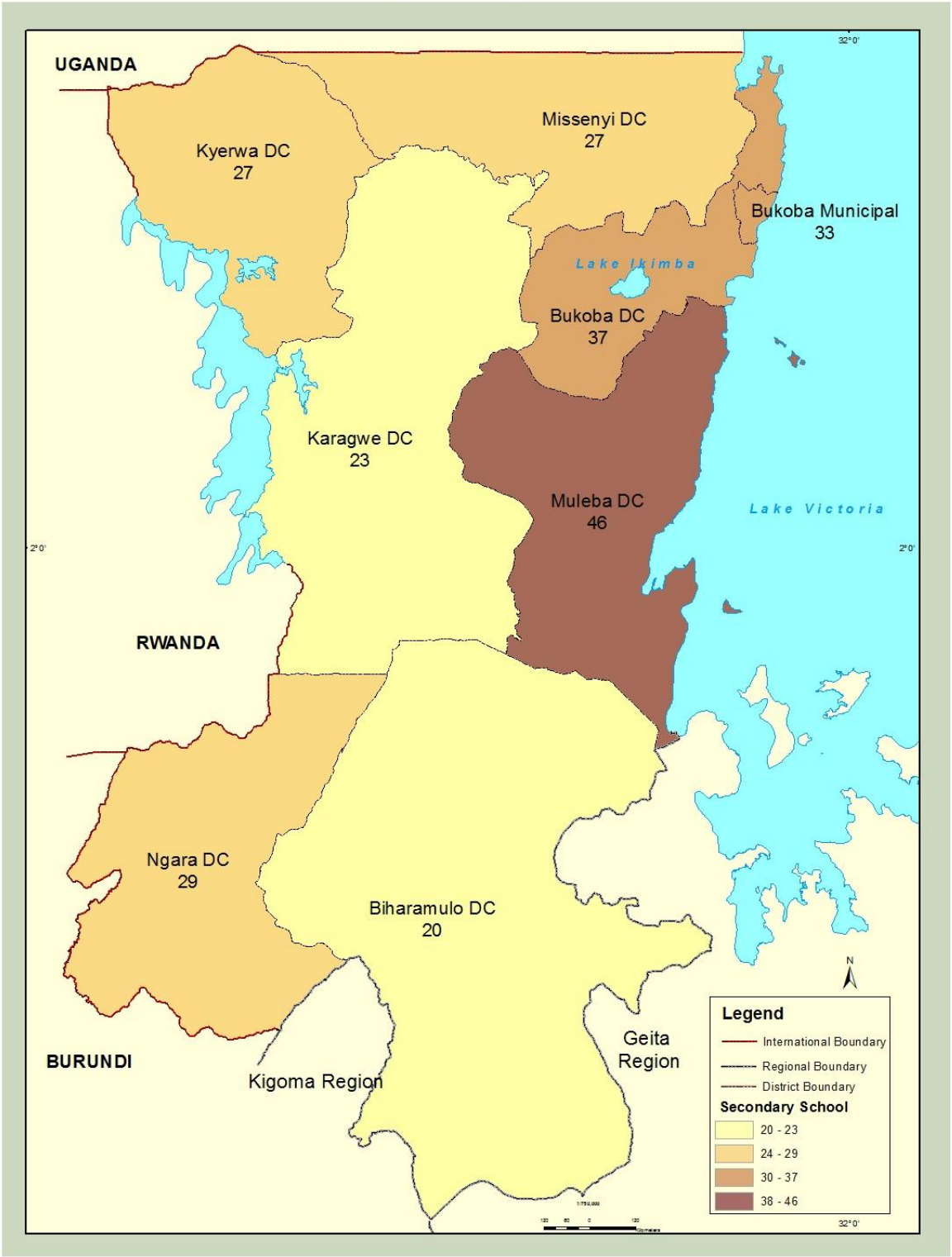
Table 5.53: Distribution of Public Secondary Schools by Administrative Units, Kagera Region, 2015

Council	No. of Wards	No. of Villages/ *Mitaa*	No. of Schools	Average No. of Schools per Ward	Average No. of Villages/*Mitaa* per School
Karagwe DC	23	80	19	0.8	4
Bukoba DC	29	94	30	1	3
Muleba DC	43	166	38	0.9	4
Biharamulo DC	17	74	18	1	4
Ngara DC	22	75	23	1	3
Bukoba MC	14	66	19	1.4	3
Missenyi DC	20	77	22	1.1	4
Kyerwa DC	24	99	21	0.7	5
Total	**192**	**731**	**190**	**0.9**	**4**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

The Government strategy of establishing at least one secondary school in each ward has facilitated the proportionate distribution of secondary schools in the Region. By the end of 2015 the Region had 182 public schools distributed proportionately among councils. The number of schools ranged from 16 schools in Kyerwa DC to 38 schools in Muleba DC (Table 5.54). The table also shows the extent to which the private sector contributed to the establishment of secondary schools in the Region. The share of private secondary schools increased from 18.2 percent in 2011 to 22.2 percent in 2013 and 23.8 percent in 2015.On the other hand; Map 10 shows total number of secondary schools (public and private) in Kagera Region in 2015.

Map 10:Map of Kagera Region Showing Total Number of Secondary Schools by Council, 2015



Source: NBS, Cartographic Unit, Dsm, 2017

Table 5.54: Distribution of Secondary Schools by Council and Ownership, Kagera Region, 2011, 2013 and 2015

Council	2011			2013			2015			
	Public	Private	Total	Public	Private	Total	Public	Private	Total	Percent Share
Karagwe DC	19	4	23	19	4	23	19	4	23	9.5
Bukoba DC	30	7	37	30	7	37	30	7	37	15.3
Muleba DC	35	5	40	38	7	45	38	8	46	19.0
Biharamulo DC	18	2	20	18	2	20	18	2	20	8.3
Ngara DC	23	6	29	23	6	29	23	6	29	12.0
Bukoba MC	19	8	27	19	12	31	19	14	33	13.6
Misenyi DC	20	5	25	22	5	27	22	5	27	11.2
Kyerwa DC	21	6	27	21	6	27	21	6	27	11.2
Total	**185**	**43**	**228**	**190**	**49**	**239**	**190**	**52**	**242**	**100.0**
Percent	**81.1**	**18.9**	**100**	**79.5**	**20.5**	**100**	**78.5**	**21.5**	**100**	

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

5.2.4.1 Secondary School Enrolment

Table 5.55 shows that secondary school enrolment in Kagera Region fluctuated from 19,849 students in 2011 to 18,835 in 2013 and 17,040 in 2015. In regard to sex difference, Table 5.55 shows that there were sexual balances in secondary school development in recent years. In 2011, the imbalance was in favour of boys (52.6 percent boys, 47.4 percent girls), in 2013, it was sexual balance between girls and boys (50.0 percent each) and in 2015, enrolment was in favour of girls than boys (49.5 percent boys and 50.5 percent girls).

Table 5.55 also shows variations in enrolment among councils. These variations were caused by poor performance of Standard Seven Examinations or poverty which forced some of selected students to engage in income generating activities instead of joining Form One.

Table 5.55: Total Form 1 Enrolment in Public Secondary Schools by Sex and Council, Kagera Region, 2011, 2013 and 2015

Council	2011			2013			2015		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Karagwe DC	1,203	1,176	2,379	902	1,032	1,934	1,006	1,117	2,123
Bukoba DC	1,330	1,371	2,701	1,098	1,015	2,113	1,084	1,089	2,173
Muleba DC	2,973	2,292	5,265	2,376	2,298	4,674	2,181	2,266	4,447
Biharamulo DC	745	758	1,503	898	877	1,775	949	911	1,860
Ngara DC	1,570	1,075	2,645	1,583	1,306	2,889	1,070	832	1,902
Bukoba MC	479	752	1,231	659	936	1,595	354	417	771
Missenyi DC	1,201	1,149	2,350	1,050	1,127	2,177	972	1,013	1,985
Kyerwa DC	914	861	1,775	846	832	1678	870	909	1,779
Total	**10,415**	**9,434**	**19,849**	**9,412**	**9,423**	**18,835**	**8,486**	**8,554**	**17,040**
Percent	**52.5**	**47.5**	**100**	**50.0**	**50.0**	**100**	**49.8**	**50.2**	**100**

Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

5.2.4.2 Completion Rates

The completion rate is an indicator of the efficiency of the school system that shows the extent to which a cohort of students enrolled in Form One completes the secondary education cycle irrespective of whether they sit for the final examination or not. The analysis of data shows that the completion rate of secondary education in Kagera Region increased from 63.7 percent for the 2011 cohort to 75.0 percent for the 2012 cohort.

Table 5.56 shows the cohort of students who enrolled Form One in 2011 and completed secondary school education in 2014 by sex and council in Kagera Region. In 2014, out of 17,856 students who enrolled in 2011, only 11,373 (63.7 percent) completed Form Four in 2014. The completion rate for boys (61.1 percent) was slightly higher than that of girls (56.0 percent). At council level, Bukoba DC had the highest completion rate of 90.8 percent, followed by Muleba District Council (71.2 percent), Bukoba MC and Missenyi DC (70.8 percent each). The council with the lowest rate was Kyerwa DC (40.8 percent), followed by Biharamulo district council (44.6 percent) and Karagwe District Council (49.8 percent).

Table 5.56: Number of Students Enrolled in Form One in 2011 and Completed Form IV in 2014 in Public Secondary Schools by Sex and Council , Kagera Region

Council	Enrolled 2011			Completed 2014			Completion Rates		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Karagwe DC	1,203	1,176	2,379	585	599	1184	48.6	50.9	49.8
Bukoba DC	1,391	1,461	2,852	1,269	1,321	2,590	91.2	90.4	90.8
Muleba DC	2,151	1,884	4,035	1,576	1,298	2,874	73.3	68.9	71.2
Biharamulo DC	797	758	1,555	427	266	693	53.6	35.1	44.6
Ngara DC	1,399	1,399	2,798	823	743	1,566	58.8	53.1	56.0
Bukoba MC	479	752	1,231	441	430	871	92.1	57.2	70.8
Missenyi DC	1,245	1,169	1,231	334	314	871	26.8	26.9	70.8
Kyerwa DC	914	861	1,775	401	323	724	43.9	37.5	40.8
Total	**9,579**	**9,460**	**17,856**	**5,856**	**5,294**	**11,373**	**61.1**	**56.0**	**63.7**

Source: Compiled data from District Executive Directors' Offices, Kagera Region, 2017

Table 5.57 shows the performance of the 2012 cohort. Its overall completion rate was 75.0 percent. At council level, Bukoba Municipal council had the highest completion rate (91.7 percent), followed by Bukoba District Council (91.3 percent), Ngara DC (85.6 percent) and Muleba DC (77.9 percent). Biharamulo DC had the lowest completion rate of 56.6 percent.

Table 5.57 shows that at regional level, the completion rate for girls' (77.6 percent) was higher than that of boys (72.4 percent) and that in all councils there were differences in completion rates

between boys and girls. The difference between completion rates of girls and boys was largest in Bukoba MC (28.9 percentage points), followed by Missenyi DC (9.1 percentage points) and Karagwe DC (8.3 percentage points). It was smallest in Ngara DC (1.2 percentage points), followed by Kyerwa and Muleba DC (1.5 percentage points each).

Table 5.57: Number of Students Enrolled in Form One in 2012 and Completed Form IV in 2015 in Public Secondary Schools by Sex and Council, Kagera Region

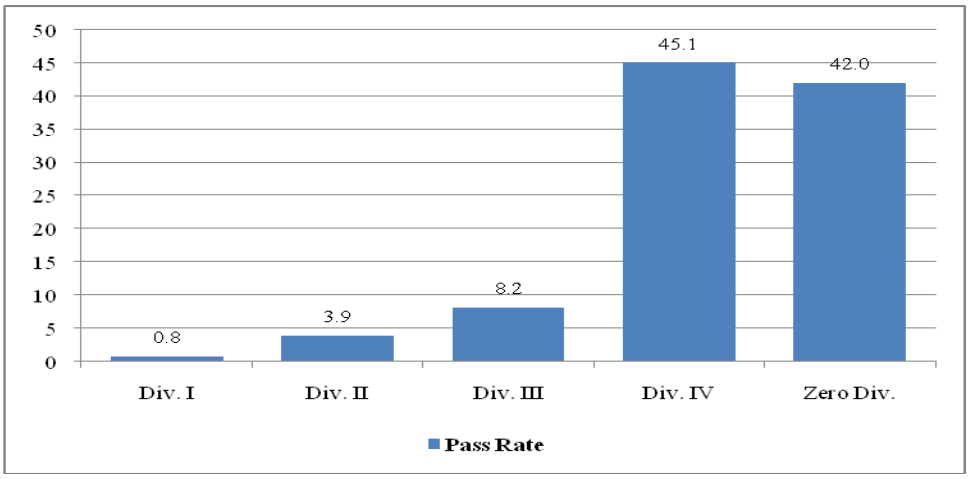
Council	Enrolled 2012			Completed 2015			Completion Rates		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Karagwe DC	1,281	1,499	2,780	819	1,083	1,902	63.9	72.2	68.4
Bukoba DC	1,182	1,206	2,408	1,061	1,127	2,198	89.8	93.4	91.3
Muleba DC	2,090	2,199	4,289	1,644	1,696	3,340	78.7	77.1	77.9
Biharamulo DC	807	736	1,543	451	423	874	55.9	57.5	56.6
Ngara DC	1,017	1,109	2,126	864	955	1,819	85.0	86.1	85.6
Bukoba MC	765	777	1,542	590	824	1,414	77.1	106.0	91.7
Missenyi DC	1,175	1,103	2,278	733	788	1,521	62.4	71.4	66.8
Kyerwa DC	1,075	1,145	2,220	634	693	1,327	59.0	60.5	59.8
Total	**9,392**	**9,774**	**19,186**	**6,796**	**7,589**	**14,395**	**72.4**	**77.6**	**75.0**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

5.2.4.3 Pass Rates

Pass rate reflects the quality of secondary education provided in the Region. A pass is divided into 4 divisions with Division One being the highest pass followed by divisions two, three and four. Division Zero is considered to be a total failure. The total performance in Form Four Examination for the last five years in Kagera Region was not good, although there were some improvements in performance in 2015. Figure 5.16 shows that only 0.8 percent of 54,727 examinees in the period of 2011 to 2015 attained Division One, 3.9 percent attained Division Two, 8.2 percent got Division Three, 45.1 percent got Division Four and 42.0 percent got Division Zero. The Regional Authority should take this performance seriously and find ways to improve it.

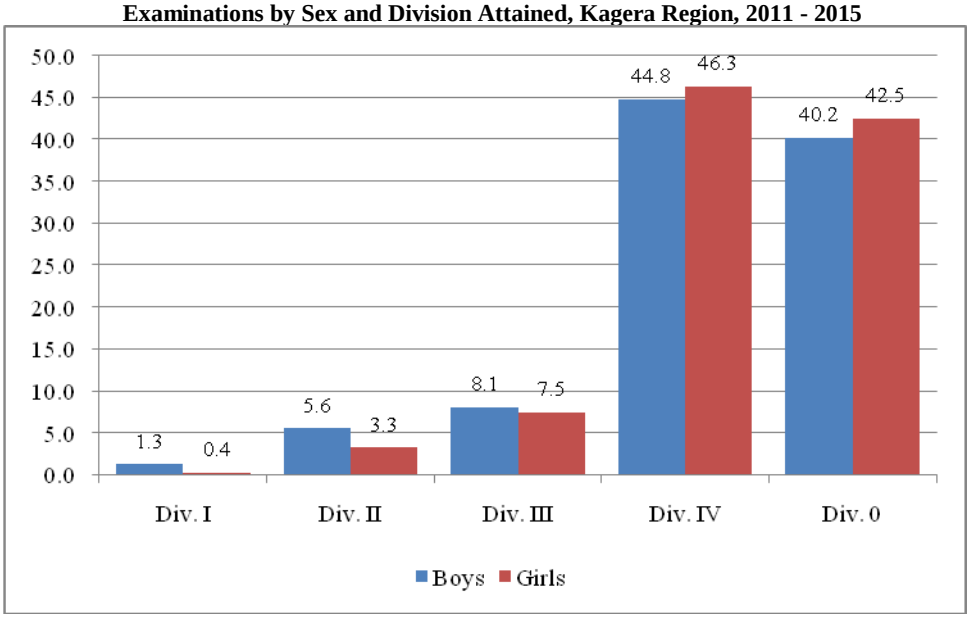
Figure 5.16: Percentage Distribution of Form Four Students in Public Schools Who Sat Form Four Examinations by Division Attained, Kagera Region, 2011 - 2015



Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

In terms of sex, Figure 5.17 shows that boys performed better than girls during the five-year period from 2011 to 2015. The overall performance was that only 0.4 percent of girl examinees attained Division One compared to 1.3 percent of boy examinees. Similar results were observed in division two and three with higher percentages for boys than girls, while girls lower grades than boys. Strategies should be devised to improve performance of girls in the Region. These strategies include construction of dormitories for girls, provision of food and other performance enhancing incentives for girls.

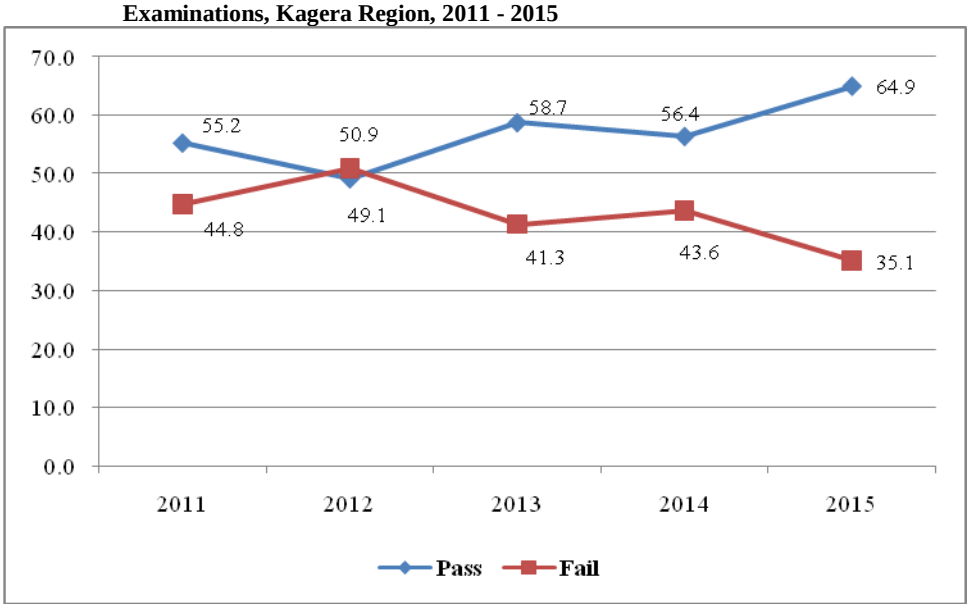
Figure 5.17: Percentage Distribution of Form Four Students in Public Secondary Schools Who Sat Form Four Examinations by Sex and Division Attained, Kagera Region, 2011 - 2015



Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

Figure 5.18 shows that at the regional level, the pass rate for Form Four Examination generally increased and failure declined after 2012. The seriousness shown by local government authorities, teachers and students from 2013 onwards could be considered a turning point in the improvement of the quality of education in the Region.

Figure 5.18: Percentage Distribution of Students in Public Secondary Schools Who Passed or Failed Form Four Examinations, Kagera Region, 2011 - 2015



Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

At council level, there were significant variations in Form Four Examination results. Table 5.58 shows that in 2011, Karagwe DC had the highest pass rate (71.0 percent), followed by Bukoba MC (68.7 percent) and Biharamulo DC (56.5 percent). Missenyi DC (43.3 percent) had the lowest rate, followed by Muleba DC (44.4 percent).

Table 5.58: Students Performance in Form IV Examination in Public Secondary Schools by Council, and Type of Pass, Kagera Region, 2011

Council	Passed Examination (Division I - IV)								Failed Examinations		Total Examinees
	Div. I and II	Percent	Div. III	Percent	Div. IV	Percent	Total		Div. Zero	Percent	
							No.	Percent			
Karagwe DC	32	2.4	60	4.5	862	64.2	954	71.0	389	29.0	1,343
Bukoba DC	36	8.2	49	11.2	154	35.1	239	54.4	200	45.6	439
Muleba DC	23	0.8	85	3.1	1,121	40.5	1,229	44.4	1,542	55.6	2,771
Biharamulo DC	30	3.8	53	6.6	369	46.1	452	56.5	348	43.5	800
Ngara DC	62	3.2	54	2.8	792	41.2	908	47.2	1,015	52.8	1,923
Bukoba MC	85	6.7	202	16.0	581	46.0	868	68.7	396	31.3	1,264
Missenyi DC	16	1.2	69	5.0	513	37.1	598	43.3	784	56.7	1,382
Kyerwa DC	7	0.6	52	4.6	552	48.5	611	53.5	527	46.5	1,138
Total	**291**	**2.8**	**624**	**5.7**	**4,944**	**44.1**	**5,859**	**52.6**	**5,201**	**47.4**	**11,060**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

At council level, Table 5.59 shows that Biharamulo DC had the highest pass rate (85.8 percent) in the Region, followed by Bukoba DC (80.6 percent) and Karagwe DC (76.5 percent), while Missenyi DC (54.8 percent) had the lowest rate, followed by Muleba DC (55.3 percent). However, the performances were not good as pass rates were skewed towards the lowest pass rate (Division Four). Regional and local authorities should find ways to improve pass rates in Form Four Examination in individual schools.

Table 5.59 Students Performance in Form IV Examinations in Public Secondary Schools by Council, Kagera Region, 2015

Council	Passed Examination (Division I - IV)								Failed Examinations		Total Students
	Div. I and II	Percent	Div. III	Percent	Div. IV	Percent	Total Passed		Div. Zero	Percent	
							No.	Percent			
Karagwe DC	80	6.1	85	6.5	839	63.9	1,004	76.5	308	23.5	1,312
Bukoba DC	114	9.9	170	14.8	413	35.9	697	80.6	454	39.4	1,151
Muleba DC	138	3.6	342	8.9	1,648	42.8	2,128	55.3	1,723	44.7	3,851
Biharamulo DC	191	21	155	17	436	47.9	782	85.8	129	14.2	911
Ngara DC	239	13	286	15.5	717	38.9	1,242	67.4	602	32.6	1,844
Bukoba MC	158	11	183	12.6	698	48.6	1,039	72.4	396	27.6	1,435
Missenyi DC	48	2.8	116	6.8	771	45.2	935	54.8	771	45.2	1,706
Kyerwa DC	84	5.4	233	15.1	774	50.1	1,091	70.6	455	29.4	1,546
Total	**1,052**	**7.6**	**1,570**	**11.4**	**6,296**	**45.8**	**8,918**	**64.8**	**4,838**	**35.2**	**13,756**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

5.2.4.4 Form V Enrolment

Kagera Region has very few public secondary schools with high school classes. As a result, high school enrolment is still low. Table 5.60 shows that students enrolment increased by 2.1 percent from 1,562 students in 2011 to 1,595 students in 2013 then increased significantly by 39.6 percent between 2013 and 2015 and to 2,226 students. In regard to sex, more boys than girls were enrolled in the Region although the girls' enrolment share increased from 15.1 percent in 2011 to 18.2 percent in 2013 and 27.2 percent in 2015.

Table 5.60: Form V Enrolment in Public High Schools by Sex, Kagera Region, 2011, 2013 and 2015

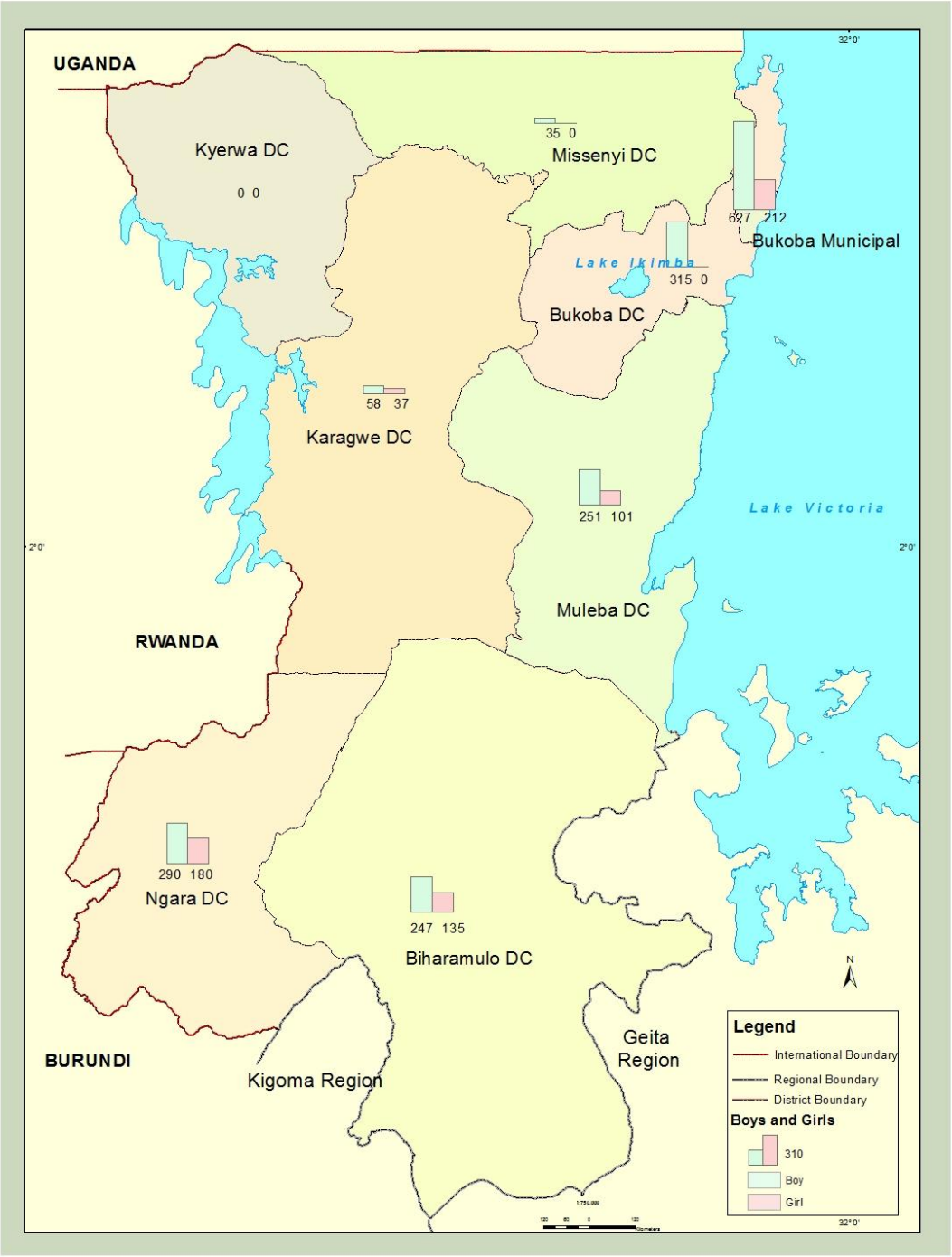
Year	Boys		Girls		Total	Enrolment Change	
	Number	Percent	Number	Percent		Number	Percent
2011	1,326	84.9	236	15.1	1,562		
2013	1,304	81.8	291	18.2	1,595	33	2.1
2015	1,621	72.8	605	27.2	2,226	631	39.6
Total	**4,251**	**79.0**	**1,132**	**21.0**	**5,383**	**664**	

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

At council level, Bukoba MC had largest number of students who enrolled in Form Five in reference years. Enrolled students were 828 in 2011, 777 in 2013 and 839 in 2015 (Table 5.61). It was followed by Bukoba DC (350) and Muleba DC (314) in 2011, Bukoba DC (263) and Ngara DC (250) in 2013 and Ngara DC (470) and Muleba DC (352) in 2015.

There was a lot of improvement in 2015 since seven out of eighty councils could enroll Form Five students (Map 11 and Table 5.61). The analysis also shows that at regional level, Form Five students had more boys than girls in all three years 2011, 2013 and 2015. The share of girls was 15.7 percent in 2011, 17.0 percent in 2013 and 26.7 percent in 2015.

Map 11:Map of Kagera Region Showing Enrolment in Public High Schools by Sex and Council, 2015



Source: NBS, Cartographic Unit, Dsm, 2017

Table 5.61: Form V Enrolment in Public High Schools by Sex and Council, Kagera Region, 2011, 2013 and 2015

Council	2011			2013			2015		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Karagwe DC	0	0	0	0	0	0	58	37	95
Bukoba DC	350	0	350	263	0	263	315	0	315
Muleba DC	267	48	315	151	29	180	251	101	352
Biharamulo DC	133	21	154	186	53	239	247	135	382
Ngara DC	147	53	200	158	92	250	290	180	470
Bukoba MC	660	168	828	660	117	777	627	212	839
Missenyi DC	0	0	0	0	0	0	35	0	35
Kyerwa DC	0	0	0	0	0	0	0	0	0
Total	**1,557**	**290**	**1,847**	**1,418**	**291**	**1,709**	**1,823**	**665**	**2,488**
Percent	**84.3**	**15.7**	**100**	**83.0**	**17.0**	**100**	**73.3**	**26.7**	**100**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

Table 5.62 shows the number of students who completed high school education by sex in Kagera Region. The Region is still in the process of establishing high schools in order to accommodate all students who pass well enough to join Form Five There was a total of 1,558 students who completed Form Six in 2011. In 2013, the number of students who completed form VI decreased to 1,438 before increasing to 1,747 in 2015. The number of girls was smaller than that of boys in each of the three years (2011, 2013 and 2015). However, the percentage of girls increased from 18.7 percent in 2011 to 20.9 in 2013 and 21.5 percent in 2015.

Table 5.62: Number of Students Who Completed ''A''-Level Secondary School Education by Sex, Kagera Region, 2011, 2013 and 2015

Year	Boys		Girls			Change	
	Number	Percent	Number	Percent	Total	Number	Percent
2011	1,266	81.3	292	18.7	1,558		
2013	1,138	79.1	300	20.9	1,438	-120	-7.7
2015	1,372	78.5	375	21.5	1,747	309	21.5
Total	**3,776**	**79.6**	**967**	**20.4**	**4,743**	**189**	

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

In 2011, Bukoba MC had the largest number of students who completed Form Six. It was followed by Muleba DC (387) and Ngara DC (162). Bukoba MC also had the largest number of Form Six students in 2013 (709 students) and 2015 (734). It was followed by Ngara DC with 250 students in 2013 and 436 in 2015 (Table 5.63).

Table 5.63: Number of Students Who Completed Form Six in Public High Schools by Sex and Council, Kagera Region, 2011, 2013 and 2015

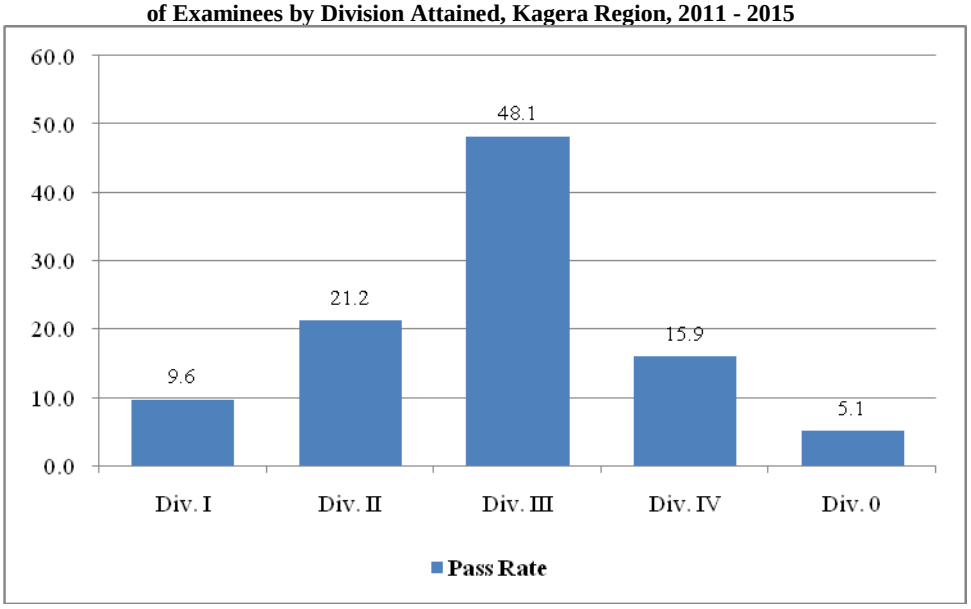
Council	2011			2013			2015		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Karagwe DC	0	0	0	0	0	0	0	0	0
Bukoba DC	154	0	154	202	0	202	212	0	212
Muleba DC	305	82	387	171	49	220	189	101	290
Biharamulo DC	0	0	0	35	22	57	56	19	75
Ngara DC	122	40	162	158	92	250	290	146	436
Bukoba MC	685	170	855	572	137	709	625	109	734
Misenyi DC	0	0	0	0	0	0	0	0	0
Kyerwa DC	0	0	0	0	0	0	0	0	0
Total	**1,266**	**292**	**1,558**	**1,138**	**300**	**1,438**	**1,372**	**375**	**1,747**
Percent	**81.3**	**18.7**	**100.0**	**79.1**	**20.9**	**100.0**	**78.5**	**21.5**	**100.0**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

5.2.4.5 Form Six Pass Rate

Figure 5.19 shows student's performance in Form Six Examination. The figure shows that the majority of students attained Division Three (48.1 percent), followed by those who attained Division Two (21.2 percent) and Division Four (15.9 percent). Only 9.6 percent of students attained Division One.

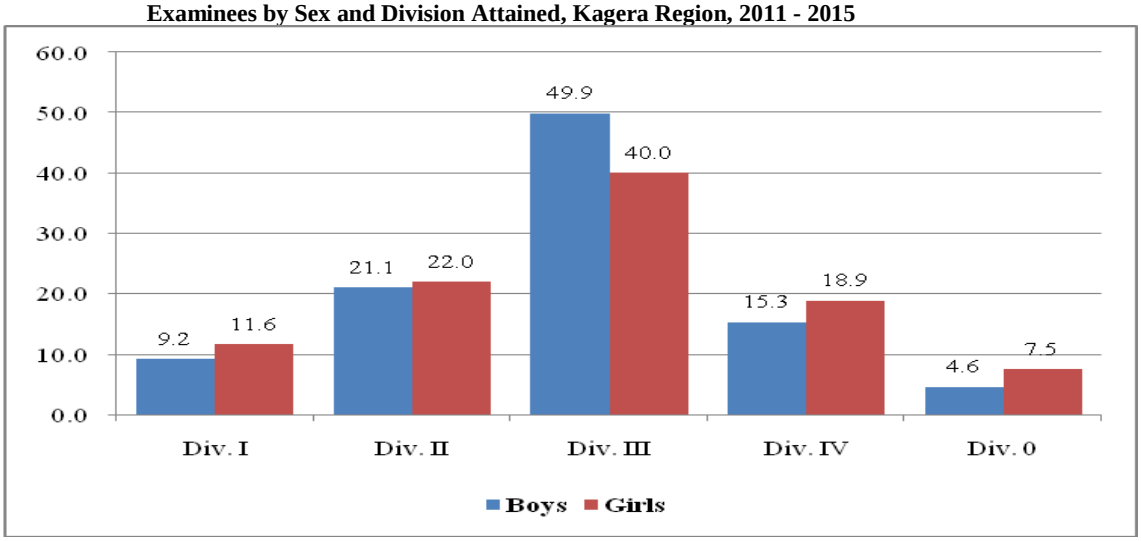
Figure 5.19: Overall Students Performance in Form Six Examination in Public Secondary Schools-Percentage of Examinees by Division Attained, Kagera Region, 2011 - 2015



Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

Figure 5.20 shows that over the five-year period from 2011 to 2015, the percentage of boys (95.6 percent) who passed was larger than the percentage of girls (92.5 percent). Nevertheless, the percentage of the examinees attaining higher grades (divions one and two) was higher for girls (33.6 percent) than boys (30.3 percent). And strategies could be devised to improve the performance of girls. These strategies include construction of dormitories for girls in order to provide good environment for studying.

Figure 5.20: Overall Students Performance in Form Six Examination in Public Secondary Schools- Percentage of Examinees by Sex and Division Attained, Kagera Region, 2011 - 2015



Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

According to the Ministry of Education, Science, Technology and Vocational Training students are considered to have passed the Form Six Examination if they attain divisions one and four and to have failed if they attain Division Zero. Table 5.64 shows that the Kagera Region's performance in the Form Six Examination was improving. The percentage of students failing the Examination decreased from 12.3 percent in 2011 to 4.6 percent in 2015 for boys and for 8.3 percent in 2011 to 0.8 percent in 2015 for girls.

Table 5.64: Students Performance in Form Six Examination in Public Secondary Schools by Sex, Kagera Region, 2011 - 2015

Year	Boys			Girls			Total
	Pass	Percent Fail	Total	Pass	Percent Fail	Total	
2011	883	12.3	1,007	244	8.3	266	1,273
2012	955	4.7	1,002	195	10.1	217	1,219
2013	1,137	4.0	1,184	227	14.7	266	1,450
2014	1,163	2.1	1,188	191	2.1	195	1,383
2015	1,273	1.2	1,288	241	0.8	243	1,531
Total	**5,411**	**4.6**	**5,669**	**1,098**	**7.5**	**1,187**	**6,856**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

At council level, there were significant variations of performance of councils in the Form Six Examination. Table 5.65 shows that Ngara DC had the best performance with 98.7 percent of the students passing the Examinations in 2011. It was followed by Muleba DC (96.3 percent) and Bukoba DC (94.8 percent). On the other hand, Bukoba MC had the worst performance at 84.6 percent. The table also shows that in 2011, 22.6 percent of total examinees attained divisions one or two, 49.1 percent attained Division Three and 16.8 percent attained Division Four, while 11.5 percent failled the Examination. It is important to note that only those who attained divisions one or two are allowed to join universities.

Table 5.65: Students Performance in Form Six Examination in Public Secondary Schools by Council and Type of Pass, Kagera Region, 2011

Council	Passed Examination (Division I - IV)								Failed Examinations		Total (Students)
	Div. I and II	Percent	Div. III	Percent	Div. IV	Percent	Total		Div. Zero	Percent	
							No.	Percent			
Karagwe DC	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Bukoba DC	28	18.2	96	62.3	22	14.3	146	94.8	8	5.2	154
Muleba DC	31	29	61	57	11	10.3	103	96.3	4	3.7	107
Biharamulo DC	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Ngara DC	100	63.7	42	26.8	13	8.3	155	98.7	2	1.3	157
Bukoba MC	129	15.1	426	49.8	168	19.6	723	84.6	132	15.4	855
Missenyi DC	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Kyerwa DC	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total	**288**	**22.6**	**625**	**49.1**	**214**	**16.8**	**1,127**	**88.5**	**146**	**11.5**	**1,273**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

Table 5.66 shows that in 2015, 99.1 percent of the students who sat for Form Six Examination passed whereby 50.1 percent got division one or two, 40.4 percent got Division Three and 8.6 percent got Division Four. The table also shows that all students who sat Form Six Examination in Muleba, Biharamulo and Ngara DCs passed.. They were followed by Bukoba MC (98.8 percent) and Bukoba DC (97.2 percent). Karagwe, Missenyi and Kyerwa DCs had no Form Six examinees.

Table 5.66: Students Performance in Form Six Examination in Public Secondary Schools by Council and Type of Pass, Kagera Region, 2015

Council	Passed Examination (Division I - IV)								Failed Examinations		Total (Students)
	Div. I and II	Percent	Div. III	Percent	Div. IV	Percent	Total		Div. Zero	Percent	
							No.	Percent			
Karagwe DC	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Bukoba DC	69	32.5	96	45.3	41	19.3	206	97.2	6	2.8	212
Muleba DC	125	75.8	39	23.6	1	0.6	165	100	0	0.0	165
Biharamulo DC	7	13	45	83.3	2	3.7	54	100	0	0.0	54
Ngara DC	400	80.5	92	18.5	5	1	497	100	0	0.0	497
Bukoba MC	226	31.3	394	54.6	93	12.9	713	98.8	9	1.2	722
Missenyi DC	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Kyerwa DC	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total	**827**	**50.1**	**666**	**40.4**	**142**	**8.6**	**1635**	**99.1**	**15**	**0.9**	**1,650**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

5.2.4.6 Secondary School Facilities

In 2015, Kagera Region had not attained standards set by educational authorities in regard to secondary school facilities. Besides the capability of students themselves, school facilities play a significant role in the provision of quality education. The most common school facilities are classrooms, toilets, staff quarters, libraries, laboratories, dormitories, desks, teachers, and availability of electricity and water.

(i) Teachers

Expansion of secondary education implies an increase in the number of teaching staff. Table 5.67 shows that in 2015, Kagera Region had a total of 3,3,997 teachers distributed in 190 public secondary schools. This gives an average School Teachers Ratio of 1:21. At council level, Bukoba MC (1:30) had the largest School Teachers Ratio, followed by DC Karagwe (1:27) and Biharamulo DC (1:26). On the other hand, Kyerwa DCs (1:13) had the smallest School Teachers Ratio, followed by Bukoba DC (1:14) and Missenyi DC with a School Teachers Ratio of 1:20.

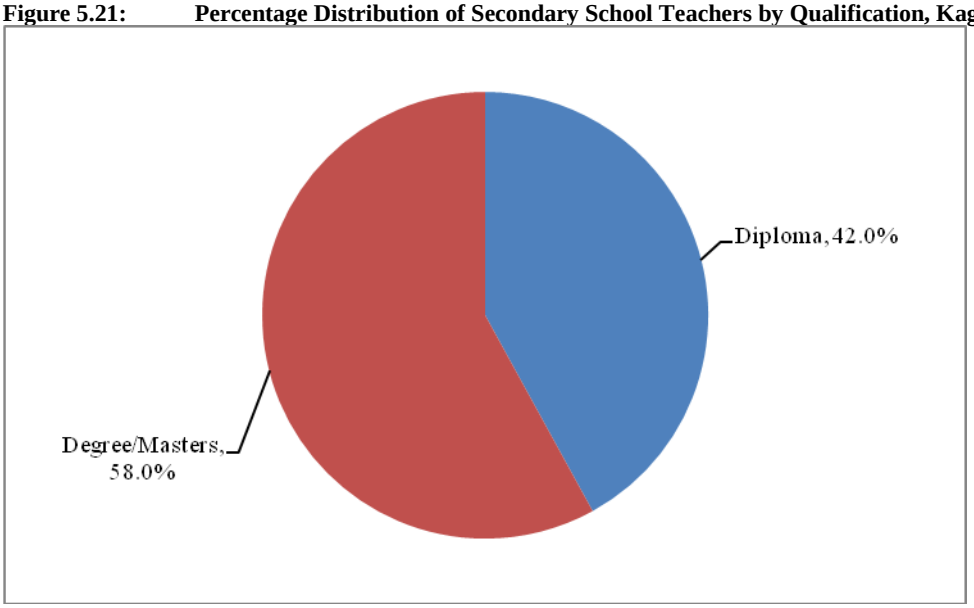
Table 5.67: Availability of Public Secondary School Teachers by Council, Kagera Region, 2015

Council	No. of Schools	Available Teachers	School Teachers Ratio	Required Teachers	Deficit of Teachers	
					Number	Percent
Karagwe DC	19	504	27	595	91	15.3
Bukoba DC	30	426	14	724	298	41.2
Muleba DC	38	840	22	982	142	14.5
Biharamulo DC	18	467	26	633	166	26.2
Ngara DC	23	474	21	593	119	20.1
Bukoba MC	19	569	30	450	-119	-26.4
Missenyi DC	22	447	20	507	60	11.8
Kyerwa DC	21	270	13	450	180	40.0
Total	**190**	**3,997**	**21**	**4,934**	**937**	**19.0**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

In 2015, Kagera Region was well endowed with qualified teachers in public secondary schools since out of 3,997 teachers available, 1,680 (42.0 percent) were diploma holders and 2,320 (58.0 percent) had first degrees or Masters (Figure 5.21).

Figure 5.21: Percentage Distribution of Secondary School Teachers by Qualification, Kagera Region, 2015



Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

At council level, Muleba DC (506) had the largest number of teachers with degrees. It was followed by Karagwe DC (324) and Bukoba MC (291). Kyerwa DC (173) had the smallest number of teachers with degrees (Table 5.67a).

Table 5.67a: Number of Public Secondary School Teachers by Council and Qualification, Kagera Region, 2015

Council	Diploma			Degree/Masters			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Karagwe DC	132	51	183	221	100	324	353	151	504
Bukoba DC	133	50	183	169	74	243	302	124	426
Muleba DC	236	88	324	347	169	516	583	257	840
Biharamulo DC	108	54	162	185	120	305	293	174	467
Ngara DC	162	66	228	170	76	246	332	142	474
Bukoba MC	140	84	224	236	109	345	376	193	569
Misenyi DC	143	45	188	187	72	259	330	117	447
Kyerwa DC	162	26	188	55	27	82	217	53	270
Total	**1,216**	**464**	**1,680**	**1,570**	**747**	**2,320**	**2,786**	**1,211**	**3,997**
Percent	**72.4**	**27.6**	**42.0**	**67.7**	**32.3**	**58.0**	**69.7**	**30.3**	**100**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2016*

Campaigns for increasing the number of science teachers in Kagera Region were required in 2015 since in that year the deficit was for 758 science teachers (55.7 percent) compared to a surplus of 38 arts teachers (1.2 percent). Table 5.67b also shows that, Kyerwa District Council was the most affected with only 27 teachers whom they taught science subjects. The most privileged council was Muleba District Council (132), followed by Bukoba Municipal Council (109) and Karagwe (89).

Table 5.67b: Number of Science and Arts Teachers in Public Secondary Schools by Sex and Council, Kagera Region, 2015

Council	Available Science Teachers			Required Teachers	Available Arts Teachers			Required Teachers
	Male	Female	Total		Male	Female	Total	
Karagwe DC	68	21	89	167	283	132	415	428
Bukoba DC	56	14	70	258	240	116	356	466
Muleba DC	114	18	132	209	471	237	708	773
Biharamulo DC	41	29	70	185	227	170	397	448
Ngara DC	51	12	63	143	275	136	411	450
Bukoba MC	82	27	109	134	295	165	460	326
Missenyi DC	53	5	58	139	267	122	389	368
Kyerwa DC	22	5	27	111	216	27	243	339
Total	**469**	**134**	**603**	**1,361**	**2,221**	**1,111**	**3,332**	**3,294**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

(ii) Administration Blocks

Administration blocks are important facilities for providing the enabling environment to teachers to enable them to provide quality education. Therefore inadequacy of administration blocks is one of the challenges that need to be dealt with by the Regional Authority. Table 5.68 shows that in 2015, the Region had very few public secondary schools with administration blocks since, out of 190 public secondary schools, only 79 schools (41.6 percent) had administration blocks. As a result, the Region had a shortage of 57.9 percent for administration blocks in 2015.

At council level, Muleba DC had the largest deficit of 35 blocks, followed by Bukoba DC (27 blocks), Missenyi (14) and Karagwe DC (10). Kyerwa DC had the smallest deficit of only 1 block. .

Table 5.68: Availability of Administration Blocks in Public Secondary Schools by Council, Kagera Region, 2015

Council	No. of Schools	Available Administration Blocks	Percent of Schools with Admin Blocks	Required Admin. Blocks	Deficit of Admin Blocks	
					No.	Percent
Karagwe DC	19	9	47.4	19	10	52.6
Bukoba DC	30	6	20.0	30	27	90.0
Muleba DC	38	3	7.9	38	35	92.1
Biharamulo DC	18	9	50.0	18	9	50.0
Ngara DC	23	14	60.9	23	9	39.1
Bukoba MC	19	10	52.6	19	9	47.4
Misenyi DC	22	8	36.4	22	14	63.6
Kyerwa DC	21	20	95.2	21	1	4.8
Total	**190**	**79**	**41.6**	**190**	**110**	**57.9**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

(iii) Teachers' Houses

Besides the shortage of teachers, the Region experienced a shortage of staff quarters in all councils. Table 5.69 shows that the Region had 509 Teachers Houses while it required 3,997 houses. Therefore, it had a shortage of 3,488 houses (87.3 percent of the required houses). The table also shows that though all councils experienced shortage of staff quarters, Muleba DC with the shortage of 760 houses was the most affected council, followed by Bukoba MC (484) and Ngara DC (409).

The Region Authority together with local government authorities should always remember that the provision of staff houses is one of the most effective incentives for teacher retention. Therefore, more effort should also be directed towards building staff houses together with other facilities.

Table 5.69: Availability of Teachers Houses in Public Secondary Schools by Council, Kagera Region, 2015

Council	No. of Schools	Available Teachers	Available Houses	House Teachers Ratio	Required Houses	Deficit of Teachers' Houses	
						Number	Percent
Karagwe DC	19	504	50	10	504	454	90.1
Bukoba DC	30	426	50	9	426	376	88.3
Muleba DC	38	840	80	11	840	760	90.5
Biharamulo DC	18	467	62	8	467	405	86.7
Ngara DC	23	474	65	7	474	409	86.3
Bukoba MC	19	569	85	7	569	484	85.1
Misenyi DC	22	447	64	7	447	383	85.7
Kyerwa DC	21	270	53	5	270	217	80.4
Total	**190**	3,997	**509**	**8**	3,997	**3,488**	**87.3**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

(iv) Classrooms

Table 5.70 shows that at regional level, the average number of students per classroom, was 35 in 2015. This was less than the recommended 45 students per classroom and an achievement for the Region. At council level, all councils except Biharamulo District Council had an excess of classrooms. In 2015, Biharamulo district had shortage of 12 of classrooms in the region.

Table 5.70: Availability of Classrooms in Public Secondary Schools by Counci, Kagera Region, 2015

Council	No. of Schools	Total Pupils	Available Classrooms	Class Pupils Ratio	Required Classrooms	Deficit of Classrooms	
						No.	Percent
Karagwe DC	19	7,953	207	38	177	-30	-17.1
Bukoba DC	30	9,750	302	32	217	-85	-39.4
Muleba DC	38	15,282	445	34	340	-105	-31.0
Biharamulo DC	18	7,983	165	48	177	12	7.0
Ngara DC	23	8,346	243	34	185	-58	-31.0
Bukoba MC	19	7,415	177	42	165	-12	-7.4
Misenyi DC	22	3,791	134	28	84	-50	-59.1
Kyerwa DC	21	6,044	211	29	134	-77	-57.1
Total	**190**	**66,564**	**1,884**	**35**	**1,479**	**-404.8**	**-27.4**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

(vi) Toilets

In 2015, public secondary schools in Kagera Region had a total of 3,377 pit latrines (holes) (1,620 for boys and 1,757 for girls). The standard set by the educational authorities, is that a pit latrine hole should serve 20 girls or 25 boys (1:20 for girls and1:25 for boys). By 2015, the Region had not yet achieved the national standard for toilets and a pit latrine hole was used by 27 boys or 26 girls. All councils except Bukoba municipal and Missenyi DCs did not meet the standard set for toilets. Table 5.71 shows that in the case of boys Ngara DC (101) had the largest deficit of holes, followed by Karagwe DC (84) and Biharamulo DC (33) while in the case of girls the council with the largest deficit was again Ngara DC (109), followed by Karagwe DC (101) and Biharamulo (79).

Table 5.71: Availability of Pit Latrines (holes) in Public Secondary Schools by Council and Sex, Kagera Region, 2015

Council	Total Students		Available Pit Latrines (holes)		Hole Students Ratio		Required Pit Latrines (Holes)		Deficit of Latrines (No. of Holes.)	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Karagwe DC	3,666	4,287	111	140	33	31	175	241	64	101
Bukoba DC	4,963	4,864	185	186	27	26	199	243	14	57
Muleba DC	7,605	7,677	279	308	27	25	304	384	25	76
Biharamulo DC	4,287	3,696	137	114	31	32	170	193	33	79
Ngara DC	3,940	4,406	123	149	32	30	199	232	101	109
Bukoba MC	3,849	3,566	218	170	18	21	154	178	-64	8
Missenyi DC	3,191	3,485	145	156	22	22	128	174	-17	18
Kyerwa DC	2,882	3,162	99	106	29	30	115	158	16	52
Total	**34,383**	**35,143**	**1,297**	**1,329**	**27**	**26**	**1,444**	**1,803**	**172**	**500**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

(vi) Dormitories

Construction of dormitories for schools is essential due to the location of schools compared to distribution of human settlements in Kagera Region. The availability of dormitories help students to solve the problem of walking long distances and reduce the rates of dropouts, pregnancies and truancy. In 2015, all councils had a shortage of dormitories. This implies that most students attended day schools sometimes by renting houses near school premises. This is very risky and may result in poor school attendance also pregnancy for girls.

Councils have tried to minimize this challenge by constructing dormitories or hostels within the school compounds. Table 5.72 shows that, by 2015 Kagera Region had successfully constructed 107 dormitories. However, the Region still had a deficit of 415 dormitories (79.2 percent). Bukoba DC (104 dormitories) had the largest deficit and it was followed by Karagwe (86) and Muleba DC (64) while Bukoba MC had the smallest deficit of 10 dormitories in the region.

Table 5.72: Availability of Dormitories/Hostels in Public Secondary Schools by Council, Kagera Region, 2015

Council	No. of Schools	Available Dormitories	School Dormitories Ratio	Required Dormitories	Deficit of Dormitory	
					Number	Percent
Karagwe DC	19	16	0.8	102	86	84.3
Bukoba DC	30	6	0.3	112	104	92.9
Muleba DC	38	12	3.2	76	64	84.2
Biharamulo DC	18	13	0.7	56	43	76.8
Ngara DC	23	13	1.4	48	35	72.9
Bukoba MC	19	29	1.5	39	10	25.6
Misenyi DC	22	7	0.3	49	42	85.7
Kyerwa DC	21	11	0.5	42	31	73.8
Total	**190**	**107**	**1.8**	**524**	**415**	**79.2**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

(vii) Libraries

A library facility is considered essential but not crucial for the development of knowledge and skills of a student. Standards set by the Ministry of Education are for every secondary school to have a library to enable students borrow and use supplementary books besides textbooks. Table 5.73 shows that only 29 out of 190 public secondary schools had a library facility. Furthermore, three out of eight councils had no library facility in any public school in 2015. No supplementary books were available for borrowing by students in Karagwe, Bukoba and Kyerwa DCs, while in Bukoba municipal had library facility in each school and rest of councils the deficit of libraries was over 82 percent of their requirements.

Table 5.73: Availability of Libraries in Public Secondary Schools by Council, Kagera Region, 2015

Council	No. of Schools	Available Libraries	Library Schools Ratio	Required Libraries	Deficit of Libraries	
					Number	Percent
Karagwe DC	19	0	0.0	19	19	100.0
Bukoba DC	30	0	0.0	30	30	100.0
Muleba DC	38	2	0.1	38	36	94.7
Biharamulo DC	18	2	0.1	18	16	88.9
Ngara DC	23	4	0.2	23	19	82.6
Bukoba MC	19	19	1.0	19	0	0.0
Misenyi DC	22	2	0.1	22	20	90.9
Kyerwa DC	21	0	0.0	21	21	100.0
Total	**190**	**29**	**0.2**	**190**	**179**	**94.2**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

(viii) Furniture (Tables and Chairs)

Table 5.74 shows that in 2015, the Region had a shortage of 4,731 tables and 3,645 chairs out of the required 67,676 tables and 67,676 chairs. The table also shows that at regional level the number of tables and chairs were enough since facility student ratio was 1:1 for both tables and chairs. However, there was a shortage of tables or chairs in five out of eight councils. The shortages were follows: Bukoba DC (2,150 tables and 1,013 chairs), Kyerwa DC (926 tables and chairs each), Karagwe DC (892 tables and 620 chairs) and Biharamulo DC (619 tables and 626 chairs).

Table 5.74: Availability of Tables and Chairs in Public Secondary Schools by Council, Kagera Region, 2015

Council	Total Students	Available		Facility Pupils Ratio		Required		Deficit of	
		Tables	Chairs	Tables	Chairs	Tables	Chairs	Tables	Chairs
Karagwe DC	7,953	7,061	7,333	1.1	1.1	7,953	7,953	892	620
Bukoba DC	9,750	7,600	8,737	1.3	1.1	9,750	9,750	2,150	1,013
Muleba DC	15,282	15,204	14,617	1.0	1.0	15,282	15,282	78	665
Biharamulo DC	7,983	7,364	7,357	1.1	1.1	7,983	7,983	619	626
Ngara DC	8,346	8,204	8,414	1.0	0.9	8,346	8,346	142	-68
Bukoba MC	7,415	7,385	7,446	1.0	1.0	7,415	7,415	30	-31
Misenyi DC	6,676	6,782	6,782	0.9	0.9	6,676	6,676	-106	-106
Kyerwa DC	6,044	5,118	5,118	1.2	1.2	6,044	6,044	926	926
Total	**69,449**	**64,718**	**65,804**	**1.0**	**1.0**	**69,449**	**69,449**	**4,731**	**3,645**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

(ix) Laboratories

The laboratory is a necessary facility for students taking science subjects. The standards set by the Government is that each school should have at least three laboratories for physics, chemistry and biology subjects. In 2015, Kagera Region had a total of 163 laboratories in 190 the public secondary schools compared to the required 570 laboratories at three laboratories per school. As a

result, Kagera Region had substantial shortage of laboratories (71.4 percent) in 2015 with an average of about 1 laboratory per school. This implies that few practicals for science subjects were done in most of secondary schools in the Region (Table 5.74).

All councils had a shortage of laboratories ranged from 31 in Kyerwa DC to 68 in Muleba DC. Muleba DC (68) had the largest deficit of laboratories, followed by Bukoba DC (67), Kyerwa DC (57) and Missenyi DC (55). The council with the smallest deficit was Kyerwa DC (31 laboratories).

Table 5.74: Availability of Laboratories in Public Secondary Schools by Council, Kagera Region, 2015

Council	No. of Schools	Available Laboratories	Laboratory Schools Ratio	Required Laboratories	Deficit of Laboratories	
					Number	Percent
Karagwe DC	19	26	1.4	57	31	54.4
Bukoba DC	30	23	0.8	90	67	74.4
Muleba DC	38	46	1.2	114	68	59.6
Biharamulo DC	18	15	1.1	54	39	72.2
Ngara DC	23	17	0.7	69	52	75.4
Bukoba MC	19	19	1.0	57	38	66.7
Missenyi DC	22	11	0.5	66	55	83.3
Kyerwa DC	21	6	0.3	63	57	90.5
Total	**190**	**163**	**1.1**	**570**	**407**	**71.4**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

(xi) Electricity

Table 5.75 shows various sources of electricity used by secondary schools in Kagera Region at the end of 2015. About 82.5 percent of 189 schools had electricity and the National Grid (74 schools) was the main source. It was followed by solar energy (64 schools) and the generator (15 schools). The least source was biogas (2 schools). The council with the largest percentage of schools with electricity was Missenyi DC (95.5 percent), followed by Kyerwa DC (95.2 percent) and Karagwe DC (94.7 percent). The council with the smallest percentage of schools with electricity was Bukoba DC (65.5 percent), followed by Muleba DC (71.1 percent). One general observation from these data is that the availability of national grid managed by TANESCO has enabled significant number of public secondary schools to have electricity in all councils of Kagera Region.

Table 5.75: Availability of Electricity in Public Secondary Schools by Source and Council, Kagera Region, 2015

Council	No. of Schools	Source of Electricity					Total Schools With Electricity	
		National Grid	Biogas	Solar	Generator	Others	No.	Percent
Karagwe DC	19	0	0	16	2	0	18	94.7
Bukoba DC	30	19	0	0	0	0	19	65.5
Muleba DC	38	20	0	7	0	0	27	71.1
Biharamulo DC	18	5	1	5	1	1	13	72.2
Ngara DC	23	0	0	11	10	0	21	91.3
Bukoba MC	19	17	0	0	0	0	17	89.5
Misenyi DC	22	13	1	5	2	0	21	95.5
Kyerwa DC	21	0	0	20	0	0	20	95.2
Total	**190**	**74**	**2**	**64**	**15**	**1**	**156**	**82.5**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

(xii) Water

Availability of adequate clean and safe water in school is important for the health of the students. Table 5.76 shows that 151 (98.4 percent) out of 190 schools in Kagera Region had clean water within their compounds in 2015. Table 5.75 also shows that only Karagwe, Biharamulo and Missenyi DCs had clean water in all their secondary schools (100.0 percent), while Missenyi DCs had minimum coverage of 50 percent followed by Bukoba district (53.3 percent) and Ngara district (73.9 percent).

Table 5.76: Accessibility of Water in Public Secondary Schools by Council, Kagera Region, 2013 and 2015

Council	Total No. of Schools	No. of Schools with Working			Schools with Water Sources	
		Water Tanks	Water Wells	Tape Water	Number	Percent
Karagwe DC	19	19	3	3	19	100.0
Bukoba DC	30	7	4	5	16	53.3
Muleba DC	38	26	3	2	31	81.6
Biharamulo DC	18	16	1	1	18	100.0
Ngara DC	23	14	0	3	17	73.9
Bukoba MC	19	5	0	14	19	100.0
Missenyi DC	22	8	2	1	11	50.0
Kyerwa DC	21	20	0	0	20	95.2
Total	**190**	**30**	**30**	**148**	**151**	**79.5**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

5.2.5 Colleges/Universities

Kagera Region had very few public and private universities, colleges and vocational training centres. By 2015, the Region had two private university colleges and five non-university colleges offering various courses at certificate, diploma and degree levels. Courses offered by university colleges included social sciences or humanities, law, computer science, information and technology, education, commerce and accounting and medicine and related courses. Out of the five non-university colleges, four were teachers training colleges and one was a nursing training college.

Table 5.77 shows that the number of students enrolled at university and non-university colleges increased from 2,958 in 2013 to 3,066 in 2015, with the majority being males.

Table 5.77: Enrolment (number) in University and Non-University Colleges, Kagera Region, 2013 and 2015

Name of College	Programme Offered	2013			2015		
		Male	Female	Total	Male	Female	Total
University Colleges							
Josiah Kibira University Collage - JoKoCo	Social Science Subjects, Law and Education Courses, Education Courses, ICT Programs, Businesses and Administration (Masters, Bachelor, Diploma and Certificates)	217	81	298	265	54	319
Cardinal Rugambwa Memorial University College	Education Courses, ICT programs, Business Administration, Laws and Accountants Courses (Masters, Bachelor, Diploma and Certificates)	333	152	485	402	150	552
Sub Total		**550**	**233**	**783**	**667**	**204**	**871**
							Non-University Colleges
Murugwanza School of Nursing	Technician certificate in nursing (NTA level 4-5)	32	35	67	41	26	67
Katoke Teachers Teaching Colleges	Education Courses (Diploma and Certificates)	2,071	37	2,108	2,061	25	2,086
Nshambya Teachers College	Certificate in Primary Education	n.a	n.a	n.a	n.a	n.a	n.a
ERA Teachers College		n.a	n.a	n.a	8	11	19
King Rumanyika Teachers College	Diploma in Primary Education	n.a	n.a	n.a	10	13	23
Sub Total		**2,103**	**72**	**2,175**	**2,120**	**75**	**2,195**
Total Students		**2,653**	**305**	**2,958**	**2,787**	**279**	**3,066**
Percent		**89.7**	**10.3**	**100.0**	**90.9**	**9.1**	**100.0**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

5.2.6 Vocational Training Schools/Centres

Kagera Region had few vocational training schools. In 2015, the Region had only two public vocational training centres located in Bukoba MC and Karagwe DC. The Region had also seven private vocational training centres located in Ngara, Missenye, Muleba and Biharamulo DCs. The courses offered by centres include, motor vehicle mechanics, driving, electrical installation, plumbing, masonry, joinery, carpentry and tailoring. Table 5.81 shows that enrolment was still very low compared to the number of children who completed primary and secondary education in each council. In 2013, total enrolment was only 531, but increased slightly to 671 in 2015 and in both years the number of males were more than those of females.

Table 5.78: Registered Vocation Training Centres and Number of Students by Sex, Kagera Region, 2013 and 2015

Name of Centre	Programme Offered	2013			2015		
		Male	Female	Total	Male	Female	Total
Kagera Region Vocational Training Centre (KRVTC)	Motor Vehicle Mechanics (MVM), Carpentry and Joinery (CJ), Masonry and Bricklaying (MB), Tailoring (TL), Electrical Installation (EI), Electronics (ET), Welding and Fabrication (WF)	58	37	95	46	25	71
Karagwe District Voccational Training Centre (KDVTC)	Motor Vehicle Mechanics (MVM), Carpentry and Joinery (CJ), Masonry and Bricklaying (MB), Tailoring (TL), Electrical Installation (EI), Electronics (ET), Welding and Fabrication (WF)	n.a	n.a	n.a	n.a	n.a	n.a
REDESO	Computer Application, Driving, Masonry, Mechanics, Welding.	51	23	74	54	31	85
Lemela FDC	Carpentry, Tailoring, Masonry, Motor Vehicle and Mechanics, Electricity, Computer Application and Maintenance	49	18	67	63	13	76
Bhakita VCT	Secretarial Courses	0	12	12	0	9	9
Dan Computer	Secretarial Courses	n.a	n.a	n.a	n.a	n.a	n.a
King Rumanyika VTC	Secretarial Courses	0	0	0	11	19	30
Tuinuane VTC	Secretarial Courses	5	11	16	8	12	20
Kashasha VCT	Carpentry, Laundry Works, Welding	150	117	267	217	163	380
Total VCT Students		**313**	**218**	**531**	**399**	**272**	**671**
Percent		**58.9**	**41.1**	**100.0**	**59.5**	**40.5**	**100.0**

Source: *Compiled data from District Executive Directors' Offices, Kagera Region, 2017*

5.2.7 Policy Implication for Education Sector

Although significant progress has been made in both primary and secondary education, policy interventions are needed to achieve targets and standards set. The Region needs to put more effort in construction of girls' dormitories which will help to prevent or reduce girls' dropout due to pregnancy and also to increase pass rate for girls. In addition to that, the on-going programme of constructing laboratories in secondary schools should be speeded up so that science students can carry out their practicals. Moreover, the School Feeding Programme is important for learning improvement in primary schools.

Since both primary and secondary schools in the Region have a critical shortage of toilet holes, more toilet holes should be constructed to satisfy the education policy of one toilet hole for 20 girls or 25 boys. Likewise, the number of furniture such as desks, tables and chairs should be increased in some of primary and secondary schools to meet education targets of one desk per three pupils in primary schools and a chair and a table per student in secondary schools.

Most of primary and secondary schools in Kagera Region have no access to clean and safe water. Therefore, initiatives are needed to supply the schools with both electricity and safe water in order to improve learning environment and perform practicals for science subjects. Solar power and rain water harvest technologies can also help to alleviate electricity and water shortage problems. Moreover, all secondary schools, especially in rural areas, should be motivated to build at least two dormitories and supplied with electricity to improve the learning environment for girls and reduce the pregnancy problem in the Region.

5.2.8 Investment Opportunities in Education

The challenges facing the development of education sector include; inadequacy of pre-primary schools, primary schools and secondary schools as well as school facilities like classrooms, textbooks, laboratories, toilets, learning and teaching materials and inadequacy of teachers. Therefore, investment in constructing more schools, supply of textbooks, laboratory equipment and materials and building materials should be welcomed by the Regional and local authorities.

5.3 Water Supply and Sanitation

5.3.1 Water Supply

Water Supply and Sanitation Sector covers rural and urban water supply in terms of water sources, schemes and technology used to supply water. Besides that, the staffing situation is highlighted especially the work of the districts' water and sanitations engineers/technicians in providing

sustainable water and sanitation services. Sustainable access to clean and safe water is essential for reducing poverty and health problems. Water is largely for domestic purpose but due to the increase of economic activities and delivery of social services both of which utilize water in one way or another, supply of water has become a burden which the government cannot meet without participation of the private sector.

5.3.2 Rural Water Supply

Table 5.82 shows that in 2015, the main source of water for the rural population in Kagera Region was the rain water harvesting tanks (50.7 percent), followed by springs (18.2 percent), shallow wells (15.8 percent), piped schemes (8.4 percent), bore holes (4.6 percent) and rivers (1.9 percent). Other sources such as lakes and dams account for 0.4 percent of the water schemes. However; the table also shows that by the end of 2015, 87.2 percent of rural water schemes in the Region were working.

Table 5.82: Number and Percentage of Rural Water Schemes by Type of Source and Operating Status, Kagera Region, 2015

	Working or Permanent		Not Working or Seasonal		Total	
Type of Water Source	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent Share**
Charco	11	91.7	1	8.3	12	0.2
Spring	1,168	80.6	281	19.4	1,449	18.2
Shallow wells	977	77.6	282	22.4	1,259	15.8
Rain Water Harvesting tanks	3,922	97.2	111	2.8	4,033	50.7
Bore Holes	266	72.3	102	27.7	368	4.6
Piped Scheme	440	66.1	226	33.9	666	8.4
River water	135	88.2	18	11.8	153	1.9
Lake	10	100.0	0	0	10	0.1
Dam	9	100.0	0	0	9	0.1
Total	**6,938**	**87.2**	**1,021**	**12.8**	**7,959**	**100.0**

Source: Compiled Data from District Offices, Water Supply and Sanitation Department, Kagera Region, 2017

In order ensure that there is a good supply of water to rural residents of Kagera Region different types of water technologies were used. Table 5.83 shows that in 2015, a hand pump was the leading technology used. It was used by 73.6 percent of the schemes and followed by gravity piped (21.3 percent), electrical pump (4.0 percent) and Diesel pump (1.1 percent).

Table 5.83: Number and Percentage of Rural Water Schemes by Type of Water Delivery Technology Used and Its Operating Status, Kagera Rural, 2015

	Working		Not Working		Total	
Technology	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent Share**
Wind Mill	-	-	-	-	-	-
Electric Pump	46	71.9	18	28.1	64	4
Diesel Pump	12	66.7	6	33.3	18	1.1
Hand Pump	806	68	380	32	1,186	73.6
Gravity Piped	187	54.5	156	45.5	343	21.3
Total	**1,051**	**65.2**	**560**	**34.8**	**1,611**	**100.0**

Source: Compiled data from District Offices, Water Supply and Sanitation Department, Kagera Region, 2017

Table 5.84 shows that in 2015, 46.6 percent of rural population in Kagera Region was being served with clean water. Rural population served with clean water at council level ranged from 19.1 percent in Kyerwa DC to 69.7 percent in Missenyi DC. Since Bukoba MC was wholly urban, it had no rural population served with clean water.

Table 5.84: Rural Population Served with Clean Water by Council, Kagera Region, 2015

Council	Total Rural Population (number)	Population Served with Clean Water (number)	Percent Population Served with Clean Water
Karagwe DC	372,142	192,589	51.8
Bukoba DC	289,697	55,800	19.3
Muleba DC	580,145	309,901	53.4
Biharamulo DC	324,378	188,937	58.2
Ngara DC	353,327	190,727	54
Bukoba MC	n/a	n/a	n/a
Missenyi DC	202,632	141,199	69.7
Kyerwa DC	328,797	62,726	19.1
Regional Total	2,451,118	1,141,879	46.6

Source: Compiled data from District Offices, Water Supply and Sanitation Department, Kagera Region, 2017

Management of water schemes in rural areas is the responsibility of village/harmlet water user groups (WUGs). Table 5.85 shows that in 2015 Kagera Region had 173 water user groups of which the majority (100 WUGs 57.8 percent) was active and 73 (42.2 percent) were inactive. A total of TZS. 8,068,200 was collected in the Region through water user groups to cover water operating and maintenance costs.

Table 5.84: Number of Water User Groups (WUGs) and Operation and Maintenance Accounts (Oand M) by Council, Kagera Region, 2015

Council	WUGs			O and M		Total Funds (TZS) on 31/12/2015
	Total	Active	Inactive	Operate	Dormant	
Karagwe DC	40	40	-	33	3	-
Bukoba DC	31	19	12	19	13	-
Muleba DC	1	1	0	0	0	0
Biharamulo DC	8	8	-	8	-	550,000
Ngara DC	74	16	58	42	27	5,180,000
Bukoba MC	n/a	n/a	n/a	n/a	n/a	n/a
Missenyi DC	10	7	3	7	2	-
Kyerwa DC	9	9	-	9	-	2,338,200
Total	**173**	**100**	**73**	**118**	**45**	**8,068,200**
Percent	**100**	**57.8**	**42.2**			

n/a: Not applicable

Source: Compiled data from District Offices, Water Supply and Sanitation Department, Kagera Region, 2017

Table 5.86 shows that the rural councils in Kagera Region had established some water committees and water user's groups by 2015. Out of the total village water committee members, 785 were males and 688 females with the majority being from Karagwe DC (463 members). The Region had a total of TZS. 80,242,600 in the water user groups/village water funds with Bukoba DC having the largest share of 79.8 percent. Bukoba MC is wholly urban and not applicable.

Table 5.86: Number of Rural Village Water Committee Members by Sex,, Village Water Funds and Funds in the VWCs by Council, Kagera Region, on 31.12 2015

Council	Village Water Committee Members			No. of WUG/ VWF	Total Funds (TZS)	Percent (Funds)
	Male	Female	Total			
Karagwe DC	236	228	464	-	-	-
Bukoba DC	133	139	272	-	64,070,000	79.8
Muleba DC	89	55	144	-	3,492,600	4.4
Biharamulo DC	30	22	52	103	640,000	0.8
Ngara DC	238	196	434	-	4,080,000	5.1
Bukoba MC	n/a	n/a	n/a	n/a	n/a	n/a
Missenyi DC	13	18	31	0	0	0
Kyerwa DC	46	30	76	5	7,960,000	9.9
Total	**785**	**688**	**1,473**	**108**	**80,242,600**	**100**

Source: Compiled data from District Offices, Water Supply and Sanitation Department, Kagera Region, 2017

5.3.3 Urban Water Supply

During the 2012 Population and Housing Census Kagera Region had an overall of 16.9 percent of private households used piped water as the main source of drinking water (three percent had water piped into their houses, three percent piped into yard and 11 percent used public tap). In urban areas, 51 percent of private households used piped water as their main source of drinking water compared with 12.9 percent of households in rural areas.

Table 5.87 presents sources of urban water supply operating in urban centres of Kagera Region cover all types of water sources. As Kagera Region receives adequate rainfall most of the year, in 2015 the source of water for most schemes in urban areas was the rain water tank (67.4). It was followed by piped schemes (11.1 percent) and springs (7.5 percent). Sources with the smallest percentage of schemes were dams and lakes (0.2 percent each).

Table 5.87: Number and Percentage of Urban Water Schemes by Type of Source and Operating Status, Kagera Urban, 2015

	Working or Perrmanent		Not wWorking or Seasonal		Total	
Type of Water Source	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent Share**
Charco Dams	11	100.0	0	0	11	0.2
Spring	446	98.9	5	1.1	451	7.5
Shallow wells	37	11.2	292	88.8	329	5.5
Bore Holes	221	68.4	102	31.6	323	5.4
Rain water tank	3,922	97.2	111	2.8	4033	67.4
Piped Scheme	440	66.1	226	33.9	666	11.1
River	125	87.4	18	12.6	143	2.4
Lake	10	100.0	0	0	10	0.2
Dam	16	100.0	0	0	16	0.3
Total	**5,228**	**87.4**	**754**	**12.6**	**5,982**	**100.0**

Source: Compiled data from District Offices, Water Supply and Sanitation Department, Kagera Region, 2017

In regard to the technology used for water delivery in urban areas in 2015, 68.7 percent of the schemes used gravity piped, followed by hand pump (27.5 percent) and electric pump (2.7 percent). Diesel pump (1.0 percent) was the least used water delivery technology.Given the fact that 60.3 percent of the water delivery technologies highlited in Table 5.88 were not working, Kagera Regional and district authorities should find a solution to the problem of water delivery technology facilities not working. Through cost benefit analysis, decision can be made on wether to replace the water delivery technology facilities which are not working through buying the new facilities or making repairs to facilities which are not working.

Table 5.88: Number and Percentage of Urban Water Schemes by Type of Water Delivery Technology and Operating Status, Kagera Urban 2015

Technology	Working		Not Working		Total	
	Number	Percent	Number	Percent	Number	Percent Share
Wind Mill	0	0	0	0	0	0
Electric Pump	9	81.8	2	18.2	11	2.7
Diesel pump	1	25	3	75	4	1
Hand Pump	31	27.9	80	72.1	111	27.5
Gravity Piped	119	43	158	57	277	68.7
Total	**160**	**39.7**	**243**	**60.3**	**403**	**100**

Source: Compiled data from District Offices, Water Supply and Sanitation Department, Kagera Region, 2017

Table 5.89shows the percentage of population served with clean water in urban areas of the Region in 2015. At council level, clean water accessibility to to urban dwellers ranged from 6.4 percent in Karagwe DC to 91.9 percent in Bukoba MC. In accessibility of clean water, Karagwe DC had the worst situation followed by Biharamulo DC (36.8 percent) and Ngara DC (53.6 percent). Resource allocation aiming at improving accessibility of clean water among urban population in Kagera Region should first be directed towards those councils with poor clean water accessibility.

Table 5.89: Percentage of Urban Population Served with Clean Water by Council, Kagera Urban; 2015

Council	Estimated Demand per Day (cu.m.)	Actual Supply in per Day (cu.m.)	Percent of Population Served
Karagwe DC	6,064	390	6.4
Bukoba DC	n/a	n/a	n/a
Muleba DC	1,512	1,000	66.1
Biharamulo DC	1,720	633	36.8
Ngara DC	3,293	1,766	53.6
Bukoba MC	2,539	2,334	91.9
Missenyi DC	55,322	43,554	78.7
Kyerwa DC	n/a	n/a	n/a
Total	**70,450**	**49,677**	**70.5**

Source: Compiled data from District Offices, Water Supply and Sanitation Department, Kagera Region, 2017

5.3.4 Sanitation

Kagera Region does not have good waste disposal systems and therefore no proper ways of disposing solid and water waste. Very few households have septic tanks and the most common way of disposing human waste is through pit latrines.On the other hand, the 2012 Population and Housing Census Report showed a slight decrease in households with no toilet facility from 6.5 percent in 2002 to 3.8 percent in 2012. Also the use of traditional pit latrines in Kagera Region decreased from 90.6 percent in 2002 to 89.8 percent in 2012, while households with flush toilets increased from one (1) percent to 4.6 percent in the same period.

Table 5.90 shows that in a total of 496,715 households which were available in Kagera Region in 2015, 423,855 households (85.3 percent) had toilet facilities. The remaining 72,860 households (14.7 percent) had no toilet facilities. At council level, the percentage of households with toilet facilities ranged from 37.1 percent in Kyerwa DC to 99.9 percent in Biharamulo DC. Therefore, Biharamulo DC (0.3 percent) had the smallest percentage of households without toilet facilities while Kyerwa DC (62.9 percent) had the largest percentage.

Table 5.90: Total Number of Households With and Without Toilet Facilities by Council, Kagera Region, 2015

Council	Total Number of Households	With Toilets		Without Toilets	
		Number	Percent	Numbers	Percent
Karagwe DC	76,000	73,983	97.3	2,017	2.7
Bukoba DC	65,685	48,099	73.2	17,586	26.8
Muleba DC	97,920	83,761	85.5	14,159	14.5
Biharamulo DC	55,674	55,618	99.9	56	0.1
Ngara DC	67,572	65,422	96.8	2,150	3.2
Bukoba MC	32,540	32,430	99.7	110	0.3
Missenyi DC	48,416	44,916	92.8	3,500	7.2
Kyerwa DC	52,908	19,626	37.1	33,282	62.9
Total	**496,715**	**423,855**	**85.3**	**72,860**	**14.7**

Source: Compiled data from District Offices, Water Supply and Sanitation Department, Kagera Region, 2017

5.3.5 Water Supply Personnel

All water sector personnel are located at the district headquarters. In 2015, the Region had a total of 29 water supply personnel. They consisted of 3 engineers, 16 technicians, 7 plumbers and 3 others. At council level, water supply personnel distributed unevenly based on the personnel category and type of water supply scheme. Karagwe DC (9) had the largest number of water personnel while Bukoba MC (2) had the smallest. No information was provided by Bukoba and Biharamulo DCs.

5.3.6 Policy Implication for Water Sector

Poor accessibility of clean and safe water is a very common problem in Kagera Region. Lack of sufficient and reliable water sources is believed to be the corner stone of the problem. Alleviating the problem calls for taping, lake water, drilling boreholes and carrying out rain water harvesting.

5.3.7 Investment Opportunities in Water Supply

Kagera Region is endowed with various types of water sources. Nevertheless, it has very few piped water sources. In this regard, investment is needed for supply of pipes and pumping equipments; drilling; and construction of charco dam and water storage facilities. Investment is also needed for the supply of electricity to be used in electricity pumps.

CHAPTER SIX

Other Development Issues

6.0 Introduction

This chapter gives a detailed description on special development issues among others, gender related initiatives, day care centres, lifestyle of most vulnerable children, women and youth economic groups, co-operative development groups (SACCOs), other cooperative activities, women's participation in managerial, political, professional and technical fields as well as road traffic incidents and crime statistics.

6.1 Gender Empowerment

Briefly, gender empowerment is part of a worldwide initiative that aims at ensuring that all sexes, that is men and women participate fully on the basis of equality, in policy formulation, planning and decision making processes and in all aspects of economic, socio-cultural and political life. In this regard, various measures had already been taken in Kagera Region to reduce time spent by women and girls in attending domestic activities and hence enable them to devote more time in other economic activities. Generally, measures taken include raising awareness on the use of family planning methods aimed at regulating their reproductive behaviour, opening and operating day care centres, formation and registration of women economic groups, participation in SACCOs, CBOs and other cooperative activities.

6.2 Day Care Centres

Running of day care centres enables mothers to participate in other economic activities which contribute significantly to the socio economic growth and welfare of their families and the region in general. The established day care centres are meant for children of age 3 to 4 years. These are young children who are not yet qualified for pre-primary education. Table 6.1 shows that there were 51 day care centres in Kagera Region in 2013 whereby, Missenyi DC was leading by having 21 centres followed by Muleba DC (10), Biharamulo DC (6) and Bukoba DC (5). However, no day care centres were reported in Kyerwa DC in 2013. In 2015, the number of centres increased to 128, with Kyerwa DC leading with 57 centres followed by Missenyi DC with 21 centres, and Bukoba MC had 15 centres. There was no council which had no day care centre in 2015. The number of pupils in day care centres in Kagera Region was 2,634 in 2013 and 5,176 in 2015. The table further shows that in both years 2013 and 2015 the largest number of pupils were recorded in Muleba DC, followed by Missenyi DC and Bukoba DC.

Table 6.1: Distribution of Day Care Centers by Council, Kagera Region, 2013 and 2015

Council	2013		2015		Change of Pupils	
	No. of Centers	No. of pupils	No. of Centers	No. of pupils	Number	Percent
Karagwe DC	2	45	4	118	73	162.0
Bukoba DC	5	472	8	608	136	28.8
Muleba DC	10	1,018	10	1,123	105	10.3
Biharamulo DC	6	320	6	377	57	17.8
Ngara DC	4	49	7	177	128	261.2
Bukoba MC	3	178	15	548	370	207.9
Missenyi DC	21	552	21	645	93	16.8
Kyerwa DC	0	0	57	1,580	1,580	N/A
Total	**51**	**2,634**	**128**	**5,176**	**2,542**	**96.5**

Source: Districts Directors Offices, Kagera Region, 2017.

6.3 Vulnerability

Vulnerability refers to excessive exposure of an individual to various risks, life stress and increased inability to mitigate the situation. It is the result of not only individual misfortunes, but also the social conditions which emanate from limited resources and opportunities to lead a normal and decent life. Poverty is among the leading conditions as a state of deprivation that denies an individual or persons to lead a decent life which ultimately hinders them to meet minimum basic necessities for survival such as food, shelter and clothes. In this regard, poverty contributes to poor health and poor health causes poverty due to inability of people to engage in production of basic needs of life. This is a vicious cycle that traps most vulnerable children. However, all children and especially young children are vulnerable simply because they continue to depend on others for provision of their basic needs.

Increasing physical and mental maturity normally leads to growing capability for self-provisioning, but during the period of childhood and adolescence, children and young people continue to need special care and support. It is customary, most children in Tanzania are cared for and protected by their families and communities, however, some are not so fortunate. Manifestations of child vulnerability include child mortality and malnutrition as evidenced by the increasing number of children in households headed by children or households with elderly people only; orphan hood and HIV/AIDS; education and child labour; and gender abuse.

Thus, data and information obtained from various surveys and studies reveal that orphaned children are poorer than children who are not orphaned. Table 6.2 shows the situation of most vulnerable

children, categorized as orphans and non-orphans in Kagera Region. The table shows that in 2015 the region had a total of 172,635 most vulnerable children, out of whom 102,295 (59.4 percent) were non- orphans and 70,360 (40.7 percent) were orphans. The table further shows that out of 70,360 orphans, 49.7 percent were girls and 50.3 percent were boys. At council level, among the orphans, the largest percentage of orphan girls (51.2 percent) was found in Biharamulo DC, followed by Kyerwa DC (50.4 percent), Missenyi and Karagwe DCs (50.0 percent each).The remaining councils had less that 50 percent of orphan girls.

Table 6.2: Number of Most Vulnerable Children by Council, Kagera Region, 2015

		Most Vulnerable Children							
		Orphans				Non Orphans			
Council	Total most Vulnerable	No. of Girls	Girls Percent	No. of Boys	Total	No. of Girls	Girls Percent	No. of Boys	Total
Karagwe DC	7,111	2,728	49.9	2,738	5,466	818	49.7	827	1,645
Bukoba DC	72,629	10,977	48.8	11,522	22,499	28,744	57.3	21,386	50,130
Muleba DC	46,884	3,845	49.4	3,933	7,778	19,778	50.6	19,328	39,106
Biharamulo DC	5,517	1,734	51.2	1,652	3,386	1,573	73.8	558	2,131
Ngara DC	2,040	531	47.0	599	1,130	458	50.3	452	910
Bukoba MC	1,816	305	48.5	324	629	578	48.7	609	1,187
Missenyi DC	4,547	1,155	50.0	1,156	2,311	1,106	49.5	1,130	2,236
Kyerwa DC	32,091	13,690	50.4	13,451	27,141	2,531	51.1	2,419	4,950
Total	**172,635**	**34,965**	**49.7**	**35,375**	**70,340**	**55,586**	**54.3**	**46,709**	**102,295**

Source: Districts Directors Offices, Kagera Region, 2017

6.4 Women Groups

Formation of women groups for economic purposes generally strengthens women solidarity for enhancing discussions on gender issues which affect their social and economic development.

In order to help the development of women each district council has established a Women Loan Fund to assist women economic groups and this is expected to act as a catalyst to the growth of region's economy. Table 6.3 reveals that Kagera Region had 448 registered economic groups in 2013, which increased to 735 in 2015. In 2013, Karagwe, Biharamulo and Kyerwa DCs had no women economic groups. Nevertheless, all women economic groups received loans totaling TZS 77,349,000 in 2013 compared to TZS 104,355,000 in 2015. In 2013 most women economic groups were concentrated in Missenyi DC with 181 groups (40.4 percent), followed by Ngara DC with 179 groups (40.0 percent). This pattern did not change in 2015 whereby Missenyi District Council again led by having 318 registered women groups (43.3 percent), followed by Ngara DC with 146 groups (19.9 percent). The table further shows that all councils showed considerable variations in relation to the amount of loans received.

Table 6.3: Number of Women Economic Groups by Council Kagera Region, 2013 and 2015

Council	2013				2015			
	No. of Registered Group	Total Members	No. of Groups Assisted	Total Loaned TZS. (000)	No. of Registered Groups	Total Members	No. of Groups Assisted	Total Loaned TZS. (000)
Karagwe DC	0	0	0	0	51	1,220	6	19,000
Bukoba DC	43	330	0	0	75	680	0	0
Muleba DC	32	214	21	36,500	27	185	20	40,500
Biharamulo DC	0	0	62	22,274	18	203	8	13,300
Ngara DC	179	1,618	0	0	146	2,023	6	8,000
Bukoba MC	13	109	5	13,875	39	292	5	10,500
Missenyi DC	181	882	4	4,700	318	2,226	6	4,100
Kyerwa DC	0	0	0	0	61	1,482	6	8,955
Total	**448**	**3,153**	**92**	**77,349**	**735**	**8,311**	**57**	**104,355**

Source: Compiled data from Districts Directors Offices, Kagera Region, 2017

6.4.1 Women Participation in Decision Making

The Tanzania Vision 2025 and Sustainable Development Goals (SDGs) 2030 and targets are to empower women by involving them in decision making at various levels. Observations show that in Kagera Region, men are still dominating all levels of decision making compared to women. Only 27.8 percent of the 395 political posts, (including district Commissioners, members of parliament and councillors) were held by women and 26.9 percent of the 581 managerial posts in the Region were held by women (Table 6.4). Moreover, the gap between men and women is also observed in the professional and technical posts, whereby out 5,818 technical and professional posts in the Kagera Region, 45.5 percent (2,649 posts) were held by women. In such circumstances, there is an urgent need to create conducive environment that encourages women to aspire for political and managerial posts in order to achieve equal opportunities amongst men and women as clearly stipulated in the SDGs.

At council level, similar observations were also made. The available data show that the situation is more vivid in Biharamulo, Ngara and Kyerwa District councils whereby the percentage of women holding managerial posts was below 10.0.

Table 6.4: Participation in Managerial, Political, Professional and Technical Personnel by Sex and Council, Kagera Region, 2015

Council	Managerial			Professionals/ Technicians			Politicians (MPs, DC, Councilors)		
	Male	Female	Percent Female	Male	Female	Percent Female	Male	Female	Percent Female
Karagwe DC	85	15	15.0	74	26	26.0	81	19	19.0
Bukoba DC	95	56	37.1	1,261	1,002	44.3	29	10	25.6
Muleba DC	133	35	20.8	600	741	55.3	16	43	72.9
Biharamulo DC	29	3	9.4	17	0	0.0	18	6	25.0
Ngara DC	15	1	6.3	58	16	21.6	24	8	25.0
Bukoba MC	27	41	60.3	184	433	70.2	70	10	12.5
Missenyi DC	15	4	21.1	50	11	18.0	21	8	27.6
Kyerwa DC	26	1	3.7	925	420	31.2	27	5	15.6
Total	**425**	**156**	**26.9**	**3,169**	**2,649**	**45.5**	**286**	**109**	**27.6**

Source: Compiled data from Districts Directors Offices, Kagera Region, 2017

6.5 Youth Economic Groups

The youth form an economically active group with an enormous potential in human resources that cannot be ignored for sustainable development of any country as emphasized in the current and in all National Youth Development Policies of previous years. Hence, both the Government and communities must allocate enough resource in order to deliver basic services, solve youth basic needs, and deal with issues related to unemployment and alleviation of poverty.

In this regard, youths in Kagera Region are mainly involved in informal employment that include small scale activities like fabricating and making household amenities, plumbing, fishing, *bodaboda* operators, sand mining and small businesses. Self-employment in these sectors needs initial preparations and some capital input. According to the available statistics, this Region supports the youths in forming economic groups, so as to develop their potential and contribute to the regional economic growth and poverty eradication.

Table 6.5 presents the number of economic groups for youths, membership and the amount of money loaned to these groups. The table shows that there was an increase in the number of youth economic groups registered from 231 groups in 2013 to 404 groups in 2015, an increase of 74.9 percent. The increase in the number of groups in the Region was associated with an increase of members from 2,467 in 2013 to 5,168 in 2015, of which females were 1,101 (44.6 percent) and 2,541 (49.2 percent) in 2013 and 2015 respectively. In general, working together in economic groups increases the opportunity of youths in accessing credit funds, whereby, by the end of 2012/2013 loans amounting to TZS 54,475,000 were issued and these increased to TZS 142,900,000 in 2014/2015. Moreover, the number of groups assisted increased from 11 in 2013 to 40 in 2015.

Table 6.5: Youth Economic Groups and Total Money Loaned by Council, Kagera Region, 2013 and 2015

Council	2013						2015					
	No. of Reg. Group	Members			No. of Groups Assisted	Funds Loaned (Tshs. "000")	No. of Reg. Groups	Members			No. of Groups Assisted	Funds Loaned (Shs. "000")
		Male	Female	Total				Male	Female	Total		
Karagwe DC	0	0	0	0	0	0	28	387	280	667	9	45,500
Bukoba DC	7	49	26	75	0	0	12	153	96	249	1	1,000
Muleba DC	4	37	25	62	4	25,000	3	26	15	41	3	25,000
Biharamulo DC	67	705	396	1,101	1	22,275	67	19	27	46	0	0
Ngara DC	65	331	348	679	0	0	38	334	381	715	7	31,000
Bukoba MC	5	36	10	46	2	4,500	19	58	15	73	8	33,500
Missenyi DC	83	208	296	504	4	2,700	162	444	618	1062	12	6,900
Kyerwa DC	0	0	0	0	0	0	75	1,206	1,109	2,315	0	0
Total	**231**	**1,366**	**1,101**	**2,467**	**11**	**54,475**	**404**	**2,627**	**2,541**	**5,168**	**40**	**142,900**

Source: Districts Directors Offices, Kagera Region, 2017

6.6 Savings and Credit Cooperative Societies (SACCOS)

Economic indicators show that, availability of Savings and Credit Cooperative Societies (SACCOS) in Kagera Region is among factors contributing to development especially for low income families and individuals. Most SACCO's members have access to financial resources because financial institutions in Tanzania prefer to channel loans to these groups or individuals through their SACCOS.

Table 6.6 shows the distribution of SACCOS groups by council in Kagera Region. It also shows the number of active and dormant groups, amount of funds involved, number of SACCOS members by sex and the amount of money loaned to members.

In 2015, a total of 301 SACCOS groups were registered in Kagera Region of which 164 were active, whereas 137 were dormant. In 2015 a total of 47,844 members were registered, of whom 26,816 were males and 21,028 were females. Total value of shares owned by all members was TZS 1,395,032,661 meanwhile, a total of TZS. 30,182,512,137 were loaned to members of which TZS 20,140,091,561 were recovered (66.7 percent) by the end of 2015.

The loan recovery is above the average of 50 percent in the region and this is a good sign for sustainability of economic activities in the region.

Table 6.6: Number and Status of SACCOS with Amount of Shares and Loans by Council, Kagera Region, 2015

Council	No. of SACCOs		Members		Total Value of Money (TZS) as at 31.12.2015			
	Active	Dormant	Male	Female	Shares (TZS)	Loaned to Members	Loans Recovered	Percent Recovered
Karagwe District Council	16	14	5,983	7,839	464,973,470	4,109,522,250	3,683,062,010	89.6
Bukoba District Council	21	25	2,777	1,329	150,548,000	496,690,000	245,470,000	49.4
Muleba District Council	30	33	4,955	3,559	212,538,600	1,569,581,000	1,077,438,674	68.6
Biharamulo District Council	11	9	3,036	1,969	76,311,148	14,499,333,964	12,124,492,710	83.6
Ngara District Council	19	10	1,910	888	92,492,223	631,443,923	22,263,000	3.5
Bukoba Municipal Council	30	14	474	42	93,300,000	143,500,000	87,000,000	60.6
Missenyi District Council	13	23	3,078	2,724	178,400,000	7,952,576,000	2,390,997,167	30.1
Kyerwa District Council	24	9	4,603	2,678	126,469,220	779,865,000	509,368,000	65.3
Total	**164**	**137**	**26,816**	**21,028**	**1,395,032,661**	**30,182,512,137**	**20,140,091,561**	**66.7**

Source: Compiled data from Districts Directors Offices, Kagera Region, 2017

6.7 VICOBA

VICOBA groups are also playing a significant role towards stimulating economic activities at community level. VICOBA, like any other micro-finance service is suitable and effective in supporting developmental initiatives introduced in communities for improving the well-being of low income earners. In Kagera Region, VICOBA groups were formed in all councils except in Biharamulo DC, Ngara DC and Bukoba Municipal Council. A total of 593 VICOBA were formed in the Region with 14,829 members of whom 5,388 were males (36.3 percent) and 9,441 were females (63.7 percent). Karagwe DC had the largest number of VICOBA (272), followed by Missenyi DC (152) and Muleba DC (105). Active participation is contributed mainly by females in the region who accounted for 63.7 percent of VICOBA members compared to 36.3 percent of males, Table 6.7. VICOBAs help the people in the region to secure loans for different economic activities and projects, it can also be inferred that VICOBAs help the people in the region to alleviate poverty and ultimately enhance economic growth and social well-being which is one of the main areas of focus of the Government.

Table 6.7: Village Community Bank (VICOBA) by Council, Kagera Region, 2015

Council	Number of VICOBA	Members					
		Male	Percent	Female	Percent	Total	Percent
Karagwe DC	272	2,883	36.9	4,930	63.1	7,813	52.7
Bukoba DC	63	0	0.0	0	0.0	0	0.0
Muleba DC	105	602	22.3	2,094	77.7	2,696	18.2
Biharamulo DC	0	0	0.0	0	0.0	0	0.0
Ngara DC	0	0	0.0	0	0.0	0	0.0
Bukoba MC	0	0	0.0	0	0.0	0	0.0
Missenyi DC	152	1,855	43.6	2,395	56.4	4,250	28.7
Kyerwa DC	1	48	68.6	22	31.4	70	0.5
Total	**593**	**5,388**	**36.3**	**9,441**	**63.7**	**14,829**	**100.0**

Source: Districts Directors Offices, Kagera Region, 2017

6.8 Financial Institutions

Several financial institutions are operating in Kagera Region, whereby six financial institutions were already providing financial services in 2015. This suggests that the demand for financial services is high in the Region due to the increasing number of formal and informal small scale businesses. As a result, the regional economic growth has led to increased social and economic activities by providing a suitable business environment in financial and even non-financial institutions to operate smoothly. Bukoba MC leads with 6 banks (NMB, TPB, NBC, CRDB, Mkombozi and KCDB) and other financial services, followed by Ngara and Karagwe DCs with 3 banks each (NMB, TPB and CRDB). The other councils had 2 banks each (NMB and CRDB) but there are no banks in Bukoba DC.

6.9 Crime Statistics and Road Traffic Accidents

6.9.1 Introduction

The results from previous censuses and the most recent 2012 Population and Housing Census have shown an increasing trend in population size in Tanzania. Furthermore, observations show that there is a rising trend of rural- urban migration of people in search of basic necessities, opportunities and social services most of which are available in urban areas. This phenomenon has inevitably led to unplanned growth of towns, increasing population sizes and densities; and increased crimes. It is possible, poverty and misuse of opportunities, particularly by the young population, as a result of development of science, technology and globalization might have eroded their ability to behave. Statistics on the rate of crimes and the type of offences committed reveal an increasing trend across all population age groups in several communities. Kagera Region, like other regions in the country, is also experiencing an increase in crimes and accidents. Statistics compiled from several Police Stations scattered throughout the region support these allegation.

6.9.2 Crime by Type

Table 6.8 shows that a total of 10,185 crime cases were reported in Kagera Region at the end of 2015. The most common crime was related to violence with 59.1 percent of reported cases, followed by property crimes (39.2 percent) and drug crimes (1.7 percent). Regarding the number of people who were jailed for committing various types of crimes, a total of 1,554 persons were jailed of whom 888 persons (57.1 percent) were jailed due to crime with violence, 577 persons (37.1 percent) were jailed due to property crimes and 89 persons (5.7 percent) were jailed due to criminal cases related to drugs.

Table 6.8: Number of Crimes Reported in Police Stations and People Jailed, January - December 2015, Kagera Region

Council	No. of Police Officers	Type of Crime Cases Reported				Number of People Jailed by Type of Crime		
		Violence	Property	Drug	Total	Violence	Property	Drug
Karagwe DC	138	1,556	1,366	22	**2,944**	226	108	10
Bukoba DC	4	336	190	2	**528**	108	89	2
Muleba DC	142	2,286	293	8	**2,587**	396	212	8
Biharamulo DC	230	24	20	1	**45**	5	20	1
Ngara DC	190	40	12	18	**70**	10	5	13
Bukoba MC	178	1,432	1,883	93	**3,408**	5	13	40
Missenyi DC	140	277	130	26	**433**	110	98	10
Kyerwa DC	119	71	94	5	**170**	28	32	5
Percent	**1,141**	**6,022**	**3,988**	**175**	**10,185**	**888**	**577**	**89**

Source: Region Police Commander's Office, Kagera Region, 2017

6.9.3 Theft Cases and Convicts

This section describes theft cases and people jailed for stealing. Common types of stolen property were motor vehicles, motor cycles, bicycles and livestock.

Table 6.9 shows that a total of 1,229 theft cases were reported in Kagera Region in 2015. Livestock stealing was the most common incident that accounted for 1,146 (93.2 percent) of all theft cases in 2015. It was then followed by motorcycles (81; 6.6 percent) while bicycle and vehicle stealing had one case each (0.1 percent).

At council level, the table shows that Karagwe DC had the largest number of livestock stealing cases (895), followed by Ngara DC (82) and Missenyi DC (54). For motorcycle theft cases, 25 cases were reported in Bukoba MC, 19 cases in Kyerwa DC while Ngara DC had 18 cases of motor cycles stealing.. Furthermore, the table shows that out of the suspects, 56 (74.7 percent) were convicted and jailed for stealing livestock, 17 persons (22.7 percent) were jailed for stealing motorcycles while two persons (2.7 percent) were convicted and jailed for stealing motor vehicles. However, there was only one case of bicycle and motor vehicle stealing in the region in 2015 reported in Missenyi District Council.

Table 6.9: Number of Theft Cases Reported at Police Stations and People Jailed, Kagera Region, 2015

Council	No. of Police Posts in the Council	Number of Theft Cases				Number of People Jailed Due to Stealing of			
		Motor Vehicles	Motor Cycles	Bicycles	Livestock	Motor Vehicles	Motor Cycles	Bicycles	Livestock
Karagwe DC	6	0	5	0	895	2	0	0	4
Bukoba DC	4	0	2	0	21	0	0	0	4
Muleba DC	14	0	5	0	47	0	3	0	8
Biharamulo DC	11	0	0	0	20	0	0	0	0
Ngara DC	8	0	18	0	82	0	5	0	15
Bukoba MC	2	0	25	0	22	0	2	0	4
Missenyi DC	9	1	7	1	54	0	3	0	3
Kyerwa DC	5	0	19	0	5	0	4	0	18
Total	**59**	**1**	**81**	**1**	**1,146**	**2**	**17**	**0**	**56**
Percent						**2.7**	**22.7**	**0.0**	**74.7**

Source: Region Police Commander's Office, Kagera Region, 2017

6.9.4 Road Traffic Incidents

This section discusses road traffic incidents and accidents that occurred in Kagera Region in 2015. According to the report common incidents include motor vehicles only, motorcycles only, motor vehicles versus motor cycles, motor vehicles and motor cycles versus pedestrian. Tables further reveal deaths and injuries that were reported at Police Stations within the region.

6.9.4.1 Accidents by Cause

Table 6.10 presents the number of accidents reported by councils in Kagera Region and type of vehicles involved in 2015. The data shows in total there were 275 accidents out of which 76 accidents (27.6 percent) involved motor vehicles only, 73 accidents (26.5 percent) involved motor vehicles versus motorcycles, 76 accidents (27.6 percent) involved motorcycles only and 50 accidents (18.2 percent) involved motor vehicles and motorcycles versus pedestrians.

At council level, the largest number of accidents were reported in Ngara DC with 83 accidents (30.2 percent) of which 30 were caused by motor vehicles versus motorcycles, 20 accidents were caused by motorcycles only, while 15 accidents were caused by motor vehicles only and 18 accidents were caused by motor vehicles and motorcycles versus pedestrians. Bukoba MC had the second largest number of accidents (63; 22.9 percent) , out of which 25 accidents were caused by motor vehicles only, 11 accidents were caused by motorcycles only, 16 were caused by motor vehicles versus motorcycle and while 11 accidents were caused by motor vehicle and motorcycle against pedestrians.

Table 6.10: Number of Accidents Reported at Police Stations by Council, Kagera Region, 2015

	Motor Vehicles Only		Motor vehicles versus Motor Cycles		Motor Cycles Only		Motor vehicles and Motor cycles versus Pedestrian		
Council	**Number.**	**Percent**	**Number.**	**Percent**	**Number.**	**Percent**	**Number.**	**Percent**	**Total**
Karagwe DC	5	18.5	12	44.4	7	25.9	3	11.1	27
Bukoba DC	1	20.0	2	40.0	1	20.0	1	20.0	5
Muleba DC	4	22.2	1	5.6	11	61.1	2	11.1	18
Biharamulo DC	3	37.5	2	25.0	1	12.5	2	25.0	8
Ngara DC	15	18.1	30	36.1	20	24.1	18	21.7	83
Bukoba MC	25	39.7	16	25.4	11	17.5	11	17.5	63
Missenyi DC	12	29.3	5	12.2	11	26.8	13	31.7	41
Kyerwa DC	11	36.7	5	16.7	14	46.7	0	0.0	30
Total	**76**	**27.6**	**73**	**26.5**	**76**	**27.6**	**50**	**18.2**	**275**

Source: Regional Police Commander's Office, Kagera Region, 2017

6.9.4.2 Deaths and Injuries

Table 6.11 shows the number of people who were injured and died by type of motor vehicles accidents in Kagera Region in 2015. Out of 275 accidents that occurred in the region, there were 321 casualties out of whom there were 200 injuries and 121 deaths. The table further shows that out of 321 casualties, 66 injuries (33.0 percent) were caused by motorcycles only followed by 46 injuries (23 percent) caused by motor vehicles versus motorcycles and 43 injuries (21.5 percent) caused by motor vehicles only. At the council level, Ngara DC had the largest number of injuries (60), followed by Kyerwa DC (30), Muleba DC, Bukoba MC and Missenyi DC (25 each), Biharamulo DC (18) and Bukoba DC (2).

The table further reveals that in 2015, there were 121 reported deaths in the Region, whereby, 37 deaths occurred in Bukoba MC, 23 deaths in Ngara DC, 16 deaths both in Muleba and Kyerwa DCs, 14 deaths in Biharamulo DC, 8 deaths in Missenyi DC and 6 deaths in Karagwe DC. Only one death was reported in Bukoba DC.

Table 6.11: Number of People Injured/Died from Reported Accidents by Councils, Kagera Region, 2015

	Motor Vehicles only		Motor Vehicle versus Motorcycles		Motorcycles only		Motor Vehicles and Motorycles versus Pedestrian	
Council	**Died**	**Injured**	**Died**	**Injured**	**Died**	**Injured**	**Died**	**Injured**
Karagwe DC	3	4	0	2	0	5	3	4
Bukoba DC	0	0	0	2	0	0	1	0
Muleba DC	1	6	1	2	12	17	2	0
Biharamulo DC	9	9	3	1	1	0	1	8
Ngara DC	5	10	9	21	6	14	3	15
Bukoba MC	7	2	10	6	3	12	17	5
Missenyi DC	2	3	2	5	2	4	2	13
Kyerwa DC	4	9	3	7	9	14	0	0
Total	**31**	**43**	**28**	**46**	**33**	**66**	**29**	**45**
Percent	**25.6**	**21.5**	**23.1**	**23.0**	**27.3**	**33.0**	**24.0**	**22.5**

Source: Region Police Commander's Office, Kagera Region, 2017

6.10 Motorcycle Operators

Motorcycles famously known as *BodaBoda*, has recently become a common means of transport that is operating in a business manner similar to any other informal sector not only in Kagera Region but also in other regions in Tanzania.It helps to reduce youth unemployment as well as contributing to reduction of income poverty.Table 6.12 shows the number of motorcycle operators and the Estimated Income Earned per *Bodaboda* Operator per Month in Kagera Region. In 2015 Missenyi DC registered the largest number of motorcycle operators (16,920), followed by Bukoba MC (2,249), Muleba DC (1,774), Karagwe DC (805), Biharamulo DC (647), Kyerwa DC (502) and Ngara DC (492). No motorcycle operator was registered in Bukoba DC. The average monthly income collected by motorcycle operators in the Region was TZS 2,094,172 and the amount of money collected per month ranged from TZS 112,500 in Missenyi DC to TZS 730,000 in Karagwe DC.

Table 6.12: Number of Motorcycle Operators (*BodaBoda*) by Council, and Estimated Income Earned per Operator per Month (TZS) in 2015; Kagera Region, 2015

Council	Number of *Bodaboda* operators	Estimated Income Earned per *Bodaboda* Operator per Month (TZS)
Karagwe DC	805	730,000
Bukoba DC	0	0
Muleba DC	1,774	265,502
Biharamulo DC	647	168,000
Ngara DC	492	172,390
Bukoba MC	2,249	450,000
Missenyi DC	16,920	112,500
Kyerwa DC	502	195,780
Total	**23,389**	**2,094,172**

Source: Regional Police Commander's Office, Kagera Region, 2017

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Kagera Regional Secretariat

Vision

To be an institution of excellence that plays a supportive role in achieving a sustainable regional economic growth and prosperity, and as a technical resource base for supporting local development opportunities and administrative services between central and local government.

Mission

To facilitate Region in socio-economic development for poverty alleviation, good governance, peace and tranquility through timely provision of effective and quality advice, consultancy services to LGAs and other development partners by highly motivated and skilled personnel.