



United Republic of Tanzania

BUKOBA MUNICIPAL COUNCIL SOCIO-ECONOMIC PROFILE, 2015



May 2018



United Republic of Tanzania

BUKOB MUNICIPAL COUNCIL

SOCIO-ECONOMIC PROFILE, 2015

Jointly prepared by
National Bureau of Statistics,
Ministry of Finance and Planning,
and
Bukoba Municipal Council



National Bureau of Statistics

Dar es Salaam



Bukoba Municipal Council

Kagera Region

May, 2018

Foreword



The goals of Tanzania's Development Vision 2025 are in line with United Nation's Sustainable Development Goals (SDGs) 2030. Among the major goals includes achieving high quality livelihood for the people; to achieve food security; to develop a strong and competitive economy; to combat inequality and empower all women and girls. To manage monitoring the progress in achieving these goals, there is need for availability of timely and accurate statistical information at all levels.

Problems occurring in both urban and rural areas are many and challenging. Experience shows that delivery of quality social and economic services requires a continuous and sustainable improvement of strategies through community participation from time to time. Indeed, it must be admitted that high primary school enrolment rates recently attained have to be sustained by using available resources and so is the policy of making sure that all pupils who pass standard seven examinations join Form One. The food situation is still precarious and infant and maternal mortality rates, while showing signs of decline, continue to be high. Unemployment in rural areas triggers mass migration of youths to the already overcrowded urban centers.

Health problems due to HIV/AIDS pandemic have been quite severe among the economically active population which hinders 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 new developmental problems which cannot be ignored.

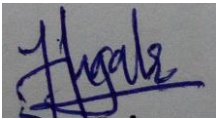
Efforts by the Municipal Council to meet both the new and old challenges are hampered by many factors including ill prepared rural development programs followed by weak implementation, as well as monitoring and supervision of these programs. The shortcomings in policy formulation, project identification,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

Bukoba Municipal Council has prepared this Socio-Economic profile by using its own funds. The publication of the Bukoba Municipal Council Social-Economic Profile series by the Municipal Management Team with technical backstopping from the National Bureau of Statistics should be viewed as a step forward towards finding feasible solutions to the existing problem of data and information gap at Municipality level.

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

This Bukoba Municipal Council Socio Economic Profile has taken advantage of the cumulative experience gained in the production of the Regional and District Socio Economic Profiles covering the whole 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.

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

A handwritten signature in blue ink, appearing to read 'Mfugale E.A.', is shown within a rectangular frame.

Mfugale E.A
Municipal Director
May, 2018

Table of Contents

Foreword	i
List of Tables	vii
CHAPTER ONE	1
1.0 Introduction.....	1
1.1 Geographical Location.....	1
1.2 Land Area, Land Use Pattern and Administrative Units	3
1.3 Climate, Soil and Topography	5
1.4 Drainage System	5
1.5 POPULATION	6
1.5.1 Ethnic groups	6
1.5.2 Population size and Growth.....	6
1.5.3 Population Density.....	8
1.5.4 Dependency ratio	10
1.5.5 Population Distribution and Sex Ratio	11
1.5.6 Household Size	15
CHAPTER TWO	16
THE ECONOMY OF THE COUNCIL.....	16
2.0 Introduction.....	16
2.1 GDP and Per Capita GDP	16
2.1.1 Council Contribution to the Region GDP	16
2.1.2 Council Per Capita GDP	17
2.2 Non - Income Indicators	18
2.2.1 Main Sources of Cash Income	18
2.2.2 Food Security and Food Poverty	18
2.2.3 Food Consumption Patterns.....	19
2.2.4 Health Indicators.....	20
2.2.5 Literacy Rate and Understanding Different Languages	21
2.2.6 Housing Conditions	22
2.2.7 Ownership of Assets	27
2.2.8 Land Development.....	28
CHAPTER THREE.....	29
PRODUCTION SECTORS	29
3.0 Overview.....	29
3.1 Agriculture	29
3.1.1 Distribution of Arable Land.....	29
3.1.2 Land under Cultivation	30

3.1.2.1	Area under Major Food Crops Cultivation	30
3.1.2.2	Area under Major Cash Crops Cultivation	32
3.1.3	CROP PRODUCTION	33
3.1.3.1	Major Food Crops Production	33
3.1.3.2	Major Cash Crops Production.....	34
3.1.4	Crop Marketing.....	35
3.1.5	Irrigation	35
3.1.6	Agriculture Inputs	36
3.1.6.1	Chemical/Inorganic Fertilizers	36
3.1.6.2	Fungicides, Insecticides and Improved seeds	36
3.1.7	Investment Opportunities in Agriculture sector.....	38
3.2	Livestock.....	39
3.2.1	Introduction.....	39
3.2.2	Livestock Population	39
3.2.3	Poultry Population	40
3.2.4	Cattle Population.....	41
3.2.5	Goat population.....	42
3.2.6	Pig Production.....	43
3.2.7	Sheep Production	44
3.2.8	Grazing Land Area.....	44
3.2.9	Livestock Infrastructure	44
3.2.10	Marketing Livestock Products	45
3.2.11	Milk Production	46
3.2.12	Eggs Production.....	46
3.2.13	Status of Livestock Staff.....	46
3.2.14	Major Livestock Diseases	47
3.2.14.1	Cattle Diseases	47
3.2.14.2	Goat Diseases.....	48
3.2.14.3	Sheep Diseases.....	48
3.2.14.4	Poultry Diseases.....	49
3.2.14.5	Investment Opportunities in Livestock sub sector.....	49
3.3	Natural Resources	50
3.3.1	Tree Plantation	50
3.3.2	Environment Conservation	51
3.3.3	Beekeeping.....	52
3.3.4	Natural Resources Products	53
3.3.4.1	Forest Products	53
3.3.4.2	Beekeeping Products.....	53

3.3.4.3	Fishing	54
3.3.5	Tourism	55
3.3.6	Investment Opportunities in Natural Resources	57
3.3.7	Mineral Resources	58
3.4	Industrial sector.....	58
CHAPTER FOUR		63
ECONOMIC INFRASTRUCTURES		63
4.0	Introduction.....	63
4.1	Road Network	63
4.2	Road Classification by Type of Road Surfaces	65
4.2.1	Road Passability.....	66
4.2.2	Major Road Connections	67
4.3	Air Services.....	67
4.4	Telecommunication Services	68
4.5	Energy	68
4.5.1	Electricity	69
CHAPTER FIVE		70
SOCIAL SERVICES		70
5.0	Introduction.....	70
5.1	Health Sector.....	70
5.1.1	Health Facilities	70
5.1.2	Doctor Population Ratio	73
5.1.3	Primary Health Facilities	74
5.1.4	Status of Health Personnel.....	75
5.1.4.1	Morbidity	76
5.1.4.2	Mortality	78
5.1.5	HIV/AIDS Infections	79
5.1.6	Impact of HIV/AIDS	81
5.1.7	Child Nutrition.....	82
5.1.8	Mother and Child Health Care.....	83
5.1.9	Policy Implication on Health Sector	87
5.1.10	Investment Opportunities for Health Sector	87
5.2	Education Sector	88
5.2.1	An overview.....	88
5.2.1.1	Pre-primary School	88
5.2.1.2	Enrolment in Pre-primary Schools	90
5.2.2	Primary Education	92
5.2.2.1	Standard one Enrolment.....	95

5.2.2.2	Completion Rate	99
5.2.2.3	Primary School Dropout Rate	101
5.2.2.4	Pass Rate in Primary Schools	102
5.2.2.5	Transition to Secondary Education	105
5.2.2.6	Primary Schools Facilities	105
5.2.3	Secondary School Education	111
5.2.3.1	Secondary School Enrollment (Form I)	114
5.2.3.2	Completion Rate	116
5.2.3.3	Pass Rate in Secondary Schools	118
5.2.3.4	State of Secondary School Facilities	120
5.2.4	Colleges and Vocational Training	131
5.2.5	Policy Implication on Education Sector	132
5.2.6	Investment Opportunity in Education	132
5.3	Water Supply and Sanitation	132
5.3.1	Water Supply	132
5.3.2	Urban Water Supply	133
5.3.3	Sanitation	134
5.3.4	Water Supply Personnel	135
5.3.5	Policy Implication on Water Sector	136
5.3.6	Investment Opportunities in Water Supply	136
CHAPTER SIX		137
OTHER DEVELOPMENT ISSUES		137
6.0	Introduction	137
6.1	Gender Empowerment	137
6.1.1	Day Care Centers	137
6.1.2	Women Economic Groups	138
6.1.3	Women's Participation in Policy and Decision Making	139
6.2	Youth Economic Groups	140
6.3	Vulnerable Children and Orphan Hood	141
6.4	Savings and Credit Cooperative Societies (SACCOS)	142
6.5	Active Non-Government Organizations (NGOs)	143
6.6	Financial Institutions	144
6.7	Crime Statistics	144
6.8	Motorcycle Operations (Bodaboda)	145
6.9	Policy Implication	145
6.10	Potential Areas for Investment	146
References		147

List of Tables

Table 1.1: Distribution of land and Water Area by Ward, Bukoba Municipal; 2015.....	3
Table 1.2: Population Size and Growth by Council, Kagera Region, 2002 and 2012 Census	6
Table 1.3: Population Distribution by Ward, Bukoba Municipal Council, 2002 and 2012 Censuses....	7
Table 1.4: Population Density by Council, Kagera Region; 2002 and 2012 Censuses	9
Table 1.5: Distribution of population Densities by Ward, Bukoba Municipal Council 2002 and 2012 Censuses.....	10
Table 1.6: Dependency Ratios by Council, Kagera Region, 2002 and 2012 Censuses	11
Table 1.7: Distribution of Population by Broad Age Group and Sex, Bukoba Municipal Council, 2012 Census	12
Table 1.8: Sex Ratio of Bukoba Municipal Council; 2012 census	13
Table 1.9: Sex Ratios by Ward, Bukoba Municipal Council, 2012 Census	14
Table 2.1: GDP Estimates Contribution by Council, 2013, 2014 and 2015 (Mill.Tsh), Kagera Region	16
Table 2.2: Per Capita GDP Estimates by Council, 2013, 2014 and 2015, Kagera Region.....	17
Table 3.1: Distribution of Arable Land by Ward, Bukoba Municipal Council; 2015	30
Table 3.2: Estimated Land Area (Ha) under Major Cash Crop (Coffee) by Ward, Bukoba MC; 2011 – 2015	32
Table 3.3: Productions in Tones of Major Food Crops, Bukoba MC, 2011- 2015.....	33
Table 3.4: Estimated Production (in Tons) of Coffee Crop in Bukoba Municipal Council; 2011- 2015	35
Table 3.5: Type and Quantity of Chemical Fertilizers (Kgs) Distributed to Farmers; Bukoba Municipal Council; 2011- 2015.....	36
Table 3.6: Type and Quantity of Fungicides (in Litres) Distributed to Farmers Bukoba Municipal Council; 2011-2015	37
Table 3.7: Type and Quantity of Insecticides (in Litres) Distributed to Farmers; of Bukoba Municipal Council; 2011-2015	37
Table 3.8: Type and Quantity of Improved seeds (Kgs) Distributed to Farmers, Bukoba Municipal Council; 2011-2015	38
Table 3.9: Estimated Livestock Population by Ward, Bukoba Municipal Council; 2015.....	39
Table 3.10: Estimated Chicken Population by Ward, Bukoba Municipal Council; 2015	40
Table 3.11: Distribution of Cattle by Ward and Type, Bukoba Municipal Council;2015.....	42
Table 3.12: Distribution of Goats by Ward and Type, Bukoba Municipal Council;2015.....	43
Table 3.13: Marketing of Livestock, Hides and Skins; Bukoba Municipal Council; 2013, 2014 and 2015	45
Table 3.14: Number of Liters of Milk Produced, Bukoba Municipal Council; 2013- 2015	46
Table 3.15: Number of Eggs from Indigenous chicken and Broilers; Bukoba Municipal Council; 2013- 2015	46

Table 3.16: Availability of Livestock Personnel by Ward, Bukoba Municipal Council; 2015	47
Table 3.17: Five Major Cattle Diseases Reported by Ward, Bukoba Municipal Council, 2013, 2014 and 2015	48
Table 3.18: Three Major Goat Diseases Reported by Ward, Bukoba Municipal Council; 2013, 2014 and 2015.....	48
Table 3.19: Three Major Sheep Diseases Reported by Disease, Bukoba Municipal Council; 2013, 2014 and 2015.....	49
Table 3.20: Major Poultry Diseases in Bukoba Municipal Council; 2013, 2014 and 2015	49
Table 3.21: Number of Tree Seedlings Raised by Ward; Bukoba Municipal Council; 2011 – 2015....	51
Table 3.22: Number of Tree Seedlings Raised by Institutions; 2011 - 2015.....	51
Table 3.23: Name of NGOs and Number Development Partners Involved in Environmental Conservation by Ward, Bukoba Municipal Council; 2015.....	52
Table 3.24: Number of Traditional and Modern Beehives by Ward,Council; 2011 -2015	53
Table 3.25: Amount of Honey and Wax produced in Bukoba Municipal Council; 2011 - 2015	53
Table 3.26: Fishery Resources and Production in Bukoba Municipal Council from January to December, 2015	54
Table 3.27: Revenue Collection from Fishermen (Tshs) by Ward, Bukoba Municipal Council; 2011 - 2015	54
Table 3.28: Historical sites potential/attractive for Tourism; Bukoba Municipal Council; 2015.....	56
Table 3.29: Accommodation Facilities by Ward: December, 2015.....	57
Table 3.30: Type of Small Scale Industries by Ward, Bukoba Municipal Council; 2015.....	59
Table 3.31: Number of Employees in Small Scale Industries by Ward, Bukoba Municipal Council; 2015	60
Table 3.32: Large and Medium Scale Industries by Ward; Bukoba MC; 2015.....	60
Table 4.1: Length (km) of Road Network by Ward and Type, Bukoba Municipal Council, 2015	64
Table 4.2: Length of Road Network by Ward and Type of Road Surface, Bukoba Municipal Council, 2015	65
Table 4.3: Accessibility of Road Network by Ward, Bukoba Municipal Council, 2015	67
Table 4.4: Major Road Connections and Road link, Bukoba Municipal Council; 2015	67
Table 4.5: Number of Customers using/connected to Electricity; Bukoba Municipal Council; 2011 – 2015	69
Table 5.1: Availability of Health Facilities by Ward and Ownership, Bukoba Municipal Council; 2015	73
Table 5.2: Distribution of Health Facilities and Their Ratios by Division, Biharamulo District, 2015	73
Table 5.3: Distribution of Doctors Among Population by Ward, Bukoba Municipal Council; 2012 and 2015	74
Table 5.4: Distribution of Complementary Rural Health Service Providers by Wards, Bukoba Municipal Council, 2015	75

Table 5.5: Type and Number of Medical Personnel by Profession, Bukoba Municipal Council; 2015	76
Table 5.6: List of the Ten Commonly Reported Causes of Morbidity (Out Patients) Bukoba Municipal Council; 2011 and 2015	77
Table 5.7: List of Common Reported Causes of Morbidity (In Patients), Bukoba Municipal Council; 2011 and 2015	78
Table 5.8: List of the Ten Common Reported Causes of Mortality, Bukoba Municipal Council: 2011 and 2015	79
Table 5.9: VCT volunteers Screened for HIV and those subsequently using ARVs; Bukoba Municipal Council 2011, 2013 and 2015	80
Table 5.10: Expected Mothers who Participated in the PMTCT Services and Tested for HIV/AIDS by Ward, Bukoba Municipal Council: 2015	80
Table 5.11: Malnutrition Status among Children under One Year by Ward, Bukoba Municipal Council, 2011, 2013 and 2015	83
Table 5.12: Percentage Distribution of Expectant Mothers Vaccinated with TT2 by Ward, Bukoba Municipal Council; 2011, 2013 and 2015	84
Table 5.13: Percentage Distribution of Children under One Year Vaccinated against Measles by Ward, Bukoba Municipal Council; 2011, 2013 and 2015.	84
Table 5.14: Percentage Distribution of Children under One year Vaccinated with BCG by Ward, Bukoba Municipal Council; 2011, 2013 and 2015	85
Table 5.15: Children under One Year Vaccinated with DPT3/HB3 by Ward; Bukoba Municipal Council; 2011, 2013 and 2015	86
Table 5.16: Percentage Distribution of Children under One Year Vaccinated with OPV3 by Ward, Bukoba Municipal Council; 2011, 2013 and 2015	87
Table 5.17: Number of Pre-Primary Schools by Ward and Ownership, Bukoba Municipal Council; 2011, 2013 and 2015	89
Table 5.18: Status of Pre-Primary School Facilities by Ward, Bukoba Municipal Council; 2011, 2013 and 2015	90
Table 5.19: Pre-primary School Enrollment by Ownership, Bukoba Municipal Council; 2011-2015 ..	91
Table 5.20: Number of Primary Schools by Ownership and by Ward, Bukoba Municipal Council, 2015.	93
Table 5.21: Standard I Enrollment in Primary Schools by Ward, Bukoba Municipal Council; 2011 and 2015	95
Table 5.22: Distribution of Standard I Enrolment by Age Group, Bukoba Municipal Council; 2011 - 2015	97
Table 5.23: Total (STD I – VII) Enrolment of Public Primary Schools by Sex; Bukoba Municipal Council, 2011 - 2015	97
Table 5.24: Total (STD I – VII) Enrolment of Primary Schools by Ward and by Sex; Bukoba Municipal Council, 2011, 2013 and 2015	98

Table 5.25: Number of Pupils Enrolled in STD I in 2007 and Completed STd VII in 2013 by Ward and Sex, Bukoba Municipal Council	100
Table 5.26: Number of Pupils Enrolled in STD I in 2008 and Completed STD VII in 2014 by Ward and Sex, Bukoba Municipal Council	101
Table 5.27: Primary School Drop Outs by Reasons and Sex; Bukoba Municipal Council; 2012 - 2015	102
Table 5.28: Number of Pupils Who Sat and Passed STD VII Examinations, Bukoba Municipal Council; 2011	103
Table 5.29: Number of Pupils Who Sat and Passed STD VII Examinations, Bukoba Municipal Council; 2015	104
Table 5.30: Number of Pupils Who were Selected and Joined Form I in Public Secondary Schools by Sex, Bukoba Municipal Council; 2011, 2013 and 2015	105
Table 5.31: Number of Pupils Who Completed Primary Education and Joined Secondary Education in Public Secondary Schools by Sex, Bukoba Municipal Council 2011, 2013 and 2015	105
Table 5.32: Availability of Classrooms in Public Primary Schools by Ward, Bukoba Municipal Council; 2015	106
Table 5.33: Availability of Pit Latrines in Public Primary Schools by Ward, Bukoba Municipal Council; 2015	107
Table 5.34: Availability of Primary School Teachers' Houses by Ward, Bukoba Municipal Council; 2015	108
Table 5.35: Availability of Desks in Primary Schools by Ward, Bukoba Municipal Council; 2015 ...	109
Table 5.36: Accessibility of water in public primary schools by wards in Bukoba Municipal Council 2013 and 2015	110
Table 5.37: Number of Public Primary School Teachers (Grade IIIB/C, IIIA, Diploma and Degree, Masters) by Ward, Bukoba Municipal Council; 2015	111
Table 5.38: Number of Secondary Schools by Ownership and by Ward, Bukoba Municipal Council; 2011, 2013 and 2015	114
Table 5.39: Form 1 Enrolment in Public Secondary Schools by Sex; Bukoba Municipal Council; 2011, 2013 and 2015	114
Table 5.40: Form 1 Enrolment in Public Secondary Schools by Sex; Bukoba Municipal Council; 2011, 2013 and 2015	115
Table 5.41: Number of Students Registered in 2011 and Completed Form IV in 2014 by Ward and by Sex in Public Secondary Schools, Bukoba Municipal Council.	117
Table 5.42: Number of Students Registered in 2012 and Completed Form IV in 2015 by Ward and Sex in Public Secondary Schools, Bukoba Municipal Council	118
Table 5.43: Students Performance in Form IV Examinations in Public Secondary Schools, Bukoba Municipal Council; 2011-2015	120
Table 5.44: Availability of Public Secondary School's Teachers by Ward, Bukoba Municipal Council; 2015	121

Table 5.45: Availability of Administration Blocks in Public Secondary Schools by Ward, Bukoba Municipal Council; 2015	124
Table 5.46: Availability of Teachers Houses in Public Secondary Schools by Ward, Bukoba Municipal Council, 2015.....	125
Table 5.47: Availability of Classrooms in Public Secondary Schools by Ward, Bukoba MC; 2015...	126
Table 5.48: Availability of Pit Latrines in Public Secondary Schools by Ward; Bukoba MC; 2015...	127
Table 5.49: Availability of Dormitories/Hostels in Public Secondary Schools by Ward, Bukoba MC; 2015	128
Table 5.50: Availability of Libraries in Public Secondary Schools by Ward, Bukoba MC; 2015	128
Table 5.51: Availability of Tables and Chairs in Public Secondary Schools by Ward, Bukoba MC; 2015	129
Table 5.52: Accessibility of Water in Public Secondary Schools by Ward, Bukoba MC, 2015	130
Table 5.53: List of Registered Colleges, Courses and Enrolments by Sex, Bukoba Municipal Council; 2013- 2015	131
Table 5.54: List of Registered Vocation Training Centres, Courses and Enrolments by Sex, Bukoba Municipal Council; 2013- 2015	131
Table 5.55: Number and Type of Urban Water Sources, Bukoba Municipal Council; 2015	133
Table 5.56: Number and Type of Water Delivery Technology Used in Urban Water Schemes, Bukoba Municipal Council; 2015	133
Table 5.57: Percentage of Urban Population Served with Clean Water, Bukoba Municipal Council; 2015	134
Table 5.58: Number of Households With and Without Toilet Facilities by Ward, Bukoba Municipal Council; 2015.....	135
Table 5.59: Available staff in water sub-sector, Bukoba Municipal Council, 2015.....	135
Table 6.1: Distribution of Day Care Centers by Ward, Bukoba Municipal Council 2013 and 2015 .	138
Table 6.2: Number of Women Economic Groups by Ward; Bukoba Municipal Council; 2013 and 2015	139
Table 6.3: Participation in Managerial, Political, Professional and Technical Personnel by Ward and Sex, Bukoba Municipal Council: 2015.....	140
Table 6.4: Youth Economic Groups and Total Money Loaned by Ward, Bukoba Municipal Council	141
Table 6.5: Number of Most Vulnerable Children by Ward, Bukoba Municipal Council: 2015	142
Table 6.6: Active SACCOS by Ward, Bukoba Municipal Council: 2015.....	143
Table 6.7: Active Non-Governmental Organization (NGOs) Bukoba Municipal Council, 2015	144
Table 6.8: Names of banks available in Bukoba Municipal Council 2015.....	144
Table 6.9: Number of crimes reported at Bukoba Police Station and Number of persons jailed, 2016	145

CHAPTER ONE

1.0 Introduction

This chapter, gives overview information about the geographical location, land area, administrative units, climate and agro-ecological zones of Bukoba Municipal Council (BMC). In addition, this chapter provides the information about ethnic groups and population distribution.

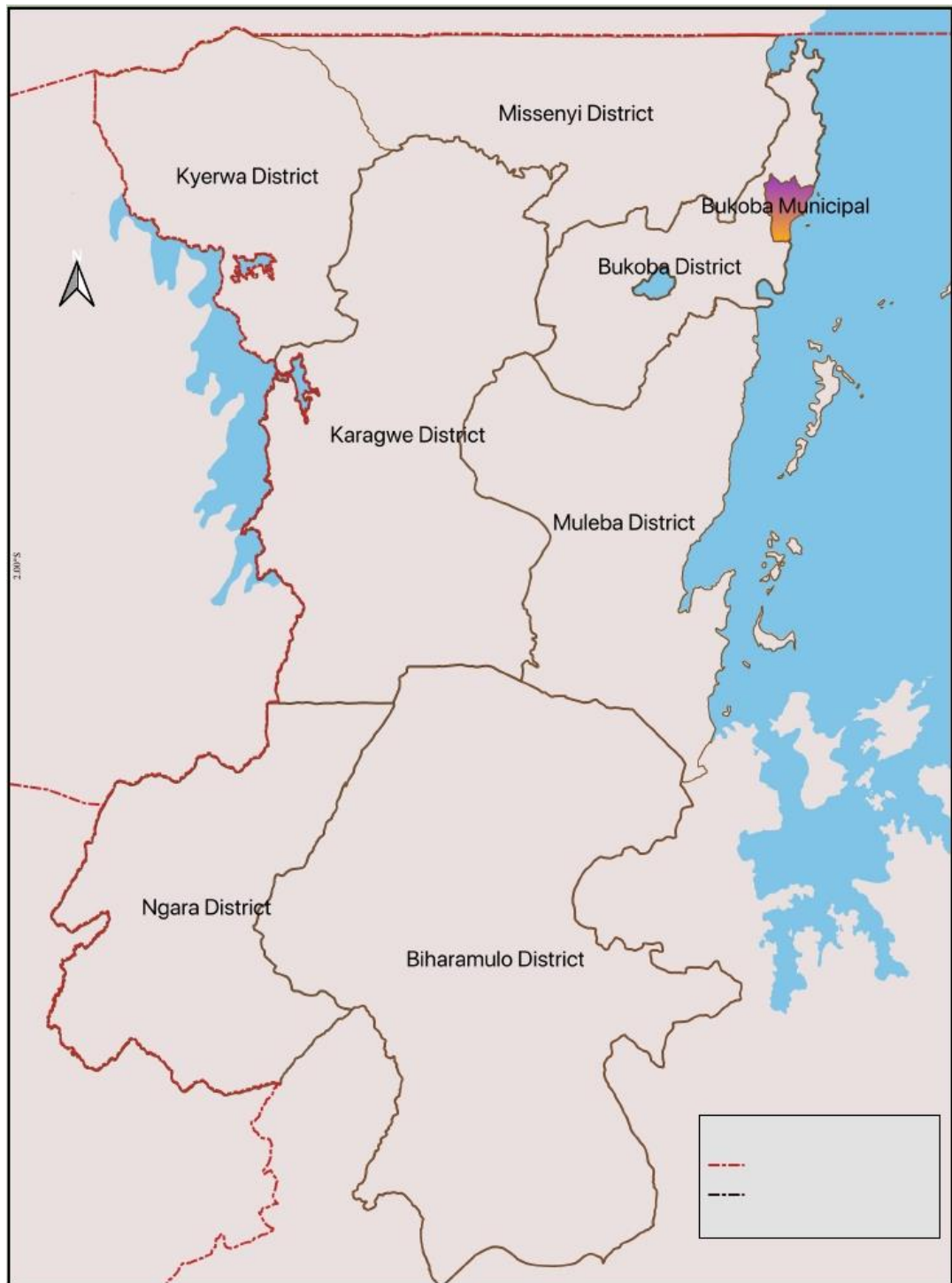
1.1 Geographical Location

Bukoba Municipal Council is one of the eight Local Government Authorities (LGAs) in Kagera Region. Other local authorities are Bukoba, Missenyi, Karagwe, Muleba, Biharamulo, Kyerwa, and Ngara district councils. Out of the eight LGAs, Bukoba Municipal Council is the administrative and commercial capital of Kagera Region and also is the “gateway” or linking town of the great lakes countries of Uganda, Kenya, Rwanda and Burundi.

Situated on the western shore of Lake Victoria, in the northwest of Tanzania, Bukoba Municipal Council lies only one degree south of the Equator and was Tanzania's second largest port on Lake Victoria. It lies between Latitudes $1^{\circ}6'0''$ and $1^{\circ}8'42''$ south of the Equator and Longitudes $31^{\circ}16'12''$ and $31^{\circ}18'54''$ east of the Greenwich Meridian. The Municipal Council also lies at 1,100 m above sea level and is bordered by Lake Victoria on the east and Bukoba District Council to the south, west and north.

Much of the town structures are at the basin surrounded by escarpments invariably decorated by coffee/banana plantations, trees, and rocks. Bukoba emerged as the trading and commercial centre before becoming the administrative headquarters of Buhaya Council which comprised of eight divisions namely Bukoba itself, Kyamtwara, Bugabo (Maliyamkono), Kihanja, Kiziba, Missenyi, Ihangiro and Karagwe. Bukoba Town is among the oldest towns in the country. Its administrative Authority as Township was conferred upon it by the then British Colonial Government under the Local Governance Ordinance Cap 333 on the 27th June 1960. At that time, Bukoba was a small town comprising of what is now called Uzunguni in Miembeni Ward, the central business district (CBD) and two residential neighborhoods close to CBD called “Uswahilini” and Nyakanyasi. These residential neighbourhoods form part of wards now called Bilele and Bakoba. At independence in December 1961, Bukoba Town was a glamorous, well planned town surrounded by homesteads under banana and coffee trees in the outskirts. Thereafter, the town expanded its administrative boundaries to meet the increasing population. The situation has resulted into environmental degradation, growth of slums and deterioration of infrastructures. In 2005, Bukoba Town Council acquired the municipal status and is among the eight town councils in the country which were promoted to Municipality and was published in the Government Gazette No. 210 of 29th July, 2005. Thus, this makes Bukoba Municipal Council to be one of the nineteen municipal councils in the country.

Map 1: Geographical Location of Bukoba Municipal Council; 2015



Source: Cartographic Unit, NBS, Dsm, 2017

1.2 Land Area, Land Use Pattern and Administrative Units

Bukoba Municipal Council has a total area of 105 sq.km divided into land area of 83.0 sq.km (equivalent to 83 percent of total area) and water (22 sq.km or 21 percent). Looking at the land area of the council, Bukoba Municipal Council ranks the last council for having the smallest area of the total area of the region.

Bukoba Municipal Council consists of one division namely Rwamishenye which in turn comprises of 14 wards and 66 streets (mitaa). Out of the 14 wards, eight are situated in the greenbelt and the remaining six are located in the urban centers. Table 1.1 shows the area distribution and percent contribution of land and water area by ward.

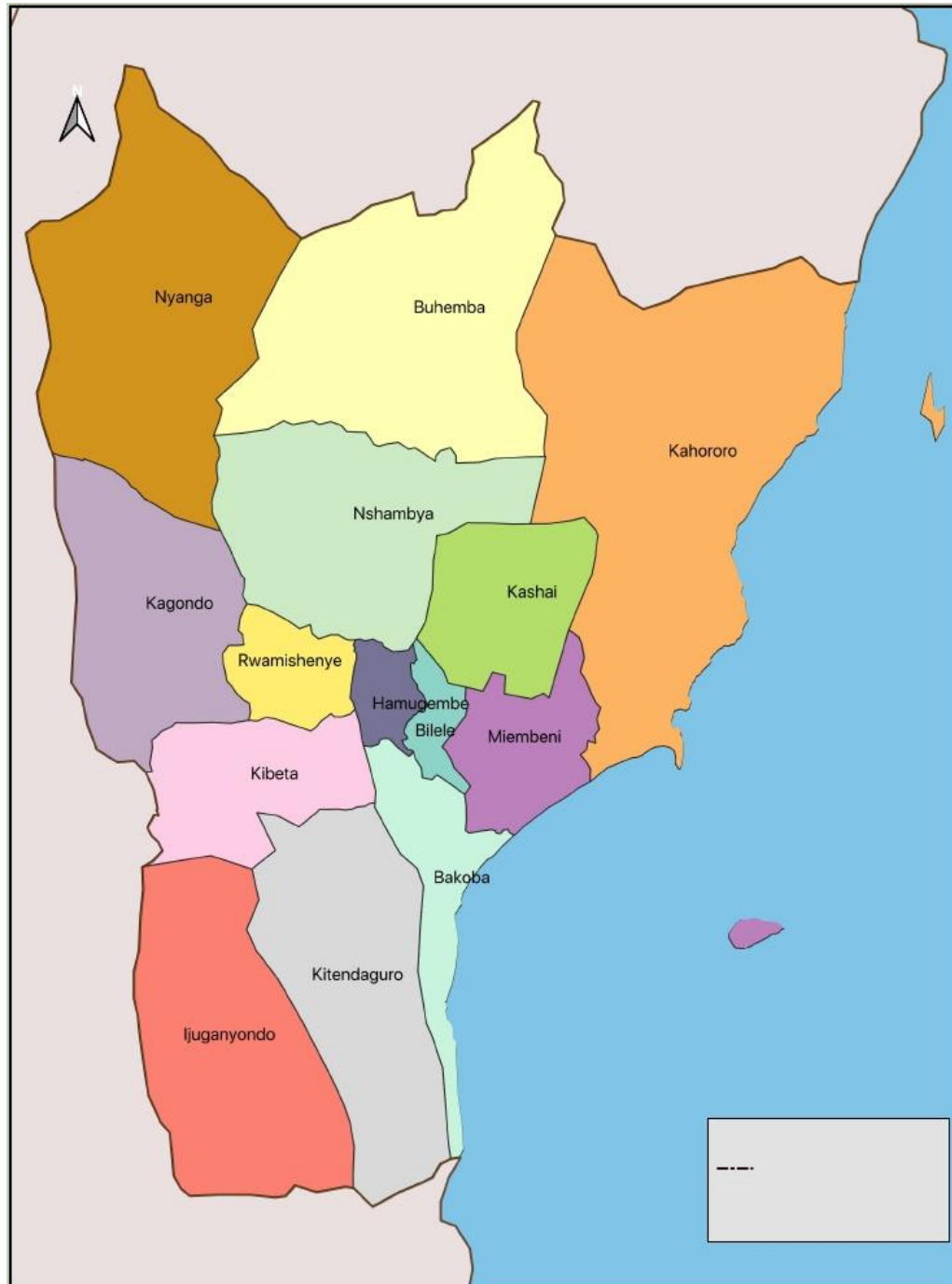
Table 1.1: Distribution of land and Water Area by Ward, Bukoba Municipal; 2015

Ward	No of streets	Land Area	Percent	Water Area	Percent	Total Area	Percent
Bakoba	5	2.8	3.4	5.99	27.2	8.79	8.4
Bilele	4	1.8	2.2	0.1	0.5	1.9	1.8
Buhembe	3	7.4	8.9	0.3	1.4	7.7	7.3
Hamugembe	4	3.9	4.7	0.1	0.5	4	3.8
Ijuganyondo	3	7.7	9.3	1	4.5	8.7	8.3
Kagondo	3	5.1	6.1	0.7	3.2	5.8	5.5
Kahororo	5	11.2	13.5	7.77	35.3	18.97	18.1
Kashai	9	3.9	4.7	0.1	0.5	4	3.8
Kibeta	5	7.2	8.7	0.8	3.6	8	7.6
Kitendaguro	8	8.1	9.8	0.5	2.3	8.6	8.2
Miembeni	5	2.5	3	3.54	16.1	6.04	5.8
Nshambya	3	7.7	9.3	0.6	2.7	8.3	7.9
Nyanga	5	11.3	13.6	0.1	0.5	11.4	10.9
Rwamishenye	4	2.4	2.9	0.4	1.8	2.8	2.7
Total	66	83	100	22	100.0	105	100.0

Source: Municipal Director Bukoba Municipal Council (Land planning)

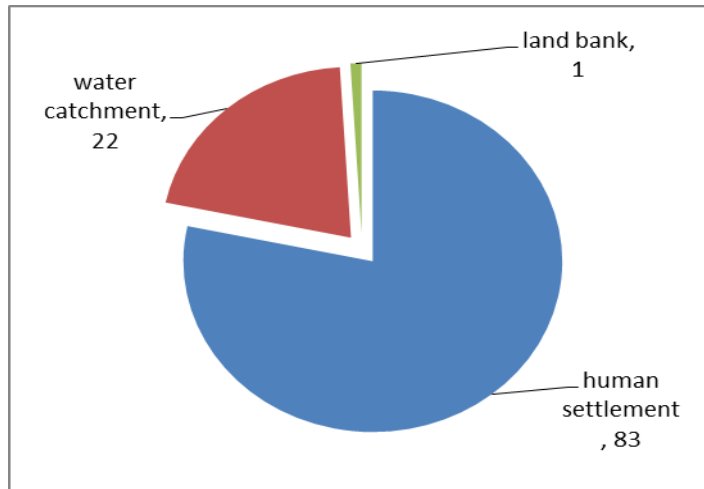
Looking at land area, Nyanga Ward covers the largest part of land area of the Municipality (about 13.6 percent) followed by Kahororo Ward with about 13.5 percent of the total land area. Bilele Ward has the smallest land area in the Municipality constituting only 2.2 percent.

Map 2: Bukoba Municipal Council Showing Ward Boundaries; 2015



Source: Cartographic Unit, NBS, Dsm, 2017

Figure: 1.1: Land Use Pattern, Bukoba Municipal Council; 2015



Source: Municipal Director, Bukoba Municipal Council (Land planning)

1.3 Climate, Soil and Topography

The climate is sunny and mild most of the year. It can sometimes get cool especially in the evening during the two rainy seasons, but never as cold as the winter season in Europe. Bukoba Municipal Council experiences two main rainy seasons (bi-modal rainfall) per year namely February to May and September to November. Despite these two seasons, during dry season of December to January and June to August, there is still a spell of swallows which is the secret of Bukoba Municipal Council being evergreen all year round. Bukoba Municipal Council enjoys an average of temperature ranging between 22°C and 27°C and an average rainfall of 2000 mm per year.

The major soil within the Municipality is well drained, moderately deep or deep yellowish or reddish sandy clay to clay with weak structure, and low natural fertility with pH ranging from 4-6. It has a complex of undifferentiated shallow soil less than 25cm deep with rock outcrop. Bukoba Municipal Council is characterized by slope basin with altitude of 1100m above sea level.

1.4 Drainage System

There are two streams in the council (Kanoni and Kagemu) with several tributaries, which are Kyabazaile, Kaijumba, Kanoni, Rwabuhaya, Machinjioni, Kahanga, Kisharu, Ikemefuna, Kabanjoile, Kamubwi, Nyamurwani, Kiziru, Kabagabi, Kashabo, Kibeta Medium, Kaisho, Nyakalengo, Nyakanchuro, Kibumba, Ibanga and river Rumuli. These form a number of alluvial flood plain in the council. The Kanoni and Kagemu streams in Bukoba Municipal Council supplement the over increasing demand of water supply for both industrial and domestic purposes in the municipality. Kanoni stream flows through Rwamishenye, Nshambya, Bilele and Bakoba wards, while Kagemu stream flows through Kahororo, and Kashai wards. These two streams finally end up in Lake Victoria.

1.5 POPULATION

1.5.1 Ethnic groups



Generally the main inhabitants in Bukoba Municipal Council are the Haya tribe. However, the composition of the current population is getting more multiethnic because of the influx of workers like government and non-government workers, business men, religious and Fortier seekers from different district councils of Kagera Region as well as other regions from Tanzania and nearby countries. Thus, the Municipal Council has main three ethnic groups namely, Haya, Nyambo and Hangaza.

1.5.2 Population size and Growth

The population of Bukoba Municipal Council has experienced significant growth in the last decade. Table 1.2 shows that Bukoba Municipal Council population has increased by 59.3 percent from 80,868 people in 2002 (40,583 males and 40,285 females) to 128,796 people counted in the 2012 Population and Housing Census (62,521 males and 66,275 females) resulting in a significant increase of 47,928 people during the inter-censal period.

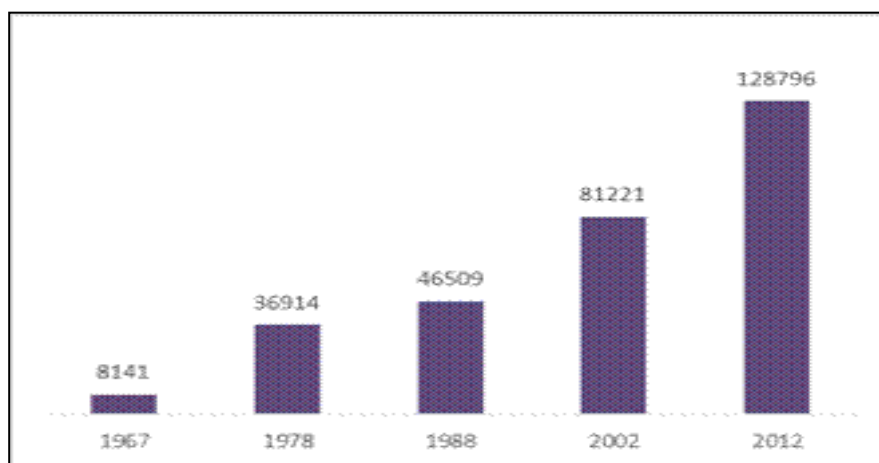
Table 1.2 also shows the population size and its increase for Kagera Region and its councils recorded in the 2002 and 2012 censuses. Compared to other councils of Kagera Region, Bukoba Municipal Council is the last council in terms of land area and is also the least populous council according to census results of 2012. According to the 2012 Population and Housing Census results, the Municipal Council contributed 5.2 percent of the regional population. Between 2002 and 2012, the council's population increased by 59.3 percent higher than that of the Region (38.3 percent).

Table 1.2: Population Size and Growth by Council, Kagera Region, 2002 and 2012 Census

Council	Land Area (sq. km)	2002 Pop. Census		2012 Pop. Census		Growth Rate	
		Number	Percent	Number	Percent	1988 - 2002	2002 - 2012
Karagwe DC	4,342.0	201,446	11	332,020	13.5	-2.5	5
Bukoba DC	2,595.5	241,234	14	289,697	11.8	-2.5	1.8
Muleba DC	3,444.0	385,184	22	540,310	22	2.5	3.4
Biharamulo DC	5,617.0	159,055	9	323,486	13.2	-2	7.1
Ngara DC	3,744.0	334,409	19	320,056	13	5.3	-0.4
Bukoba MC	83.0	80,868	5	128,796	5.2	N/A	4.7
Misenyi DC	2,000.0	152,786	9	202,632	8.2	N/A	2.8
Kyerwa DC	2,783.4	222,841	13	321,026	13.1	N/A	3.7
Total	24,608.9	1,777,283	100	2,458,023	100		

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

Figure 1.2: Population Trend of Bukoba Municipal Council, 1967, 1978, 1988, 2002 and 2012



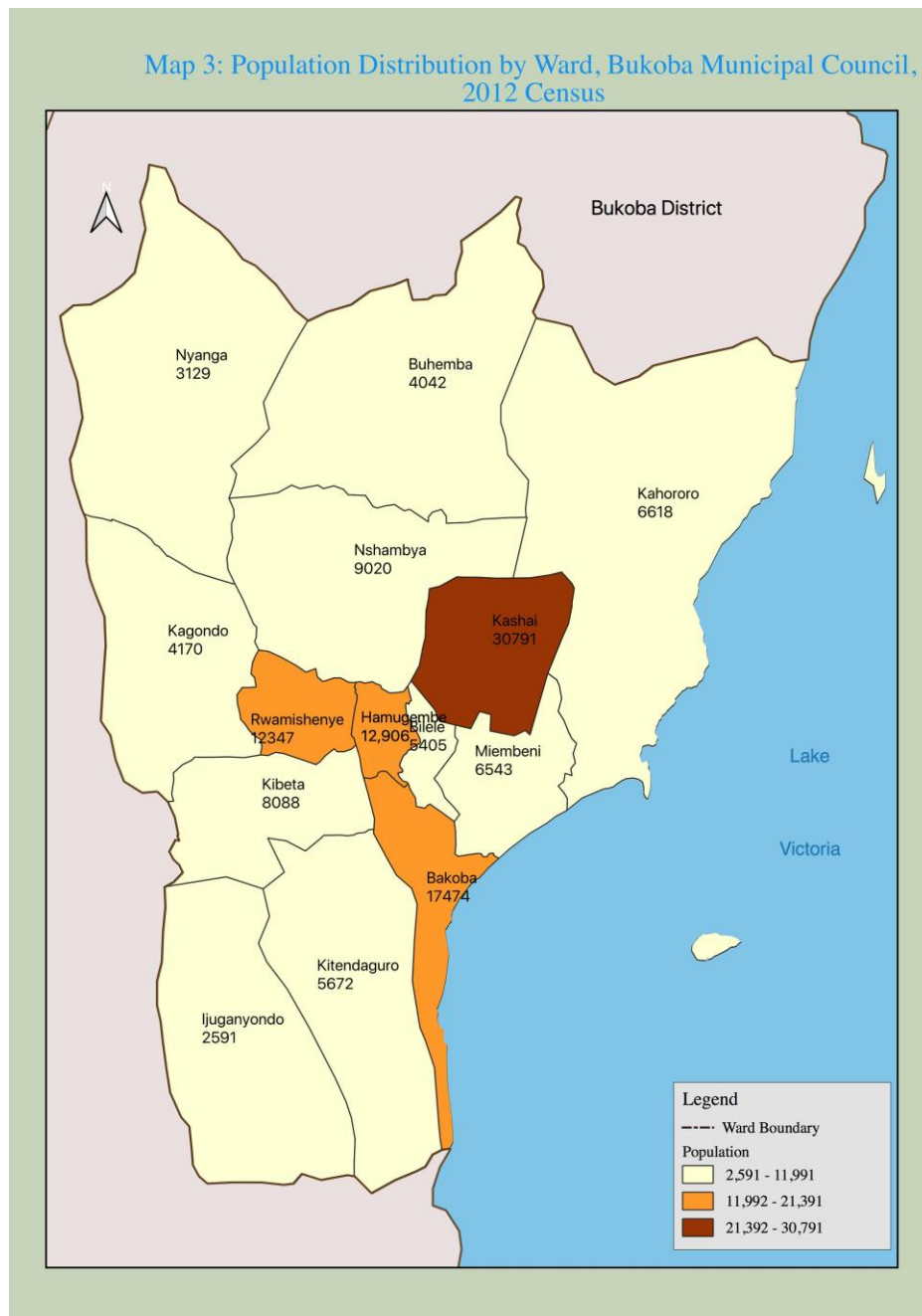
Source: National Bureau of Statistics, 2002 and 2012 Population Censuses Reports.

At ward level, Table 1.3 shows that Kagondo Ward had the highest population increase of almost 126.3 percent followed by Kibeta (123.2 percent) and Kahororo (111.4 percent). The increase of population in Kagondo Ward is due to the expansion of settlement areas because of the proposed new bus station. For Kibeta Ward, the increase is due to the new settlement of people from other areas due to the availability of new plots.

Table 1.3: Population Distribution by Ward, Bukoba Municipal Council, 2002 and 2012 Censuses

Ward	Population Distribution				Percent increase	Population change(2012-2002)
	2002 Census		2012 Census			
	Population	Percent	Population	Percent		
Bakoba	11,430	14.1	17,474	14.0	52.3	6,044
Bilele	4,758	5.9	5,405	4.0	13.0	647
Buhembe	3,086	3.8	4,042	3.0	30.5	956
Hamugembe	9,098	11.3	12,906	10.0	41.2	3,808
Ijuganyondo	1,906	2.4	2,591	2.0	35.5	685
Kagondo	1,833	2.3	4,170	3.0	126.3	2,337
Kahororo	3,111	3.8	6,618	5.0	111.4	3,507
Kashai	17,612	21.8	30,791	24.0	74.3	13,179
Kibeta	3,593	4.4	8,088	6.0	123.2	4,495
Kitendaguro	4,085	5.1	5,672	4.0	38.0	1,587
Miembeni	6,416	7.9	6,543	5.0	1.7	127
Nshambya	4,636	5.7	9,020	7.0	93.9	4,384
Nyanga	1,831	2.3	3,129	2.0	69.0	1,298
Rwamishenye	7,473	9.2	12,347	10.0	64.6	4,874
Total	80,868	100	128,796	100.0	58.6	47,928

Source: NBS, 2002 and 2012 Population Censuses Report, Bukoba Municipal Council



1.5.3 Population Density

Population Density is defined as the number of people per square kilometer or square mile. Bukoba Municipal Council, with an average population density of 974 people per sq. km in 2002 is considered to be the highest densely populated Council in Kagera Region above Muleba District Council, Bukoba District Council, Ngara District Council, Kyerwa District Council and Misenyi District Council. In 2012, the population density of Bukoba Municipal Council increased to 1,552 people per sq. km and again was the highest above all other councils in the region.

The population density of Bukoba Municipal Council was far above the regional average population density of 72 people per sq. km in 2002 and 100 persons per sq. km in 2012 but was not the most populous among the councils in the region in the two censuses. Among other reasons, the relatively high population density of Bukoba Municipal Council has been caused by the size of its land area (Table 1.4).

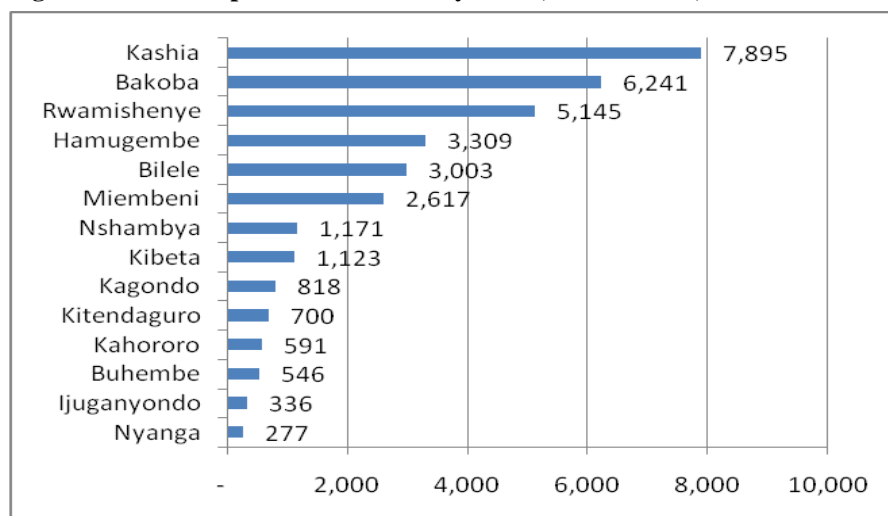
Table 1.4: Population Density by Council, Kagera Region; 2002 and 2012 Censuses

Council	Land Area (sq. km).	2002 Population	2012 Population	Population Density	
				2002	2012
Karagwe District Council	4,342.0	201,446	332,020	46	76
Bukoba District Council	2,595.5	241,234	289,697	93	112
Muleba District Council	3,444.0	385,184	540,310	112	157
Biharamulo District Council	5,617.0	159,055	323,486	28	58
Ngara District Council	3,744.0	334,409	320,056	89	85
Bukoba Municipal Council	83.0	80,868	128,796	974	1,552
Missenyi District Council	2,000.0	152,786	202,632	76	101
Kyerwa District Council	2,783.4	222,841	321,026	80	115
Total	24,608.9	1,777,283	2,458,023	72	100

Source: NBS, 2002 and 2012 Population Censuses Report

Bukoba Municipal Council has an average population density of 1,552 people per square kilometer, with variation across wards in 2012 Census (Figure 1.3). People are much concentrated in Kashai and Bakoba wards with population densities of 7,895 and 6,241 people per square kilometer. The ward with the lowest population density was Nyanga with a population density of 277 persons per sq.km.

Figure 1.3: Population Densities by Ward, Bukoba MC, 2012 Census



Source: NBS, Computed Data from 2002 and 2012 Population Censuses Report

By comparing population density observed in 2002 with that of 2012, the population density increased from an average of 974 people per square kilometer in 2002, to 1,552 people in 2012 census. This implies that, in 10 years, the population density increased by 577, which is equal to 59.3 percent increase.

Table 1.5: Distribution of population Densities by Ward, Bukoba Municipal Council 2002 and 2012 Censuses

Ward	Land area (sq.km)	2002 Census		2012 Census		Change in Population Density
		Population	Population Density	Population	Population Density	
Bakoba	2.8	11,430	4,082	17,474	6,241	2,159
Bilele	1.8	4,758	2,643	5,405	3,003	359
Buhembe	7.4	3,086	417	4,042	546	129
Hamugembe	3.9	9,098	2,333	12,906	3,309	976
Ijuganyondo	7.7	1,906	248	2,591	336	89
Kagondo	5.1	1,833	359	4,170	818	458
Kahororo	11.2	3,111	278	6,618	591	313
Kashia	3.9	17,612	4,516	30,791	7,895	3,379
Kibeta	7.2	3,593	499	8,088	1,123	624
Kitendaguro	8.1	4,085	504	5,672	700	196
Miembeni	2.5	6,416	2,566	6,543	2,617	51
Nshambya	7.7	4,636	602	9,020	1,171	569
Nyanga	11.3	1,831	162	3,129	277	115
Rwamishenye	2.4	7,473	3,114	12,347	5,145	2,031
Total	83.0	80,868	974	128,796	1,552	577

Source: NBS, 2002 and 2012 Population Censuses Report

1.5.4 Dependency ratio

Dependants are persons aged 0–14 years and those aged 65 years and above. Economically active age group includes persons aged 15– 64 years. Table 1.6 indicates the number of dependants and economically active persons in Kagera Region captured during the 2002 and 2012 censuses. Results obtained from the two censuses, Bukoba Municipal Council had 31,727 dependants in 2002 and 51,929 in 2012 Census. Economically active persons in the council were 49,141 in 2002 Census and were the least in the whole region (76,867). However, further analysis of the table shows that the number of economically active persons was slightly more than that of the dependants giving a dependency ratio of 65 8 in 2002. This means that in that year the burden of the dependants to the economically active population was small, meaning that the economic resources of economically active persons mobilized in development purposes was supporting few dependants. Similar cases were noted for the remaining councils, whereby the number of economically active persons was almost equal to the number of dependants. Further analysis shows that while the number of dependants had increased between the two censuses in the councils, the number of economically active persons had also increased between 2002 and 2012. The dependant population and the economically active persons increased by about 64 and 56 percent respectively between 2002 and 2012.

Table 1.6: Dependency Ratios by Council, Kagera Region, 2002 and 2012 Censuses

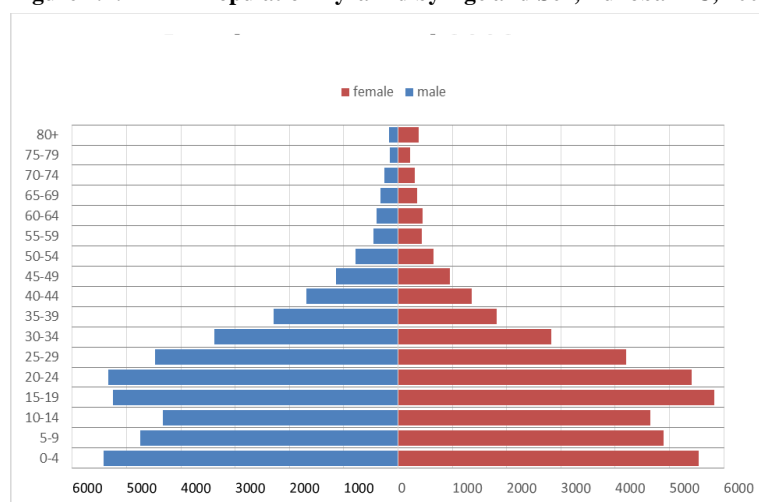
Council	2002 Population			2012 Population		
	Dependants	Economically Active	Dependency Ratio	Dependants	Economically Active	Dependency Ratio
Biharamulo D C	84,415	74,640	113	178,207	145,279	123
Bukoba D C	124,965	116,269	107	148,390	141,307	105
Bukoba MC	31,727	49,141	65	51,929	76,867	68
Karagwe DC	101,433	100,013	101	167,198	164,822	101
Kyerwa DC	116,603	106,238	110	168,724	152,302	111
Missenyi DC	78,464	74,322	106	100,263	102,369	98
Muleba DC	193,794	191,390	101	275,585	264,752	104
Ngara D C	171,753	162,656	106	168,469	151,587	111
Total	903,154	874,669	103	1,258,765	1,199,285	105

Source: NBS, 2002 and 2012 Population Censuses Reports

1.5.5 Population Distribution and Sex Ratio

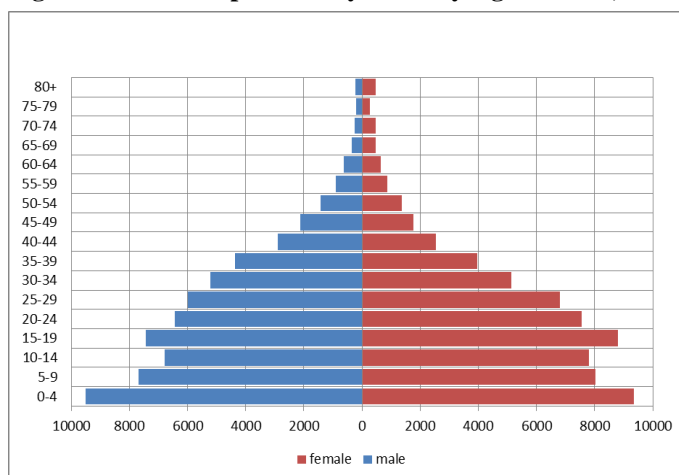
Population pyramid shows the clear and total picture of population by age and sex. This is a useful way to illustrate the age structure of the population. Figures 1.4 and 1.5 which show population pyramids of 2002 and 2012 censuses indicate a youthful aged structure of Bukoba Municipal Council in both censuses.

Figure 1.4: Population Pyramid by Age and Sex, Bukoba MC, 2002 Census



Source: NBS, the 2002 Population and Housing Census, Volume IV, 2002

Figure 1.5: Population Pyramid by Age and Sex, Bukoba MC, 2012 Census



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

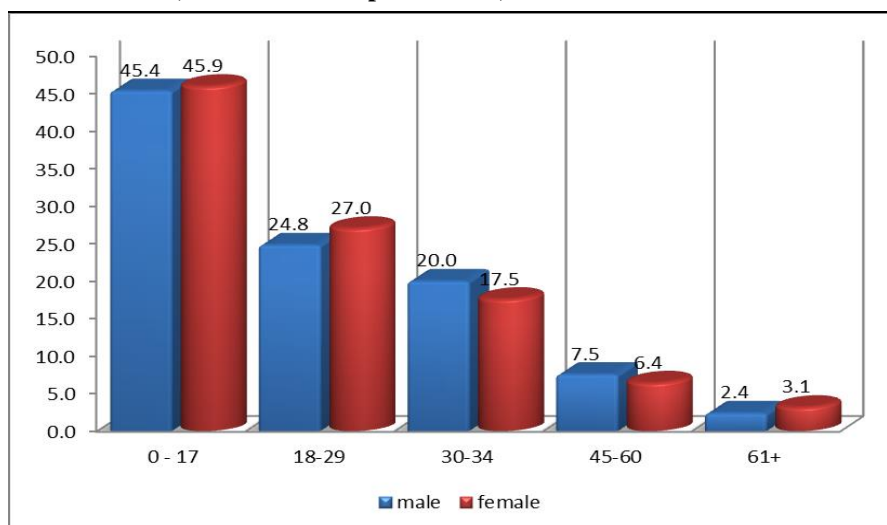
Furthermore, 45.7 percent of the population is composed of the young population below 18 years followed by the population aged 18-27 years (25.9 percent of the population).

Table 1.7: Distribution of Population by Broad Age Group and Sex, Bukoba Municipal Council, 2012 Census

Age group	Number			Percent		
	Male	Female	Total	Male	Female	Total
0 - 17	28,358	30,450	58,808	45.4	45.9	45.7
18-29	15,499	17,897	33,396	24.8	27.0	25.9
30-34	12,482	11,625	24,107	20.0	17.5	18.7
45-60	4,707	4,232	8,939	7.5	6.4	6.9
61+	1,475	2,071	3,546	2.4	3.1	2.8
Total	62,521	66,275	128,796	100.0	100.0	100.0

Source: NBS, the 2012 population Distribution by Age and Sex

Figure 1.6: Percentage Distribution of Population by Broad Age Group and Sex, Bukoba Municipal Council, 2012 Census



Source: NBS, the 2012 Population Distribution by Age and Sex

Sex ratio by age provides an important index of population age. Here sex ratio is defined as the number of males over females in Bukoba Municipal Council. From table 1.8 we can see that the number of female begins to exceed the number of males and the difference grows larger with advanced Ages.

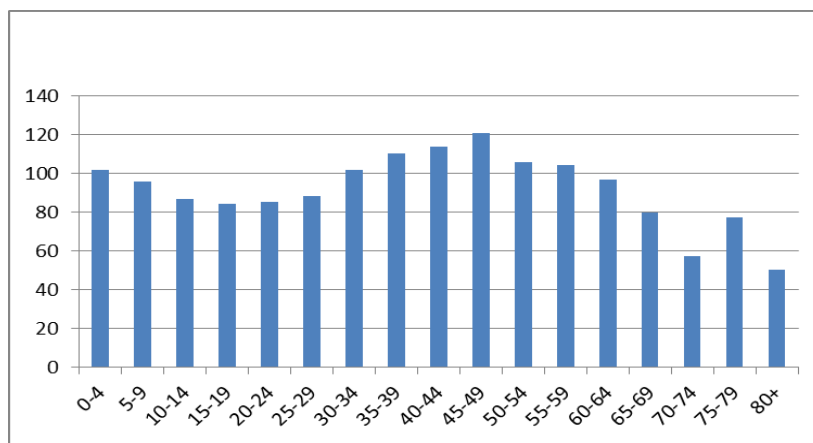
Table 1.8: Sex Ratio of Bukoba Municipal Council; 2012 census

Age Group	Population Census, 2012			Sex Ratio
	Male	Female	Total	
0-4	9,501	9,350	18,851	102
5-9	7,692	8,027	15,719	96
10-14	6,799	7,810	14,609	87
15-19	7,436	8,811	16,247	84
20-24	6,436	7,556	13,992	85
25-29	5,993	6,793	12,786	88
30-34	5,227	5,134	10,361	102
35-39	4,357	3,950	8,307	110
40-44	2,898	2,541	5,439	114
45-49	2,132	1,765	3,897	121
50-54	1,437	1,356	2,793	106
55-59	913	877	1,790	104
60-64	618	637	1,255	97
65-69	366	458	824	80
70-74	263	461	724	57
75-79	214	276	490	78
80+	239	473	712	51
Total	62,521	66,275	128,796	94

Source: NBS, the 2012 population Distribution by Age and Sex,2013

Generally, the overall sex ratio in 2012 Census of Bukoba Municipal Council was 94. This indicates that, for every 100 female there are 94 males. However, the sex ratio of 0-4 age group is above 100, this indicates an excess number of males over females; also the same pattern is observed in other age groups ranging from 30-59 and above. The lowest ratio is observed in age group 80 and above whereby there are 51 males for 100 females.

Figure 1.7: Sex Ratios (Males for 100 Females) for Bukoba Municipal Council, 2012 Census



Source: NBS, Population and Housing Census 2012.

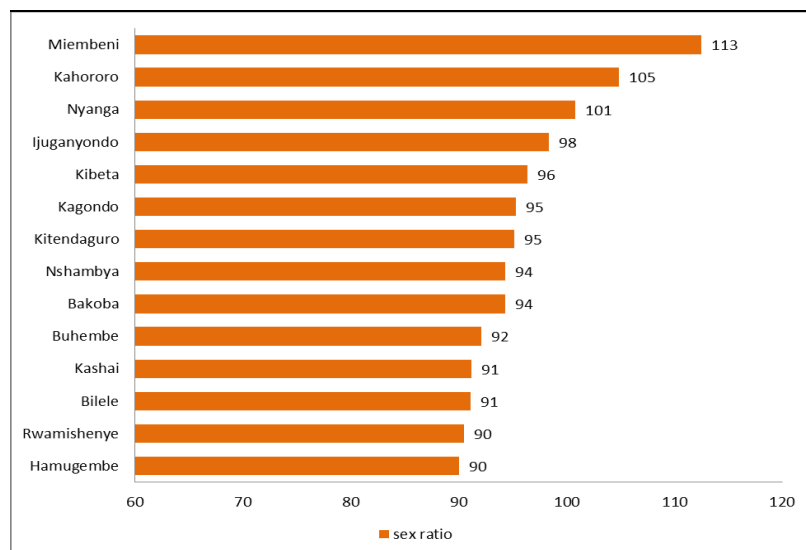
Sex ratios among wards vary between 90 males per 100 female in Hamugembe and Rwamishenye wards and 113 in Miembeni Ward. The majority of the wards have ratios which range between 91 and 98. Table 1.9 shows the distribution of sex ratios among wards in Bukoba Municipal Council.

Table 1.9: Sex Ratios by Ward, Bukoba Municipal Council, 2012 Census

Ward	2012 Pop. Census			Sex Ratio
	Number			
	Male	Female	Total	
Bakoba	8,481	8,993	17,474	94
Bilele	2,577	2,828	5,405	91
Buhembe	1,938	2,104	4,042	92
Hamugembe	6,116	6,790	12,906	90
Ijuganyondo	1,285	1,306	2,591	98
Kagondo	2,035	2,135	4,170	95
Kahororo	3,387	3,231	6,618	105
Kashia	14,689	16,102	30,791	91
Kibeta	3,969	4,119	8,088	96
Kitendaguro	2,766	2,906	5,672	95
Miembeni	3,464	3,079	6,543	113
Nshambya	4,378	4,642	9,020	94
Nyanga	1,571	1,558	3,129	101
Rwamishenye	5,865	6,482	12,347	90
Total	62,521	66,275	128,796	94

Source: NBS, 2012 Population Distribution by Age and Sex, 2013

Figure 1.8: Sex Ratios by Ward, Bukoba Municipal Council; 2012 Census

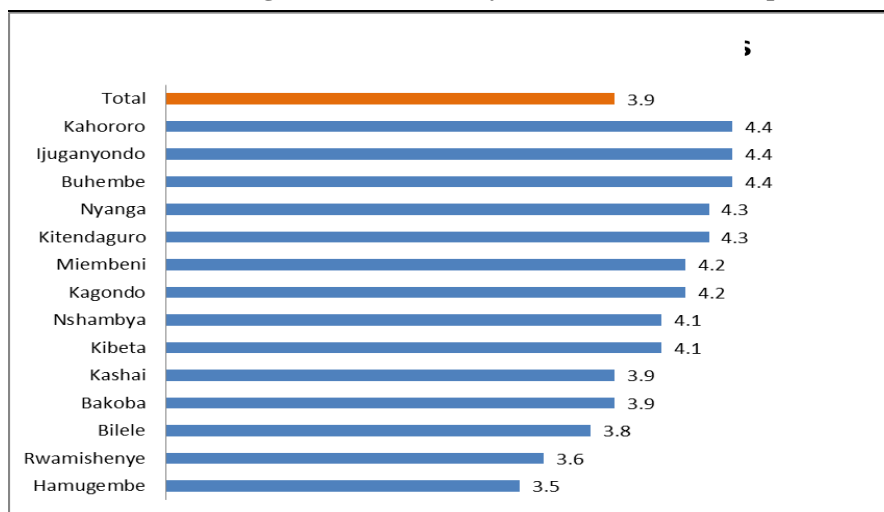


Source: NBS, 2012 Population and Housing Census, 2012.

1.5.6 Household Size

Bukoba Municipal Council had an average household size of 3.9 people per household in 2012 Census. The highest average household size is 4.4 persons per household in Buhembe, Kahororo and Ijuganyondo Wards, while the least average household size of 3.5 persons per household was in Hamugembe Ward.

Figure 1.9: Distribution of Average Household Size by Ward, Bukoba Municipal Council, 2012



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

CHAPTER TWO

ECONOMY OF THE COUNCIL

2.0 Introduction

This chapter highlights the socio-economic performance of Bukoba Municipal Council and its poverty status. The economic indicators used include the Gross Domestic Product (GDP), Per Capita Gross Domestic Product and the main industrial activities as sources of income for the residents of Bukoba Municipal Council. Other non-income poverty indices discussed in this chapter include the status of residents in terms of their health and education status, housing conditions and their amenities inside and outside their dwellings.

2.1 GDP and Per Capita GDP

2.1.1 Council Contribution to the Region GDP

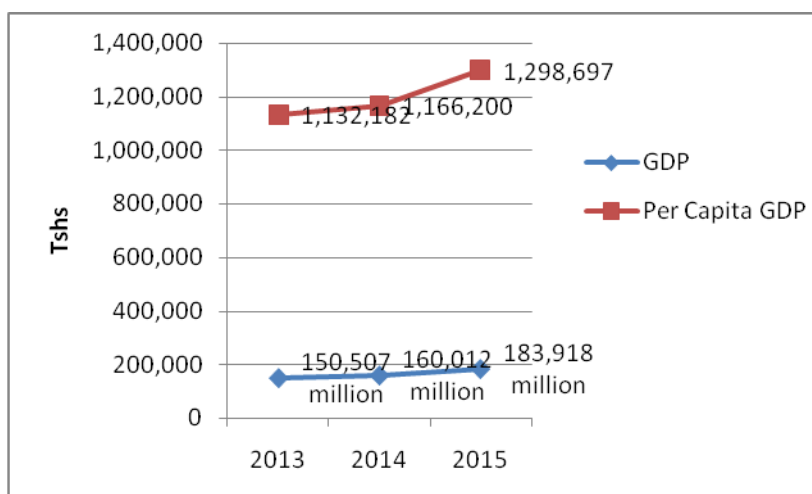
Table 2.1 shows the computed GDP estimates by council in Kagera Region for 2013, 2014 and 2015 years. Bukoba Municipal Council contributed six percent of the region's GDP in 2013 below Ngara District Council (6.8 percent), Biharamulo District Council (7.3 percent), Karagwe District Council (21.2 percent), Missenyi District Council (23.6 percent) and Muleba District Council (29.7 percent). It was the sixth council in 2013. The trend remained the same for the three consecutive years although it became the seventh council in 2014 and 2015. On the other hand, Bukoba Municipal Council's share in the GDP was very little in all three years (Table 2.1).

Table 2.1: GDP Estimates Contribution by Council, 2013, 2014 and 2015 (Mill.Tsh), Kagera Region

Council	2013		2014		2015	
	Amount	Percent	Amount	Percent	Amount	Percent
Karagwe District Council	522,569	21.5	526,724	17.6	651,479	20.1
Bukoba District Council	122,924	5.0	117,509	3.9	176,153	5.4
Muleba District Council	722,889	29.7	764,587	25.6	681,197	21.0
Biharamulo District Council	177,142	7.3	200,784	6.7	298,167	9.2
Ngara District Council	164,902	6.8	293,882	9.8	328,000	10.1
Bukoba MC	160,314	6.5	173,893	5.7	222,565	6.4
Missenyi District Council	574,757	23.6	658,088	22.0	631,477	19.5
Kyerwa District Council	0	0	267,295	8.9	288,609	8.9
Total	2,435,690	100.0	2,988,881	100.0	3,239,000	100.0

Source: National Bureau of Statistics, National Accounts Data, 2017

Figure 2.1: GDP and Per Capita GDP of Bukoba Municipal Council; 2013, 2014 and 2015



Source: NBS, Kagera Region GDP Report, 2017

2.1.2 Council Per Capita GDP

Looking at the distribution of the regional economy, Bukoba Municipal Council was the fourth in 2013 and was the third in 2014 and 2015. Missenyi District Council had the highest per capita GDP in the region, TZS 2,748,135 in 2013, TZS 3,048,593 in 2014 and TZS 2,834,229 in 2015 followed by Karagwe District Council whereby in 2013 had TZS 1,524,899, TZS 1,489,164 in 2014 and TZS 1,784,522 in 2015. On Bukoba Municipal Council generated TZS 1,132,182 in 2013, TZS 1,166,200 in 2014 and TZS 1,298,697 in 2015 (Table 2.2). The least council was Bukoba District Council in all three years.

Table 2.2: Per Capita GDP Estimates by Council, 2013, 2014 and 2015, Kagera Region

Council	2013		2014		2015	
	Amount	Rank	Amount	Rank	Amount	Rank
Karagwe DC	1,524,899	2	1,489,164	2	1,784,522	2
Bukoba DC	411,107	7	380,759	8	553,007	8
Muleba DC	1,296,256	3	1,328,336	4	1,146,610	4
Biharamulo DC	530,552	5	582,636	6	838,282	6
Ngara DC	499,184	6	861,929	5	932,038	5
Bukoba MC	1,132,182	4	1,166,200	3	1,298,697	3
Missenyi DC	2,748,135	1	3,048,593	1	2,834,229	1
Kyerwa DC	0	8	781,583	7	817,627	7
Total	1,582,797		1,141,423		1,198,425	

Source: National Bureau of Statistics, National Accounts Data, 2017

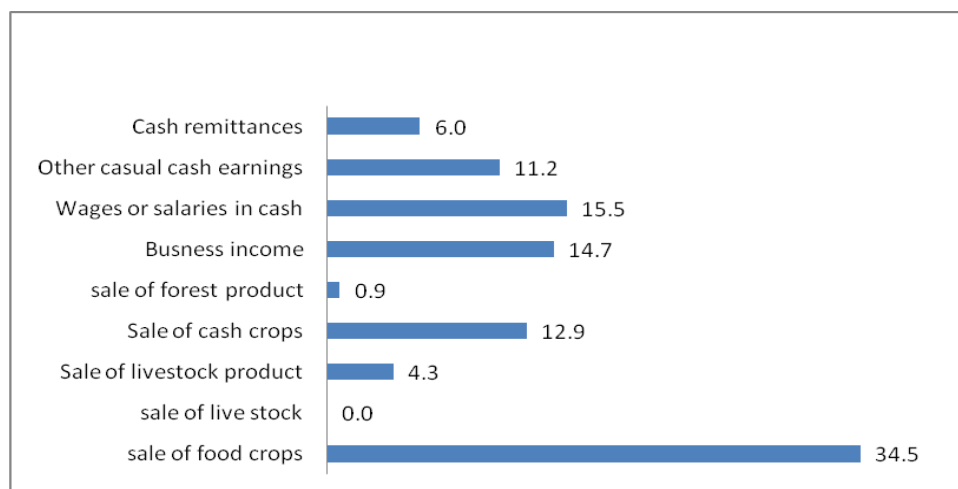
2.2 Non - Income Indicators

As stated earlier, besides income poverty in terms of GDP and per capita GDP, there are other non - income indicators that portray the poverty level. These indicators include main sources of cash income, food poverty in terms of food security and protein intake, net enrolment, adult literacy rate, health indicators and housing condition and their amenities inside and outside dwellings. Others include the use of modern and durable building materials, access to safe drinking water, types of toilets, household's assets, and sources of lighting and cooking energies.

2.2.1 Main Sources of Cash Income

Kagera Region Agriculture Sample Census - 2007/08 showed that Bukoba Municipal Council had a minimum number of economic opportunities due to unavailability of industries in the council. Sale of food crops was reported to be the main source of income in the council which engaged 34.5 percent of residents. It was followed by wages or salaries in cash (15.5 percent), business income (14.7 percent), sale of cash crops (12.9 percent), other casual cash earning (11.2 percent), cash remittances (6 percent), sale of livestock products (4.3 percent) and sale of forest products (0.9 percent).

Figure 2.2: Percentage of Main Sources of Income in Bukoba Municipal Council, 2007/08

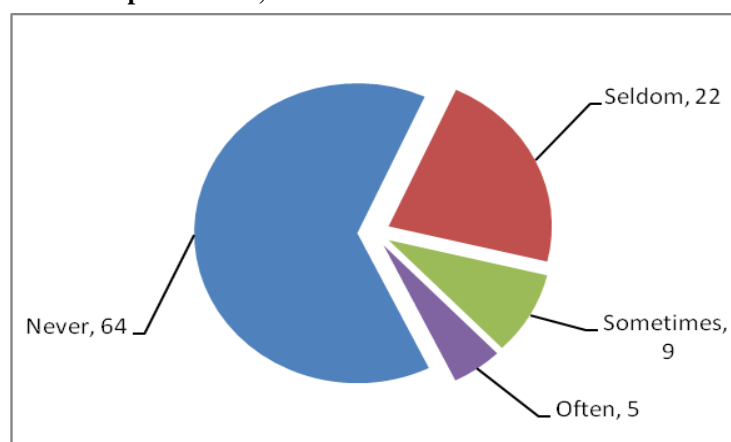


Source: NBS, Agriculture Sample Census Report 2007/08 Kagera Region

2.2.2 Food Security and Food Poverty

According to the 2007/2008 National Sample Census of Agriculture, 64 percent of households of all agricultural households in Bukoba Municipal Council reported that they 'never' experienced problems in satisfying household food requirement. Other households reported to have experienced food problems at different levels including those households that 'seldom' experiences food problem (22 percent), and "sometimes" experienced food problem (9 percent). However, 345 households (5 percent) 'often' experienced food shortage (Figure 2.3).

Figure 2.3: Percentage Distribution of Rural Agricultural Households by Status of Food Satisfaction, Bukoba Municipal Council, 2007/2008



Source: NBS, National Sample Census of Agriculture, Kagera region, 2007/2008.

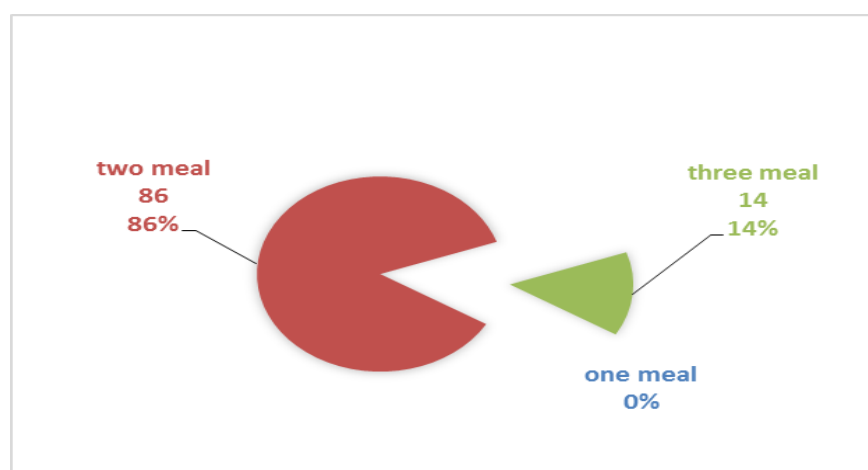
2.2.3 Food Consumption Patterns

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

Number of Meals per Day

The National Sample Census of Agriculture 2007/08 revealed that 86 percent of households in Bukoba Municipal Council normally have two meals per day, 14 percent of the households have three meals per day. On the other hand, there is no household that had one meal per day (Figure 2.4).

Figure 2.4: Percentage Distribution of Rural Agricultural Households by Meals Taken per Day, Bukoba Municipal Council; 2007/2008

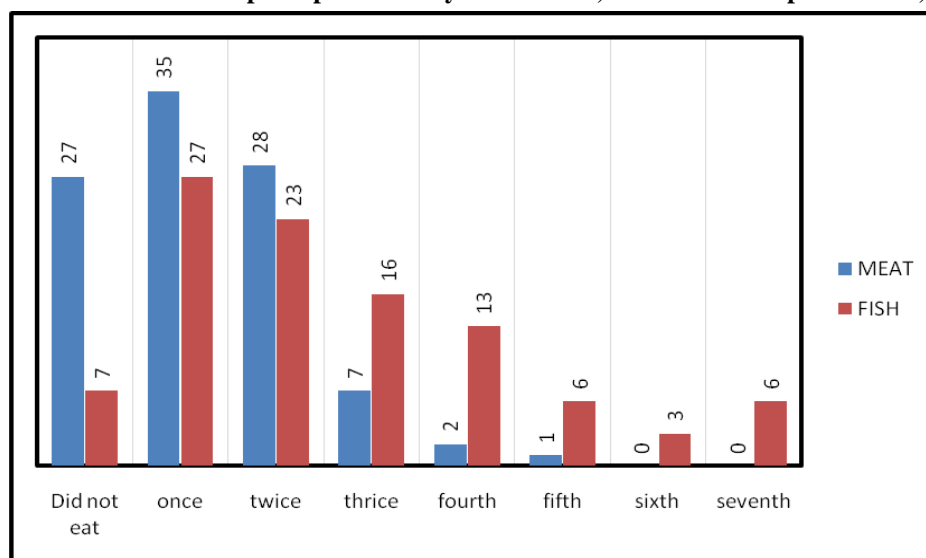


Source: NBS, National Sample Census of Agriculture, Kagera Region, 2007/08.

Protein (Meat and Fish) Intake

Protein intake among people in Bukoba Municipal Council showed meat preference than fish. The results of the 2007/08 National Sample Census of Agriculture showed that 27 percent of the households consumed fish once during the week preceding the census and 35 percent consumed meat once during the week preceding the census. Regardless of the availability of different types of meat, a large number of households (27 percent) never consumed meat during the respective week. A number of households (7 percent) had never consumed fish during the week preceding the census, (Figure 2.5).

Figure 2.5: Percentage Distribution of Rural Agricultural Households by Frequency of Meat and Fish Consumption per Week by Households, Bukoba Municipal Council, 2007/2008

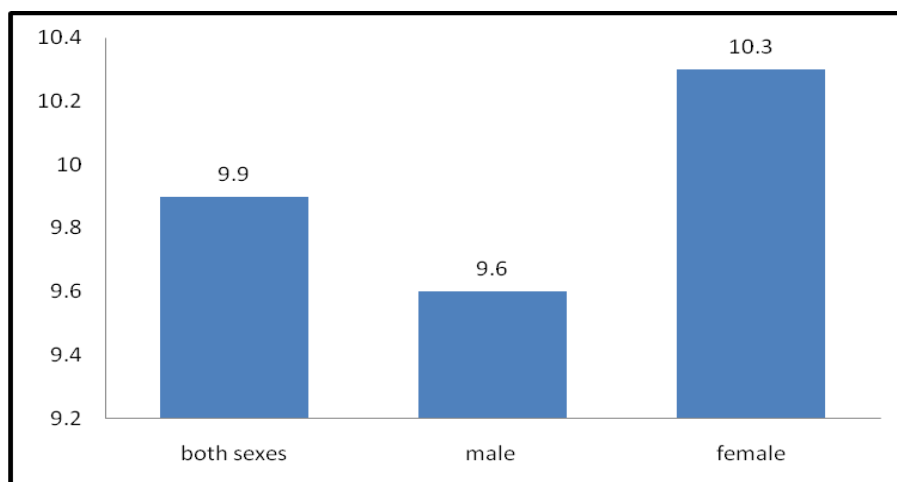


Source: NBS, National Sample Census of Agriculture, Kagera Region, 2007/08.

2.2.4 Health Indicators

The impact of HIV/AIDS pandemic has also replicated to the high rates of orphans observed in the 2012 Population and Housing Census. Bukoba Municipal Council is among the councils in Kagera Region with average rates of orphans of 9.9 percent. The Municipal Council management is planning to conduct a survey in order to know the current status of orphan hood and factors contributing to have higher rates of orphans and come up with solutions.

Figure 2.6: Percentage Distribution of Orphans by Sex, Bukoba Municipal Council, 2012 Census



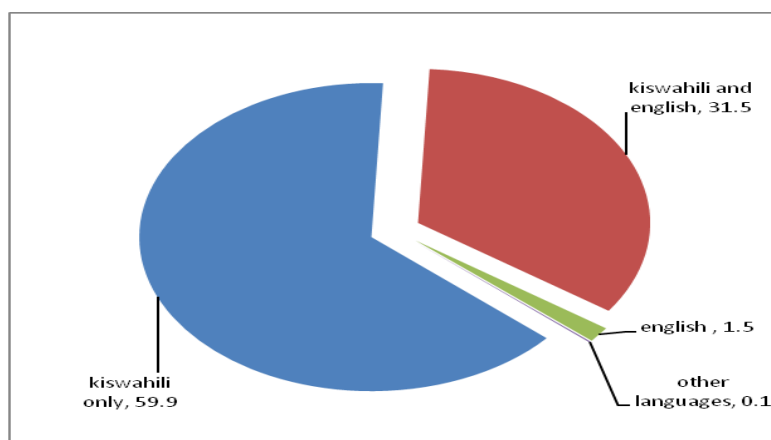
Source: NBS, Population and Housing Census, Kagera Region, 2012

2.2.5 Literacy Rate and Understanding Different Languages

Literacy rate is another quality aspect of population in any country and gauge the ability of understanding various issues of their socio-economic development and environment. According to the 2012 Population and Housing Census, Kagera Region, the literacy rate in Bukoba Municipal Council is 93.0 percent.

Furthermore, Figure 2.7 reveals that there is also great achievement on percentages of understanding different languages. About 59.9 percent could read or write in the national language (Kiswahili only) while 31.5 percent could read and write in Kiswahili and English. There were an insignificant percentage of people who were able to read and write in English only (1.5 percent) and other languages (0.1 percent).

Figure 2.7: Percentage Distribution of Population by Understanding Different Languages, Bukoba Municipal Council, 2012 Census



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

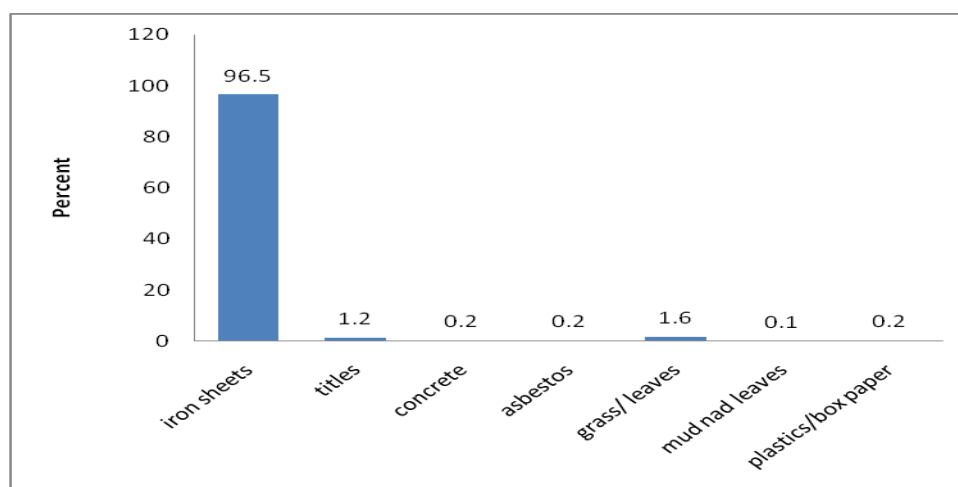
2.2.6 Housing Conditions

Housing condition is another non – income indicator that shows the poverty status of a household and can easily judge whether a household is of low, medium or high income level. Three aspects of a dwelling are observed whether they have used modern and durable materials for roofing, flooring and walls.

Roofing Materials

The 2012 Population and Housing Census Report shows that iron sheets is the most common roofing material in the Municipal Council. The situation in Bukoba Municipal Council showed that 96.5 percent of households have iron sheets as roofing material, followed by grass or leaves (1.6 percent), titles (1.2 percent) while 0.2 percent used box paper, concrete and asbestos. Mud and leaves were used by 0.1 percent of the households (Figure 2.8).

Figure 2.8: Percentage of Households by Type of Roofing Materials, Bukoba Municipal Council, 2012

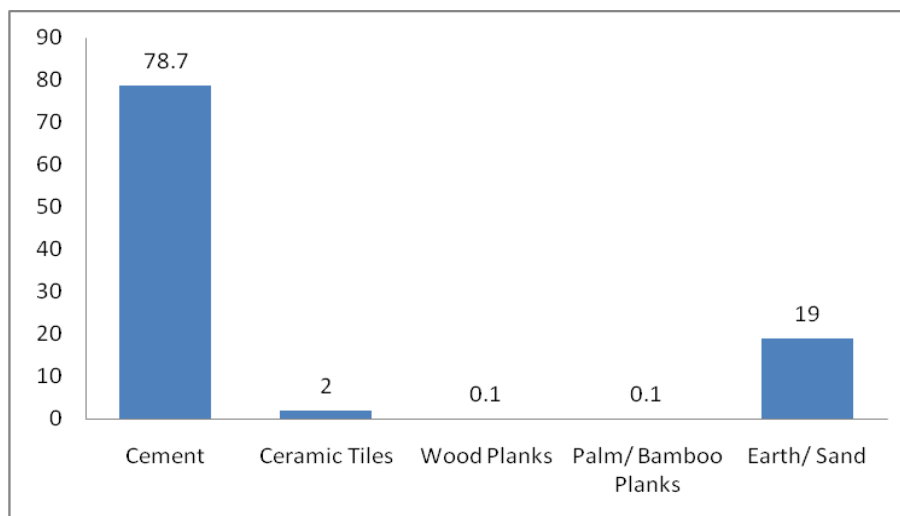


Source: NBS, Population and Housing Census Report, Kagera region, 2015

Flooring Materials

Flooring is also an important indicator on the quality of dwellings in measuring poverty of private households. Figure 2.9 reveals that 78.7 percent of households in Bukoba Municipal Council used cement material, followed by earth/sand (19 percent). It was only 2 percent of the households who used ceramic tiles as flooring materials for their dwellings in 2012. Although the council has not yet done any survey to evaluate the current status, few households in Bukoba Municipal Council have used wood planks and palm/bamboo planks as the flooring materials. This implies that there is a significant improvement in Bukoba Municipal Council on the use of modern materials for flooring.

Figure 2.9: Percentage of Households by Type of Flooring Materials, Bukoba Municipal Council, 2012

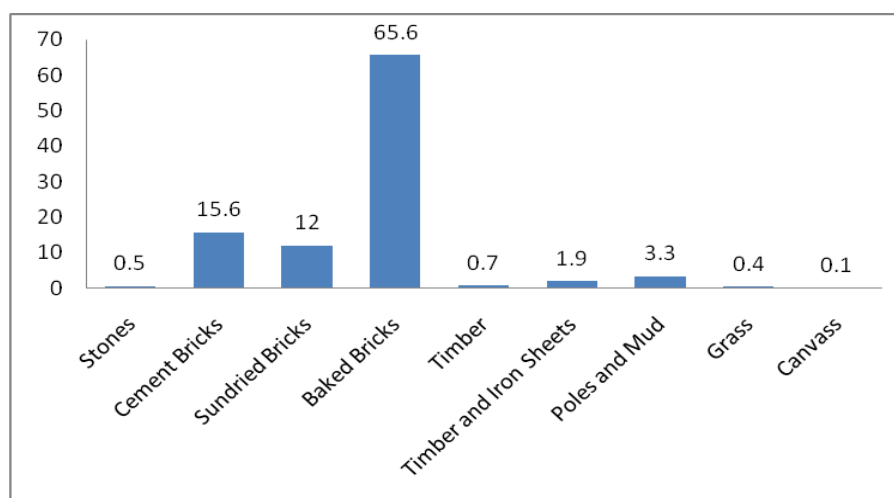


Source: NBS, Population and Housing Census Report, Kagera Region, 2015

Wall Materials

The use of modern and durable wall materials is another notable feature concerning dwellings in the measurement of poverty in any country or region. Figure 2.10 shows that the majority (65.6 percent) of households in Bukoba Municipal Council had their house walls built of baked bricks, 15.6 percent built by cement bricks, 12 percent built by sundried bricks, 3.3 percent built by poles and mud and 1.9 percent built by timber and iron sheets. On the other hand, 0.5 percent of households used stones and 0.7 percent used timber materials for wall building. This implies that most of the house walls in Bukoba Municipal Council were built by baked bricks.

Figure 2.10: Percentage of Households by Type of Wall Materials, Bukoba MC; 2012



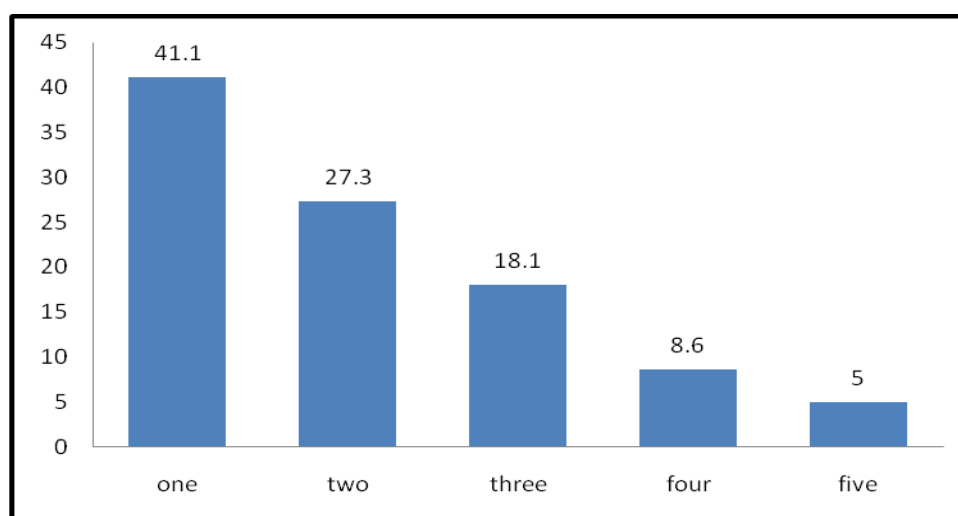
Source: NBS, Population and Housing Census Report, Kagera Region, 2015

Number of Sleeping Rooms

Room occupancy is vital information in estimating and understanding the status of accommodation against the recommended Room Persons Ratio that provides hygienic condition of each person in that household. A room for sleeping, according to the Census definition, was defined as “any space within the household which is currently used by household members for sleeping”. By this definition, it means that any space used for other purposes like a sitting room; dining room or even stores can be termed as rooms for sleeping if they are used for that purpose.

The 2012 Census results show that Bukoba Municipal Council had an average household size of 3.9 persons and an average number of 2 rooms for sleeping. Figure 2.11 shows that in Bukoba Municipal Council, 41.1 percent of households have 1 room for sleeping, 27.3 percent had 2 rooms, 18.1 percent had three rooms, 8.6 percent had four rooms, and those with five rooms were 5 percent.

Figure 2.11: Percentage Distribution of Households by Number of Rooms for Sleeping, Bukoba Municipal Council, 2012 Census



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

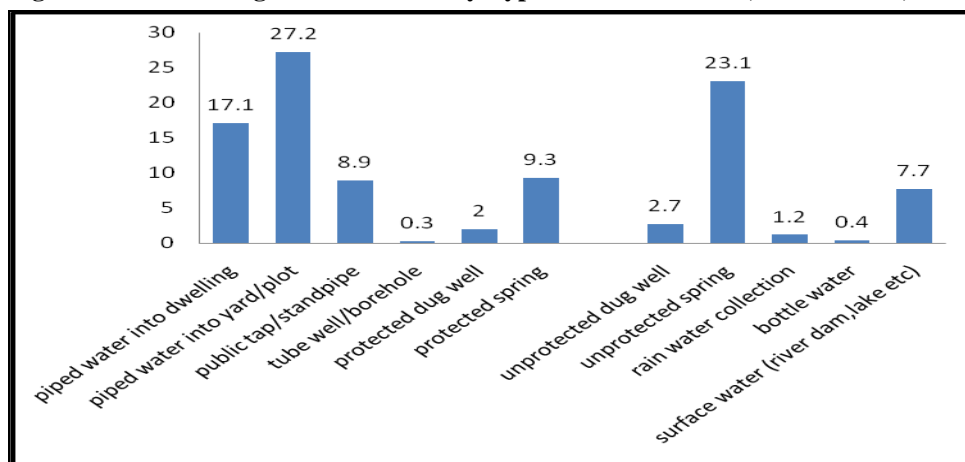
Access to Clean Drinking Water

The 2012 Population and Housing Census shows that 64.8 percent of the households in Bukoba Municipal Council had access to improved drinking water sources, while 35.1 percent of households had access to unimproved water sources. These results imply that the council has high proportion of households which are depending on unimproved drinking water sources.

Figure 2.12 shows that the improved main source of clean and safe drinking water used by households was piped water into yard/plots (27.2 percent) followed by piped water into dwelling (17.1 percent), protected spring (9.3 percent), and public tap/standpipe (8.9 percent). However, the Council had

households which still depended on unimproved sources of water for drinking including unprotected spring (23.1 percent) and surface water (7.7 percent).

Figure 2.12: Percentage of Households by Type of Water Sources, Bukoba MC, 2012 Census

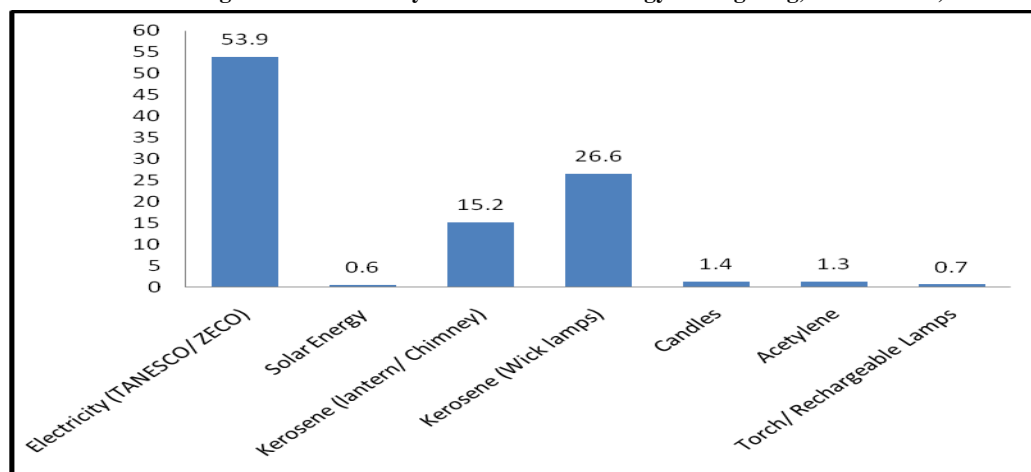


Source: NBS, Population and Housing Census Report, Kagera Region, 2015

Source of Energy for Lighting

The 2012 Population Census results have revealed that the main source of energy for lighting for households was electricity supplied by TANESCO/ZECO (53.9 percent), kerosene (wick lamps) was 26.6 percent, and kerosene (lantern/chimney) was 15.2 percent. This result indicates that most of the households in Bukoba Municipal Council depend more on Electricity as the main source of energy for lighting. There were also other sources of energy for lighting such as acetylene, solar energy, firewood, candles, generator/private source and gas (Figure 2.13).

Table 2.13: Percentage of Households by Main Source of Energy for Lighting, Bukoba MC, 2012 Census

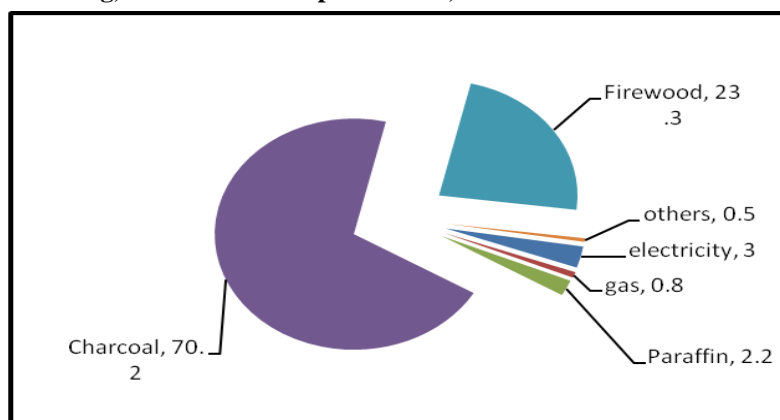


Source: NBS, Population and Housing Census Report, Bukoba Municipal Council, 2015

Sources of Energy for Cooking

The 2012 Population and Housing Census Report shows that firewood remains as the most prevalent source of energy for cooking in Kagera Region as it was used by 84.9 percent of all households. This is not the same as in Bukoba Municipal Council since 70.2 percent of the households used charcoal as the main source of energy for cooking followed by firewood (23.3 percent) and electricity (3 percent). If this practice is continued, deforestation and depletion of natural vegetation through using charcoal and firewood will destroy the nature and ecology of Kagera Region as a whole. Hence, measures should be taken to ensure that natural vegetation and ecology of the Municipal Council are restored.

Figure 2.14: Percentage of Households by Main Source of Energy for Cooking, Bukoba Municipal Council, 2012 Census

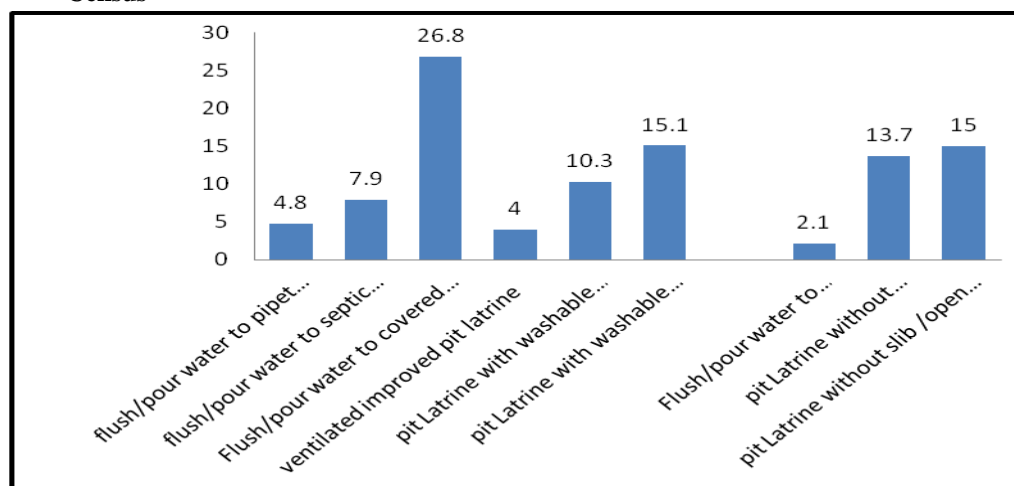


Source: NBS, Population and Housing Census Report, Bukoba Municipal, 2015

Type of Toilet Facility

The 2012 Population and Housing Census shows that Bukoba Municipal Council had the highest proportion (69 percent) of households with improved toilet facilities categorized as flush/pour water to covered pit (26.8 percent), followed by 15.1 percent of the households with pit latrine with washable slab without lid and 10.3 percent of households in the Municipal Council are using pit latrine with washable slab with lid. On the other hand, the results also show a substantial percentage of the households which were using non-improved toilet facilities categorized as pit latrine without slip/open pit (15 percent), pit latrine without washable/soil slab (13.7 percent) and flush/pour water to somewhere else (2.1 percent) (Figure 2.15).

Figure 2.15: Percentage Distribution of Households by Type of Toilet Facility, Bukoba Municipal Council, 2012 Census

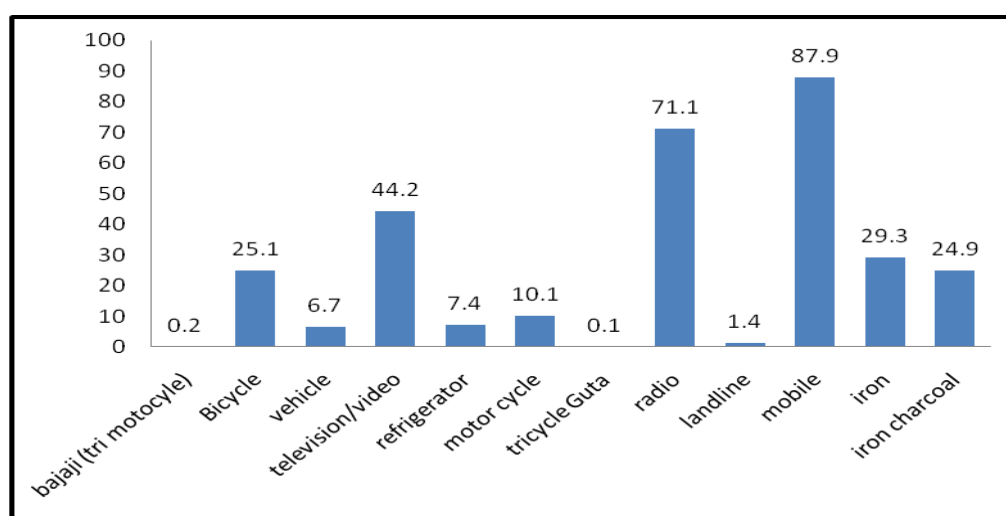


Source: NBS, Population and Housing Census Report, Kagera Region, 2015

2.2.7 Ownership of Assets

The economic development of Bukoba Municipal Council can also be assessed through ownership of modern communication and transport facilities, home appliances and others. Figure 2.16 shows that the proportion of private households that owned mobile phones as main communication facility was 87.9 percent and was followed by radio (71.1 percent) and television (44.2 percent). One general observation experienced from the 2012 Population and Housing Census is a significant increase of mobile phone ownership and radio as the most owned assets and have been used as a means of communication and media in private households in Bukoba Municipal Council.

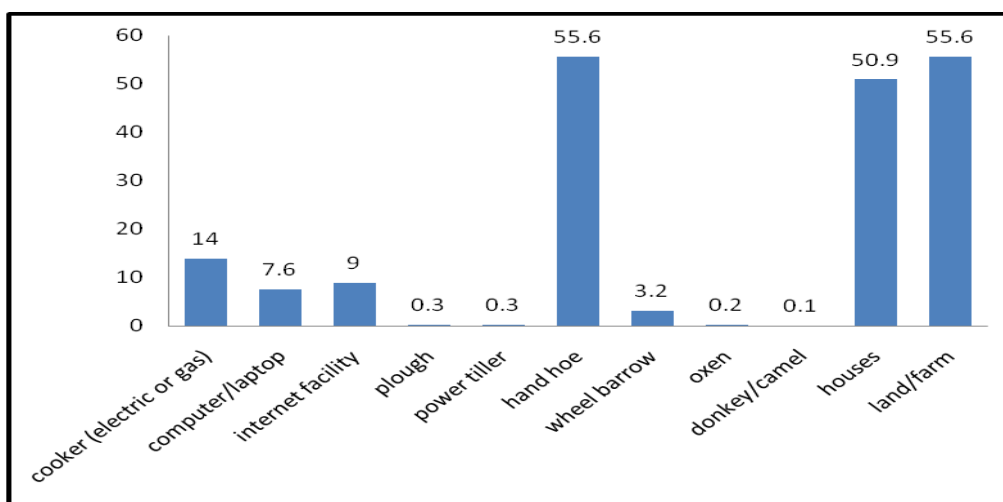
Figure 2.16: Percentage of Households who Owned Communication Facilities by Type, Bukoba Municipal Council, 2012 Census



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

Ownership of specified assets is a good indicator of household to evaluate the economic status of the council. Great achievement on ownership of modern home appliances have been observed in 2012 than it was in 2002. The 2012 Population Census results show a shifting of ownership of assets towards modern home appliances such as a hand hoe (55.6 percent of households owned), land/farm (55.6 percent) and houses (50.9 percent). (Figure 2.17)

Figure 2.17: Percentage of Households Owned Modern Home Appliances by Type, Bukoba Municipal Council, 2012 Census



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

2.2.8 Land Development

Land use planning is a key aspect of development for both urban and rural areas of any council in the country. Needs of land in urban areas are dominated by the demand for building plots for residential, commercial, institutional or industrial purposes. In rural areas, agriculture and other social and production activities are the major needs for land. Bukoba Municipal Council had surveyed 10,574 plots and 7,287 plots were allocated. It is obvious that lack of surveyed building plots in most cases create a problem of crowded environment.

CHAPTER THREE

PRODUCTION SECTORS

3.0 Overview

Chapter Three explains the performance of production sectors in Bukoba Municipal Council. These sectors include agriculture, livestock, natural resources, mining and industrial development

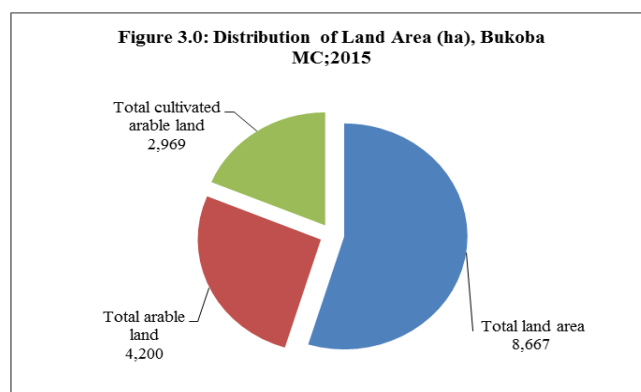
3.1 Agriculture

Bukoba Municipal Council is an urban area and its urban farming has been both extensive and intensive. Despite its relatively small size of agricultural land, farms in Bukoba Municipal Council grow a significant amount of food and cash crops. A substantial area of Bukoba Municipality is fully utilized for subsistence farming to enable the inhabitants to earn their living. Coffee is the major cash crop grown in the area. Banana, maize, sweet potatoes, cassava and yams are the main food crops grown in the area.

The land that is within urban areas is customary zoned out to accommodate residential areas, business centers, industrial sites, road and railway construction as well as areas for recreational activities. Besides, there are factors that have contributed towards emergence and persistence of urban agriculture in Tanzania including peasant culture. This is because of the current generation of urban dwellers in Tanzania including Bukoba Municipal Council who are still having remnants of rural culture. The persistence of the peasant culture explains the reasons that lead some urban residents to plant various types of crops and keep some form of livestock for cultural rather than for economic ends. High living cost attributed by high inflation rates is another important reason that compels urban residents to involve in urban farming so as to have self-food sufficiency through reducing cost of buying foods. However, according to agronomical factors, Bukoba Municipal Council indulges more on food crops such as banana, cassava, maize and sweet potatoes rather than cash crops. The same crops are also used as source of income.

3.1.1 Distribution of Arable Land

Figure 3.0 and Table 3.1 show that Bukoba Municipal Council has a total land area of 8,667 ha of which 4,200 ha (48.5 percent) were classified as arable land which is suitable for crop farming. More than half of the arable land area in Bukoba Municipality is under crop cultivation and this justifies cultivated land in the Municipality to be under pressure. Human settlements, commercial and industrial areas and



land used for social services such as schools and hospitals largely contribute towards increasing

pressure on cultivated land. Likewise, Table 3.1 shows that Kahororo Ward with 664 ha has the largest arable land followed by Nyanga Ward (631 ha) and Kitendaguro Ward (571 ha). Bilele Ward with eight ha has the smallest arable land area. The same table (Table 3.1) further shows that Kahororo Ward cultivated the largest arable land area of 461 ha (equivalent to 69.4 percent of its respective arable land area). Wards with less than ten hectares cultivated with crops were Bilele (2 ha), Hamugembe (3 ha) and Rwamishenye (4 ha).

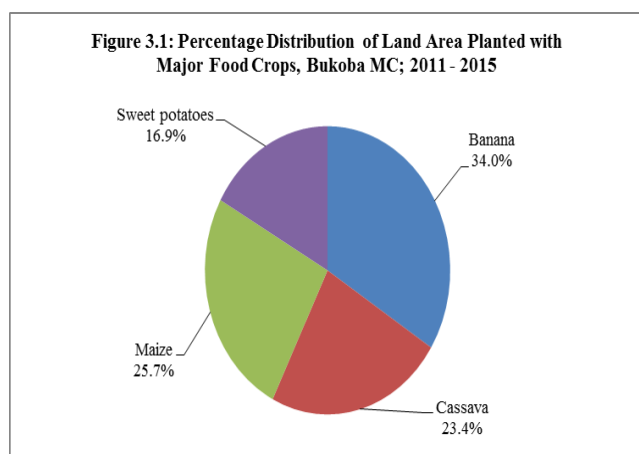
Table 3.1: Distribution of Arable Land by Ward, Bukoba Municipal Council; 2015

Ward	Total land Area (Ha)	Total Arable land (Ha)	Percentage of Ward Arable Land	Arable land Under Cultivation (Ha)	Percent of Arable land under cultivation
Kitendaguro	857	571	66.6	324	56.7
Kagondo	585	428	73.2	342	79.9
Ijuganyondo	866	520	60.0	364	70.0
Bakoba	288	25	8.7	14	56.0
Nyanga	1141	631	55.3	437	69.3
Miembeni	229	16	7.0	11	68.8
Bilele	122	8	6.6	2	25.0
Kibeta	800	420	52.5	340	81.0
Buhembe	769	444	57.7	316	71.2
Kahororo	1183	664	56.1	461	69.4
Hamugembe	400	12	3.0	3	25.0
Kashai	324	36	11.1	28	77.8
Rwamishenye	267	10	3.7	4	40.0
Nshambya	836	415	49.6	323	77.8
Total	8,667	4,200	48.5	2,969	70.7

Source: Bukoba Municipal Director's Office (Agriculture Department), Bukoba Municipal Council, 2017

3.1.2 Land under Cultivation

3.1.2.1 Area under Major Food Crops Cultivation



Over the reference period shown in Figure 3.1 and Table 3.1, banana, cassava, maize and sweet potatoes were the major food crops grown in Bukoba Municipality. Land area planted with major food crops averaged annually at 2,697 ha which is equivalent to 64.2 percent of the Municipal's total arable land area of 4,200 ha (Table 3.1). A large part of land (34.0 percent) of the average annual planted area of 2,969 ha was cultivated with banana. Hence, in terms of planted area, banana is the principal food crop in the council. It is followed by maize (25.7 percent), cassava (23.4 percent) and sweet potatoes (16.9 percent).

Table 3.1: Estimated Area (ha) under Major Food Crops; Bukoba Municipal Council; 2011– 2015

Crop	Estimated Land Area (ha)					Total Area	Annual Average	Percentage
	2011	2012	2013	2014	2015			
Banana	1055.6	859	958	873	841	4,587	917	34.0
Cassava	655.1	694.7	655.2	606	540	3,151	630	23.4
Maize	809.2	727	679	677	576	3,468	694	25.7
Sweet Potatoes	470.5	497	456.6	442	412	2,278	456	16.9
Total	2990	2778	2749	2,598	2369	13,484	2,697	100

Source: Bukoba Municipal Director's Office (Agriculture Department), Bukoba Municipal Council, 2017

Banana

Banana is the major staple food for Bukoba Municipal Council residents and forms an important and desirable food crop with the highest per capita consumption rate in local diet. It is possible to cultivate Banana in all areas of the municipal council although in some areas the comparative advantage may be greater than in other parts of the council depending on variation on climatic condition and soil fertility.

Table 3.1 above shows that from 2011–2015, banana was planted on an annual average area of 917 ha. This was equivalent to 34.0 percent of the annual average area planted with all major food crops in the council (2,697 ha). Banana was the first food crop in terms of cultivated area. Moreover, the best season for banana cultivation was in 2011 with annual cultivated land area of 1,055.6 ha. The worst season was 2015 when only 841 ha were planted.

Maize

Maize is among the major food crops with significant impact on food security in the Municipal Council. It accounted for 25.7 percent of the council's annual average land area of 2,697 ha planted with all major food crops (Table 3.1 above).



Cassava

It is a drought food crop which plays a big role in maintaining food security in the Municipal Council. In terms of planted land area, cassava ranked third major food crop. Moreover, as Figure 3.1 and Table 3.1 above show, 23.4 percent of the municipal's average annual land area was planted with cassava. The best season of which annual land area planted with cassava was at the peak of 694.7 ha was in the season of 2012. The worst season of 540 ha was recorded in the season of 2015.



Sweet potatoes

It is a root tuber crop which forms among the major food crops in the council. The crop accounted for 16.9 percent of the Municipal Council's annual average land area of 456 ha planted with major food crops (Figure 3.1 and Table 3.1). In terms of cultivated land area, sweet potatoes ranked fourth major food crop grown in the council. The largest annual area cultivated with sweet potatoes was observed in the season of 2012 in 497 ha while the lowest size of 412 ha was observed in the season of 2015.

3.1.2.2 Area under Major Cash Crops Cultivation

Coffee is the only major cash crop grown in Bukoba Municipal Council. Table 3.2 that, over the season of 2011-2015, coffee was planted on an annual average land area of 276.7 ha equivalent to 46.5 percent of the Municipal's arable land under cultivation Table 3.2 further indicates that in five seasons from 2011 to 2015, the size of land area planted with coffee decreased every season from 286 ha in 2011 to 266.5 ha in 2015.

Table 3.2: Estimated Land Area (Ha) under Major Cash Crop (Coffee) by Ward, Bukoba MC; 2011 – 2015

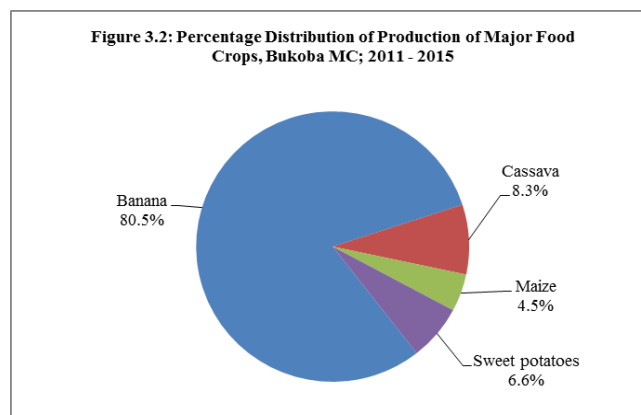
Ward	Estimated Land Area (Ha)					Total Area	Annual Average	Percentage
	2011	2012	2013	2014	2015			
Kahororo	55	54	53.9	53.6	53	269.5	53.9	19.48
Buhembe	42	41	39	39	39	200	40	14.46
Kibeta	21	21	20	19	18	99	19.8	7.16
Ijuganyondo	20	20	20	19	18	97	19.4	7.01
Kitendaguro	45	45	43	40	40	213	42.6	15.40
Nshambya	10	10	9	9	9	47	9.4	3.40
Nyanga	44	44	43	42.5	42.5	216	43.2	15.61
Kagondo	49	49	48.6	48.3	47	241.9	48.38	17.49
Municipal Total	286	284	276.5	270.4	266.5	1383.4	276.7	100.00

Source: Bukoba Municipal Director's Office (Agriculture Department), Bukoba Municipal Council, 2017

3.1.3 CROP PRODUCTION

3.1.3.1 Major Food Crops Production

Banana, maize, cassava, and sweet potatoes are the major food crops grown in Bukoba Municipal Council (Figure 3.2 and Table 3.3). Table 3.3 further shows that, over five seasons, 2011-2015, 162,374 tons of major food crops averaged annually at 32,475 tons were harvested in the municipal council. Figure 3.2 and Table 3.3 further show that banana which accounted for 80.5 percent of the total production was the



dominant food crop in Bukoba Municipal Council. It was followed by cassava (8.3 percent), sweet potatoes (6.6 percent) and maize (4.5). Regarding production trend, food crops production was at the peak (43,538 tons) in the crop season of 2015. The lowest production of 18,146 tons was recorded in the season of 2011.

Table 3.3: Productions in Tones of Major Food Crops, Bukoba MC, 2011- 2015

Crop	Etimated Production in Tons					Total Food Production	Annual Average	Percentage
	2011	2012	2013	2014	2015			
Banana	14369	23621	25559	32421	34799	130,769	26154	80.5
Cassava	1691	2602	2536	2929	3776	13,534	2707	8.3
Maize	1013	1507	1570	1474	1727	7,291	1458	4.5
Sweet Potatoes	1073	1306	1437	3728	3236	10,780	2156	6.6
Municipal Total	18146	29036	31102	40,552	43538	162,374	32,475	100

Source: Bukoba Municipal Director's Office (Agriculture Department), Bukoba Municipal Council, 2017

Production of Banana

Banana ranked first major food crop in Bukoba Municipal Council. Figure 3.2 and Table 3.3 shows that, banana accounted for 80.5 percent of the total tonnage of 162,374 of all major food crops produced in the Council. Table 3.3 reveals that crop season of 2015 was the best as banana production reached the peak of 34,799 tones. The worst season of banana production of 14,369 tones was recorded in the season of 2011.

Production of Cassava

Cassava was the second major food crop produced in Bukoba Municipal Council. As shown in Figure 3.2 and Table 3.3, cassava accounted for 8.3 percent of the total tonnage of 162,374 of all major food crops produced in the Municipal Council. Table 3.3 further reveals that production of cassava was at the peak of 3,776 tons in the crop season of 2015 and was the worst at 1,691 tons in 2011.

Production of Sweet Potatoes

Sweet potatoes were the third major food crop produced in Bukoba Municipal Council. As shown in Figure 3.2 and Table 3.3, sweet potatoes accounted for 6.6 percent of the total tonnage of 162,374 of all major food crops produced in the council. Table 3.3 further reveals that production of sweet potatoes was at the peak of 3,728 tons in the crop season of 2014 and was at the worst of 1,073 tons in 2011.

Production of Maize



of 2011.

Maize ranked the last among the four major food crops produced in Bukoba Municipal Council (Table 3.3). Figure 3.2 and Table 3.3 shows that maize accounted for 4.5 percent of the total tonnage of 162,374 of all major food crops produced in the council. Table 3.3 further reveals that crop season of 2015 was the best as maize production reached the peak of 1727 tons. The worst season of maize production of 1013 tons was observed in the season

3.1.3.2 Major Cash Crops Production

Coffee is the only major cash crop produced in Bukoba Municipal Council. It is produced in eight wards as shown in Table 3.4. The table shows that 927 tons of coffee averaged annually at 185.4 tons was harvested during the period of 2011 – 2015. Considering production trend, coffee was at the peak of 229 tons in 2011 and was at the worst of 145 tons in 2015. Kitendaguro Ward was the leading ward in coffee production (50.2 tons per annual, equivalent to 27.1 percent) of the total tonnage of 927 tons of coffee produced in the Municipal Council.

Table 3.4: Estimated Production (in Tons) of Coffee Crop in Bukoba Municipal Council; 2011- 2015

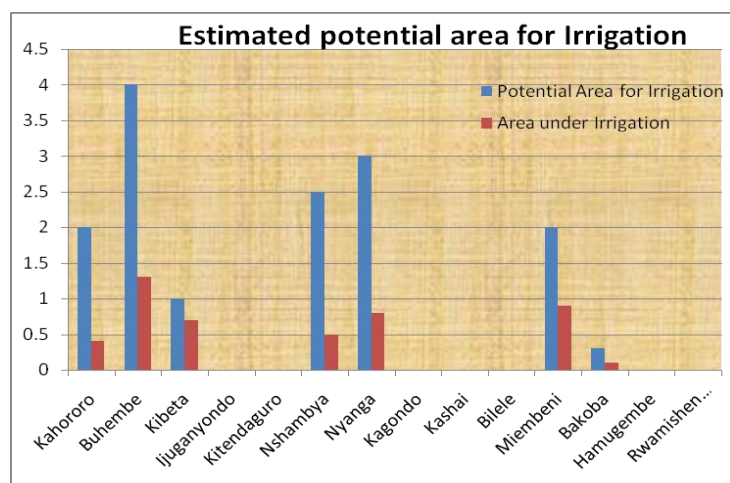
Ward	Crop	Estimated Production in tons					Total Area	Annual Average	Percentage
		2011	2012	2013	2014	2015			
Kahororo	Coffee	38	33	29	27	19	146	29.2	15.7
Buhembe	Coffee	29	32	28	18	14	121	24.2	13.1
Kibeta	Coffee	25	18	14	12	10	79	15.8	8.5
Ijuganyondo	Coffee	12	11	9	6	7	45	9	4.9
Kitendaguro	Coffee	58	47	45	52	49	251	50.2	27.1
Nshambya	Coffee	12	9	7	8	6	42	8.4	4.5
Nyanga	Coffee	24	26	28	23	22	123	24.6	13.3
Kagondo	Coffee	31	24	26	21	18	120	24	12.9
Municipal Total		229	200	186	167	145	927	185.4	100.0

Source: Bukoba Municipal Director's Office (Agriculture Department), Bukoba Municipal Council, 2017

3.1.4 Crop Marketing

According to Kagera Region Agriculture Sample Census of 2007/08, Bukoba Urban/Municipal Council had the smallest number of households (1,035) reporting to have sold crops while Karagwe District Council which by that time included Kyerwa District Council was the first to sell crops with 116,141 households. Biharamulo District Council had 78,738 households which reported to have sold crops. Other councils which managed to sell crops were Ngara (63,879 households), Muleba (61,388 households), Missenyi (50,723 households) and Bukoba Rural (41,546 households).

3.1.5 Irrigation



Water is the limiting factor to crop production in the majority of areas in Tanzania and without it most agricultural practices applied to crops do not result in significant yields. According to information received in 2015 from agriculture and Livestock department in Bukoba Municipal Council, there were 14.8 ha estimated potential for irrigation. Of the total hectares potential for irrigation, four hectares (27 percent) are areas under irrigation which are

in Buhembe Ward, 20 percent (3 ha) are in Nyanga Ward, and the remaining 16.8 percent 2.5(ha) are in Nshambya Ward. There are more potential areas for irrigation in Miembeni, Kahororo, Kibeta and Bukoba wards. Horticultural crops are the only crops under irrigation.

3.1.6 Agriculture Inputs

The nature of soil in Bukoba Municipal Council requires an application of fertilizers otherwise, the yields become poor. Thus, for better production of various crops in the council, the use of fertilizers as well as fungicides and insecticides is essential.

3.1.6.1 Chemical/Inorganic Fertilizers

Soil infertility, plant pests and diseases are among factors which limit agricultural production in Bukoba Municipal Council. The council's soils depended on application of chemical fertilizers for optimum crop harvests. Crops such as maize demand the use of chemical fertilizers for optimum harvests. Likewise, horticultural crops such as tomatoes require the use of pesticides for control of insect infestation and plant diseases.

Table 3.5 gives information on the distribution of essential agricultural inputs in the council for the last five years from 2011-2015. The main type of fertilizers in use was NPK (53.9 percent of total Kgs of fertilizers distributed to farmers) followed by CAN (46.5 percent was distributed to farmers), TSP and UREA distributed in small quantity of 5.4 and 6.3 percent respectively.

Table 3.5: Type and Quantity of Chemical Fertilizers (Kgs) Distributed to Farmers; Bukoba Municipal Council; 2011- 2015

Type	2011	2012	2013	2014	2015	Total (Kg)	Annual average	Percentage
NPK	1,500	2,500	3,600	3,500	6,000	17,100	3,420.0	53.9
DAP	1,000	500	2,400	2,500	4,500	10,900	2,180.0	34.4
UREA	500	250	150	100	1,000	2,000	400.0	6.3
TSP	250	250	125	100	1,000	1,725	345.0	5.4
CAN	1,500	2,000	2,750	3,000	5,500	14,750	2,950.0	46.5
Total	3,250	3,500	6,275	6,200	12,500	31,725	6,345.0	1

Source: Bukoba Municipal Director's Office (Agriculture Department), Bukoba Municipal Council, 2017

3.1.6.2 Fungicides, Insecticides and Improved seeds

Fungicides prevent crops from fungus. Pesticides are chemicals used for controlling insects and diseases while herbicides are used to control weeds

Fungicides

Table 3.6 shows that over the season of 2011 – 2015, 1,192 litres (238.4 litres on average annually) of fungicides were distributed to farmers in Bukoba Municipal Council. Victory, accounting for 23.7 percent, was the most distributed fungicide followed by mancozeb 22.3 percent, farmzeb (20.2 percent), grider (17.8 percent) and bravo (16.0 percent) was the last and the least fungicide applied by farmers in Bukoba Municipal Council.

Table 3.6: Type and Quantity of Fungicides (in Litres) Distributed to Farmers Bukoba Municipal Council; 2011-2015

Year	2011	2012	2013	2014	2015	Total Annual Litres	Annual Average Litres	Percentage
Victory	40	38	60	71	73	282	56.4	23.7
Mancozeb	35	46	43	56	86	266	53.2	22.3
Farmzeb	25	42	49	64	61	241	48.2	20.2
Bravo	45	19	27	41	59	191	38.2	16
Gridex	20	32	41	48	71	212	42.4	17.8
Total	165	177	220	280	350	1192	238.4	1

Insecticides

Table 3.7 shows that over the season of 2011 – 2015, 562 litres (112.4 litres on average annually) of insecticides were distributed to farmers in Bukoba Municipal Council. Selecron accounting for 23.7 percent of 562 litres of insecticides was the most distributed insecticide. It was followed by supercron (19.6 percent), malathion (16.4 percent), alphacypermethrin (16.2 Percent) and sumuthion (12.8 percent). It is also observed that mukpar-dimethoate (11.4 percent) was the least distributed insecticide. Regarding the distribution of insecticides, 180 litres of the distributed insecticides constituted the biggest amount (32 percent) which was distributed in 2014 while the lowest amount (100 litres) was distributed in the season of 2011.

Table 3.7: Type and Quantity of Insecticides (in Litres) Distributed to Farmers; of Bukoba Municipal Council; 2011-2015

Type of Insecticides	2011	2012	2013	2014	2015	Annual Total Litres	Annual Average Litres	Percentage
Selecron	22	30	36	45	35	133	26.6	23.7
Supercron	25	20	27	38	22	110	22	19.6
Sumuthion	8	10	28	26	20	72	14.4	12.8
Malathion	20	22	22	28	19	92	18.4	16.4
Alphacypermethrin	10	21	39	21	11	91	18.2	16.2
Mukpar-Dimethoate	15	14	13	22	18	64	12.8	11.4
Total	100	117	165	180	125	562	112.4	1
Percent	17.8	20.8	29.4	32.0	22.2	100		

Source: Bukoba Municipal Director's Office (Agriculture Department), Bukoba Municipal Council 2017

Improved Seeds

The use of improved seeds is important for increasing crop yield. According to Kagera Region Agriculture Sample Census - 2007/08, Bukoba Municipal Council had the highest percentage (15.4 percent) of the area planted using improved seeds during the short rainy season and a small number of households received extension advice. From Table 3.8, 79.7 percent of the improved seeds distributed to farmers were sweet potatoes followed by cassava (19.1 percent). Improved seeds of largest quantity of 1,324,437 kg (21 percent) were distributed over the season of 2015. The least distribution of 1,060,035 kg (17.2 percent) was recorded in crop season of 2011.

Table 3.8: Type and Quantity of Improved seeds (Kgs) Distributed to Farmers, Bukoba Municipal Council; 2011-2015

Type of Improved seed	2011	2012	2013	2014	2015	Total Kgs	Annual Average Kgs	Percent
Banana	4,720	3,913	4,198	1,930	1,816	16,577	3315.4	0.3
Maize	5,500	5,570	7,300	6,260	7,000	31,630	6326	0.5
Beans	3,000	4,500	3,750	4,200	4,800	20,250	4050	0.3
Cassava	221,015	307,520	208,000	244,000	200,000	1,180,535	236,107	19.1
Sweet Potatoes	830,000	920,830	1,050,240	1,015,000	1,110,001	4926071	985,214.2	79.7
Coffee(seedlings)	1,800	1,350	2,950	960	820	7,880	1,576	0.1
Total	1,066,035	1,243,683	1,276,438	1,272,350	1,324,437	6,182,943	1,236,589	100
Percent	17.2	20.1	20.6	20.6	21	100		

Source: Bukoba Municipal Director's Office (Agriculture Department), Bukoba Municipal, 2017

3.1.7 Investment Opportunities in Agriculture sector

Like other urban areas, farming in Bukoba Municipal Council, to large extent, is limited by inadequacy of land for agriculture that would be suitable for large scale farming. Hence, small scale farming is very common. With favorable rainfall and climate, horticultural crops and banana are preferable crops for agricultural investment in the council. Mechanized agriculture with optimum use of farm inputs is the best way of maximizing crop yield in a limited agricultural land available in the Municipal Council. On the other hand, basing on the location of Bukoba which is the place where the Kagera Regional Office is situated, the Municipal Council forms the economic hub of the region by receiving agro-based agricultural produces from all other seven councils of Kagera Region. Likewise, investment can be made on food processing industries such as maize milling and flour packaging. Kagera Region, being among the major regions in Tanzania Mainland for coffee and banana production, information centre can be established in Bukoba Municipal Council essential for providing marketing information to peasant farmers especially linking peasant farmers to reliable coffee and banana markets within and outside the country. Sales of farm inputs and implements at affordable prices are other important areas for investment.

3.2 Livestock

3.2.1 Introduction

The urban nature of the Municipality has made livestock keeping not much of an economic activity. Shortage of grazing land and by-laws introduced by Bukoba Municipal Council which prevent massive livestock keeping are among the reasons for the council to have the lowest percentage of households involved in livestock keeping. However, cattle, goat, sheep, pigs and poultry are some of the livestock kept under zero grazing in the Municipality.

3.2.2 Livestock Population

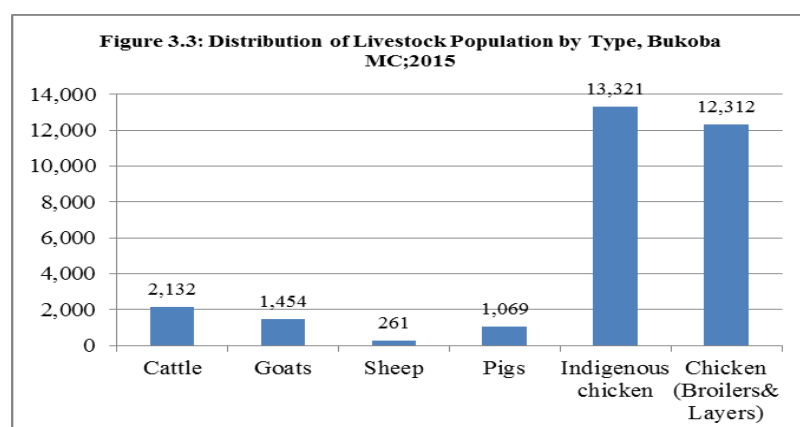


Figure 3.3 and Table 3.9 display estimated livestock population by ward in Bukoba Municipal Council in 2015. Cattle were the leading large domestic livestock (2,132) followed by goats (1,454) and pigs (1,069). However, sheep is the least livestock kept in Bukoba council C. Regarding poultry, indigenous poultry were the majority

(13,321) while broilers and layers were minority types of chicken (12,312). Distribution of livestock population by ward is shown in Table 3.8. The table reveals that Kashai Ward had the biggest number of cattle (403), pigs (321) and indigenous chicken (1,787). Goats were concentrated in Nyanga Ward (219) while Kahororo Ward had the biggest number of sheep (55). Kitendaguro Ward led in broilers and layers (3,762).

Table 3.9: Estimated Livestock Population by Ward, Bukoba Municipal Council; 2015

Ward	Cattle	Goats	Sheep	Pigs	Indigenous chicken	Chicken (Broilers & Layers)
Bukoba	152	119	3	9	1,872	489
Bilele	32	34	0	0	791	520
Buhembe	166	95	27	49	513	1,251
Hamugembe	81	67	0	76	1,708	689
Ijuganyondo	192	148	14	38	445	465
Kahororo	309	173	55	27	425	0
Kashai	403	137	35	321	1,787	766
Kagondo	108	135	42	95	829	400
Kibeta	114	52	8	164	1,054	478
Kitendaguro	160	96	3	18	372	3,762
Miembeni	59	35	3	0	301	1,627
Nyanga	166	219	36	224	1,453	0
Nshambya	97	77	25	27	654	345
Rwamishenye	93	67	10	21	1,117	1,520
Total	2,132	1,454	261	1,069	13,321	12,312

Source: Municipal Director's Office, (Livestock Department), Bukoba Municipal Council, 2015

3.2.3 Poultry Population



Poultry is by far the largest livestock group and is estimated to be about 14,000 million worldwide, consisting mainly of chickens, ducks and turkeys in the world (FAO 1999). In total, poultry products (eggs and meat) constitute 30% of all animal protein consumed worldwide.

Poultry farming plays a significant role in rural and urban people's lives and

contributes significantly to poverty alleviation and improvement of food security with high nutrition. In Bukoba Municipal Council, poultry farming is an emerging industry and hygienic poultry production can pave way to better income and sustainable development. Table 3.10 indicates that the largest number of poultry was found in Kitendaguro Ward (4,134), followed by Rwamishenye Ward (2,637).

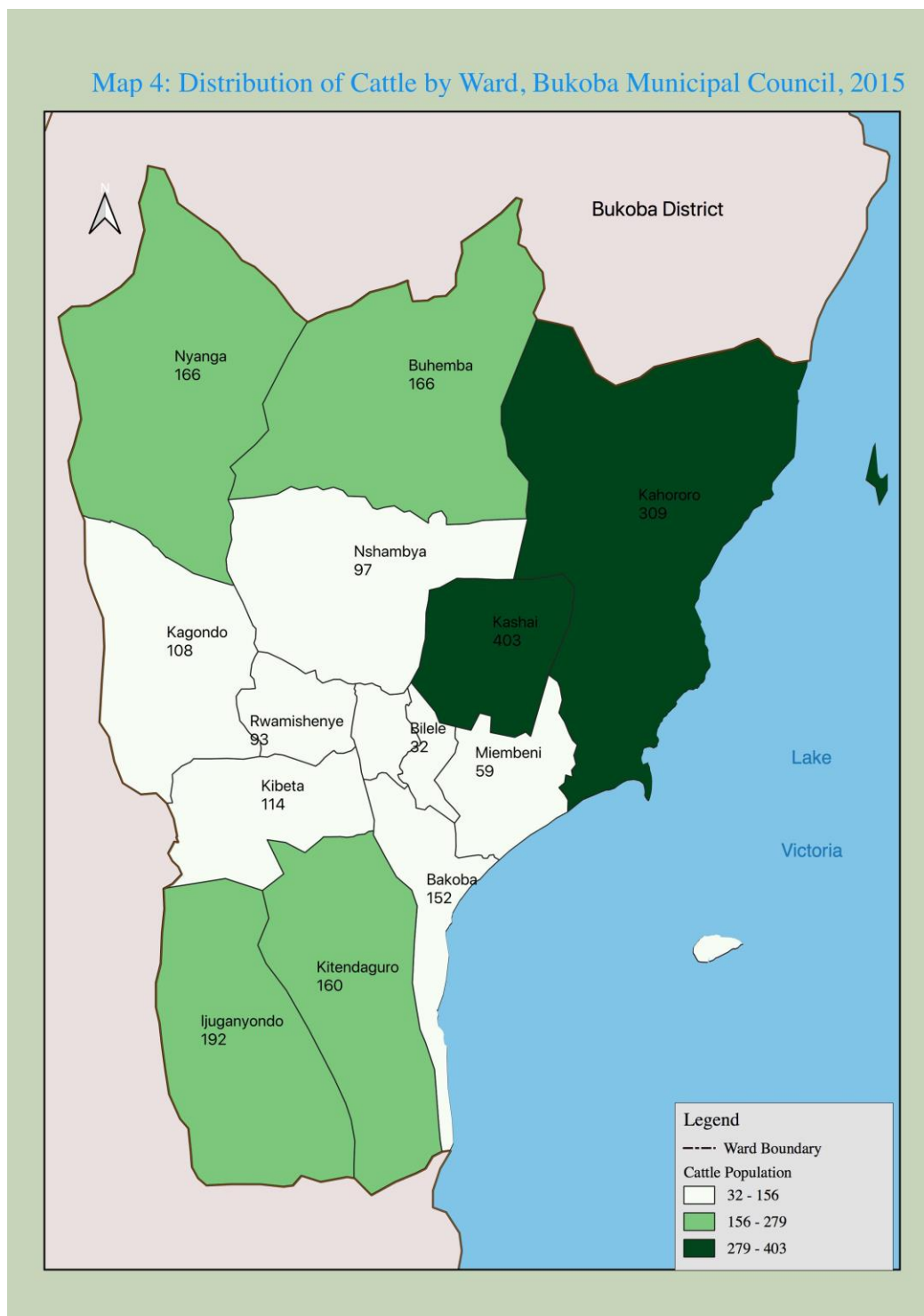
Table 3.10: Estimated Chicken Population by Ward, Bukoba Municipal Council; 2015

Ward	Indigenous chicken	Chicken broilers and layers	Total	Percent
Bakoba	1,872	489	2,361	9.2
Bilele	791	520	1311	5.1
Buhembe	513	1,251	1764	6.9
Hamugembe	1,708	689	2,397	9.4
Ijuganyondo	445	465	910	3.6
Kahororo	425	0	425	1.7
Kashai	1,787	766	2,553	10
Kagondo	829	400	1229	4.8
Kibeta	1,054	478	1,532	6
Kitendaguro	372	3,762	4134	16.1
Miembeni	301	1,627	1928	7.5
Nyanga	1,453	0	1,453	5.7
Nshambya	654	345	999	3.9
Rwamishenye	1,117	1,520	2,637	10.3
Total	13,321	12,312	25,633	100

Source: Municipal Director's Office, (Livestock Department), Bukoba Municipal Council, 2015

3.2.4 Cattle Population

Table 3.11 shows that indigenous (33.3 percent) and improved dairy cattle (72.7 percent) were the only types of cattle in the Municipality in 2015. The ward with the largest number of cattle was Kashai which had 403 cattle (18.9 percent of the total cattle in the Municipality). This was followed by Kahororo Ward (309) and Ijuganyondo Ward (192). The least number of cattle was in Bilele Ward (32 cattle).



Source: Cartographic Unit, NBS, Dsm, 2017

Table 3.11: Distribution of Cattle by Ward and Type, Bukoba Municipal Council;2015

Ward	Indigenous Cattle	Dairy Cattle	Total	Percent
Bakoba	0	152	152	7.1
Bilele	0	32	32	1.5
Buhembe	138	28	166	7.8
Hamugembe	0	81	81	3.8
Ijuganyondo	119	73	192	9.0
Kahororo	25	284	309	14.5
Kashai	21	382	403	18.9
Kagondo	79	29	108	5.1
Kibeta	18	96	114	5.3
Kitendaguro	128	152	160	7.5
Mienbeni	0	59	59	2.8
Nyanga	123	43	166	7.8
Nshanbya	38	59	97	4.5
Rwamishenye	14	79	93	4.4
Total	703	1549	2132	100.0
Percentage by Type	33.3	72.7	100	

Source: Directors Office, (Livestock Department), Bukoba Municipality Council, 2015

3.2.5 Goat population

Goat rearing was the third most important livestock keeping activity in Bukoba Municipal Council. Table 3.12 shows that the ward with the largest number of goats was Nyanga which had about 15.1 percent of the total goats in the Municipality. This was followed by Kahororo Ward (11.9 percent). Table 3.12 also shows that goat husbandry in the Municipality was dominated by the indigenous breeds that constituted 83.6 percent of the total goats in the council while improved dairy goats constituted only 16.4 percent.

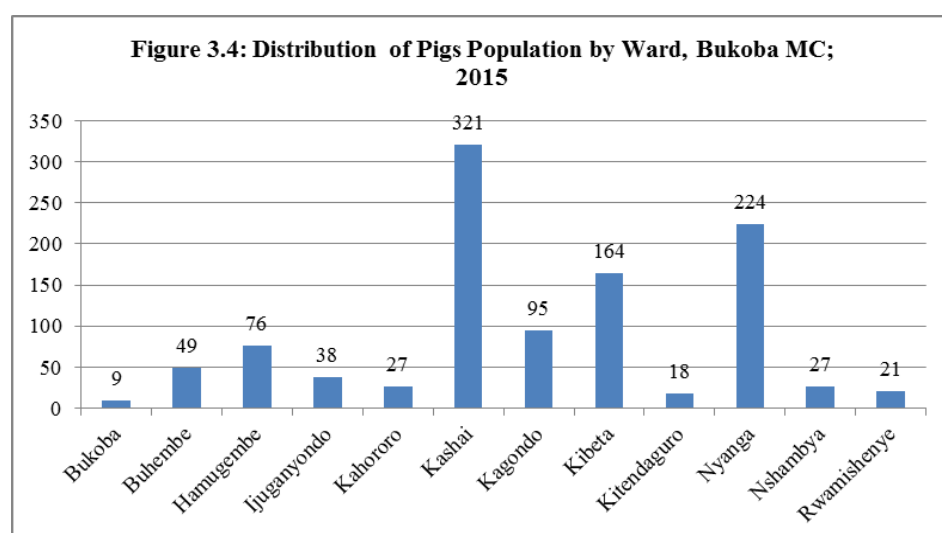
Table 3.12: Distribution of Goats by Ward and Type, Bukoba Municipal Council;2015

Ward	Population of Goats by Type		Total	Percent of Goat by Ward
	Indigenous Goats	Dairy Goats		
Bakoba	102	17	119	8.2
Bilele	34	0	34	2.3
Buhembe	77	18	95	6.5
Hamugembe	46	21	67	4.6
Ijuganyondo	139	9	148	10.2
Kahororo	173	0	173	11.9
Kashai	106	31	137	9.4
Kagondo	97	38	135	9.3
Kibeta	31	21	52	3.6
Kitendaguro	83	13	96	6.6
Miembeni	22	13	35	2.4
Nyanga	202	17	219	15.1
Nshambya	56	21	77	5.3
Rwamishenye	48	19	67	4.6
Total	1216	238	1454	100.0
Percent of Goats by Type	83.6	16.4		

Source: Director's Office, (Livestock Department), Bukoba Municipal Council, 2015

3.2.6 Pig Production

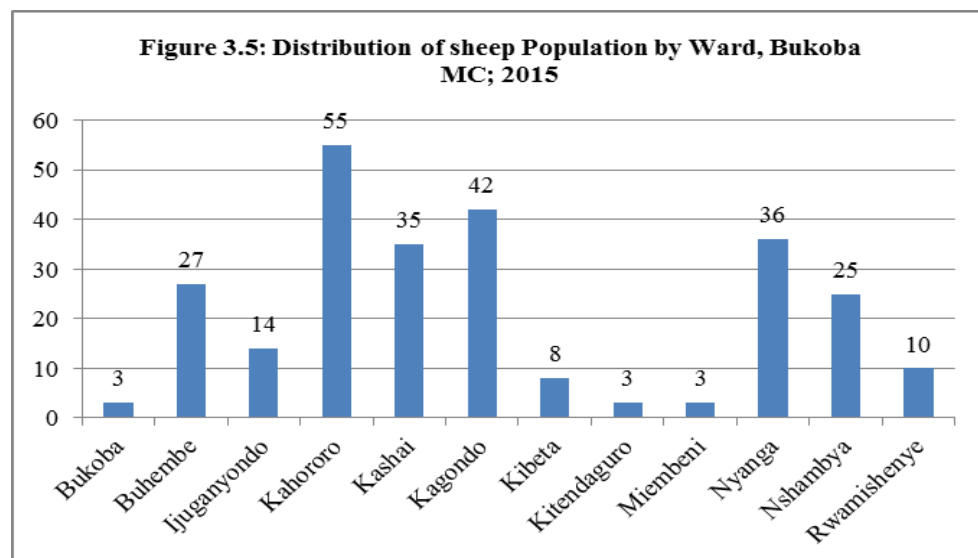
Pigs play an increasingly important role in the livelihood of both urban and sub urban communities. In other areas of the country, community organizations have been practicing pig keeping purposely for improving their livelihood. Pigs were the fourth important livestock in Bukoba Municipal Council after poultry, cattle and goats. According to Figure 3.4, wards with large numbers of pigs were Kashai Ward (321), Nyanga Ward (224), Kibeta Ward (164) and Kagondo Ward (95).



Source: Director's Office, (Livestock Department), Bukoba Municipal Council, 2015

3.2.7 Sheep Production

Sheep were the last and fifth important livestock in Bukoba Municipal Council after poultry, cattle, goats and pigs. The ward with the largest number of sheep was Kahororo Ward (55 sheep) followed by Kagondo Ward (42 sheep), Nyanga Ward (36 sheep) and Kashai Ward (35 sheep).



Source: Director's Office, (Livestock Department), Bukoba Municipal Council, 2015

3.2.8 Grazing Land Area

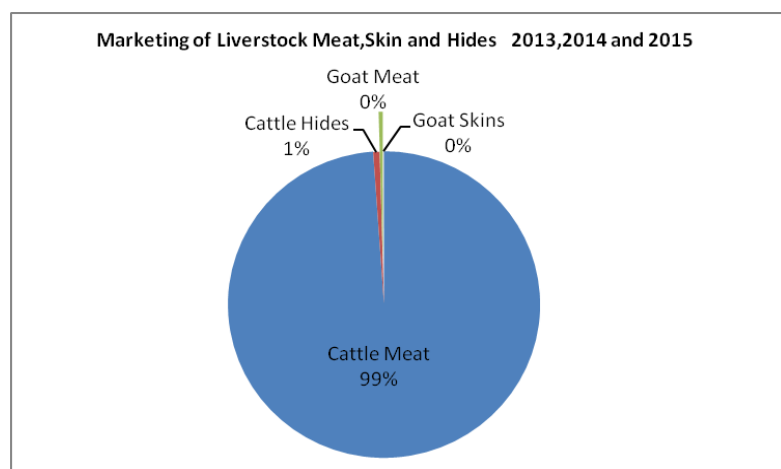
Grazing land is defined as the land that is available for the grazing needs of livestock. It excludes all tsetse fly infested areas, all wildlife and forest reserves also tree plantations, but it includes game controlled areas. In many cases, it overlaps arable land and areas for other use. Due to urban characteristics, there is a serious shortage of grazing land in the Municipality. Zero grazing, however, happens to be the only means of livestock keeping and feeding.

3.2.9 Livestock Infrastructure

Livestock quality improvement is limited due to difficulties in accessing facilities capable of controlling or preventing animal diseases. Diseases affect animal health and reduce both meat and milk production in terms of quality and quantity and, in some cases, cause deaths to the affected animals.

Delivery of livestock health services depends on facilities such as dips, veterinary health centers and water sources. Reports from agriculture and livestock department show that the Municipal Council has critical shortage of livestock infrastructure. This is true as only two wards; Miembeni and Rwamishenye have the facilities.

3.2.10 Marketing Livestock Products



Due to high demand and good transportation infrastructure, urban areas provide reliable marketing place for livestock products than rural areas. Bukoba Municipal Council had no official market available to record the sold livestock. Furthermore, unreliability of data on the marketed livestock and their products from grass roots to council level is still a challenge

in Bukoba Municipal Council. Besides, data collection on the marketed livestock and their products can be improved by having reliable sources where data can be captured. Marketed livestock information can well be captured if livestock markets or auctions are well monitored and supervised by government officials.

Table 3.13 and the figure above give the quantity and value of dominant livestock products marketed in the Municipality in 2013, 2014 and 2015. Bukoba Municipal Council sold 3,659,700 kgs of cattle meat and 15,570 kgs of goat meat whereby Tshs.16, 916,250,000 and 83,070,000 from selling cattle and goat meat were earned in the period of three years from 2013 to 2015. Moreover, Bukoba Municipal Council earned Tsh.222,634,000 from selling 24,398 kgs of cattle hides and Tsh,2,966,000 from selling 1,038 kgs of goat skin in the same period. The highest earnings from cattle meat was Tshs.16, 916,250,000 which was equivalent to 98.2 percent of total revenue earned from selling of livestock products in the Municipality.

Table 3.13: Marketing of Livestock, Hides and Skins; Bukoba Municipal Council; 2013, 2014 and 2015

Category	Total Number of Units Marketed(Kg)				Total Value in T.Shs. '000'			Total	Percent
	2013	2014	2015	Total	2013	2014	2015		
Cattle Meat	953,850	862,800	1,843,050	3,659,700	3,818,400	3,882,600	9,215,250	16,916,250	98.2
Cattle Hides	6,359	5,752	12,287	24,398	50,872	48,892	122,870	222,634	1.3
Goat Meat	4,830	5,520	5,220	15,570	24,150	27,600	31,320	83,070	0.5
Goat Skins	322	368	348	1,038	644	1,104	1,218	2,966	0.0
Sheep Skins	0	0	0	0	0	0	0	0	0
Total	965,361	874,440	1,860,905	3,700,706	3,894,066	3,960,196	9,370,658	17,224,920	100

Source: Bukoba Municipal Director's Office, (Livestock Department), Bukoba Municipal Council, 2017

3.2.11 Milk Production

Milk is an important livestock product which contributes significantly to income generation to both urban and rural population. By knowing the role of milk in health improvement and reduction of poverty, the government of Tanzania always emphasizes on dairy cattle keeping in order increasing milk production. Table 3.14 shows that from 2013 to 2015 13,816,450 litres of milk were produced in Bukoba Municipal Council which was valued at Tsh. 12,954,111,000. The average price per litre ranged between Tsh. 895 in 2013 and Tsh. 1,000 in 2015.

Table 3.14: Number of Liters of Milk Produced, Bukoba Municipal Council; 2013- 2015

Year	Total number of Litres	Total Revenue in Tsh.	Average price per Litre
2013	3,189,830	2,853,711,000	895
2014	5,290,621	4,763,833,600	900
2015	5,335,999	5,336,567,000	1,000
Total	13,816,450	12,954,111,600	

Source: Director's Office, (Livestock Department), Bukoba Municipal Council, 2017

3.2.12 Eggs Production

An egg is an important chicken product which contributes significantly to income generation in urban population. According to Table 3.15, exotic breed was the main producer of eggs than indigenous chicken. Table 3.15 also reveals that egg production stood at 4,769,550 in 2013 and increased in 2014 to reach 3,834,570 and then decreased to 3,716,730 in 2015. Revenue collected in 2013 was the highest compared to other years.

Table 3.15: Number of Eggs from Indigenous chicken and Broilers; Bukoba Municipal Council; 2013- 2015

Year	No. of Eggs			Value in Tsh.			Price/Egg	
	Indigenous	Exortic	Total	Indigenous	Exortic	Total	Indigenous	Exortic
2013	476,880	4,292,670	4,769,550	143,064,000	858,534,000	1,001,598,000	300	200
2014	383,460	3,451,110	3,834,570	115,038,000	690,222,000	805,260,000	300	200
2015	348,562	3,368,168	3,716,730	121,996,700	842,042,000	964,038,700	350	250
Total	1,208,902	11,111,948	12,320,850	380,098,700	2,390,798,000	2,770,896,700		
Percent	9.8	90.2		13.7	86.3			

Source: Director's Office, (Livestock Department), Bukoba Municipal Council, 2017

3.2.13 Status of Livestock Staff

Human resource is important for good performance of the livestock sector. With reference to Table 3.16, by the end of 2015, Bukoba Municipal Council had 17 staff in livestock department. There were 16 livestock field officers (94 percent) who were headed a livestock officer. At ward level, Miembeni Ward where the council's head office is located had more staff (9 staff, 52.9 percent) compared to

other wards. The remaining wards each had one staff except Bilele, Buhembe, Ijuganyondo, Kahororo and Kitendaguro wards which had none.

Table 3.16: Availability of Livestock Personnel by Ward, Bukoba Municipal Council; 2015

Ward	Veterinary Officers	Livestock Officers	Livestock Field Officers	Pests and Tsetse Field Officers	Livestock Auxiliary	Total	Percent
Bakoba	0	0	1	0	0	1	5.9
Bilele	0	0	0	0	0	0	0
Buhembe	0	0	0	0	0	0	0
Hamugembe	0	0	1	0	0	1	5.9
Ijuganyondo	0	0	0	0	0	0	0.0
Kahororo	0	0	0	0	0	0	0.0
Kashai	0	0	1	0	0	1	5.9
Kagondo	0	0	1	0	0	1	5.9
Kibeta	0	0	1	0	0	1	5.9
Kitendaguro	0	0	0	0	0	0	0.0
Miembeni	0	1	8	0	0	9	52.9
Nyanga	0	0	0	0	0	0	0.0
Nshambya	0	0	1	0	0	1	5.9
Rwamishenye	0	0	1	0	0	1	5.9
Total	0	1	16	0	0	17	100.0

Source: Director's Office, (Livestock Department), Bukoba Municipal Council, 2017

3.2.14 Major Livestock Diseases

The livestock industry is extremely important to the economy of Bukoba Municipal Council and includes not only commercial producers of meat or milk, but also small producers with few animals. The success of any type of livestock operation is closely related to the disease level of the animals. Losses due to disease originate in many ways. Some are obvious, such as death, medication costs and disqualification at the processing plant. Others are sometimes less obvious, such as poor growth, poor production, poor feed conversion, and downgrading.

3.2.14.1 Cattle Diseases

Table 3.17 shows that helminthiasis, east coast fever (ECF), anaplasmosis, foot mouth diseases (FMD), diarrhoea, lymphoskin, pneumonia and milk fever were the sources of cattle illnesses and deaths in the Municipality. Out 2,747 morbidity cases, 55 cases resulted into cattle deaths which were equivalent to 2.0 percent of the reported morbidity cases. Both number of morbidity and mortality cases of cattle were fluctuating. Morbidity cases reached the peak of 1,113 cases in 2013 while mortality cases were 20 cases in 2013. Helminthiasis (2,474 morbidity cases, equivalent to 90.1 percent) was the main source of cattle illness while east coast fever caused much of cattle deaths of 22 cases (40.0 percent).

Table 3.17: Five Major Cattle Diseases Reported by Ward, Bukoba Municipal Council, 2013, 2014 and 2015

Disease	Number of Morbidity cases reported					Number of Mortality cases reported				
	2013	2014	2015	Total	Percent	2013	2014	2015	Total	Percent
ECF	32	20	24	76	2.8	10	6	6	22	40.0
ANAPLASMOSIS	16	8	13	37	1.3	5	4	3	12	21.8
DIARRHOEA	11	8	9	28	1.0	2	3	2	7	12.7
MASTITIS	8	6	5	19	0.7	0	0	0	0	0
HEALMINTHIOSIS	1,002	662	810	2,474	90.1	0	0	0	0	0
FMD	12	9	12	33	1.2	0	0	1	1	1.8
MILK FEVER	6	7	4	17	0.6	0	4	1	5	9.1
LYMPYSKIN	11	6	4	21	0.8	0	0	1	1	1.8
PNEMONIA	7	5	6	18	0.7	2	0	1	3	5.5
CBPP	4	3	7	14	0.5	0	0	2	2	3.6
HEART WATER	4	2	4	10	0.4	1	0	1	2	3.6
Total Cases	1,113	736	898	2,747	100.0	20	17	18	55	100.0

Source: Director's Office, (Livestock Department), Bukoba Municipal Council, 2017

3.2.14.2 Goat Diseases

Table 3.18 shows a list of common diseases which caused goat's morbidity and mortality in Bukoba Municipal Council in 2013 to 2015. As it was for cattle, helminthiasis (77.0 percent) happened to be the main cause of goat's morbidity in the Council and diarrhea (57.9 percent) was the main cause of goat's mortality. Moreover, pneumonia and mange disease were the second sourcecause of goat's mortality. FMD and Lumpkin disease insignificantly endangered goat's health and life.

Table 3.18: Three Major Goat Diseases Reported by Ward, Bukoba Municipal Council; 2013, 2014 and 2015

Disease	Number of Morbidity cases reported					Number of Mortality cases reported				
	2013	2014	2015	Total	Percent	2013	2014	2015	Total	Percent
HEALMINTHIOSIS	829	801	966	2,596	77.0	0	0	0	0	0
FMD	18	17	10	45	1.3	1	0	0	1	2.6
LYMPY SKIN	5	4	9	18	0.5	1	0	0	1	2.6
PNEUMONIA	28	16	32	76	2.3	2	1	5	8	21.1
DIARRHOEA	136	105	110	351	10.4	12	5	5	22	57.9
MANGE	5	149	131	285	8.5	1	0	5	6	15.8
Total Cases	1,021	1,092	1,258	3,371	100.0	17	6	15	38	100.0

Source: Director's Office, (Livestock Department), Bukoba Municipal Council, 2017

3.2.14.3 Sheep Diseases

Information from Table 3.19 reveals that for the period of 2013 to 2015, helminthiasis (89.2 percent) was the main cause of all reported morbidity while diarrhea (71.4 percent) was the main cause of mortality cases for sheep in Bukoba Municipal Council. The highest morbidity cases of 230 were recorded in 2013 while the highest mortality cases of three cases were recorded in 2015.

Table 3.19: Three Major Sheep Diseases Reported by Disease, Bukoba Municipal Council; 2013, 2014 and 2015

Disease	Number of Morbidity Cases Reported					Number of Mortality Cases Reported				
	2013	2014	2015	Total	Percent	2013	2014	2015	Total	Percent
HEALMINTHOSIS	206	143	170	519	89.2	0	0	0	0	0
FMD	5	0	1	6	1.0	0	0	0	0	0
DIARRHOEA	14	13	14	41	7.0	1	2	2	5	71.4
ABSES	0	0	1	1	0.2	0	0	0	0	0
WOUND	2	1	1	4	0.7	0	0	0	0	0
PNEMONIA	0	0	1	1	0.2	0	0	0	0	0
LYMPY SKIN	0	2	0	2	0.3	0	1	0	1	14.3
MASTITIS	2	0	1	3	0.5	0	0	0	0	0
POISONOUS	1	0	4	5	0.9	0	0	1	1	14.3
Total Cases	230	159	193	582	100.0	1	3	3	7	100.0

Source: Director's Office, (Livestock Department), Bukoba Municipal Council, 2017

3.2.14.4 Poultry Diseases

Based on Table 3.20, coccidiosis, new castle, fowl typhoid, infectious coryza, fowl cholera and helminthiasis were the common poultry diseases identified in the Municipality. Coccidiosis caused much of poultry illnesses (6,013 reported cases) while most of poultry deaths (3,242) were caused by new castle disease. Basing on these data, priority of improvement of poultry industry in Bukoba Municipality should be directed at controlling coccidiosis which is the main threat to poultry health whiles controlling new castle disease will help to reduce poultry deaths.

Table 3.20: Major Poultry Diseases in Bukoba Municipal Council; 2013, 2014 and 2015

Disease	Number of Morbidity cases reported				Number of Mortality cases reported			
	2013	2014	2015	Total	2013	2014	2015	Total
Coccidiosis	2,463	1,522	2,028	6,013	166	179	181	526
Newcastle disease	1,131	1,135	981	3,247	1,131	1,133	978	3,242
Fowly thyphoid	885	562	843	2,290	137	105	151	393
Infectious coryza	463	436	183	1,082	33	44	58	135
Fowl cholera	1,236	700	390	2,326	91	108	46	245
Healminthiosis	567	458	329	1,354	0	0	0	0
Total Cases	6,745	4,813	4,754	16,312	,1558	1,569	1,414	4,541

Source: Director's Office, (Livestock Department), Bukoba Municipal Council, 2017

3.2.14.5 Investment Opportunities in Livestock sub sector

Investment in this sub sector can focus on dairy farming and livestock processing industries such as milk processing, leather tanning and meat canning. Precisely, the Municipality needs to look at the following possibilities:-

1. **Meat processing:** The Municipality needs to have modern abattoir. The abattoirs can be used as slaughtering and meat processing area. It can also act as local markets for livestock keepers.
2. **Animal feeds:** Supplement feeds can be manufactured and sold to farmers. Fodder can also be planted and the selling hay or seeds that can improve range land in the Municipality,
3. **Animal services and pharmaceuticals:** Establish animal pharmaceutical shops and veterinary centres where qualified veterinary and livestock officers can offer consultancy services especially in sub urban areas of the Municipality,
4. **Grazing land:** To avoid further increase of land pressure for grazing land, well designed urban planning is important to carter the demand. Knowledge on zero grazing to livestock keepers is also important for urban livestock keeping.

3.3 Natural Resources

Natural resource sector is comprised of forestry, hunting, beekeeping and tourism. The forestry sub sector plays an important role in maintaining ecological balance, protect soils from erosion and conserves water and wildlife. Forests are sources of domestic energy and provide industrial raw materials. Forests also provide useful non-wood products mainly honey and bee wax.

Urbanization of Bukoba Municipal Council is accompanied by rapid population growth. Social impact associated to this includes changes of natural resources use and economic activities. Protection of natural resources is the most challenging problem facing management of urbanization process in Bukoba Municipal Council. This is true as high urban population growth raised the need for the Bukoba Municipal Council to have well planned, surveyed and serviced land for households and public uses which all these processes put more pressure on natural resources. In due cause, balancing urban development and management processes against natural resources protection guiding principles is important for sustainable development of the Municipal Council.

3.3.1 Tree Plantation

Table 3.21 shows tree seedlings raised by wards whereby Table 3.21 shows tree seedlings raised by institutions over the period of 2011 – 2015. Tree seedlings raised by wards (305,114) were much higher (91.2 percent) compared to 26,862 tree seedlings raised by institutions. Considering Table 3.21, Buhembe Ward raised the largest number of tree seedlings of 44,759 (14.7 percent). The smallest number of tree seedlings (3,042) was raised in Rwamishenyi Ward. Among institutions which used to raise tree seedlings in Bukoba Municipality, Mayawa led by planting 11,517 tree seedlings while Bukoba Municipal Council raised the smallest number of tree seedlings of 4,205 (15.7 percent).

Table 3.21: Number of Tree Seedlings Raised by Ward; Bukoba Municipal Council; 2011 – 2015

Ward	Number of Tree Seedlings Raised					Total	Percent
	2011	2012	2013	2014	2015		
Kitendaguro	3,785	3,445	4,381	10,020	8,130	29,761	9.8
Hamugembe	0	195	897	625	485	2,202	0.7
Kahororo	0	5,510	4,788	3,368	3,520	17,186	5.6
Kibeta	0	3,901	6,270	6,012	8,700	24,883	8.2
Kashai	0	7,670	5,281	3,060	2,280	18,291	6.0
Kagondo	0	4,762	3,090	8,873	11,500	28,225	9.2
Bakoba	1,239	4,669	3,119	2,400	1,850	13,277	4.4
Nyanga	5,219	6,318	8,100	7,670	12,800	40,107	13.1
Bilele	0	1,878	855	967	782	4,482	1.5
Buhembe	1,264	5,445	9,408	11,442	17,200	44,759	14.7
Miembeni	1,783	1,765	520	559	1,870	6,497	2.1
Nshambya	4,823	6,706	5,872	7,708	9,300	34,409	11.3
Rwamishenye	0	544	1,003	820	675	3,042	1.0
Ijuganyondo	6,272	7,807	6,548	8,118	9,278	38,023	12.5
Total	24,385	60,615	60,132	71,642	88,370	305,144	100.0

Source: Director's Office, (Natural Resources office), Bukoba Municipal Council, 2017

Table 3.22: Number of Tree Seedlings Raised by Institutions; 2011 - 2015

Institution	Number of Tree Seedlings Raised					Total	Percent
	2011	2012	2013	2014	2015		
BUKoba MC	890	1,175	940	860	340	4,205	15.7
MAYAWA	2,116	1,862	2,739	2,500	2,300	11,517	42.9
VI – AGRO -FORESTRY	2,456	1,985	2,356	2,213	2,130	11,140	41.5
Total	5,462	5,022	6,035	5,573	4,770	26,862	100.0

Source: Director's Office, (Natural Resources office), Bukoba Municipal Council, 2017

3.3.2 Environment Conservation

According to Table 3.23, Bukoba Municipal Council had 13 development partners who, together with NGOs, were involved in environment conservation in Bukoba Municipality. Planting trees is among the major activities which were done by the NGOs and development partners.

Table 3.23: Name of NGOs and Number Development Partners Involved in Environmental Conservation by Ward, Bukoba Municipal Council; 2015

Ward	Name of NGOs	Number of Development Partners
Kahororo	Kifungu BMU	1
Bakoba	Forodhani BMU	1
Miembeni	Nyamkazi BMU	1
Bilele	Kagera Enviromental Care	1
Bilele	World vision	1
Bilele	BICODEA	1
Bilele	KADETFU	1
Bakoba	VIA Agro - forestry	1
Bilele	Redcross	1
Buhembe	GEFEST	1
Kashai	Abagambakamoi	1
Hamugembe	Abarakimaya	1
Miembeni	Matumaini Mapya	1
Total	13	13

Source: Director's Office, (Natural Resources office), Bukoba Municipal Council, 2017

3.3.3 Beekeeping

Table 3.24 indicates that there were more modern beehives (96) than traditional beehives (37). While modern beehives from 2011 to 2015 were increasing, traditional beehives stood at 32 in 2013 and 2014. Buhembe Ward had the highest number of modern beehives (73 beehives, 73.4 percent of all modern beehives in Bukoba Municipal Council). Kashai Ward had 27 traditional beehives and was the leading ward, followed by Kitendaguro (6 beehives).

Table 3.24: Number of Traditional and Modern Beehives by Ward, Bukoba Municipal Council; 2011 -2015

Ward	No. of Beehives											
	Traditional						Modern					
	2011	2012	2013	2014	2015	Total	2011	2012	2013	2014	2015	Total
Buhembe	0	0	0	0	0	0	2	27	16	21	7	73
Nshambya	2	0	1	0	0	3	1	5	3	1	0	9
Kibeta	0	0	0	0	0	0	0	0	0	0	0	0
Kagondo	0	0	0	0	0	0	1	5	1	3	0	10
Nyanga	0	0	0	0	0	0	0	0	0	0	0	0
Kitendaguro	3	1	2	0	0	6	0	0	0	0	0	0
Ijuganyondo	0	1	0	0	0	1	0	1	1	0	0	3
Rwamishenye	0	0	0	0	0	0	0	0	0	0	0	0
Kashai	17	2	3	0	5	27	0	1	0	0	0	1
Hamugembe	0	0	0	0	0	0	0	0	0	0	0	0
Bakoba	0	0	0	0	0	0	0	0	0	0	0	0
Miembeni	0	0	0	0	0	0	0	0	0	0	0	0
Kahororo	0	0	0	0	0	0	0	1	0	0	0	1
Total	22	3	6	0	6	37	4	39	21	25	7	96

Source: Bukoba Municipal Director's Office (Bee Unit), Bukoba Municipal Council, 2017

3.3.4 Natural Resources Products

3.3.4.1 Forest Products

Due to scarcity of forests, the municipality council does not earn revenue from timber and poles. Bukoba Municipal Council depends on other councils within the region especially Biharamulo and Muleba district councils to get charcoal which is used as a main source of energy for cooking.

3.3.4.2 Beekeeping Products

Table 3.25 indicates that over a three years' period, beekeeping sub sector produced 1,270 kilograms of honey valued at Tshs 12,700,000.00 out of all beekeeping products in the Municipality. In the same period, 50 kgs of bee-wax worth Tshs 675,000.00 was also produced.

Table 3.25: Amount of Honey and Wax produced in Bukoba Municipal Council; 2011 - 2015

Year	Product		Value per Kg	
	Honey(kg)	Bee Wax (kg)	Honey	Bee wax
2013	330	10	3,300,000	135,000
2014	340	13	3,400,000	175,500
2015	600	27	6,000,000	364,500
Total	1270	50	12,700,000	675,000

Source: Bukoba Municipal Director's Office (Bee unit), Bukoba Municipal Council, 2017

3.3.4.3 Fishing



Fishing is another enterprising activity carried out by Bukoba Municipal Council residents. Lake Victoria is the most important fishing ground. This employs about 125 active fishermen. However, most of these fishermen employ traditional fishing methods. It is recommended to use improved and modern facilities for sustainable fishing. Common fish species which are found in Lake Victoria are tilapia, Nile perch, 'dagaa', and *haplochromis*.

Table 3.26 indicates that from January to December, 2015, fishing activities produced 1,803,747 kilograms of fish valued at Tshs. 30,114,569,425. Out of 14 wards in Bukoba Municipal Council, only three wards were involved in fishing activities. Bakoba Ward had 31 fishermen, Miembeni Ward had 45 fishermen and Kahororo Ward had 49 fishermen.

Table 3.26: Fishery Resources and Production in Bukoba Municipal Council from January to December, 2015

Ward	Type of Fishing Resources				Fish Production	
	No. of Fishing licences	No. of Fishermen	No. of Registered Fishing Vessels	No. of Un-Registered Fishing Vessels	Weight (kg)	Value
Bakoba	31	31	15	11	11,450	57,250,000
Kahororo	49	49	32	16	16,150	80,750,000
Miembeni	45	45	42	15	1,776,147	29,976,569,425
Total	125	125	89	42	1,803,747	30,114,569,425

Source: Bukoba Municipal Director's Office (Land and Natural Resources Department), Bukoba Municipal Council, 2017

Table 3.27: Revenue Collection from Fishermen (Tshs) by Ward, Bukoba Municipal Council; 2011 - 2015

Ward	2011	2012	2013	2014	2015	Total
Bakoba	18,957,988	21,698,046	17,285,931	15,471,739	16,175,830	89,589,534
Kahororo	20,342,976	22,209,000	18,423,900	17,353,239	16,725,000	95,054,115
Miembeni	21,725,000	22,721,041	19,423,960	19,235,239	19,000,415	102,105,65
Total	61,025,964	66,628,087	55,133,791	52,060,217	51,901,245	184,643,649

Source: Bukoba Municipal Director's Office (Land and Natural Resources Department), Bukoba Municipal Council, 2017

3.3.5 Tourism

Introduction

Bunena Stone Beach

Tourism is simply referred as travelling from one place to another for study or leisure. There is natural and cultural tourism. Natural tourism includes forests, national park, game reserves, rivers and beaches while cultural tourism includes historical sites and museums.

Bukoba Municipal Council offers very fascinating scenery and most interesting tourist attractions with rains throughout the year and the land is evergreen everywhere. Lake Victoria is the biggest and the second largest fresh water in Africa. It attracts visitors with its waves, beautiful air breeze and diversified fish varieties with the smallest sardines to the giants like Nile perch. Other tourist attractions in Bukoba Municipality are Kagera museum, German cemetery, Kiamunene water falls in Rubale forest, Bunena stone beach and Ntungamo caves etc.



Musira Island



Musira Island can be redeveloped as major tourist attraction through construction of tourists' hotels and other recreational facilities. It is also a good camping site and provides good vision of various tree species, beautiful birds and rocks with different formations. The area is estimated to be 30,000 sq. metre and security is guaranteed.

Safari boats for tourist to Musira Island

Beaches

Bukoba Municipal Council has about eight hectares of lake shore which can be useful for beach facility and recreations.



Lake shore for beach and other recreational facilities

Table 3.28: Historical sites potential/attractive for Tourism; Bukoba Municipal Council; 2015

Type of attraction for Tourism	Mitaa	Ward	District
Miami beach	Nyamukazi	Miembeni	Bukoba MC
Kiloyera	Pwani	Miembeni	Bukoba Mc
Nyamkazi	Nyamkazi	Miembeni	Bukoba Mc

Source: Bukoba Municipal Director's Office (Land and Natural Resources Department), Bukoba Municipal Council, 2017

Hotels and Accommodation Facilities

Bukoba Municipality being the hub of Kagera Region has an adequate number of financial intermediaries such as bureau de change, shops and banks. Easy accessibility of such services is essential for the promotion of tourism industry. Currency conversion and cash transactions are all made possible through availability of those financial facilities. On the other hand, accommodation facilities are important in attracting tourists. Therefore, information about hotels, guest houses, camp sites and lodges is vital for the tourists as it helps them to make a choice on the type of accommodation they prefer as well as compare the quality of services delivered against prices charged.

Bukoba Municipal Council has a remarkable number of accommodation facilities ranging from guest houses to hotels as Table 3.29 indicates. The table also shows that in 2015 the Municipality had 133 guest houses and 18 hotels. The highest number of hotels was found in Miembeni Ward (8 hotels). Bilele Ward had the largest number of guest houses (35 guest houses).

Table 3.29: Accommodation Facilities by Ward: December, 2015

Ward	Number of Accommodation Facilities		
	Guest Houses	Hotel	Total
Bakoba	5	3	8
Bilele	35	4	39
Buhembe	1	0	1
Hamugembe	30	0	30
Ijuganyondo	0	0	0
Kahororo	1	0	1
Kashai	13	0	13
Kagondo	7	0	7
Kibeta	6	0	6
Kitendaguro	0	3	3
Miembeni	13	8	21
Nyanga	4	0	4
Nshambya	2	0	2
Rwamishenye	16	0	16
Total	133	18	151

Source: Director's Office, (Trade unit), Bukoba Municipal Council, 2015



Kolping and Walkguard hotels along Kashura road, Kitendaguro

3.3.6 Investment Opportunities in Natural Resources

(i) Beekeeping

By making consultations with Sokoine University of Agriculture, Department of Forests and Natural Conservation, the Municipality can improve and transform beekeeping into a part-time economic activity. Natural forests available in Rubale forest and few available planted forests can be used as potential areas for investment in beekeeping.

(ii) Tourism

The presence of many tourists' attractions in Bukoba Municipal Council like Lake Victoria shore can be useful for beach. Kanoni river, Kagera museum, German cemetery, Kiamunene water falls in Rubale forest, Bunena stone beach, Ntungamo caves, if they are developed, can become the sources of income for the Council and its people.

(iii) Hotels and Accommodation facilities

Bukoba Municipality, being the hub of Kagera Region, borders with neighbouring Burundi, Rwanda and Uganda. Therefore, investing in accommodation facilities such as hotels, lodges, and guest houses is very ideal in the Municipality.

3.3.7 Mineral Resources

Mining activities in Bukoba Municipal Council include extraction of gravels, sand and stone for construction purposes. In Bukoba Municipal Council, the wards which are the sources of construction materials are Nyanga, Nshambya and Buhembe.

3.4 Industrial sector

Industrial sector is very important in the economy. It is a foreign exchange earner and the main source of employment, especially in urban areas. In Bukoba Municipal Council, industrial sector is increasing drastically. As Table 2.30 shows, the council had 216 small scale industries of which more than half of the industries were wood industries especially carpentry (61) and timber processing (55). Agro-based industries which involved in maize milling were the third dominant small scale industries (42). Sunflower oil processing and tailoring (each with one industry) were the least available small scale industries. At ward level, Kashai Ward had the highest number of industries (44), followed by Hamugembe Ward (36) and Bilele Ward (33). The least number of industries were observed in Jinganyodo Ward (3 industries).

Table 3.30: Type of Small Scale Industries by Ward, Bukoba Municipal Council; 2015

Ward	Sunflower Oil Processing Mill	Garage	Carpentry	Food Processing	Maize Milling	Welding	Timber Processing	Tailoring	Fresh water Industry	Total
Kahororo	1	0	2	0	1	0	0	0	0	4
Miembeni	0	3	5	4	2	3	3	0	0	20
Kashai	0	1	27	1	2	3	10	0	0	44
Nshambya	0	0	1	4	2	0	2	0	0	9
Bakoba	0	0	2	4	1	0	3	0	0	10
Kagondo	0	0	2	0	2	0	1	0	0	5
Nyanga	0	1	0	0	1	1	2	0	0	5
Ijuganyondo	0	1	0	0	1	0	1	0	0	3
Hamugembe	0	3	9	6	5	3	10	0	0	36
Kibeta	0	0	1	0	2	2	3	1	0	9
Bilele	0	3	5	2	16	0	7	0	0	33
Rwamishenye	0	2	5	0	4	5	7	0	0	23
Buhembe	0	0	2	0	2	2	3	0	0	9
Kitendaguro	0	0	0	1	1	1	3	0	0	6
Total	1	14	61	22	42	20	55	1	0	216

Source: Director's Office, (Trade unit), Bukoba Municipal Council, 2015

As Table 2.31 shows, the Council's small scale industry sector employed 1,348 people by December, 2015. Timber processing employed the highest number of people (371) followed by carpentry (320) and maize milling employed 249 people. The least number of people were employed in sunflower oil processing (4 employees).

Table 3.31: Number of Employees in Small Scale Industries by Ward, Bukoba Municipal Council; 2015

Ward	Sunflower Oil Processing Mill	Garage	Carpentry	Food Processing	Maize Milling	Welding	Timber Processing	Tailoring	Fresh water Industry	Total	Percent
Kahororo	4	0	6	0	2	0	0	0	0	12	0.9
Miembeni	0	24	21	31	8	18	7	0	0	109	8.1
Kashai	0	20	81	6	8	6	36	0	0	157	11.6
Nshambya	0	0	4	8	6	0	15	0	0	33	2.4
Bakoba	0	0	14	38	8	0	14	0	0	74	5.5
Kagondo	0	0	6	0	9	0	3	0	0	18	1.3
Nyanga	0	3	0	0	4	3	7	0	0	17	1.3
Ijuganyondo	0	44	0	0	6	4	0	0	0	54	4.0
Hamugembe	0	16	46	19	87	18	114	0	0	300	22.3
Kibeta	0	0	4	0	7	18	13	8	0	50	3.7
Bilele	0	24	30	11	78	0	53	0	0	196	14.5
Rwamishenye	0	17	102	0	17	52	64	0	0	252	18.7
Buhembe	0	0	6	0	4	6	9	0	0	25	1.9
Kitendaguro	0	0	0	4	5	6	36	0	0	51	3.8
Total	4	148	320	117	249	131	371	8	0	1348	100.0
Percent	0.3	11	23.7	8.7	18.5	9.7	27.5	0.6	0	100	

Source: Director's Office, (Trade Unit), Bukoba Municipal Council, 2015

Large and Medium scale industries in Bukoba Municipal Council are involved in water processing, coffee processing and mushroom and vanilla processing. Table 2.32 shows the distribution of the large and medium scale industries by ward and type in Bukoba Municipality in 2015. Moreover, reports from Bukoba Municipality show that coffee and fish are the two large scale industries available in Bukoba Municipality.

Table 3.32: Large and Medium Scale Industries by Ward; Bukoba MC; 2015

Ward	Scale	Type of Industry	Number of Industries
Kashai	Medium	Fresh water processing	1
Kitegaguro	Medium	Tailoring	1
Miembeni	Large	Fish Processing	1
Bakoba	Large	Coffee Processing	2
Kagondo	Large	Mushroom and Vanila Processing	1
Total			6

Source: Director's Office, (Trade unit), Bukoba Municipal Council, 2015

Tanganyika Instant Coffee (TANICA) Co. Ltd

This factory is involved in hulling coffee cherries, roasting, cleaning of coffee and processing of instant coffee for local consumption and export. The industry has a capacity of processing 1,200 tons a year with 70 permanent employees and 120 casual workers.

Coffee curing factory- TANICA



Amir Hamza Coffee Processing Factory

The factory processes and produces coffee for local consumption and for export.



Fish Processing Factory (Vicfish Company Limited)

Vicfish Ltd (Kagera) is a branch of Vick fish Ltd (Mwanza) established in 1992. Vickfish Bukoba was established in November, 2005, with 150 workers. It is located at Nyamkazi area along Lake Victoria shore involved in fish processing for exportation to European markets. The company employs 350 workers of which 40 percent are women and 60 percent are men. The company had acquired international certification of Eco-Label for quality and environmental awareness.



Vickfish Co Ltd - Bukoba Branch

CHAPTER FOUR

ECONOMIC INFRASTRUCTURES

4.0 Introduction

Chapter four explains the existing economic infrastructure in Bukoba Municipal Council. Economic infrastructures include road network development, air services, telecommunication services and energy sector. Road network development is discussed in terms of road classification, type, accessibility and electricity. Telecommunication services include number of telephone lines (land lines) available, number of television and radio stations, accessibility of mobile phone services and number of post offices. In the energy sector, the chapter discusses main sources of energy used in the Municipality.

4.1 Road Network



Although virtual connectivity has become increasingly important today with the emergence of new communication avenues, a good and reliable transport network remains vital. There is a very strong positive correlation between a country's economic development and the quality of its road network.

Roads in Tanzania are categorized into trunk, regional, district, feeder and urban 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 center to a trunk road. The Tanzania National Roads Agency (TANROADS) is one of the agencies under the Ministry of Works which has the responsibility of managing trunk and regional road networks in Tanzania Mainland.

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

Road transportation is the major type of transportation for people and goods within and outside Bukoba Municipal Council. The council road network is composed of trunk, regional, district/urban and feeder roads. The council has a total road network of 166 km. Out of total road network, Kahororo

Ward had the longest road network of 18.9 km (11.4 percent) followed by Kashia Ward with 18.3 km (11.0 percent) and Kitendaguro Ward had 18 km (10.8 percent). Hamugembe Ward had the shortest road network in the council with 5.2 km (3.1 percent) and road lengths for other wards are as shown in Table 4.1.

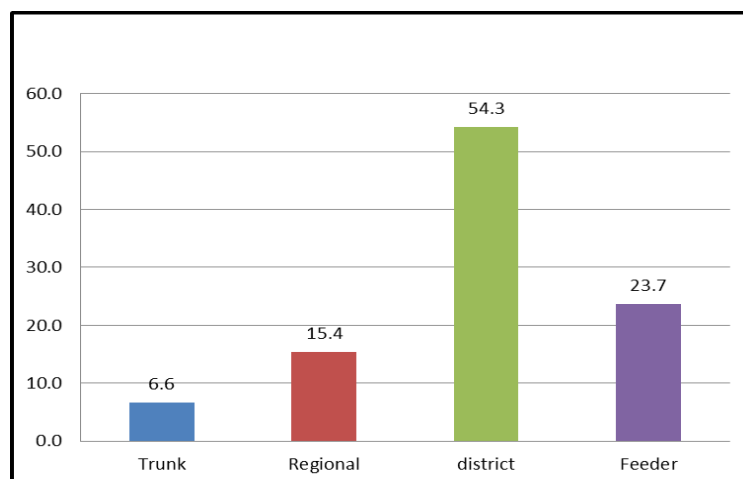
Table 4.1: Length (km) of Road Network by Ward and Type, Bukoba Municipal Council, 2015

Ward	Type (in km)				Total	Percent
	Trunk	Regional	District/Urban	Feeder		
Miembeni	0.0	0.0	4.9	2.2	7.1	4.0
Bilele	1.0	1.5	8.3	3.2	14.0	8.4
Kashia	0.0	0.0	8.9	9.4	18.3	11.0
Bakoba	2.0	0.0	5.7	0.9	8.6	5.2
Kibeta	3.0	0.0	6.1	2.5	11.6	7.0
Ijuganyondo	0.5	2.5	4.1	0.8	7.9	4.8
Kitendaguro	0.0	3.5	11.3	3.2	18.0	10.8
Rwamishenye	1.5	0.0	4.4	0.5	6.4	3.9
Hamugembe	1.0	0.0	4.2	0.0	5.2	3.1
Nyanga	0.0	4.0	6.4	0.6	11.0	6.6
Kahororo	0.0	0.0	4.0	14.9	18.9	11.4
Buhembe	0.0	10.0	2.1	0.0	12.1	7.3
Nshambya	0.0	4.0	9.9	0.4	14.3	8.6
Kagondo	2.0	0.0	9.9	0.8	12.7	7.7
Total	11.0	25.5	90.1	39.4	166.0	100.0

Source: Municipal Director's Office Bukoba Municipal Council, 2017

Furthermore, the highest percentages of road network are under Municipal Council (78 percent of the road network) and the remaining 22 percent are trunk roads and regional road roads (Figure 4.1).

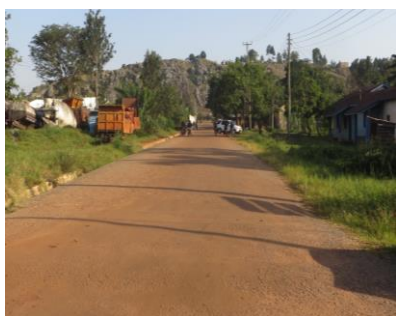
Figure 4.1: Percentage Distribution of Road Network, Bukoba MC; 2015



Source: Municipal Director's Office Bukoba Municipal Council, 2017

This implies that a high percentage of road network in Bukoba Municipal Council is under the maintenance of the council and, therefore, the council should have a comprehensive plan to make sure that all roads are maintained and accessible throughout the year to facilitate community's access to different social services and transportation of their agricultural, livestock, forestry and other products to different parts of the country.

4.2 Road Classification by Type of Road Surfaces



The grade of the road surface to a large extent determines the durability of the road. It is, therefore, important to examine the type of road surfaces with their respective length in Bukoba Municipal Council to have a picture of their durability.

Table 4.2 and Figure 4.2 quantify the quality of road surface available in Bukoba Municipal Council and shows that 43.2 km (26.0 percent) of the network was surfaced by tarmac, 73.9 kms (44.5 percent) of the network was surfaced by gravel, while 49.0 kms (29.5 percent) were earth surfaced.

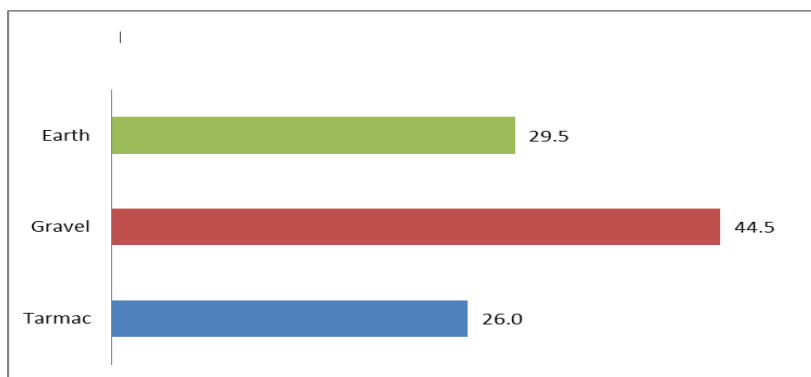
Table 4.2: Length of Road Network by Ward and Type of Road Surface, Bukoba Municipal Council, 2015

Ward	Type of Surface (in Km)			Total
	Tarmac	Gravel	Earth	
Miembeni	4.5	1.5	1.1	7.1
Bilele	6.5	3.5	4.0	14.0
Kashia	3.4	8.0	7.3	18.7
Bakoba	5.0	0.6	1.0	6.6
Kibeta	3.0	6.6	2.0	11.6
Ijuganyondo	0.5	3.5	3.9	7.9
Kitendaguro	3.5	9.0	5.5	18.0
Rwamishenye	2.5	2.6	1.3	6.4
Hamugembe	2.3	1.4	1.5	5.2
Nyanga	1.5	6.5	3.0	11.0
Kahororo	0.0	15.5	3.4	18.9
Buhembe	3.5	6.6	3.6	13.7
Nshambya	3.9	3.0	7.4	14.3
Kagondo	3.1	5.6	4.0	12.7
Total	43.2	73.9	49.0	166.0

Source: Municipal Director's Office – Bukoba Municipal Council, 2017

It can also be noted from the results that greater part of the road network is surfaced by gravel which may lead to greater part of the Council to be accessible during heavy rains and make it easy for the transportation of people, services and goods and particularly agriculture products to the market.

Figure 4.2: Percentage Distribution of Road Network by Type of Road Surface, Bukoba Municipal Council, 2015



Source: Municipal Director's Office – Bukoba Municipal Council, 2017

4.2.1 Road Passability

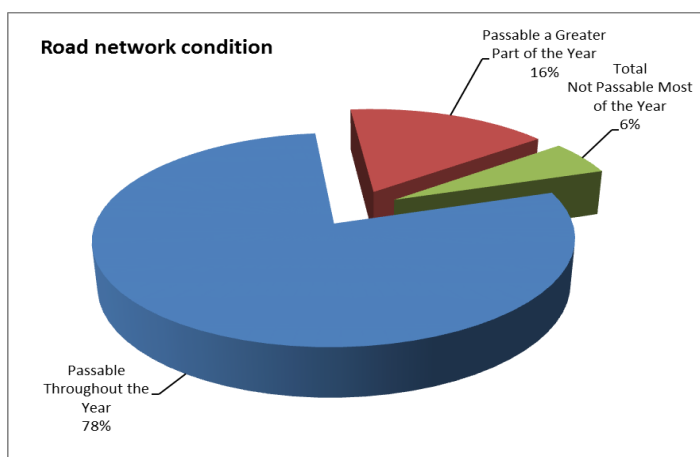


Table 4.3 and Figure 4.3 show the condition of roads network in Bukoba Municipal Council in a year. It has already been pointed out that the total road network in Bukoba Municipal Council is 166 km. About 78 percent of the total road network is accessible throughout the year. About 16 percent of the total road network in Bukoba Municipal Council is accessible a great part of the year, meaning that there are no parts of this road

network which are not accessible in some parts of the year especially during rainy seasons. All in all, the Municipal Council has done well since 94 percent of the total road network is accessible throughout the year. Across wards, the highest accessible road network is reviled in Kitendaguro Ward with 16 km, followed by Kashia and Kahororo wards with 14 km each. On the other hand, wards with the highest inaccessible road networks reviled are Kahororo and Ijuganyondo wards with road network of 2 km and 1.4 km, respectively.

Table 4.3: Accessibility of Road Network by Ward, Bukoba Municipal Council, 2015

Condition of Road Network Throughout the Year in km					
Ward	Accessible Throughout the Year(2)	Accessible Greater Part of the Year (3)	Not accessible Most of the Year (4)	Total Road Network(5)	Percentage accessible (Columns 2 +3)/5
Miembeni	7.0	0.1	0.0	7.1	100.0
Bilele	13.0	1.0	0.0	14.0	100.0
Kashai	14.0	4.0	0.7	18.7	96.3
Bakoba	5.0	1.6	0.0	6.6	100.0
Kibeta	10.0	1.6	0.0	11.6	100.0
Ijuganyondo	5.0	1.5	1.4	7.9	82.3
Kitendaguro	16.0	1.5	0.5	18.0	97.2
Rwamishenye	5.0	1.0	0.4	6.4	93.8
Hamugembe	5.0	0.0	0.2	5.2	96.2
Nyanga	7.0	3.0	1.0	11.0	90.9
Kahororo	14.0	2.9	2.0	18.9	89.4
Buhembe	7.0	5.7	1.0	13.7	92.7
Nshambya	12.0	1.0	1.3	14.3	91.2
Kagondo	10.0	2.2	0.5	12.7	96.1
Total	130.0	27.1	9.0	166.0	94.6

Source: Municipal Director's Office – Bukoba Municipal Council, 2017

4.2.2 Major Road Connections

Table 4.4 highlights road connections and road links which connect Bukoba Municipal Council with the vicinity. As the table depicts, most of the roads are in good condition as they are easily accessible in all seasons. In this respect, the roads need to be taken care of for improvement to ease transportation of goods and services to the rural population in the region.

Table 4.4: Major Road Connections and Road link, Bukoba Municipal Council; 2015

Major Inter - District Road Connections	Length of Road link in kms.	Quality of road surface	Type of Road
Bukoba - Muleba - Biharamulo Road	67	Very Good	Regional- Tarmac
Bukoba - Kyaka-Mutukula Road	78	Very Good	Trunk - Tarmac

Source: Municipal Director Bukoba Municipal Council (Works Department), 2017

4.3 Air Services



Bukoba Municipal Council has one airport located in Miembeni Ward about one km from the municipal center. Other districts in the region rely on that airport for air transportation. Moreover, unreliability of air transport and uncertainty of flight services make road transport the only reliable transport in the Council. In 2015, 15,922 passengers used the

Bukoba airport whereas 2,408 tons of cargo was ferried from the airport.

4.4 Telecommunication Services

Communications sector has expanded to a large extent in most of the urban areas of Tanzania. Bukoba Municipality is served by telecommunication networks such as landline telephones, cellular phones, internet cafes and postal services. Bukoba Municipality had four cellular phone services that are operating, namely Tigo (34 percent coverage), Halotel (93 percent coverage), Vodacom (78 percent coverage) and Airtel (37 percent coverage). The Municipality is well accessed by the mentioned mobile service providers in all wards. Bukoba municipality has one television station and four local radio stations that are operating in the Municipality. These are Kasibante FM, Vision FM, Shimazi FM and Kagera Community Radio FM (KCR FM). Furthermore, there are three internet cafes in Kangondo and Miembeni wards, one post office and one sub post office.

4.5 Energy



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

Bukoba Municipal Council depends on various sources of energy for domestic as well as commercial use. Such sources include electricity, paraffin, firewood, charcoal, gas and solar. However, in the Municipality, majority of people uses electricity as the main source of lighting and uses charcoal as the main source of energy for cooking. Some few individuals use kerosene for lighting and firewood for cooking.

Data from the 2012 Population and Housing Census show that about 53.9 percent of the households in the Municipality used electricity energy for either lighting, followed by 51.8 percent of the households who were using kerosene in both wick lamps and lantern chimney for lighting. On the other hand, charcoal is the most used energy source for cooking in Municipality (70.2 percent), followed by firewood (23.3 percent) and only 3 percent of the household were using electricity as the main source of energy for cooking.

4.5.1 Electricity

TANESCO has continued to be the sole supplier of electricity in the Municipal Council. Table 4.5 indicates that TANESCO has increased its customers from 33,621 in 2011 to 56,437 in 2015 and it has managed to increase its institution customers from 519 in 2011 to 1,526 customers in 2015. Domestic customers increased from 33,074 in 2011 to 54,869 in 2015 while commercial customers who were 28 in 2011 increased to 43 in 2015.

Table 4.5: Number of Customers using/connected to Electricity; Bukoba Municipal Council; 2011 – 2015

Year	Number. of Customers		
	Institution	Domestic	Commercial
2011	519	33,074	28
2012	622	36,381	30
2013	747	40,019	32
2014	986	44,021	36
2015	1,526	54,869	43

Source: TANESCO, 2017

CHAPTER FIVE

SOCIAL SERVICES

5.0 Introduction

This chapter dwells on the status of social services that are available in Bukoba Municipal Council and covers the development of health sector in terms of preventive and curative measures through morbidity, mortality, and reportable communicable diseases. It also covers preventive measures on HIV/AIDS prevalence, tuberculosis, mother and child health as well as health facilities.

Education is the second sector dealt in this chapter. It highlights education performance based on the increase of school facilities, pre-primary, primary and secondary education, enrolment performance; school infrastructure and quality of education are also discussed. Higher institutions of learning, vocational education and adult education are also briefly discussed in this chapter.

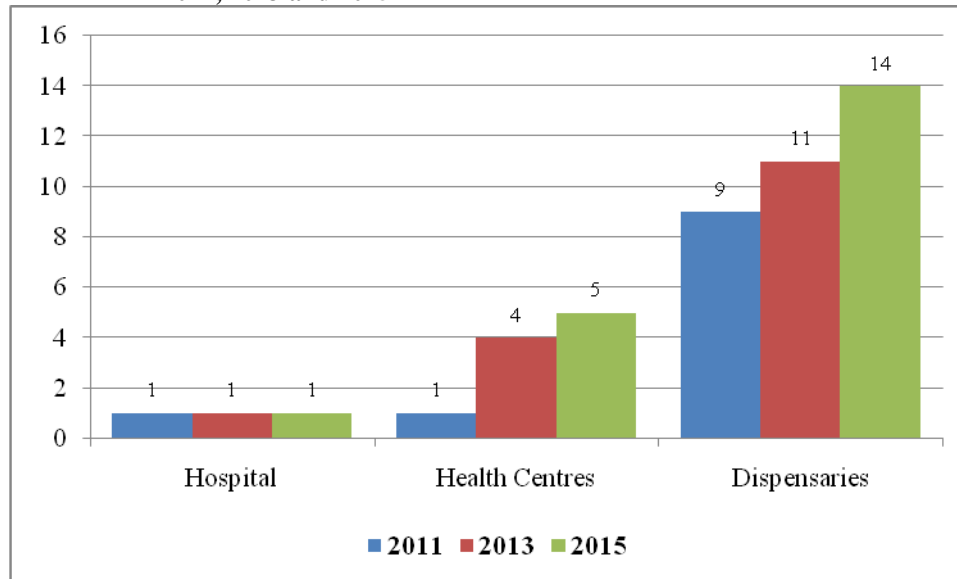
Water supply and sanitation is also discussed in this chapter. Performance of water supply for both rural and urban areas of the municipality is highlighted in terms of sources, technology and capacity of water supply. Moreover, sanitation level at the Municipality is also briefly discussed.

5.1 Health Sector

5.1.1 Health Facilities

The status of public health services in Bukoba Municipal Council can be visualized, through the health infrastructure, availability and commitments of health practitioners, implementation of preventive and curative measures and availability of medical supplies. Bukoba Municipal Council had done great achievement in the construction of health facilities in order to comply with the health policy targets of combating illnesses by improving provision of preventive and curative measures to the residents. In 2011, the Municipal Council increased health facilities from 11 facilities (a hospital, health centre and 9 dispensaries) in 2011 to 16 (a hospital, 4 health centres and 11 dispensaries) in 2013 and reached 22 (a hospital, 5 health centres and 14 dispensaries) in 2015 (Figure 5.1).

Figure 5.1: Availability of Health Facilities by Status, Bukoba Municipal Council, 2011, 2013 and 2015

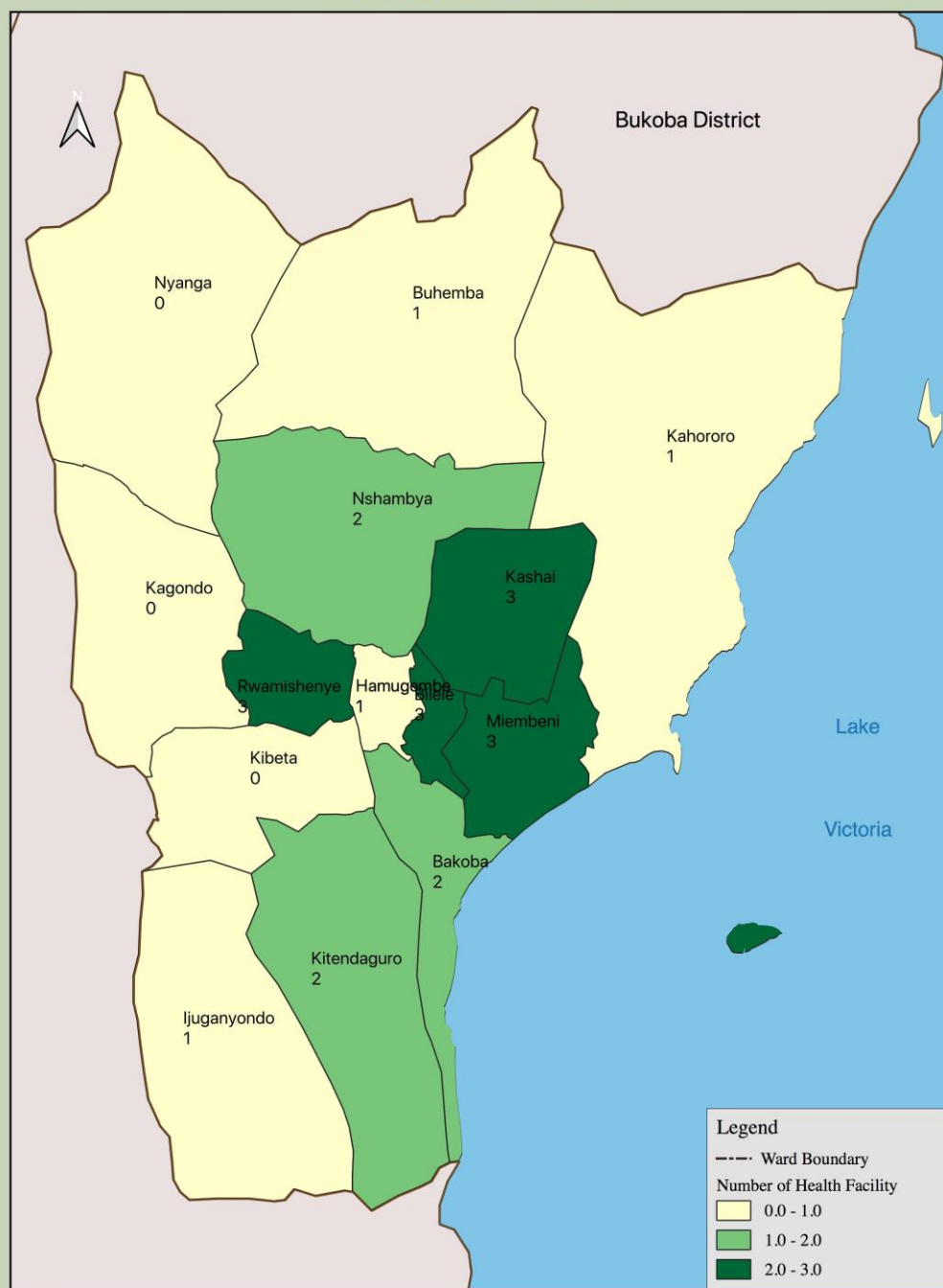


Source: Municipal Director's Office (Municipal Medical Office), Bukoba Municipal Council, 2017

At ward level, Table 5.1 shows that, with the exception of Kibeta, Nyanga and Kagondo wards, the available 22 health facilities are distributed unevenly in the wards. Bilele Ward is well endowed with health facility by having three facilities (a municipal hospital, 2 health centers and 3 dispensaries), Kitendanguro and Rwamishenye wards had three facilities with a health centre and 2 dispensaries each. Kashai Ward had three dispensaries only in 2015 (Table 5.1).

Looking at ownership, private participation in the provision of health facilities as stressed in the health policy is significant in the Municipal Council. Out of 22 health facilities in 2015, three health centers and six dispensaries were owned by the private sector, while a hospital, two health centres and 14 dispensaries are government owned (Table 5.1). The Municipality has established a dialogue with the private sector by using the existing Public Private Partnership policy to encourage them to increase their participation in the provision of social services in the Municipal Council.

Map 5: Health Facilities (Public and Private Owned) Available by Ward, Bukoba Municipal Council, 2015



Source: Cartographic Unit, NBS, Dsm, 2017

Table 5.1: Availability of Health Facilities by Ward and Ownership, Bukoba Municipal Council; 2015

Ward	Hospitals		Health Centers		Dispensaries		Total Facilities
	Public	Private	Public	Private	Public	Private	
Bakoba	0	0	0	0	1	1	2
Bilele	1	0	1	1	0	0	3
Buhembe	0	0	0	0	1	0	1
Hamugembe	0	0	0	0	0	1	1
Ijuganyondo	0	0	0	0	1	0	1
Kagondo	0	0	0	0	0	0	0
Kahororo	0	0	0	0	1	0	1
Kashai	0	0	0	0	1	2	3
Kibeta	0	0	0	0	0	0	0
Kitendaguro	0	0	0	1	1	0	2
Miembeni	0	0	0	1	1	1	3
Nshambya	0	0	0	0	2	0	2
Nyanga	0	0	0	0	0	0	0
Rwamishenye	0	0	1	0	1	1	3
Total	1	0	2	3	10	6	22

Source: Executive Director's Office (Medical's Office), Bukoba Municipal Council, 2017

Bukoba Municipal Council, like other councils in Kagera Region, is still lagging behind in the implementation of health policy under which each ward has to have a health center and have a dispensary in each village/mtaa. Table 5.2 shows that among 14 wards in the Municipality, only four (4) wards managed to implement the policy of one health centre per ward. Table 5.2 also shows that each of the available health centers was servicing an average of 3 wards and each dispensary was servicing at most 5 villages in the Municipal Council.

Table 5.2: Distribution of Health Facilities and Their Ratios by Division, Bukoba MC, 2015

Division	No. of Wards	No. of Mitaa	Health Centers	Dispensaries	Average Wards per HC	Average Mitaa per Dispensary
Rwamishenye	14	66	5	14	3	5
Total	14	66	5	14	3	5

Source: Executive Director's Office (Medical's Office), Bukoba Municipal Council, 2017

5.1.2 Doctor Population Ratio

Availability of health facilities in Bukoba Municipal Council falls below WHO standards. The average coverage of the population by a practitioner in Bukoba Municipal Council has increased from 2,628 people in 2012 per doctor to 7,644 people in 2012. At ward level, Table 5.4 shows that Bilele had the better population coverage per doctor due to the availability of referral health facilities, while Kashai Ward had the highest number of persons per doctor in the Municipal Council.

In 2015, similar experience was observed, although there was a difference in magnitude and proportions. Bilele continued to be a better ward with 214 persons per doctor in the Municipality. Kashai also continued to be the least ward with the highest number of people per doctor in the council (Table 5.3).

Table 5.3: Distribution of Doctors Among Population by Ward, Bukoba Municipal Council; 2012 and 2015

Ward	2012			2015		
	Total Population (Census)	Total Doctors	Average Population Per Doctor	Total Population (Census)	Total Doctors	Average Population Per Doctor
Bakoba	17,474	2	8,737	20,764	3	6,921
Bilele	5,405	24	225	6,423	30	214
Buhembe	4,042	1	4,042	4,531	1	4,531
Hamugembe	12,906	2	6,453	15,336	2	7,668
Ijuganyondo	2,591	1	2,591	3,079	1	3,079
Kagondo	4,170	0		4,955	0	
Kahororo	6,618	1	6,618	7,864	1	7,864
Kashai	30,791	4	7,698	36,539	6	60,900
Kibeta	8,088	0		9,611	0	
Kitendaguro	5,672	4	1,418	6,740	4	1,685
Miembeni	6,543	4	1,636	7,775	6	1,296
Nshambya	9,020	2	4,510	10,718	4	2,680
Nyanga	3,129	0		3,718	0	
Rwamishenye	12,347	4	3,087	14,672	5	2,934
Total	128,796	49	2,628	152,725	63	7,644

Source: Executive Director's Office (Medical's Office), Bukoba Municipal Council, 2017

5.1.3 Primary Health Facilities

The available official health facilities were not enough to serve the ever growing population in Bukoba Municipal Council. This shortage was supplemented by the primary health facilities including traditional birth attendants (TBA), village health workers (VHW), village health posts (VHP) and traditional medical practitioners (TMP). Table 5.4 shows that the Municipal Council had 40 trained traditional birth attendants (TBA), 43 village health workers (VHW) and 29 traditional medical practitioners (TMP), while all wards had no village health posts (VHP).

Table 5.4: Distribution of Complementary Rural Health Service Providers by Wards, Bukoba Municipal Council, 2015

Ward	Number of			
	TBAs (Trained)	VHWs	VHP	TMP (Registered)
Bakoba	6	4	0	3
Bilele	0	4	0	6
Buhembe	7	3	0	0
Hamugembe	3	4	0	0
Ijuganyondo	4	4	0	0
Kagondo	0	3	0	1
Kahororo	8	2	0	0
Kashai	6	4	0	12
Kibeta	0	3	0	1
Kitendaguro	3	4	0	1
Miembeni	0	2	0	1
Nshambya	0	2	0	0
Nyanga	0	2	0	2
Rwamishenye	3	2	0	2
Total	40	43	0	29

Source: Executive Director's Office (Medical's Office), Bukoba Municipal Council, 2017

5.1.4 Status of Health Personnel

The information provided by the Bukoba Municipal Council medical office shows that the Municipal Council was still experiencing a significant shortage of health personnel in regard to specialized doctors, radiologists, dental surgeons and pharmacists. Table 5.5 reveals that the Council had 471 medical personnel of different cadres with more males (53 percent) than females (47 percent). Table 5.4 also shows that the highest number of medical personnel are trained nurses/NM/PHN (24.6 percent) followed by medical attendants (18.9 percent) and nursing officers (15.5 percent).

Table 5.5: Type and Number of Medical Personnel by Profession, Bukoba Municipal Council; 2015

Medical Personnel	Male	Percent	Female	Percent	Total	Percent
Specialist Doctors	3	100.0	0	0.0	3	0.6
Medical doctors	15	88.2	2	11.8	17	3.6
Ass. Medical Officers	31	73.8	11	26.2	42	8.9
Clinical Officers	39	79.6	10	20.4	49	10.4
Ass. Clinical Officers	0	0.0	1	100.0	1	0.2
Dental Surgeon	1	100.0	0	0.0	1	0.2
Ass. Dental Officer	5	83.3	1	16.7	6	1.3
Dental Therapist	2	100.0	0	0.0	2	0.4
Pharmacists	6	60.0	4	40.0	10	2.1
Pharmaceutical Tech.	0	0.0	1	100.0	1	0.2
Pharmaceutical Asst.	4	16.7	20	83.3	24	5.1
Laboratory Tech.	2	100.0	0	0.0	2	0.4
Laboratory Asst.	6	54.5	5	45.5	11	2.3
Radiologist	0	0.0	0	100.0	1	0.2
Radiographer	1	100.0	0	0.0	1	0.2
Radiographic Asst	1	100.0	0	0.0	1	0.2
Nursing Officers	25	34.2	48	65.8	73	15.5
Trained Nurse/NM/PHN	18	15.5	98	84.5	116	24.6
Medical Attendants	78	87.6	11	12.4	89	18.9
Health Officers	6	75.0	2	25.0	8	1.7
Health Assistants	8	66.7	4	33.3	12	2.5
Health Secretaries	0	0.0	1	100.0	1	0.2
Total	251	53.3	219	46.7	471	100

Source: Executive Director's Office (Medical's Office), Bukoba Municipal Council, 2017

5.1.4.1 Morbidity

The key target of any health services development effort is to solve the problems of illnesses that can cause morbidity and or mortality in the community. Any council, in order to take care of morbidity and mortality, must create an inventory of ten most commonly reported causes of illnesses to the community. Bukoba Municipal Council, like other councils in the country, has an inventory of ten most commonly reported causes of illnesses for out-patients and in-patients presented in Tables 5.6 5.7.

Out- Patents

The ten most common reported causes of morbidity for out-patients in the Municipal Council for 2011 and 2015 are listed in Table 5.6. In 2011, 78.2 percent of all reported cases of out patients were suffering from the first five diseases. Malaria ranked first with 34.4 percent followed by ARI (19.0 percent), intestine worms (9.9 percent), diarrhoea (8.1 percent) and pneumonia (6.9 percent) (Table 5.6). In 2015, Table 5.6 also shows similar proportion of 79.3 percent of reported cases which was caused by the first five diseases and malaria continued to be the first illness that caused morbidity in

Bukoba Municipal Council. Intestine worms, pneumonia, ARI and skin diseases were the other illnesses which caused morbidity among out-patients in the Council.

Table 5.6: List of the Ten Commonly Reported Causes of Morbidity (Out Patients) Bukoba Municipal Council; 2011 and 2015

S/No.	2011			2015		
	Disease	No. of Cases	Percent	Disease	No. of Cases	Percent
1	Malaria	51,889	34.4	Malaria	15,273	34.5
2	ARI	28,608	19	Intestinal worms	4,784	10.8
3	Intestinal worms	14,859	9.9	Pneumonia	5,384	12.2
4	Diarrhoea	12,201	8.1	ARI	5,339	12.1
5	Pneumonia	10,436	6.9	Skin diseases	4,322	9.8
	Sub Total	117,993	78.2	Sub Total	35,102	79.3
6	Minor surgical condition	7,748	5.1	Emergency surgical condition	2,980	6.7
7	Eye Infection	6,561	4.4	Oral condition	2,095	4.7
8	Skin infection	6,922	4.6	Eye condition	1,796	4.1
9	Urinary tract infection	7,050	4.7	Other STI	1,240	2.8
10	Non skin fungal infection	4,550	3.0	Clinical AIDS	1,053	2.4
Total		150,824	100.0		44,266	100.0

Source: Executive Director's Office (Medical's Office), Bukoba Municipal Council, 2017

In-Patients

Similar diseases recorded from outpatients were replicated to in-patients in Bukoba Municipal Council in the referred years. In 2011, out of 13,556 reported in- patients, 89.7 percent were suffering from one or the other of the first five illnesses. In 2011, malaria, pneumonia, diarrhea, ARI and UTI were the top five diseases responsible for the most of illnesses in the Municipality. In 2015, the same diseases with the exception of malaria, pneumonia and diarrhea happened to be the most causes of poor health of Municipality residents. However, other diseases with the respective number of people affected (reported cases) are given in the table below. However, the highest causes of morbidity were normal deliveries and malaria

Table 5.7: List of Common Reported Causes of Morbidity (In Patients), Bukoba Municipal Council; 2011 and 2015

S/No.	2011			2015		
	Disease	No. of Cases	Percent	Disease	No. of Cases	Percent
1	Severe malaria	7432	72.0	Normal deliveries	5617	42.4
2	Pneumonia	578	5.6	Malaria severe	3335	25.2
3	Diarrhea	723	7.0	Pneumonia	1589	12
4	ARI	750	7.3	Cardiovascular diseases	610	4.6
5	UTI	113	1.1	Diarrhea diseases	566	4.3
	Sub Total	9,596	92.9	Sub Total	11,717	88.4
6	Septicemia	90	0.9	Other injuries	410	3.1
7	Skin Infection	34	0.3	ARI	367	2.8
8	poisoning	39	0.4	Emergency surgical	350	2.6
9	HIV/AIDS	557	5.4	Anemia	250	1.9
10	Neoplasm	9	0.1	Other diagnosis	162	1.2
	Total	10325	100	Total	13256	100

Source: Executive Director's Office (Medical's Office), Bukoba Municipal Council, 2017

5.1.4.2 Mortality

The available data do not give the true picture of the mortality level in Bukoba Municipal Council since deaths which occur outside health facilities are not include. However, the indicative information from medical records provided by Bukoba Municipal Council medical office shows that 97.2 percent of mortality cases were caused by the first five diseases in 2011. The dominant causes of mortality were malaria followed by pneumonia, ARI, diarrhea and clinical aids (Table 5.8).

In 2015, 88.4 percent of reported cases of mortality were caused by the first five illnesses led by normal deliveries (42.4 percent) and malaria (25.2 percent) (Table 5.8). The Municipality in collaboration with the ministry of health and social welfare (MoHSW) is striving to increase preventive measures against pneumonia, malaria, diarrhea and normal deliveries in Municipality and other regions as well so as to reduce mortality cases from these top killer diseases.

Table 5.8: List of the Ten Common Reported Causes of Mortality, Bukoba Municipal Council: 2011 and 2015

S/No.	2011			2015		
	Disease	No. of Cases	Percent	Disease	No. of Cases	Percent
1	Severe malaria	7,432	72	Normal Deliveries	5,617	42.4
2	Pneumonia	578	5.6	Malaria	3,335	25.2
3	ARI	750	7.3	Pneumonia	1,589	12.0
4	Diarrhea	723	7.0	Cardiovascular diseases	610	4.6
5	HIV/AIDS	557	5.4	Diarrhea diseases	566	4.3
	Sub Total	10,040	97.2	Sub Total	11,717	88.4
6	UTI	113	1.1	Other injuries	410	3.1
7	Septicemia	90	0.9	ARI	367	2.8
8	Poisoning	39	0.4	Emergency surgical condition	350	2.6
9	Skin Infection	34	0.3	Anemia	250	1.9
10	Neoplasm	9	0.1	Other diagnosis	162	1.2
	Total	10,325	100	Total	13,256	100

Source: Executive Director's Office (Medical's Office), Bukoba Municipal Council, 2017

5.1.5 HIV/AIDS Infections

There are a number of ways that can be used to measure the extent and trend of HIV prevalence among the people. Family blood donors, expected mothers participation in the PMTCT services and voluntary counseling and testing (VCT) are common methods employed in measuring prevalence rate of HIV/AIDS to residents in Bukoba Municipal Council.

The introduction of VCT services in the Municipality has made the screening of volunteers possible since 2011. Table 5.9 shows the results of volunteers screened for HIV tests in 2011, 2013 and 2015. In 2011, out of 20,972 volunteers of both sexes screened for HIV test, 8.1 percent were found to be HIV positive with more females (11.1 percent) than males (6.0 percent). Similar experience was observed in 2013 and 2015. Out of 24,668 and 78,703 total volunteers who were screened in 2013 and 2015, 10 percent and 4.2 percent were found to be HIV positive, respectively (Table 5.9). Table 5.9 also shows that the rate of infections was higher among females than males for both years. One general observation from this analysis is the decline of HIV prevalence rates in recent years which are attributed by the increase of awareness of the people on the impact of HIV and related diseases together with the increase in the use of protective methods.

Table 5.9: VCT volunteers Screened for HIV and those subsequently using ARVs; Bukoba Municipal Council 2011, 2013 and 2015

Year	No. Screened			No. of HIV+			Percent HIV+		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
2011	12,369	8,603	20,972	739	956	1,695	6.0	11.1	8.1
2013	13,496	11,172	24,668	1,138	1,320	2,458	8.4	11.8	10.0
2015	35,299	43,404	78,703	1,320	2,002	3,322	3.7	4.6	4.2
Cum. Total	61,164	63,179	124,343	3,197	4,278	7,475	5.2	6.8	6.0

Source: Executive Director's Office (Medical's Office), Bukoba Municipal Council, 2017

The prevalence of HIV/AIDS can also be learnt from reports from PMTCT service for 2015. The source reveals the HIV prevalence for the expectant mothers and their infants after delivering. Table 5.10 shows that 294, (equivalent to 2.0 percent) out of 14,793 expectant mothers who attended the PMCT services and screened, were found to be HIV positive and only 55.1 percent of them accepted to be given Niverapine.

At ward level, Kitendanguro Ward was the most affected ward with 5.4 percent of screened 1,120 expectant mothers were found to be HIV positive. Kihororo Ward was the least ward with only 0.8 percent of 1,478 expectant mothers who were found to be HIV positive (Table 5.10). However, it is important to note that precaution should be taken on the information provided by Table 5.10 because it covers only expectant mothers who visited clinic of mother and child at health facilities.

Table 5.10: Expected Mothers who Participated in the PMTCT Services and Tested for HIV/AIDS by Ward, Bukoba Municipal Council: 2015

Ward	No. of AN Attendants	No. Screened	No. HIV+	Percent of HIV+	No. of Given Niverapine	Percent of Given Niverapine
Bilele	1,225	1,225	45	3.7	40	88.9
Rwamiseny	1,412	1,412	36	2.5	9	25
Kitendanguro	1,120	1,120	61	5.4	11	18
Kashai	2,140	2,140	41	1.9	8	19.5
Buhembe	1,101	1,101	10	0.9	10	100
Kahororo	1,478	1,478	12	0.8	10	83.3
Ijuganyondo	1,058	1,058	23	2.2	21	91.3
Kagemu	1,956	1,956	19	1	19	100
Buyekela	2,102	2,102	29	1.4	24	82.8
Nshambya	1,201	1,201	18	1.5	10	55.6
Total	14,793	14,793	294	2	162	55.1

Source: Executive Director's Office (Medical's Office), Bukoba Municipal Council, 2017

5.1.6 Impact of HIV/AIDS

The socio-economic assessment of Bukoba Municipal Council is not complete without addressing the extreme challenges caused by the HIV/AIDS and the efforts so far made by various local and international organisations to combat the epidemic. HIV/AIDS is highlighted in this document because it has been a major health problem since its advent at the end of 1983. The other reason for addressing the epidemic is the devastating impact and the role it plays in poverty imposition to families which leads to substantial burden of orphans and vulnerable children (OVC), growing number of households headed by children and widows due to the loss of most productive segment of the society.

The report from the District Medical Office (DMO) qualifies Bukoba Municipal Council as among few councils with high rates of HIV/AIDS prevalence in the region. Economically, Most of the people in the municipality are migrants from neighbouring regions of Kigoma, Geita and Shinyanga and all districts of Kagera Region who migrate into the district for various economic activities. This influx of people makes it easy for them to be engaged in sexual relationships. Other reasons include the traditional practice of prolonged drinking and unsafe sexual practices, polygamy as well as poverty. The poor, especially young girls who migrate to urban centres end up being domestic workers for sometime before resorting to prostitution for their survival.

(i) The Increase of Widows

Understanding the status of HIV/AIDS prevalence in Bukoba Municipal Council is very difficult even though the council has referral facilities especially health centres and practitioners, but many people still die at home. Poor attendance due to lack of awareness and knowledge as well as lack of VCT services in remote areas where people could be tested in order to know their health status were the main obstacles of understanding the actual situation of HIV prevalence in the Municipal Council. Therefore, there are people who live with the HIV/AIDS virus without knowing that they have it.

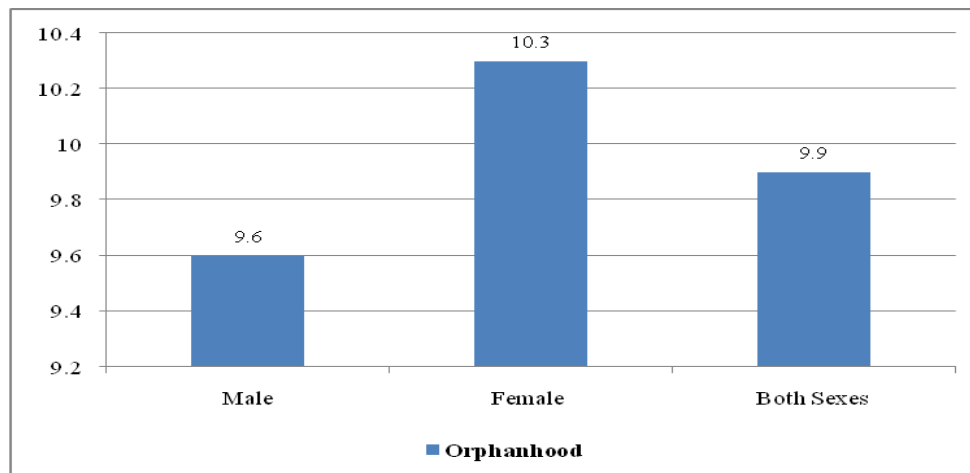
One of the proxy indication of the high prevalence rate in the Municipality is the rate of widowhood. The data gathered in 2012 population census show that the proportion of widowed persons has reached 2.2 percent of total population of the council. In this regard, the Municipal Council is intending to conduct a research that will gather information of widowed and vulnerable children in order to have the current data and their problems before coming up with appropriate measures and solutions.

(ii) The Increase of Orphaned Children

Orphans are persons for whom both parents (mother and father) are dead or those with a single parent whether father or mother alive. Data on survival of parents collected in the 2012 Population and Housing Census were used to determine the extent of orphanhood in Bukoba Municipal Council as portrayed in Figure 5.9. According to the census results, the incidence of orphan hood in the

municipality was 9.9 percent with more girls (10.3 percent) than boys (9.6 percent). However, as part of a study on widowhood, the Municipal Council authority will conduct a research to identify the number and actual status of the most vulnerable children in the district as it has been done in other districts in the country. Understanding the status of orphans and most vulnerable children will enable the district authority to adopt policies and measures that will reduce street children and improve their welfare.

Figure 5.2: Percentage of Orphan hood by Sex, Bukoba Municipal Council; 2012



Source: NBS, 2012 Population and Housing Census Report, Kagera Region, 2016

5.1.7 Child Nutrition

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

Table 5.11 shows that severe malnutrition is still a major challenge in the Municipality since results of underweight decreased from 1.9 percent in 2011 to 1.0 percent in 2013 before it rose again to 1.7 percent in 2015. At ward level, Table 5.11 also shows that Bakoba, Bilele and Kashai wards had the highest rates of 0.4 percent of children with severe malnutrition in 2011. In 2013, Bilele led other wards with the highest proportion of children with malnutrition (0.4 percent) in the council and Kashai led other wards by having the highest rate of malnutrition (0.8 percent) in 2015 (Table 5.11). Among other reasons, the culture and taboos which prevent some parents to feed their children with some

nutritious food and prevalence of poverty among the society are the main causes of severe malnutrition in the Municipality.

Table 5.11: Malnutrition Status among Children under One Year by Ward, Bukoba Municipal Council, 2011, 2013 and 2015

Ward	2011			2013			2015		
	Total Weighed	Percent Moderate	Percent Severe	Total Weighed	Percent Moderate	Percent Severe	Total Weighed	Percent Moderate	Percent Severe
Bakoba	1,102	7.6	0.4	2,014	12.2	0.1	3,701	13.1	0.0
Bilele	1,258	8.8	0.4	2,012	11.9	0.4	1,244	4.2	0.2
Buhembe	210	1.5	0.0	415	2.5	0.0	697	2.2	0.3
Hamugembe	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Ijuganyondo	210	1.5	0.0	420	2.4	0.1	624	2.2	0.0
Kagondo	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Kahororo	440	3.1	0.2	534	3.2	0.1	679	2.3	0.1
Kashai	5,019	6.1	0.4	6,072	7.0	0.1	9,087	11.4	0.8
Kibeta	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Kitendaguro	210	1.2	0.3	390	2.3	0.1	4225	14.9	0.1
Miembeni	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Nshambya	0	0.0	0.0	0	0.0	0.0	862	3.0	0.0
Nyanga	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Rwamishenye	5,287	8.3	0.2	4,513	7.5	0.1	7,056	4.9	0.2
Total	13,736	8.1	1.9	16,370	9.0	1.0	28,175	8.3	1.7

Source: Executive Director's Office (Medical's Office), Bukoba Municipal Council, 2017

5.1.8 Mother and Child Health Care



Protection of expectant/lactating mothers and children through immunization programme has to a large extent reduced the risk of being infected. This is evidenced by the decline of mortality rates relating to children and their mothers which are attributed by the wide coverage of immunization campaigns performed in the Municipality for the last five years.

Table 5.12 shows that the proportion of expectant mothers who are vaccinated with TT2 decreases from 93.9 percent in 2011 to 63.9 percent in 2013 before it rose slightly to 78.8 percent in 2015. Looking at ward level, Bilele Ward had the best coverage of 119.0 percent in 2011. In 2013, Table 5.17 shows that Bilele, Rwamishenye, Kagemu, Buyekela and Buhembe wards had the best vaccination coverage of 100 percent each. The vaccination of pregnant women with TT2 in 2015 ranged between 40.6 percent in Kitendaguro Ward and 96.9 percent recorded in Rwamishenye Ward. In 2013, the lowest coverage of vaccination of expectant mothers was recorded in Kashai (17.7 percent) and Kahororo (17.6 percent) wards (Table 5.12).

Table 5.12: Percentage Distribution of Expectant Mothers Vaccinated with TT2 by Ward, Bukoba Municipal Council; 2011, 2013 and 2015

Ward	2011			2013			2015		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage
Bilele	1,177	1,213	103.1	1,170	1,094	93.5	1,397	788	56.4
Rwamishenye	1,008	932	92.5	965	965	100	1,140	1,105	96.9
Kitendagulo	374	359	96	196	196	100	233	214	91.8
Bakoba	871	712	81.7	607	607	100	722	689	95.4
Buhembe	204	185	90.7	143	143	100	165	126	76.4
Kahororo	215	213	99.1	1,214	214	17.6	270	185	68.5
Kashai	1,213	1,137	93.7	1,080	191	17.7	270	185	68.5
Ijuganyondo	0	0	0	90	80	88.9	106	98	92.5
Total	5,062	4,751	93.9	5,465	3,490	63.9	4,303	3,390	78.8

Source: Municipal Executive Director's Office (Medical's Office), Bukoba Municipal Council, 2017

Vaccination of measles for children under one year in Bukoba Municipal Council was performed to protect children against measles. Vaccination level at Bukoba Municipal Council fluctuated in the last five years. Table 5.13 shows that the proportion of vaccinated children against measles increased from 88.4 percent in 2011 to 90.0 percent of the targeted children in 2013 before it dropped slightly to 86.1 percent in 2015. At ward level, Kibeta Ward had the highest proportion of vaccinated children under one year against measles (172.3 percent) in 2011. In 2013, vaccination coverage of measles ranged between 63.7 percent recorded in Kibeta Ward and 94.1 percent in Bakoba Ward. Kahororo Ward had the highest vaccination rate of 112.5 percent of vaccinated children in 2015 (Table 5.13).

Table 5.13: Percentage Distribution of Children under One Year Vaccinated against Measles by Ward, Bukoba Municipal Council; 2011, 2013 and 2015.

Ward	2011			2013			2015		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent coverage
Bakoba	871	845	97.0	607	571	94.1	722	667	92.4
Bilele	242	229	94.6	402	367	91.3	494	435	88.1
Buhembe	204	164	80.4	143	132	92.3	165	133	80.6
Hamugembe	935	867	92.7	768	715	93.1	903	826	91.5
Ijuganyondo	98	91	92.9	90	81	90.0	106	120	113.2
Kagondo	0	0	0.0	0	0	0.0	0	0	0.0
Kahororo	215	190	88.4	214	171	79.9	240	270	112.5
Kashai	1,213	1,120	92.3	1,080	969	89.7	1,273	1,007	79.1
Kibeta	112	193	172.3	212	135	63.7	163	134	82.2
Kitendaguro	374	341	91.2	196	178	90.8	233	204	87.6
Miembeni	0	0	0.0	0	0	0.0	0	0	0.0
Nshambya	0	0	0.0	0	0	0.0	0	0	0.0
Nyanga	0	0	0.0	0	0	0.0	0	0	0.0
Rwamishenye	1,008	621	61.6	965	892	92.4	1,140	886	77.7
Total	5,272	4,661	88.4	4,677	4,211	90.0	5,439	4,682	86.1

Source: Executive Director's Office (Medical's Office), Bukoba Municipal Council, 2017

There has been a steady growth in the number of children under one year who receive BCG vaccination in the Municipality. The number of vaccinated children increased from 3,844 in 2011 to 4,262 but dropped slightly to 4,205 in 2015. As a result, the overall vaccination coverage also increased from 75.9 percent in 2011 to 95.2 percent in 2013 before it dropped to 75.3 percent in 2015 (Table 5.14). At ward level, Table 5.14 shows that Kashai Ward had the higher percentage of vaccination coverage of 101 percent in 2011 followed by Bilele Ward with 98.8 percent. In 2013, the highest proportion was recorded in Ramishenye Ward (99.7 percent) followed by Bakoba Ward (97.5 percent), while Ijuganyondo and Kitendaguro wards were the first and second leading wards with 146.2 percent and 103.4 percent respectively, in 2015 (Table 5.14).

Table 5.14: Percentage Distribution of Children under One year Vaccinated with BCG by Ward, Bukoba Municipal Council; 2011, 2013 and 2015

Ward	2011			2013			2015		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage
Bakoba	871	123	14.1	607	592	97.5	722	719	99.6
Bilele	242	239	98.8	402	371	92.3	494	372	75.3
Buhembe	204	75	36.8	143	116	81.1	165	73	44.2
Hamugembe	935	878	93.9	768	733	95.4	903	887	98.2
Ijuganyondo	n.a	88		90	82	91.1	106	155	146.2
Kagondo	0	0	0	0	0	0	0	0	0
Kahororo	215	126	58.6	214	203	94.9	270	196	72.6
Kashai	1,213	1,225	101	1,090	1,056	96.9	1,272	469	36.9
Kibeta	0	0	0	0	0	0	0	0	0
Kitendaguro	374	364	97.3	196	147	75	233	241	103.4
Miembeni	0	0	0	0	0	0	0	0	0
Nshambya	0	0	0	0	0	0	0	0	0
Nyanga	0	0	0	0	0	0	0	0	0
Rwamishenye	1,008	726	72	965	962	99.7	1,140	1,093	95.9
Total	5,062	3,844	75.9	4,475	4,262	95.2	5,305	4,205	79.3

Source: Executive Director's Office (Medical's Office), Bukoba Municipal Council, 2017

The trend of DPT3/HB3 vaccination for children under one year shows an increase in the number of vaccinated children between 2011 and 2015 while the proportion of vaccinated children declined in recent years. Table 5.15 shows that the percentage of targeted children under one year who were vaccinated decreased from 96.0 percent in 2011 to 95.2 percent in 2013 and reached 93.8 percent in 2015. Looking at ward level, Table 5.15 also shows that wards with the highest coverage in 2011 were Hamugembe, Bakoba and kashai who vaccinated 98.5 percent, 98.4 percent and 98.0 percent, respectively. In 2013, Kahororo (104.2 percent) and Rwamishenye (102.5 percent) had high proportions of vaccinated children with DPT3/HB3, while in 2015, Ijuganyondo had the highest coverage of immunization (121.7 percent) followed by Rwamishenye (108.9 percent) of targeted children in the Municipality.

Table 5.15: Children under One Year Vaccinated with DPT3/HB3 by Ward; Bukoba Municipal Council; 2011, 2013 and 2015

Ward	2011			2013			2015		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage
Bakoba	871	857	98.4	607	588	96.9	722	643	89.1
Bilele	242	228	94.2	402	371	92.3	494	481	97.4
Buhembe	204	111	54.4	143	123	86.0	165	136	82.4
Hamugembe	935	921	98.5	768	696	90.6	903	834	92.4
Ijuganyondo		126	0.0	90	87	96.7	106	129	121.7
Kagondo	0	0	0.0	0	0	0.0	0	0	0.0
Kahororo	215	201	93.5	214	223	104.2	270	254	94.1
Kashai	1,213	1,189	98.0	1,080	997	92.3	1,273	1,037	81.5
Kibeta	0	0	0.0	0	0	0.0	0	0	0.0
Kitendaguro	374	345	92.2	196	175	89.3	233	221	94.8
Miembeni	0	0	0.0	0	0	0.0	0	0	0.0
Nshambya	0	0	0.0	0	0	0.0	0	0	0.0
Nyanga	0	0	0.0	0	0	0.0	0	0	0.0
Rwamishenye	1,008	879	87.2	965	989	102.5	1,140	1,241	108.9
Total	5,062	4,857	96.0	4,465	4,249	95.2	5,306	4,976	93.8

Source: Executive Director's Office (Medical's Office), Bukoba Municipality, 2017

The council performance on immunisation of OPV3 shows steady growth in number and proportion of children under one year who received OPV3 vaccine in the council. Table 5.16 shows that the number of vaccinated children decreased from 4,857 children in 2011 to 4522 children in 2013 before it rose again to 4,986 in 2015. Similarly, the proportion of vaccinated children increased from 93.6 percent in 2011 to 101.3 percent in 2013 before it dropped significantly to 94.0 percent in 2015 (Table 5.16).

At ward level, Table 5.16 shows that Ijuganyondo Ward had the highest percentage of children vaccinated with OPV3 in 2011 followed by Hamugembe Ward (98.5 percent) and Bakoba Ward (98.4 percent). In 2013, Hamugembe Ward had the highest proportion of vaccinated children (126.2 percent) followed by Kahororo and Rwamishenye (104.2 percent and 102.5 percent, respectively). In 2015, Ijuganyondo and Rwamishenye led other wards in the Municipality by vaccinating 131.1 percent and 108.9 percent of their targeted children, respectively (Table 5.16). Table 5.16 also shows that the least ward in 2011 and 2013 was Buhembe who vaccinated 54.4 percent and 86.0 percent of targeted children, respectively and Kashai Ward recorded the lowest proportion of vaccinated children (81.5 percent) in 2015. Unfortunately, six out of 14 wards had no vaccination information due to absence of mother and child clinic.

Table 5.16: Percentage Distribution of Children under One Year Vaccinated with OPV3 by Ward, Bukoba Municipal Council; 2011, 2013 and 2015

Ward	2011			2013			2015		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage
Bakoba	871	857	98.4	607	588	96.9	722	643	89.1
Bilele	242	228	94.2	402	371	92.3	494	481	97.4
Buhembe	204	111	54.4	143	123	86.0	165	136	82.4
Hamugembe	935	921	98.5	768	969	126.2	903	834	92.4
Ijuganyondo	126	126	100	90	87	96.7	106	139	131.1
Kagondo	0	n.a	0.0	0	0	0.0	0	0	0.0
Kahororo	215	201	93.5	214	223	104.2	270	254	94.1
Kashai	1,213	1,189	98.0	1,080	997	92.3	1,273	1,037	81.5
Kibeta	0	0	0.0	0	0	0.0	0	0	0.0
Kitendaguro	374	345	92.2	196	175	89.3	233	221	94.8
Miembeni	0	0	0.0	0	0	0.0	0	0	0.0
Nshambya	0	0	0.0	0	0	0.0	0	0	0.0
Nyanga	0	0	0.0	0	0	0.0	0	0	0.0
Rwamishenye	1,008	879	87.2	965	989	102.5	1,140	1,241	108.9
Total	5,188	4,857	93.6	4,465	4,522	101.3	5,306	4,986	94.0

Source: Executive Director's Office (Medical's Office), Bukoba Municipal Council, 2017

5.1.9 Policy Implication on Health Sector

The provision of health services in Bukoba Municipal Council is still insufficient. It is associated with low quality due to inadequate number of facilities, practitioners, medical equipment and medicines. Moreover, inadequate number of specialised doctors limited the provision of health services such as counselling, examination of complicated illnesses and PMCT. However, health services can be improved through adoption and implementation of health policy and strategies that will motivate doctors and other health workers working in remote areas of the Municipality. Likewise, the policy of constructing dispensaries in every village and one health centre in every ward should be adhered to for increasing accessibility of health services especially to rural population.

5.1.10 Investment Opportunities for Health Sector

This sector faces many challenges including prevalence of diseases such as malaria, ARI, pneumonia, diarrhea and clinical Aids, shortage of workers especially specialized doctors, pharmacists, radiographers, nurses and medicines. Investment is needed regards to the construction of more health facilities such as health centers, provision of medical instruments, medicines and training of medical personnel.

5.2 Education Sector

5.2.1 An overview

The quality of human capital remains the most important asset in achieving sustainable development in today's world. Human capital is the stock of skills competences, knowledge and personality attributes which enhances the efficiencies of labour. Human capital development has proven to be a key ingredient in the overall socio-economic development of nations and is one of the key considerations by investors when selecting potential investment locations in the Municipality.

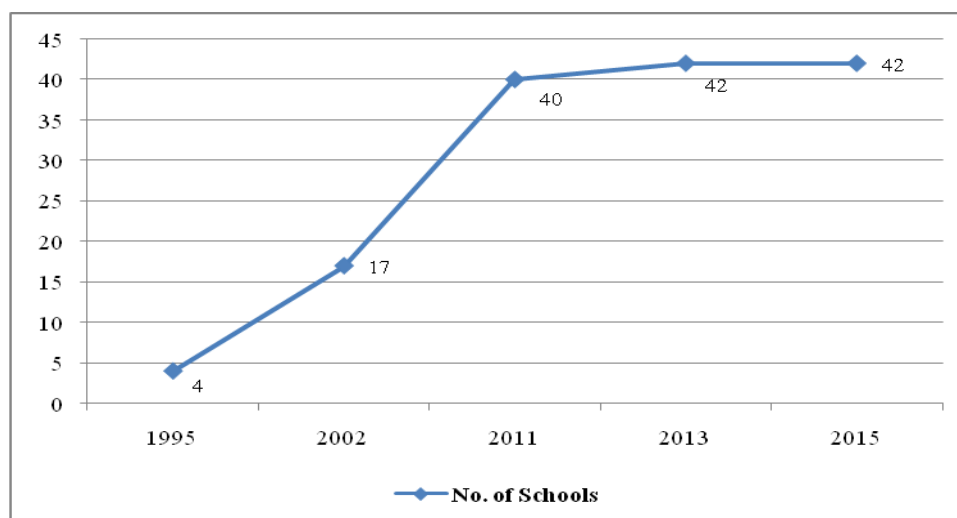
Education sector in Bukoba Municipal Council covers both basic and tertiary education. Basic education includes pre-primary, primary and secondary school education, while tertiary education includes colleges, universities, vocational education and adult education. Therefore, the development of the sector in Bukoba Municipal Council involves improvements in all the above mentioned areas.

5.2.1.1 Pre-primary School

The availability of nursery schools in the Municipality is yet another feature depicting the level of development of education system. Pre-primary schools are meant for children aged 5 and 6 years. The condition set by the Ministry of Education and Vocational Training that all children who start standard one must have undergone pre-primary education, accelerated the establishment of pre-primary schools all over the country including Bukoba Municipal Council. Most of such schools are annexed to public primary school compounds.

Information provided by the department of education shows that great achievement had been done by the Municipal Council on the establishment of pre-primary schools in the last two decades. The number of pre-primary school classrooms increased from 4 in 1995 to 14 in 2002 and reached 40 in 2011 (Figure 5.3). However, only two schools were constructed in the last five years and reached 42 in 2015.

Figure 5.3: Number of Pre-primary School Classrooms, Bukoba MC; 1995 - 2015



Source: Executive Director's Office (Education Department), Bukoba Municipal Council 2017

Looking at ward level, Table 5.17 shows that all wards had pre-primary school facilities in 2015. The ward with the biggest number of pre-school facilities was Nshambya with 5 pre-primary schools followed by Bilele, Miembeni, Kahororo and Ijuganyondo wards which had 4 pre-primary schools each. Nyanga Ward had only one pre-primary school and ranked the least ward in the council. One general observation experienced in these data is an increase of privately owned schools in the last five years.

Table 5.17: Number of Pre-Primary Schools by Ward and Ownership, Bukoba Municipal Council; 2011, 2013 and 2015

Ward	2011			2013			2015		
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Bilele	3	1	4	3	1	4	3	1	4
Miembeni	2	2	4	2	2	4	2	2	4
Rwamishenye	2	0	2	2	0	2	2	0	2
Kagondo	1	2	3	1	2	3	1	2	3
Nyanga	1	0	1	1	0	1	1	0	1
Kibeta	1	1	2	1	1	2	1	1	2
Hamugembe	2	0	2	2	0	2	2	0	2
Kashai	2	0	2	2	1	3	2	1	3
Kahororo	3	1	4	3	1	4	3	1	4
Ijuganyondo	1	2	3	1	3	4	1	3	4
Bakoba	2	1	3	2	1	3	2	1	3
Kitendaguro	2	0	2	2	0	2	2	0	2
Buhembe	2	1	3	2	1	3	2	1	3
Nshambya	1	4	5	1	4	5	1	4	5
Total	25	15	40	25	17	42	25	17	42

Source: Executive Director's Office (Education Department), Bukoba Municipal Council 2017

Table 5.18 shows the performance so far reached by the Municipal Council to establish pre-primary schools according to the Education Policy of having pre-primary school/class in each village or mitaa. The Municipal Council had an average of at most 2 pre-primary facilities per ward and at most 2 mitaa per facility (Table 5.18). However, Table 5.8 shows that pre-primary schools were unevenly distributed causing uneven deficit of schools with Nyanga Ward having 80 percent of such schools. It is followed by Kitendaguro (75.0 percent) and Kashai (66.7 percent). Ijuganyondo and Nshambya wards were the only wards with more schools than the required, while Bilele, Buhembe and kagondo wards successfully complied with the education policy target of having a school in each mitaa or village.

Table 5.18: Status of Pre-Primary School Facilities by Ward, Bukoba Municipal Council; 2011, 2013 and 2015

Ward	No. of Schools	No. of Mitaa	Average Schools per Ward	Average Mitaa per School	Required	Deficit	Percent
Bakoba	3	5	3	1.7	5	2	40.0
Bilele	4	4	4	1.0	4	0	0.0
Buhembe	3	3	3	1.0	3	0	0.0
Hamugembe	2	4	2	2.0	4	2	50.0
Ijuganyondo	4	3	4	0.8	3	-1	-33.3
Kagondo	3	3	3	1.0	3	0	0.0
Kahororo	4	5	4	1.3	5	1	20.0
Kashai	3	9	3	3.0	9	6	66.7
Kibeta	2	5	2	2.5	5	3	60.0
Kitendaguro	2	8	2	4.0	8	6	75.0
Miembeni	4	5	4	1.3	5	1	20.0
Nshambya	5	3	5	0.6	3	-2	-66.7
Nyanga	1	5	1	5.0	5	4	80.0
Rwamishenye	2	4	2	2.0	4	2	50.0
Total	42	66	1.6	1.6	66	24	36.4

Source: Executive Director's Office (Education Department), Bukoba Municipal Council 2017

5.2.1.2 Enrolment in Pre-primary Schools

The motive behind introducing pre-primary schools in government primary schools all over the country was to increase enrollment of children aged 5 and 6 years to enable them to be able to read, write and count numbers before joining primary schools. Table 5.19 shows that enrolment in Municipal council increased by 21.8 percent between 2011 and 2015 in public schools (24.0 percent) and private owned schools (16.7 percent). Looking at individual years, with the exception of 2012, 2011, 2013, 2014 and 2015 had more pupils enrolled in the preceding year than the previous one,

although the increase varies among years (Table 5.19). However, a decline of enrolment was recorded in 2012 (0.5 percent) than it was in 2011 which was caused by the decline of enrolment in public schools. Nevertheless, significant increase in enrolment was attributed to the increase in the awareness of the importance and usefulness of the pre-primary education among parents and also easy accessibility of pre-primary schools.

Table 5.19: Pre-primary School Enrollment by Ownership, Bukoba Municipal Council; 2011-2015

Year	Public	Private	Total	Enrolment Change Public		Enrolment Change Private		Enrolment Change Total	
				Number	Percent	Number	Percent	Number	Percent
2011	1,453	707	2,160						
2012	1,428	721	2,149	-25	-1.7	14	2.0	-11	-0.5
2013	1,666	771	2,437	238	16.7	50	6.9	288	13.4
2014	1,734	871	2,605	68	4.1	100	13.0	168	6.9
2015	1,912	849	2,761	178	10.3	-22	-2.5	156	6.0
Total	8,193	3,919	12,112	459	24.0	142	16.7	601	21.8

Source: Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

Looking at ward level, with the exception of Bilele, Kagondo, Nyanga and Buhembe wards, the remaining wards had successfully increased their enrolment in their pre-primary schools/classes ranging between 6.8 percent recorded in Nshambya Ward and 53.1 percent in Ijuganyondo Ward (Table 5.19a). Kakondo Ward, with a decline of enrolment by 31.6 percent, had the highest proportion of decline of enrolment in the Municipality followed by Nyanga Ward (28.8 percent) and Buhembe Ward (9.6 percent), while Bilele Ward had the least proportion of enrolment decline of 5 pupils, equivalent to 3.6 percent in the Municipality (Table 5.19a).

Table 5.19a: Pre-Primary Schools Enrolment by Ward, Bukoba Municipal Council; 2011 and 2015

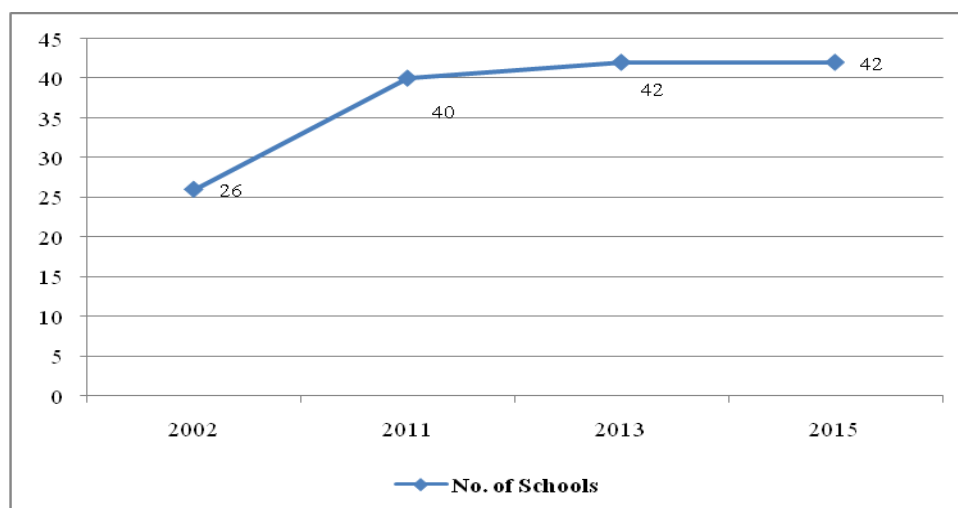
Ward	2011			2015			Change in Enrolment	
	Public	Private	Total	Public	Private	Total	No.	Percent
Bilele	102	40	142	102	35	137	-5	-3.6
Miembeni	120	60	180	182	140	322	142	44.1
Rwamishenye	156	0	156	197	0	197	41	20.8
Kagondo	93	111	204	82	73	155	-49	-31.6
Nyanga	67	0	67	52	0	52	-15	-28.8
Kibeta	30	34	64	64	32	96	32	33.3
Hamugembe	69	0	69	104	0	104	35	33.7
Kashai	160	0	160	220	51	271	111	41.0
Kahororo	96	86	182	192	87	279	97	34.8
Ijuganyondo	24	58	82	69	106	175	93	53.1
Bakoba	212	54	266	265	79	344	78	22.7
Kitendaguro	164	0	164	198	0	198	34	17.2
Buhembe	94	54	148	122	13	135	-13	-9.6
Nshambya	66	210	276	63	233	296	20	6.8
Total	1,453	707	2,160	1,912	849	2,761	601	21.8

Source: Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

5.2.2 Primary Education

Primary school education is a basic right of every Tanzanian child of school going age (7-13 years). To render this possible, 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 it available to every child. To achieve this goal, the first task was to have adequate number of primary schools which would make enrolment increase possible. In 2002, the Government introduced a comprehensive Primary Education Development Programme (PEDP) aiming at increasing enrolment, improving the learning and teaching environment through the supply of teaching books, learning materials and to rehabilitate and construct school infrastructure to comply with the quality education. Bukoba Municipal Council, like other councils in the country, implemented successfully the PEDP by increasing primary schools from 26 in 2002 to 40 schools in 2011 and reached 42 in 2013 but remained the same in 2015 (Figure 5.4). It is shown that Bukoba Municipal Council has succeeded in the implementation of the government call of making sure that primary school pupils walk shorter distances to/from school and every child in the age group has the chance of being enrolled in school.

Figure 5.4 Availability of Primary Schools, Bukoba Municipal Council: 2002 - 2015



Source: Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

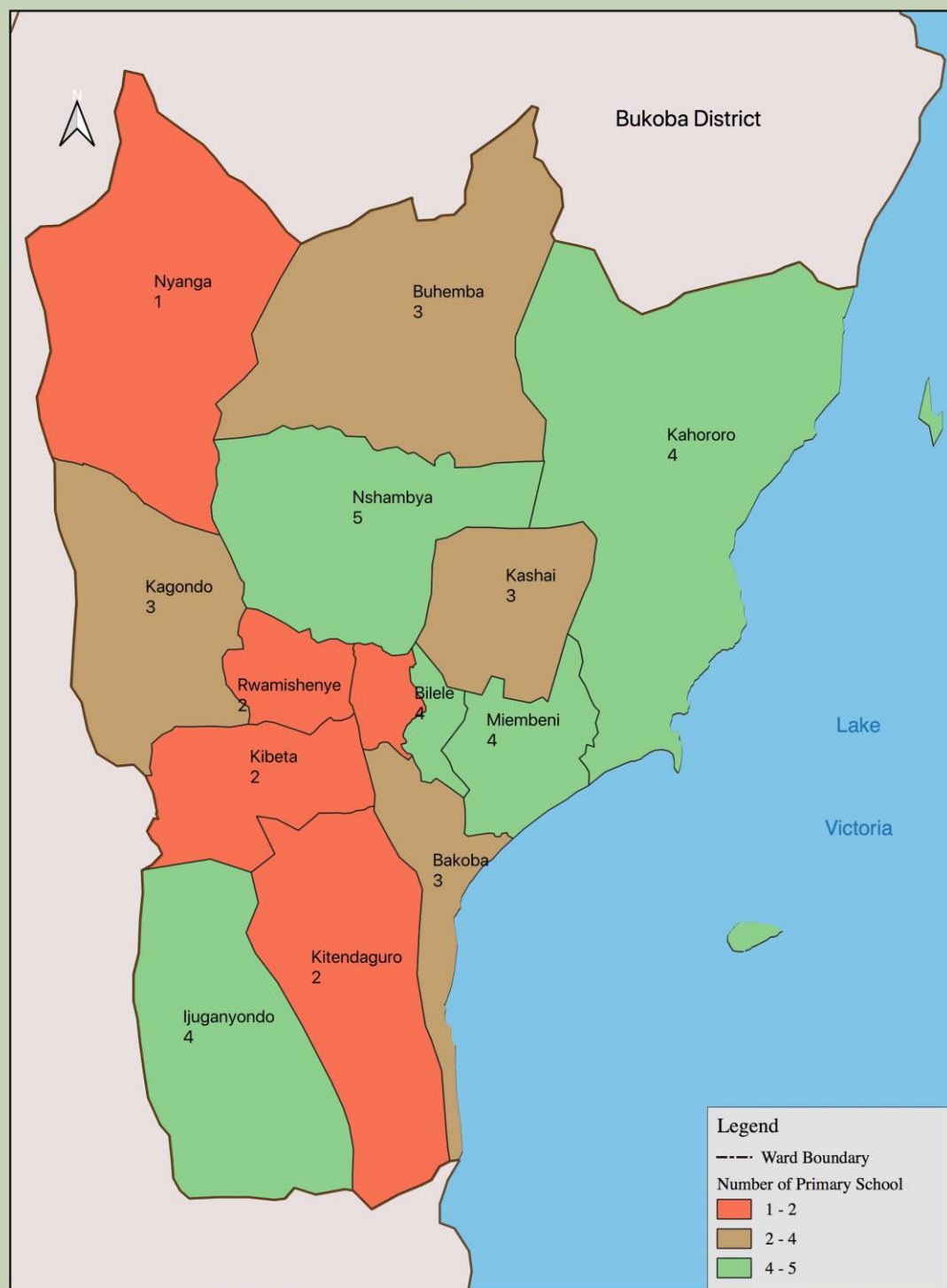
On ownership, out of 42 primary schools available in 2015 in the Council, 25 were government owned and 17 were private contribution in the provision of primary education, but distributed unevenly among 14 wards in the council (Table 5.20). Table 5.20 also shows that Nshambya Ward with 5 primary schools had the highest number of primary schools in Bukoba Municipal Council, while Nyanga Ward had the least number of schools. Other wards had primary schools ranging between 2 and 4 in 2015 (Table 5.20).

Table 5.20: Number of Primary Schools by Ownership and by Ward, Bukoba Municipal Council, 2015.

Ward	2011			2013			2015		
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Bilele	3	1	4	3	1	4	3	1	4
Miembeni	2	2	4	2	2	4	2	2	4
Rwamishenye	2	0	2	2	0	2	2	0	2
Kagondo	1	2	3	1	2	3	1	2	3
Nyanga	1	0	1	1	0	1	1	0	1
Kibeta	1	1	2	1	1	2	1	1	2
Hamugembe	2	0	2	2	0	2	2	0	2
Kashai	2	0	2	2	1	3	2	1	3
Kahororo	3	1	4	3	1	4	3	1	4
Ijuganyondo	1	2	3	1	3	4	1	3	4
Bakoba	2	1	3	2	1	3	2	1	3
Kitendaguro	2	0	2	2	0	2	2	0	2
Buhembe	2	1	3	2	1	3	2	1	3
Nshambya	1	4	5	1	4	5	1	4	5
Total	25	15	40	25	17	42	25	17	42

Source: Executive Director's Office (Education Department), Bukoba Municipal Council 2017

Map 6: Total number of Primary School by Ward, Bukoba Municipal Council, 2015

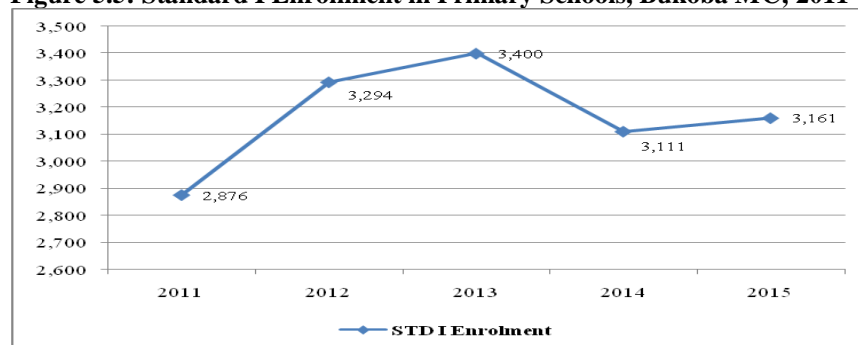


Source: Cartographic Unit, NBS, Dsm, 2017

5.2.2.1 Standard one Enrolment

Bukoba Municipal Council implemented successfully the call of the Government to increase enrolment in primary schools, although there were some variations between years. Figure 5.5 shows that enrolment of Standard One pupils increased from 2,876 pupils in 2011 to 3,400 pupils in 2013 before dropping slightly to 3,161 in 2015.

Figure 5.5: Standard I Enrollment in Primary Schools, Bukoba MC; 2011 - 2015



Source: Municipal Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

At ward level, with the exception of Bilele, Rwamishenye, Kagondo and Kitendanguro wards, the rest had successfully increased enrolment of Standard One pupils in the last five years ranging between 5.8 percent recorded in Nshambya Ward and 60.4 percent in Hamugembe Ward. The increase of enrolment is also evidenced by the increase of school pupils ratios. Table 5.21 shows that the Municipal Council had an average of 72 Standard One pupils per school in 2011 and reached 75 pupils per school in 2015.

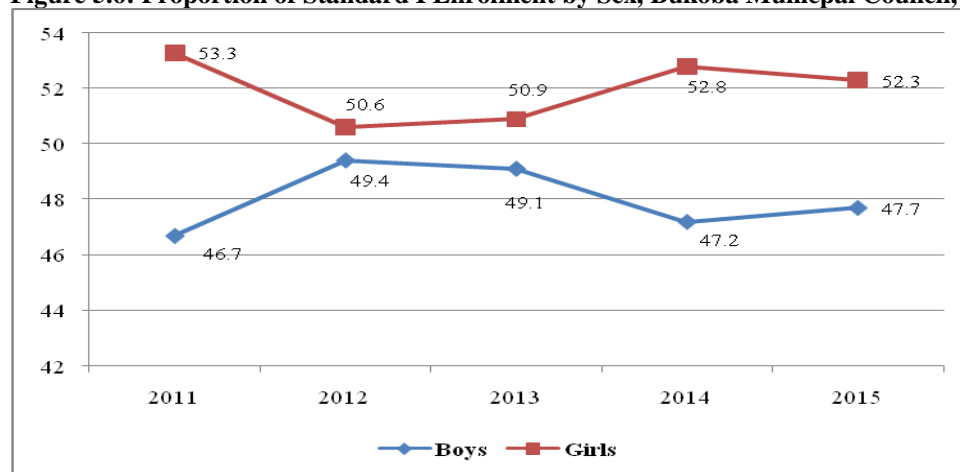
Table 5.21: Standard I Enrollment in Primary Schools by Ward, Bukoba Municipal Council; 2011 and 2015

Ward	2011			2015			Enrolment Change	
	No. of Schools	STD I Pupils	School Pupils Ratio	No. of Schools	STD I Pupils	School Pupils Ratio	No.	Percent
Bilele	4	225	56	4	203	51	-22	-9.8
Miembeni	4	212	53	4	259	65	47	22.2
Rwamishenye	2	284	142	2	281	141	-3	-1.1
Kagondo	3	213	71	3	133	44	-80	-37.6
Nyanga	1	83	83	1	111	111	28	33.7
Kibeta	2	129	65	2	151	76	22	17.1
Hamugembe	2	154	77	2	247	124	93	60.4
Kashai	2	392	196	3	472	157	80	20.4
Kahororo	4	108	27	4	161	40	53	49.1
Ijuganyondo	3	142	47	4	161	40	19	13.4
Bakoba	3	353	118	3	391	130	38	10.8
Kitendaguro	2	170	85	2	155	78	-15	-8.8
Buhembe	3	152	51	3	162	54	10	6.6
Nshambya	5	259	52	5	274	55	15	5.8
Total	40	2,876	72	42	3,161	75	285	9.9

Source: Municipal Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

Regarding enrolment by sex, the council has successfully complied with the national objective of ensuring that girls get equal opportunity as boys in Standard One enrolment for the respective years since the gap between boys and girls in enrolling into primary schools had been improved in recent years than it was before (Figure 5.6). In 2011, more girls (53.3 percent) than boys (46.7 percent) were enrolled in public primary schools in Bukoba Municipal Council; hence the gap was narrowed in 2012. Figure 5.6 also shows that more girls (50.9 percent) than boys (49.1 percent) were enrolled. From 2013, enrolment has been in favour of girls than boys.

Figure 5.6: Proportion of Standard I Enrolment by Sex, Bukoba Municipal Council, 2011 - 2015



Source: Municipal Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

The enrolment into Standard One, according to the education policy for children aged seven years, has been expanded to cover between 7 and 13 years due to culture and norms of Tanzania people. Table 5.22 shows that the proportion of children enrolled in Standard One at the age of seven years in the last five years was 96.6 percent while only 3.4 percent were age eight to 13 years. Looking at individual years, enrolment of children of age seven varies between 91.4 percent in 2011 and 99.3 percent in 2013, while pupils who were eight and more years ranged between 0.7 percent in 2013 and 8.6 percent in 2011 (Table 5.22). Great achievement which has been observed in Standard One enrolment at age seven years was caused by the community participation in school committees and attending series of school meetings in the Municipal Council to monitor and evaluate their children as per policy instruction.

Table 5.22: Distribution of Standard I Enrolment by Age Group, Bukoba Municipal Council; 2011 - 2015

Year	Age Seven Years		Eight to 13 Years		Total		
	Number	Percent	Number	Percent	Boys	Girls	Total
2011	2,265	91.4	212	8.6	1,156	1,321	2,477
2012	2,682	95.6	123	4.4	1,385	1,420	2,805
2013	2,426	99.3	17	0.7	1,199	1,244	2,443
2014	2,422	98.3	41	1.7	1,163	1,300	2,463
2015	2,406	98.8	30	1.2	1,162	1,274	2,436
Total	12,201	96.6	423	3.4	6,065	6,559	12,624

Source: Municipality Executive Director's Office (Education Department), *Bukoba Municipal Council, 2017*

Total (STD I – VII) enrolment of pupils in Bukoba Municipal Council shows similar experience observed on Standard One enrolment. With an increase of 562 pupils in the last five years, the number of pupils increased from 16,666 pupils in 2011 to 17,247 pupils in 2013 before it dropped slightly to 17,228 pupils in 2015 (Table 5.23). Looking at individual years, tremendous increase was done in 2012 with a 3.4 percent increase of pupils more than it was in 2011, However, no increase of pupils was made in 2013, while total enrolment decreased by 0.1 percent in 2015 (Table 5.23).

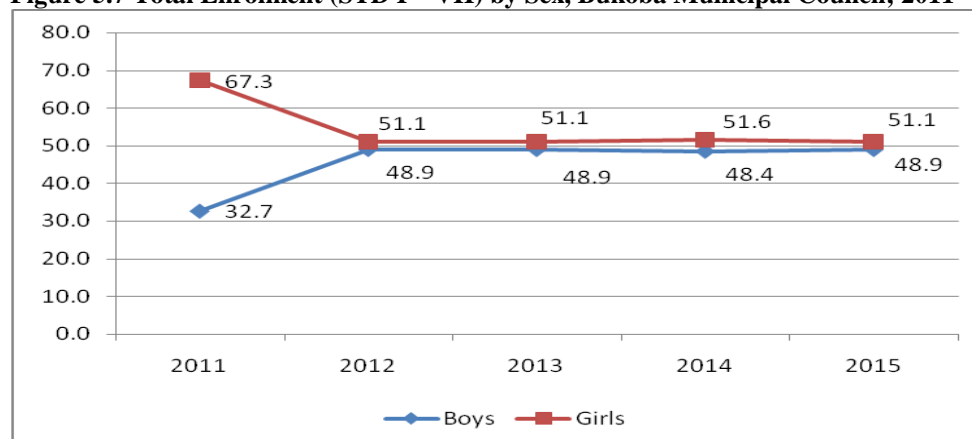
Table 5.23: Total (STD I – VII) Enrolment of Public Primary Schools by Sex; Bukoba Municipal Council, 2011 - 2015

Year	Boys		Girls		Total Pupils	Enrolment Change	
	Number	Percent	Number	Percent		Number	Percent
2011	8,102	48.6	8,564	51.4	16,666		
2012	8,426	48.9	8,804	51.1	17,230	564	3.4
2013	8,432	48.9	8,815	51.1	17,247	17	0.1
2014	8,353	48.4	8,894	51.6	17,247	0	0.0
2015	8,424	48.9	8,804	51.1	17,228	-19	-0.1
Total	41,737	48.7	43,881	51.3	85,618	562	3.4

Source: Municipality Executive Director's Office (Education Department), *Bukoba Municipal Council, 2017*

On sex difference, Figure 5.7 shows that more girls than boys were enrolled in primary schools between 2011 and 2015. The slight difference in the number of boys and girls enrolled was a result of the council's efforts to implement national objective of ensuring girls get equal opportunity as boys in primary school education.

Figure 5.7 Total Enrolment (STD I – VII) by Sex, Bukoba Municipal Council; 2011 - 2015



Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

At ward level, with the exception of Rwamishenye, Hamugambe, Bakoba and Buhembe wards, the rest implemented successfully the call of the government to increase enrolment in their primary schools, although there were some variations among them (Table 5.24). Table 5.24 shows that Ijuganyondo Ward had successfully increased enrolment by 32.4 percent from 231 in 2011 to 630 in 2015 followed by Nyanga Ward (30.1 percent) and Kahororo Ward (27.1 percent). Kashai Ward had a least increase of 1.8 percent between 2001 and 2015 (Table 5.24).

Table 5.24: Total (STD I – VII) Enrolment of Primary Schools by Ward and by Sex; Bukoba Municipal Council, 2011, 2013 and 2015

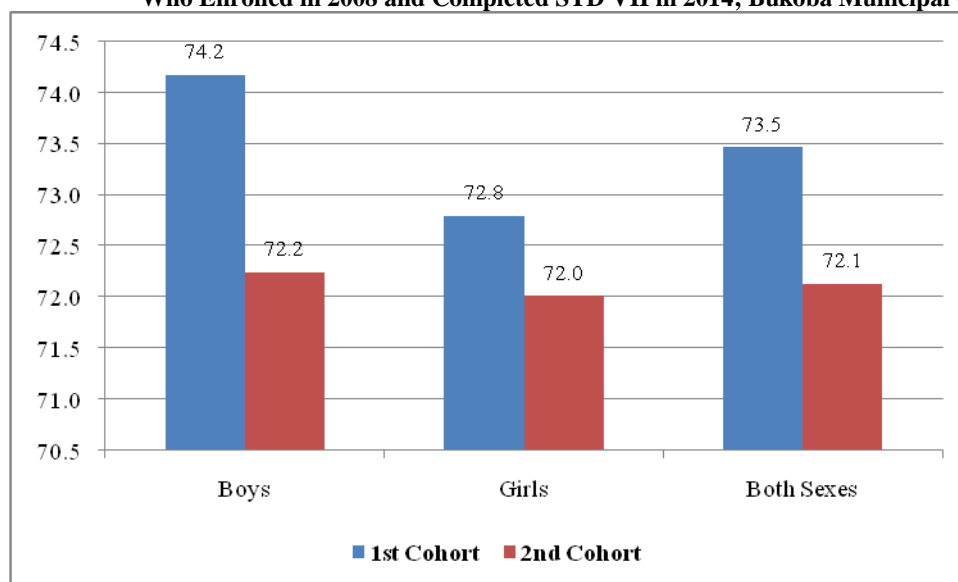
Ward	2011			2015			Enrolment Change	
	Boys	Percent Girls	Total	Boys	Percent Girls	Total	Number	Percent
Bilele	443	50.2	889	455	53.2	973	84	9.4
Miembeni	429	53.8	928	508	53.9	1,102	174	18.8
Rwamishenye	918	50.9	1,870	852	52.5	1,793	-77	-4.1
Kagondo	316	48.9	619	347	52.7	734	115	18.6
Nyanga	260	44.7	470	316	48.5	614	144	30.6
Kibeta	485	50.9	987	493	54.9	1092	105	10.6
Hamugembe	623	52.1	1,301	416	52.9	884	-417	-32.1
Kashai	1,978	52.5	4,160	2,136	49.6	4,235	75	1.8
Kahororo	287	55.5	645	403	50.9	820	175	27.1
Ijuganyondo	231	51.5	476	359	43.0	630	154	32.4
Bakoba	952	50.4	1918	936	49.3	1,845	-73	-3.8
Kitendaguro	439	51.5	906	514	47.8	984	78	8.6
Buhembe	268	51.0	547	224	52.5	472	-75	-13.7
Nshambya	473	50.2	950	465	55.7	1,050	100	10.5
Total	8,102	51.4	16,666	8,424	51.1	17,228	562	3.4

Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

5.2.2.2 Completion Rate

The completion rate is an indicator of the efficiency of the school system that shows the extent to which a cohort of pupils admitted in class one completes primary education cycle irrespective of whether they sit for the final examinations or not. Figure 5.8 shows the performance of two cohorts on tracking retention of pupils in primary schools. The completion rate of the Municipal Council though was good for both cohorts, appears to have declined in recent years. Figure 5.8 shows that the completion rate for the first cohort of pupils enrolled in Standard One in 2007 and completed in 2013 was higher (73.5 percent) than the second cohort (72.1 percent) that completed in 2014. Looking at sex difference, there was an improvement in girls' retention than boys. In the first cohort, completion rate for boys was 74.2 percent compared to 72.8 percent for girls, while girls' retention in the second cohort was 72.0 percent compared to 72.2 percent for boys (Figure 5.8).

Figure 5.8: Completion Rates 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; Bukoba Municipal Council



Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

At ward level, Table 5.25 shows that wards including Kibeta, Kahororo and Ijuganyondo had completion rates more than 100 percent since the number of pupils who completed primary school were more than those enrolled in Standard One in 2007, while Nshambya was the only ward in the Council with the lowest completion rate of 27.2 percent. Looking at sex difference, eight out of 14 wards had higher completion rates for boys than girls with significant differences in the proportion of boys and girls who completed primary school education cycle one.

The observed low completion rates experienced in some wards was influenced by lack of incentives from their parents or guardians due to lack of awareness, some households living far away from school facilities, lost parents and guardians and also poverty among households in those wards.

Table 5.25: Number of Pupils Enrolled in STD I in 2007 and Completed STd VII in 2013 by Ward and Sex, Bukoba Municipal Council

Ward	Enrolled 2008			Completed 2014			Completion Rate		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Bilele	85	94	179	98	76	174	115.3	80.9	97.2
Miembeni	68	90	158	42	54	96	61.8	60.0	60.8
Rwamishenye	124	131	255	100	110	210	80.6	84.0	82.4
Kagondo	40	49	89	34	25	59	85.0	51.0	66.3
Nyanga	42	29	71	22	21	43	52.4	72.4	60.6
Kibeta	51	51	102	51	63	114	100.0	123.5	111.8
Hamugembe	116	106	222	66	76	142	56.9	71.7	64.0
Kashai	312	376	688	196	255	451	62.8	67.8	65.6
Kahororo	57	60	117	74	58	132	129.8	96.7	112.8
Ijuganyondo	31	43	74	38	41	79	122.6	95.3	106.8
Bakoba	149	163	312	124	117	241	83.2	71.8	77.2
Buhembe	64	72	136	44	62	106	68.8	86.1	77.9
Nshambya	118	88	206	25	31	56	21.2	35.2	27.2
Kitendanguro	44	53	97	51	34	85	115.9	64.2	87.6
Total	1,301	1,405	2,706	965	1,023	1,988	74.2	72.8	73.5

Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

Performance of primary schools in terms of completion rate was low in 2014 than it was in 2013. Proportion of pupils who completed primary school education cycle in 2013 exceeded those of 2014 year. This was a 73.5 percent out of 1,988 pupils who completed primary education in 2013 compared with 72.1 percent out of 1, 809 pupils who completed in 2014. At ward level, completion rates among wards were better than those in previous cohort since no ward had completion rate below 50 percent. Moreover, more girls (916) completed education cycle than boys (893) in 2014. This indicates that school dropout problem was more serious among boys than girls during that education cycle (Table 2.39).

Table 5.26: Number of Pupils Enrolled in STD I in 2008 and Completed STD VII in 2014 by Ward and Sex, Bukoba Municipal Council

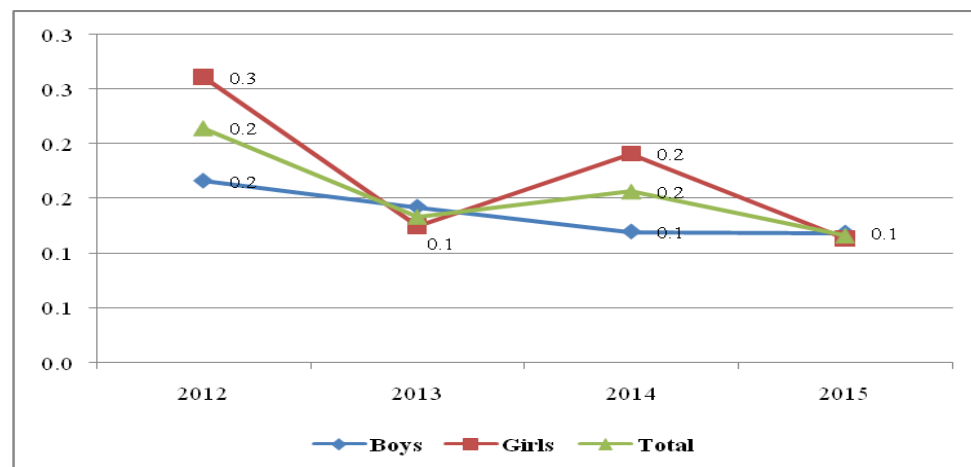
Ward	Enrolled 2008			Completed 2014			Completion Rate		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Bilele	69	95	164	72	64	136	104.3	67.4	82.9
Miembeni	84	74	158	41	45	86	48.8	60.8	54.4
Rwamishenye	101	113	214	100	94	194	99.0	83.2	90.7
Kagondo	39	52	91	29	26	55	74.4	50.0	60.4
Nyanga	21	19	40	19	13	32	90.5	68.4	80.0
Kibeta	55	55	110	46	43	89	83.6	78.2	80.9
Hamugembe	104	96	200	74	65	139	71.2	67.7	69.5
Kashai	297	291	588	188	216	404	63.3	74.2	68.7
Kahororo	42	34	76	35	35	70	83.3	102.9	92.1
Ijuganyondo	36	55	91	35	35	70	97.2	63.6	76.9
Bakoba	156	166	322	92	101	193	59.0	60.8	59.9
Buhembe	90	92	182	39	65	104	43.3	70.7	57.1
Nshambya	91	85	176	77	78	155	84.6	91.8	88.1
Kitendanguro	51	45	96	46	36	82	90.2	80.0	85.4
Total	1,236	1,272	2,508	893	916	1,809	72.2	72.0	72.1

Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

5.2.2.3 Primary School Dropout Rate

Figure 5.9 portrays the situation of primary school pupils' dropout in the last four years, (2012 - 2015) in Bukoba Municipal Council. General observation from the information is that the proportion of drop out of primary school pupils has decreased in recent years. Figure 5.9 shows that the dropout in the Council decreased from 0.2 percent in 2012 to 0.1 percent in 2013 and remains the same in 2015, although it increased to 0.2 percent in 2014.

Figure 5.9: Percentage Drop Outs by Sex; Bukoba Municipal Council; 2012 - 2015



Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

Table 5.27 shows that out of 68,952 pupils enrolled into primary school education in the last four years (2012 – 2015), 107 pupils (5.7 percent) failed to complete standard seven due to truancy and other reasons including transfer to other councils, illness and poverty. The most serious challenge for drop outs in the Municipality related to reasons such as transfer to other councils, illness and poverty. Table 5.27 shows that 61.7 percent of dropouts was caused by other reasons including transfer to other councils, illness and poverty of the parents particularly among girls (60.6 percent) than boys (39.4 percent). It was followed by truancy (38.3 percent), while no pregnancies and deaths were reported in all four years (Table 5.27).

Table 5.27: Primary School Drop Outs by Reasons and Sex; Bukoba Municipal Council; 2012 - 2015

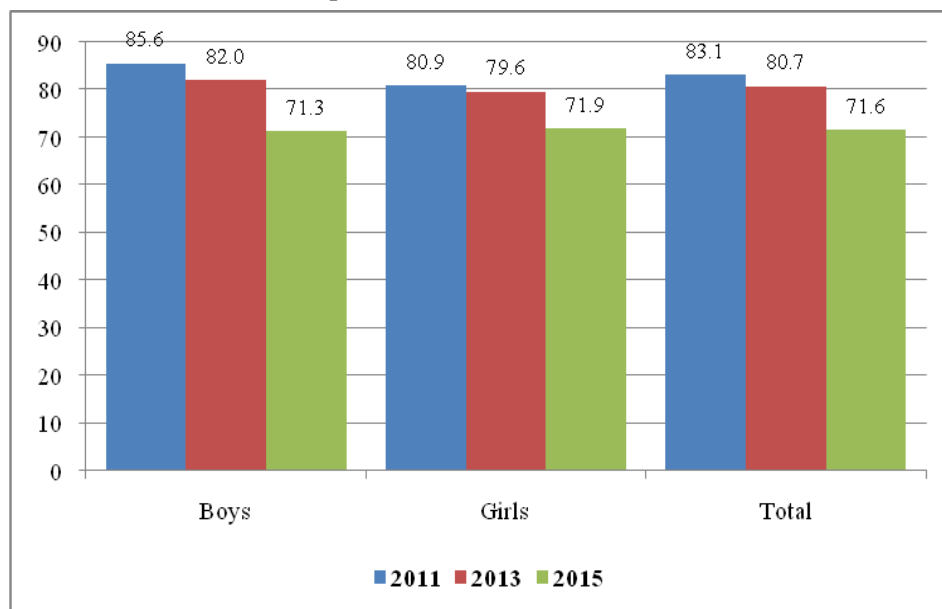
Reason	Boys		Girls		Both Sexes	
	Number	Percent	Number	Percent	Number	Percent
Truancy	20	48.8	21	51.2	41	38.3
Pregnancy			0	0.0	0	0
Death	0	0.0	0	0.0	0	0
Other	26	39.4	40	60.6	66	61.7
Total dropouts	46	43.0	61	57.0	107	100
Total Enrolment	33,635	0.1	35,317	0.2	68,952	0.2

Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

5.2.2.4 Pass Rate in Primary Schools

Pass rate refers to the percentage of pupils who passed standard seven examinations out of pupils who sat for the examinations in a particular year. Information from the Education department shows a decrease of standard seven examinations performance in the last five years. The pass rate decreased from 83.1 percent in 2011 to 80.7 percent in 2013 and then 71.6 percent in 2015 (Figure 5.10). Figure 5.10 also shows that boys' performance decreased from 85.6 percent in 2011 to 82.0 percent in 2013 and reached 71.3 percent in 2015. A similar experience was observed on girl's performance in the Council as it decreased from 80.9 percent in 2011 to 79.6 percent in 2013 and reached 71.9 percent in 2015 (Figure 5.10). The lower pass rate for girls is associated with the tendency of girls spending most of their time attending home duties rather than engaging more in self-study.

Figure 5.10 Number of Pupils who Sat and Passed STD VII Examinations in public Primary Schools, Bukoba Municipal Council 2011, 2013 and 2015



Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

At ward level, Table 5.28 shows examination performance by ward in Bukoba Municipal Council. In 2011, Miembeni Ward had the highest pass rate since all pupils who sat for Standard VII examinations passed. It was followed by Bilele Ward (96.8 percent) and Nyanga Ward (96.2 percent). Wards with the lowest pass rates were Kagondo (54.1 percent) and Kibeta (51.4 percent). Looking at sex differences, Table 5.28 also shows the overall performance of girls which was lower (80.9 percent) than boys (85.6 percent) and the least pass rate for girls was observed in Kagondo Ward whereby 44.7 percent of pupils passed their examinations.

Table 5.28: Number of Pupils Who Sat and Passed STD VII Examinations, Bukoba Municipal Council; 2011

Ward	Pupils sat for STD VII Examinations			Pupils Passed STD VII Examinations			Percent Passed STD VII Examinations		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Bilele	83	104	187	81	100	181	97.6	96.2	96.8
Miembeni	35	33	68	35	33	68	100.0	100.0	100.0
Rwamishenye	93	103	196	84	89	173	90.3	86.4	88.3
Kagondo	33	38	71	15	17	32	45.5	44.7	45.1
Nyanga	30	22	52	29	21	50	96.7	95.5	96.2
Kibeta	48	61	109	26	30	56	54.2	49.2	51.4
Hamugembe	129	129	258	100	101	201	77.5	78.3	77.9
Kashai	216	241	457	208	223	431	96.3	92.5	94.3
Kahororo	52	60	112	50	48	98	96.2	80.0	87.5
Ijuganyondo	27	21	48	15	17	32	55.6	81.0	66.7
Bakoba	134	116	250	111	79	190	82.8	68.1	76.0
Buhembe	28	51	79	23	38	61	82.1	74.5	77.2
Nshambya	20	30	50	20	21	41	100.0	70.0	82.0
Kitendanguro	43	49	92	34	39	73	79.1	79.6	79.3
Total	971	1,058	2,029	831	856	1,687	85.6	80.9	83.1

Source: Municipal Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

Table 5.29 shows trend of performance of primary school examinations in Bukoba Municipal Council in 2015. The overall performance of Standard VII examinations for 2015 was lower than that of 2011, although there were some variations among wards. Table 5.29 shows that Buhembe Ward had the highest pass rate (96.0 percent) in the Municipality. It was followed by Bakoba Ward (93.7 percent) and Miembeni Ward (93.4 percent). General observation from the data shows that performance in the wards was more than 60 percent. Again, overall girls' performance was higher (71.9 percent) than boys (71.3 percent) though there were variations among wards (Table 5.29).

Table 5.29: Number of Pupils Who Sat and Passed STD VII Examinations, Bukoba Municipal Council; 2015

Ward	Pupils Sat for STD VII Examinations			Pupils Passed STD VII Examinations			Percent Passed STD VII Examinations		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Bilele	76	100	176	25	95	120	32.9	95.0	68.2
Miembeni	56	65	121	52	61	113	92.9	93.8	93.4
Rwamishenye	90	124	214	76	102	178	84.4	82.3	83.2
Kagondo	32	48	80	18	33	51	56.3	68.8	63.8
Nyanga	37	27	64	26	21	47	70.3	77.8	73.4
Kibeta	61	68	129	34	45	79	55.7	66.2	61.2
Hamugembe	72	84	156	41	34	75	56.9	40.5	48.1
Kashai	179	248	427	129	159	288	72.1	64.1	67.4
Kahororo	57	62	119	33	35	68	57.9	56.5	57.1
Ijuganyondo	24	35	59	13	21	34	54.2	60.0	57.6
Bakoba	107	67	174	101	62	163	94.4	92.5	93.7
Buhembe	42	33	75	41	31	72	97.6	93.9	96.0
Nshambya	24	31	55	23	16	39	95.8	51.6	70.9
Kitendanguro	39	37	76	27	25	52	69.2	67.6	68.4
Total	896	1029	1925	639	740	1379	71.3	71.9	71.6

Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

Table 5.30 shows the ability of the Municipality to accommodate all pupils who passed Standard VII examinations to join secondary education. It also reflects the capacity of secondary education available in the Municipality. In a period of three years, 2011, 2013 and 2015, 94.3 percent out of 5,235 pupils who were selected joined Form I in public secondary schools in Bukoba Municipal Council whereby 95.3 percent of boys and 93.3 percent of girls were able to join secondary education.

Table 5.30: Number of Pupils Who were Selected and Joined Form I in Public Secondary Schools by Sex, Bukoba Municipal Council; 2011, 2013 and 2015

Years	Number of Pupils Selected to Join Form I			Pupils Joined Form I			Percent Pupils Joined Form I		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2011	882	904	1,786	850	857	1,707	96.4	94.8	95.6
2013	885	932	1,817	839	852	1,691	94.8	91.4	93.1
2015	778	854	1,632	737	802	1,539	94.7	93.9	94.3
Total	2,545	2,690	5,235	2,426	2,511	4,937	95.3	93.3	94.3

Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

5.2.2.5 Transition to Secondary Education

Transition rate refers to the proportion of pupils who graduated primary education to join secondary education. It also reflects the capacity of secondary education available in the region or council. In all three years, 83.1 percent of 5,942 pupils who completed primary education joined secondary education in public schools. Table 5.31 also shows that pupils who joined public secondary schools were 84.1 percent of 2,029 pupils who completed primary school in 2011, 85.1 percent of 1,988 joined secondary education in 2013 and 79.9 percent out of 1,925 joined Form I in 2015. Looking at sex differences, Table 5.31 also shows that more boys (85.7 percent) than girls (80.7 percent) joined secondary education in all referred three years. One general observation from these results is that for every 100 pupils who completed Standard VII an average of 83 pupils joined secondary education. Therefore, the council is in the process of improving its transition rate in order to reduce the number of pupils who enter into labour market without having enough education.

Table 5.31: Number of Pupils Who Completed Primary Education and Joined Secondary Education in Public Secondary Schools by Sex, Bukoba Municipal Council 2011, 2013 and 2015

Year	Pupils Sat for STD VII Examinations			Pupils Joined Form I			Percent Pupils Joined Form I		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2011	971	1,058	2,029	850	857	1,707	87.5	81.0	84.1
2013	965	1,023	1,988	839	852	1,691	86.9	83.3	85.1
2015	896	1,029	1,925	737	802	1,539	82.3	77.9	79.9
Total	2,832	3,110	5,942	2,426	2,511	4,937	85.7	80.7	83.1

Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

5.2.2.6 Primary Schools Facilities

A teacher may be the single most important factor in the development of primary education. However, after the teacher, primary school facilities are also the most important factors. School facilities include classrooms, toilet facilities, teachers' houses, desks, teachers' offices, and miscellaneous school furniture and water sources.

(i) Classrooms

According to Tanzania education system, the use of each classroom in primary and secondary schools is to accommodate 45 pupils/students only. However, due to inadequate infrastructure, most schools in Bukoba Municipal Council fail to comply with the recommended pupils classroom ratio of 45 pupils/students per classroom (CPR 1:45). Table 5.32 shows that the council had exceeded the national target with a CPR of 1:66 in 2015 which was caused by critical shortage of 151 classrooms (36.6 percent) in the Council. At ward level, primary schools in Buhembe Ward with CPR of 1:45 was the only ward that complied with the national standard of CPR at 1:45, while the rest had shortage of classrooms ranging between 8.3 percent reported in Kibeta Ward and 57.3 percent recorded in Kashai Ward (Table 5.32). It is obvious that more classrooms are, therefore, needed in primary schools to enable the pupils to sit more comfortably and enhance teaching effectiveness of the teachers.

Table 5.32: Availability of Classrooms in Public Primary Schools by Ward, Bukoba Municipal Council; 2015

Ward	No. of Schools	Total Pupils	Available Classrooms	Class Pupils Ratio (CPR)	Required Classrooms	Deficit of Classrooms	
						No.	Percent
Bilele	3	973	20	49	23	3	13.0
Miembeni	2	1,102	14	79	27	13	48.1
Rwamishenye	2	1,793	19	94	44	25	56.8
Kagondo	1	734	9	82	18	9	50.0
Nyanga	1	614	12	51	15	3	20.0
Kibeta	1	1,092	22	50	24	2	8.3
Hamugembe	2	884	19	47	22	3	13.6
Kashai	2	4,235	44	96	103	59	57.3
Kahororo	3	820	17	48	20	3	15.0
Ijuganyondo	1	630	11	57	13	2	15.4
Bakoba	2	1,845	30	62	46	16	34.8
Buhembe	2	984	22	45	24	2	8.3
Nshambya	1	472	8	59	11	3	27.3
Kitendanguro	2	1,050	15	70	23	8	34.8
Total	25	17,228	262	66	413	151	36.6

Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

(ii) Pit Latrine



All primary schools in the Municipality had 316 pit-latrine (151 for boys and 165 for girls) used by 17,228 pupils in 2015 (Table 5.33). Based on the standard set by the Government of Tanzania of pupils pit-latrine ratio of 1:20 for girls and 1:25 for boys, Table 5.33 shows that there was a shortage of pit-latrine for both boys and girls as one pit-latrine was used by 53 female pupils and 56 male pupils in 2015. This was a result of a deficit of 186 latrines for boys

273 pit latrines for girls. At ward level, primary schools in Ijuganyondo Ward had the highest shortage of pit-latrine since 120 pit-latrine were used by boys 68 by girls.

Table 5.33: Availability of Pit Latrines in Public Primary Schools by Ward, Bukoba Municipal Council, 2015

Ward	Total Pupils		Available Pit latrine		Pupils Ratio Pit latrine		Required Pit latrine		Deficit of Pit Latrine for	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Bilele	455	518	10	10	46	52	18	26	8	16
Miembeni	508	594	7	11	73	54	20	30	13	19
Rwamishenye	852	941	13	13	66	72	34	47	21	34
Kagondo	347	387	12	12	29	32	14	19	2	7
Nyanga	316	298	4	4	79	75	13	14	9	10
Kibeta	493	599	17	16	29	37	20	30	3	14
Hamugembe	416	468	5	5	83	94	17	23	12	18
Kashai	2,136	2,099	40	46	53	46	85	104	45	58
Kahororo	403	417	11	12	37	35	16	21	5	9
Ijuganyondo	359	271	3	4	120	68	14	14	11	10
Bakoba	936	909	9	11	104	83	37	45	28	34
Buhembe	514	470	7	8	73	59	21	24	14	16
Nshambya	224	248	5	5	45	50	9	12	4	7
Kitendanguro	465	585	8	8	58	73	19	29	11	21
Total	8,424	8,804	151	165	56	53	337	438	186	273

Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

(iii) Staff houses

Out of the various teaching incentives, the provision of staff quarters is very crucial as it facilitates the retention of teachers and also promotes teaching morale. Table 5.34 reveals that Bukoba Municipal Council had 50 teachers' houses compared to the requirement of 548 houses. If the official house teacher ratio (HTR) of 1:1 is required, Bukoba Municipal Council had a deficit of 434 houses (equivalent to 89.7 percent deficit) based on HTR. At ward level, Table 5.34 also shows that Miembeni Ward had no house for teachers, while Buhembe and Bakoba wards each had only one house for teachers.

Table 5.34: Availability of Primary School Teachers' Houses by Ward, Bukoba Municipal Council; 2015

Ward	No. of Schools	Available Teachers	Available Houses	House Teachers Ratio	Required Houses Based on HTR	Deficit of Houses	
						Number	Percent
Bilele	3	35	3	12	35	32	91.4
Miembeni	2	31	0	0	31	31	100.0
Rwamishenye	2	47	3	16	47	44	93.6
Kagondo	1	21	2	11	21	19	90.5
Nyanga	1	15	2	8	15	13	86.7
Kibeta	1	24	3	8	24	21	87.5
Hamugembe	2	48	1	48	48	47	97.9
Kashai	2	104	5	21	104	99	95.2
Kahororo	3	42	22	2	42	20	47.6
Ijuganyondo	1	13	2	7	13	11	84.6
Bakoba	2	49	1	49	49	48	98.0
Buhembe	2	24	2	12	24	22	91.7
Nshambya	1	12	2	6	12	10	83.3
Kitendanguro	2	19	2	10	19	17	89.5
Total	25	484	50	10	484	434	89.7

Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

(iv) Furniture (Desks)

The average number of pupils per desk is an important indicator of the provision of favorable and conducive learning environment for the pupils. For primary and secondary schools, the national standard pupils' desk ratio (DPR) is three pupils/students per one desk (1:3). Table 5.35 shows that the Municipal Council had complied with the national ratio (DPR) of three pupils per desk (1:3) as a result of a surplus of 503 desks. At ward level, Kitendanguro, Ijuganyondo and Kibeta wards were the only wards with shortage of desks in the council, while the rest complied with the DPR standards of three pupils/students per one desk (1:3).

Table 5.35: Availability of Desks in Primary Schools by Ward, Bukoba Municipal Council; 2015

Ward	No. of Schools	Total Pupils	Available Desks	Desk Pupils Ratio	Required Desks	Deficit of Desks	
						No.	Percent
Bilele	3	973	304	3	324	20	6.7
Miembeni	2	1,102	467	2	367	-100	-21.3
Rwamishenye	2	1,793	564	3	598	34	6.0
Kagondo	1	734	361	2	245	-116	-32.2
Nyanga	1	614	213	3	205	-8	-3.9
Kibeta	1	1,092	284	4	364	80	28.2
Hamugembe	2	884	440	2	295	-145	-33.0
Kashai	2	4,235	1,443	3	1412	-31	-2.2
Kahororo	3	820	403	2	273	-130	-32.2
Ijuganyondo	1	630	135	5	210	75	55.6
Bakoba	2	1,845	859	2	615	-244	-28.4
Buhembe	2	984	363	3	328	-35	-9.6
Nshambya	1	472	232	2	157	-75	-32.2
Kitendanguro	2	1,050	178	6	350	172	96.6
Total	25	17,228	6,246	3	5,743	-503	-8.1

Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council 2015

(v) Accessibility of Water



Bukoba Municipal Council supplies water to all primary schools through water tanks and tap water (Table 5.36). Water tanks are the most common water sources for most primary schools in the council. It accounted for 65.1 percent of all sources in 2013 and 57.5 percent in 2015. Nevertheless, in order to reduce water shortage, rain water harvesting is done through water tanks.

This has become the highest source of water in primary schools.

Table 5.36: Accessibility of water in public primary schools by wards in Bukoba Municipal Council 2013 and 2015

Ward	No. of Schools	2013			No. of Schools	2015		
		Schools with Working				Schools with Working		
		Water Tanks	Water Wells	Tape Water		Water Tanks	Water Wells	Tape Water
Bilele	3	3	3	3	3	0	0	3
Miembeni	2	1	0	1	2	0	1	1
Rwamishenye	2	2	2	2	2	2	2	2
Kagondo	1	1	0	1	1	2	2	2
Nyanga	1	0	1	0	1	1	1	0
Kibeta	1	2	1	2	1	1	1	3
Hamugembe	2	2	1	1	2	1	1	1
Kashai	2	6	0	3	3	6	0	3
Kahororo	3	8	4	0	3	4	2	3
Ijuganyondo	1	1	0	0	1	1	0	0
Bakoba	2	2	0	4	1	2	0	4
Buhembe	2	2	0	0	2	2	0	0
Nshambya	1	1	0	0	1	1	0	0
Kitendanguro	2	2	0	0	2	2	0	0
Total	25	33	4	11	25	25	2	15

Source: BMC Executive Director's Office (Education Department), Bukoba Municipal Council 2015

(vi) Teachers

The teacher to pupil ratio is an important indicator of the quality of education provided in schools. The national standard requirement is that one teacher should serve a class of 45 pupils (1:45). Table 5.37 indicates that Bukoba Municipal Council had an average of 36 pupils per teacher or teacher's pupil's ratio (TPR) of one teacher per 36 pupils (1:36). This was made possible because the Municipality had a surplus of 101 teachers, equivalent to 20.9 percent of the required teachers. At ward level, Kitedaguro, Ijuganyondo and Kibeta wards had teacher's pupil ratio above the national standard of one teacher per 45 students. Other wards met the national standard.

Table 5.37: Number of Public Primary School Teachers (Grade IIIB/C, IIIA, Diploma and Degree, Masters) by Ward, Bukoba Municipal Council; 2015

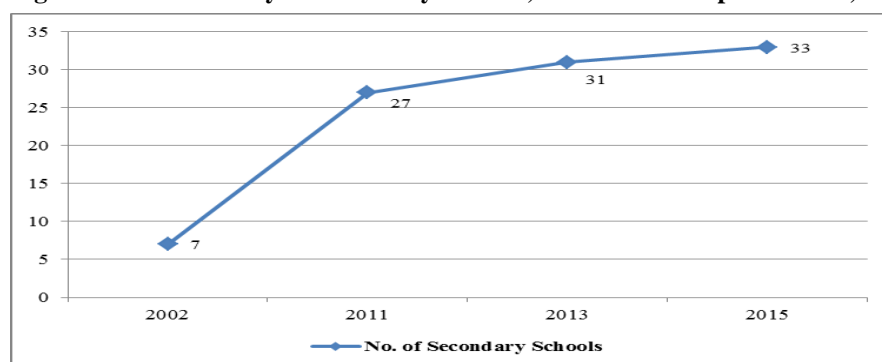
Ward	Total Pupils	Available Teachers	Teacher Pupils Ratio	Teachers Required	Deficit	Percent of Deficit
Bilele	973	35	28	22	-13	-38.2
Miembeni	1,102	31	36	24	-7	-21.0
Rwamishenye	1,793	47	38	40	-7	-15.2
Kagondo	734	21	35	16	-5	-22.3
Nyanga	614	15	41	14	-1	-9.0
Kibeta	1,092	24	46	24	0	1.1
Hamugembe	884	48	18	20	-28	-59.1
Kashai	4,235	104	41	94	-10	-9.5
Kahororo	820	42	20	18	-24	-56.6
Ijuganyondo	630	13	48	14	1	7.7
Bakoba	1,845	49	38	41	-8	-16.3
Buhembe	984	24	41	22	-2	-8.9
Nshambya	472	12	39	10	-2	-12.6
Kitendanguro	1,050	19	55	23	4	22.8
Total	17,228	484	36	383	-101	-20.9

Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council 2015

5.2.3 Secondary School Education

Bukoba Municipal Council had made tremendous achievement on the establishment of secondary school infrastructure in the last decade. The Council successfully increased the number of secondary schools from 7 in 2002 to 27 in 2011 and reached 33 in 2015 (Figure 5.11). Among others, great achievement met by the Municipality was influenced by the implementation of MES program that requires each ward must have at least a public secondary school. Community awareness of the importance of education to their children as well as community participation in the establishment and management of public secondary school were among factors which enabled the Council to achieve the current performance.

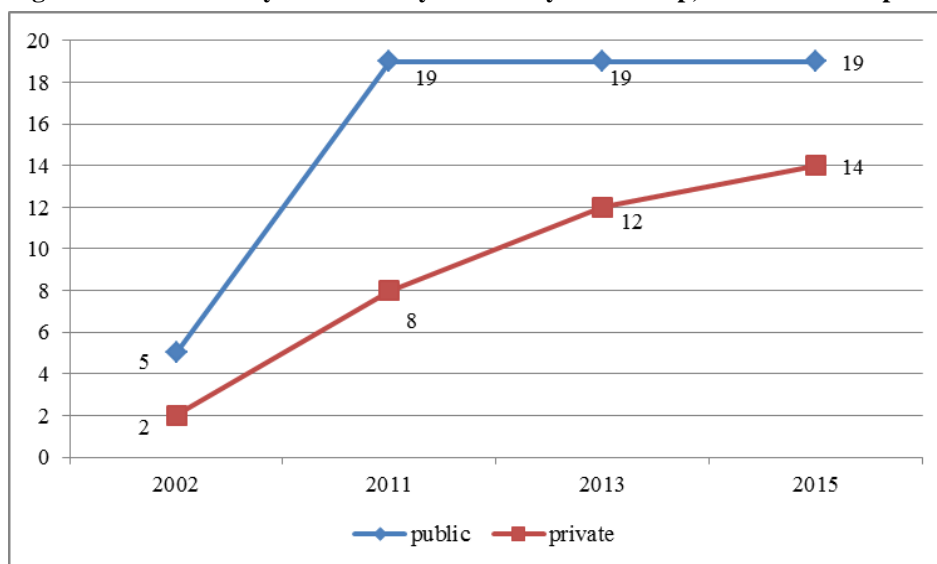
Figure 5.11 Availability of Secondary Schools, Bukoba Municipal Council; 2002 - 2015



Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

On ownership, both public and private sectors contributed significantly on ensuring that the Municipal Council cleared the thrust of the people on the accessibility of secondary schools within acceptable distance. The number of public secondary schools increased from 5 in 2002 to 19 in 2011 and remained the same until 2015, while the number of private secondary schools increased from 2 in 2002 to 8 in 2011 and reached 14 in 2015 (Figure 5.12). In 2015, out of 33 registered secondary schools in the council (Table 5.38), public secondary schools were 19 (57.6 percent of total secondary schools) and 14 schools were privately owned (42.4 percent). It is obvious that the private sector participation in the provision of secondary education in the Municipality is significant.

Figure 5.12 Availability of Secondary Schools by Ownership, Bukoba Municipal Council; 2002 -2015

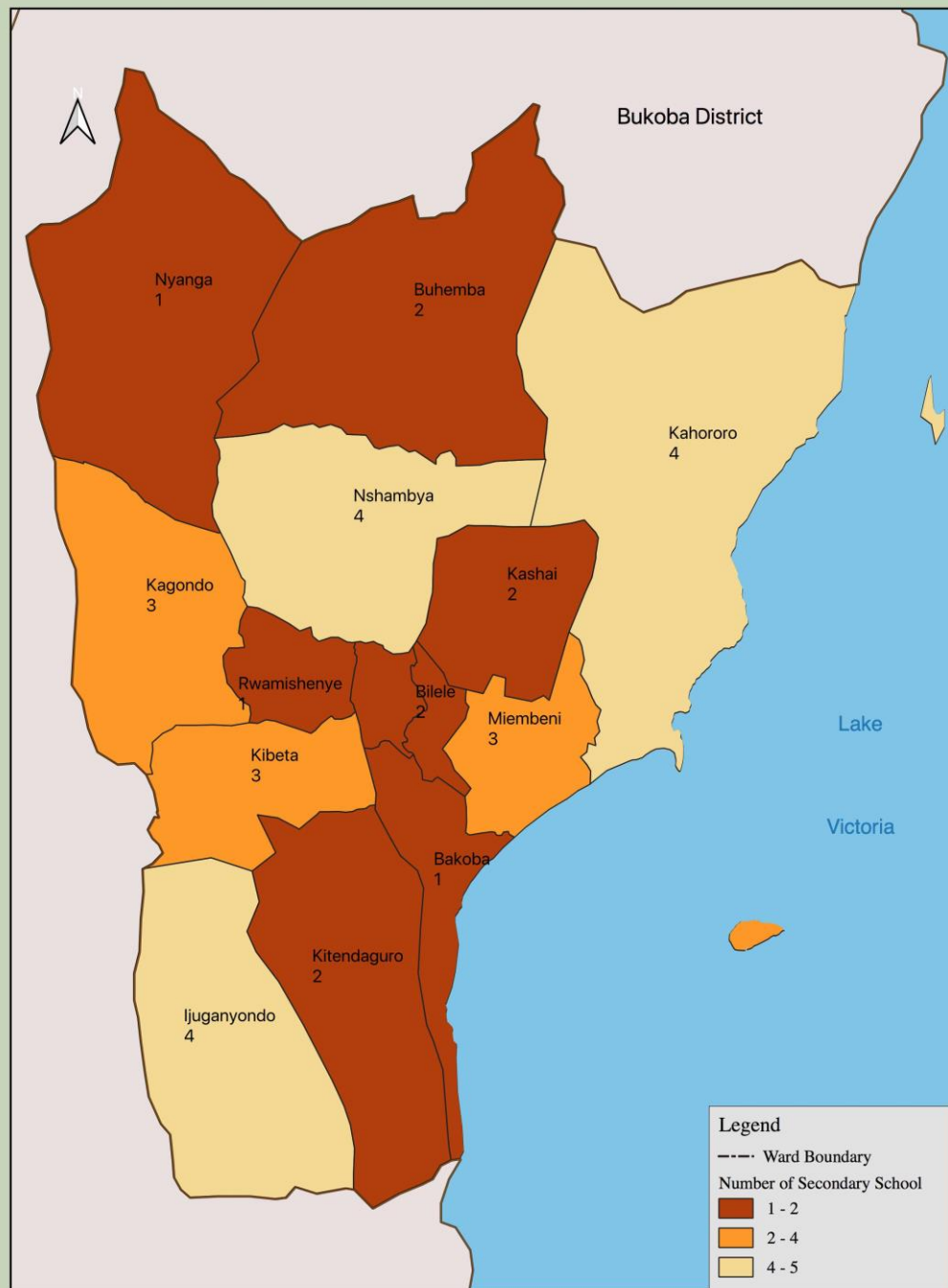


Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

At ward level, Map 7 and Table 5.38 show that all wards in the Municipality had at least a secondary school in 2015. Table 5.38 shows that Ijunganyondo, Kahororo and Nshambya wards had the biggest number of secondary schools (4 schools each) while Hamugembe, Rwamishenye, Nyanga and Bakoba wards had only a secondary school each in 2015.

One general observation from this analysis is that the Municipality had complied with the policy target of having at least a public secondary school in each ward. The best performers were Kashai, Miembeni, Kahororo, Nshambya and Kitendanguro wards which had exceeded the policy target by constructing 2 secondary schools each (Table 5.38).

Map 7: Total Number of Secondary School by Ward, Bukoba Municipal Council, 2015



Source: Cartographic Unit, NBS, Dsm, 2017

Table 5.38: Number of Secondary Schools by Ownership and by Ward, Bukoba Municipal Council; 2011, 2013 and 2015

Ward	2011			2013			2015		
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Kashai	2	0	2	2	0	2	2	0	2
Bilele	1	1	2	1	1	2	1	1	2
Hamugembe	1	0	1	1	0	1	1	0	1
Rwamishenye	1	0	1	1	0	1	1	0	1
Kibeta	1	1	2	1	2	3	1	2	3
Ijuganyondo	1	1	2	1	2	3	1	3	4
Kagondo	1	1	2	1	2	3	1	2	3
Miembeni	2	1	3	2	1	3	2	1	3
Nyanga	1	0	1	1	0	1	1	0	1
Buhembe	1	1	2	1	2	3	1	1	2
Kahororo	2	1	3	2	1	3	2	2	4
Nshambya	2	1	3	2	1	3	2	2	4
Bakoba	1	0	1	1	0	1	1	0	1
Kitendanguro	2	0	2	2	0	2	2	0	2
Total	19	8	27	19	12	31	19	14	33
Percent	70.4	29.6	100.0	61.3	38.7	100.0	57.6	42.4	100.0

Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

5.2.3.1 Secondary School Enrollment (Form I)

The enrolment of students in Bukoba Municipal Council increased with the increase of the school infrastructure. Table 5.39 shows that from 2011 to 2015 there was a remarkable increase of Form I enrolment in public secondary schools in the Municipality. Form I enrolment increased from 1,231 students in 2011 to 1,595 students in 2013 before it dropped slightly to 1,392 students in 2015. Regarding the proportion of increase between sexes, boy's enrolment had higher proportion of increase (37.6 percent) than girls (24.5 percent) in 2013, but both boys and girls decreased their enrolments in 2015 than it was in 2013 as shown in Table 5.39. One general observation experienced in this analysis is an increase of enrolment of Form I students by 13.1 percent which was attributed by the increase of enrolment of boys by 37.2 percent only since there was a decline of girls enrolment by 0.9 percent in the last five years.

Table 5.39: Form 1 Enrolment in Public Secondary Schools by Sex; Bukoba Municipal Council; 2011, 2013 and 2015

Year	Form I Enrolment			Enrolment Change			Percent Change		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2011	479	752	1,231						
2013	659	936	1,595	180	184	364	37.6	24.5	29.6
2015	657	745	1,392	-2	-191	-203	-0.3	-20.4	-12.7
Total	1795	2433	4218	178	-7	161	37.2	-0.9	13.1

Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

At ward level, Table 5.40 shows that, with the exception of Kibeta, Ijuganyondo, Miembeni, Bakoba and Kitendanguro wards, the rest had successfully achieved the call of government to increase Form I enrolment in public secondary schools. Nshambya Ward, though had the least number of students enrolled in the last five years, led other wards by having the highest proportion of increase (190.0 percent) followed by Hamugembe Ward (105.5 percent) and Kahororo ward (105.1 percent), while Buhembe Ward had the least proportion of increase of Form I enrolment (15.6 percent) in the Municipality (Table 5.40).

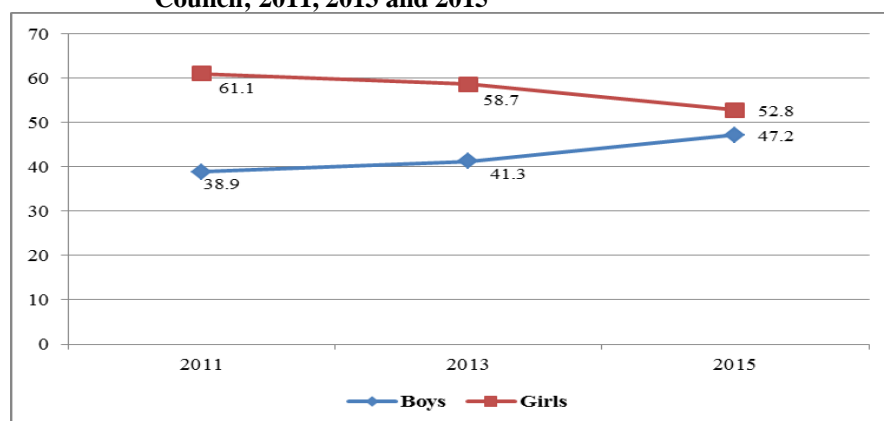
Table 5.40: Form 1 Enrolment in Public Secondary Schools by Sex; Bukoba Municipal Council; 2011, 2013 and 2015

Ward	Form I Enrolment			Change of Enrolment			Percent Enrolment Change		
	2011	2013	2015	2011 - 2013	2013 - 2015	2011 - 2015	2011 - 2013	2013 - 2015	2011 - 2015
Kashai	77	187	110	110	-77	33	142.9	-41.2	42.9
Bilele	82	105	128	23	23	46	28.0	21.9	56.1
Hamugembe	52	64	107	12	43	55	23.1	67.2	105.8
Rwamishenye	40	76	69	36	-7	29	90.0	-9.2	72.5
Kibeta	60	107	59	47	-48	-1	78.3	-44.9	-1.7
Ijuganyondo	26	95	23	69	-72	-3	265.4	-75.8	-11.5
Kagondo	21	76	41	55	-35	20	261.9	-46.1	95.2
Miembeni	235	191	224	-44	33	-11	-18.7	17.3	-4.7
Nyanga	15	19	21	4	2	6	26.7	10.5	40.0
Buhembe	32	62	37	30	-25	5	93.8	-40.3	15.6
Kahororo	98	284	201	186	-83	103	189.8	-29.2	105.1
Nshambya	20	27	58	7	31	38	35.0	114.8	190.0
Bakoba	61	0	60	-61	60	-1	-100.0	0.0	-1.6
Kitendanguro	412	302	254	-110	-48	-158	-26.7	-15.9	-38.3
Total	1,231	1,595	1392	364	-203	161	29.6	-12.7	13.1

Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

Regarding sex differences, Bukoba Municipal Council has done great achievement of ensuring both boys and girls are getting equal opportunities of being selected for secondary education according to their performances regardless of the sexes. Figure 5.13 shows that the Council had successfully narrowed down differences of Form I enrolment by sex since 2011. In 2011, enrolment gap between boys and girls was wide in favour of girls (61.1 percent) than boys (38.9 percent), but it was narrowed to 58.7 percent for girls and 41.3 percent for boys in 2013 (Figure 5.13). The gap was narrowed further to 52.8 percent girls and 47.2 percent for boys in 2015 (Figure 5.13). The district is continuing with this motto of narrowing down the gap between boys and girls in order to comply with policy target of providing equal chances of joining into secondary education system.

Figure 5.13: Percentage of Form 1 Enrolment in Public Secondary Schools by Sex, Bukoba Municipal Council; 2011, 2013 and 2015

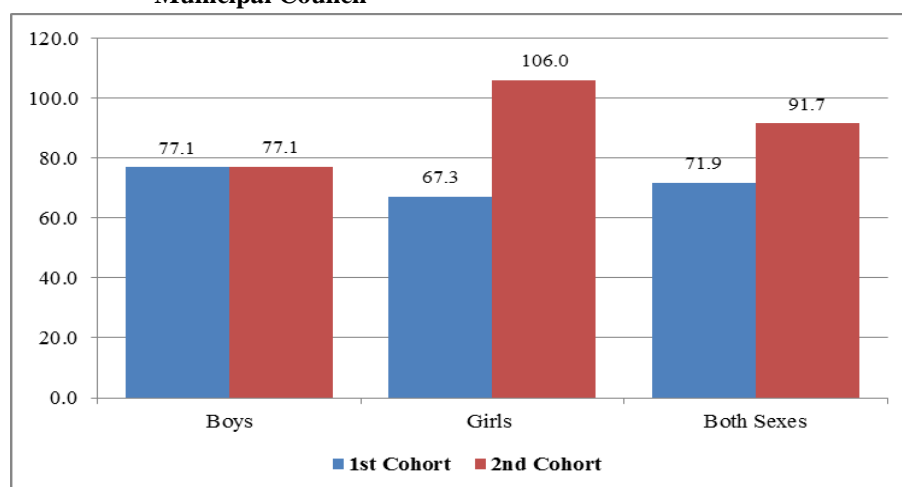


Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

5.2.3.2 Completion Rate

The completion rate is an indicator of the efficiency of the school system that shows the extent at which a cohort of students enrolled in Form I completes the secondary education cycle irrespective of whether they sit for the final examinations or not. Data provided by the education department shows that the total completion rate for second cohort (2012 – 2015) was significantly higher (91.7 percent) than the first cohort enrolled in 2011 and completed in 2014 (71.9 percent). Looking at sex differences, completion rates for boys were higher than those of girls in the first cohort, while girls had higher completion rate in the second cohort than boys (Figure 5.14).

Figure 5.14: Completion Rates of 1st Cohort (2011 – 2014) and 2nd Cohort (2012 – 2015) by Sex, Bukoba Municipal Council



Source: District Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

Table 5.41 shows the cohort of students who were enrolled in Form I in 2011 and completed secondary school education in 2014 by ward and sex in Bukoba Municipal Council. In 2014, out of 1,211 students who were enrolled in 2011, only 871 equivalent to 71.9 percent completed Form IV in 2014. At ward level, Kitendanguro Ward had the highest completion rate (96.0 percent) followed by Nshambya (95.0 percent) and Kiembeni (92.2 percent) wards. Whilst, Hamugembe and Rwamishenye wards had the least completion rates of 37.8 percent and 40.7 percent, respectively (Table 5.41).

Table 5.41: Number of Students Registered in 2011 and Completed Form IV in 2014 by Ward and by Sex in Public Secondary Schools, Bukoba Municipal Council.

Ward	Enrolled in 2011			Completed in 2014			Completion Rate		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Kashai	42	52	94	45	34	79	107.1	65.4	84.0
Bilele	48	49	97	29	33	62	60.4	67.3	63.9
Hamugembe	35	39	74	20	8	28	57.1	20.5	37.8
Rwamishenye	29	30	59	13	11	24	44.8	36.7	40.7
Kibeta	30	30	60	13	17	30	43.3	56.7	50.0
Ijuganyondo	20	20	40	18	12	30	90.0	60.0	75.0
Kagondo	18	17	35	10	12	22	55.6	70.6	62.9
Miembeni	112	107	219	115	87	202	102.7	81.3	92.2
Nyanga	12	11	23	2	8	10	16.7	72.7	43.5
Buhembe	28	24	52	14	8	22	50.0	33.3	42.3
Kahororo	74	64	138	59	29	88	79.7	45.3	63.8
Nshambya	22	18	40	25	13	38	113.6	72.2	95.0
Bakoba	40	40	80	25	19	44	62.5	47.5	55.0
Kitendanguro	62	138	200	53	139	192	85.5	100.7	96.0
Total	572	639	1,211	441	430	871	77.1	67.3	71.9

Source: Municipality Executive Director's Office (Education Department), Bukoba MC, 2017

Table 5.42 shows the second cohort of students who enrolled in 2012 and completed in 2015. Great achievement was done by the local government authorities to a large extent by improving the number of Form IV leavers in Bukoba Municipal Council. The completion rate increased significantly from 71.9 percent in 2014 (cohort one) to 91.7 percent in 2015 (Table 5.42). At ward level, similar experience was observed among wards, although there were differences in the magnitude and proportion. One general observation from Table 5.42 is that wards including Kashai, Bilele, Hamugembe, Rwamishenye, Kibeta, Kagondo and Kitendanguro had more students who completed Form IV than those enrolled in 2012, while Nyanga and Buhembe wards had more girls completed Form IV in 2015 than those enrolled in 2012.

Table 5.42: Number of Students Registered in 2012 and Completed Form IV in 2015 by Ward and Sex in Public Secondary Schools, Bukoba Municipal Council

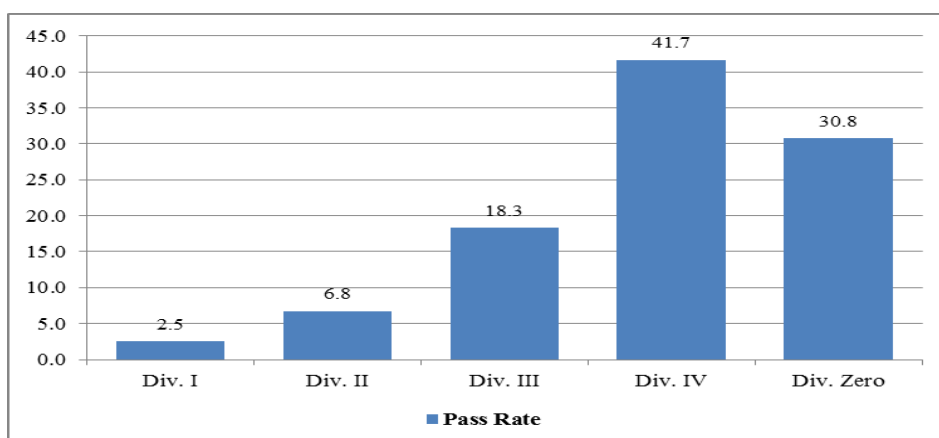
Ward	Enrolled in 2012			Completed in 2015			Completion Rate		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Kashai	57	53	110	87	82	169	152.6	154.7	153.6
Bilele	38	52	90	53	66	119	139.5	126.9	132.2
Hamugembe	25	26	51	33	31	64	132.0	119.2	125.5
Rwamishenye	24	18	42	23	31	54	95.8	172.2	128.6
Kibeta	26	28	54	31	37	68	119.2	132.1	125.9
Ijuganyondo	34	35	69	24	22	46	70.6	62.9	66.7
Kagondo	12	14	26	19	19	38	158.3	135.7	146.2
Miembeni	136	113	249	38	32	70	27.9	28.3	28.1
Nyanga	22	13	35	8	16	24	36.4	123.1	68.6
Buhembe	39	35	74	29	45	74	74.4	128.6	100.0
Kahororo	169	121	290	89	87	176	52.7	71.9	60.7
Nshambya	31	21	52	25	19	44	80.6	90.5	84.6
Bakoba	36	28	64	28	26	54	77.8	92.9	84.4
Kitendanguro	116	220	336	103	311	414	88.8	141.4	123.2
Total	765	777	1542	590	824	1414	77.1	106.0	91.7

Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

5.2.3.3 Pass Rate in Secondary Schools

Pass rate reflects the quality of secondary education provided in the Municipal Council and is divided into divisions with Division I being the highest pass. Generally, the overall performance of Form IV examinations in Bukoba Municipal Council for 2011, 2013 and 2015 were not good. Figure 5.15 shows that out of cumulative 6,587 examinees who sat for Form IV examinations in 2011, 2013 and 2015, only 2.5 percent attained Division I, 6.8 percent got Division II, 18.3 percent attained Division III and 41.7 percent got Division IV, while 30.8 percent attained division zero or failed completely. It is important to note that the Municipal authority is concerned about this performance and it is drawing up strategies that will help to improve examination performances in the future. These strategies include construction of dormitories for boys and girls, provision of food and other performance incentives for students.

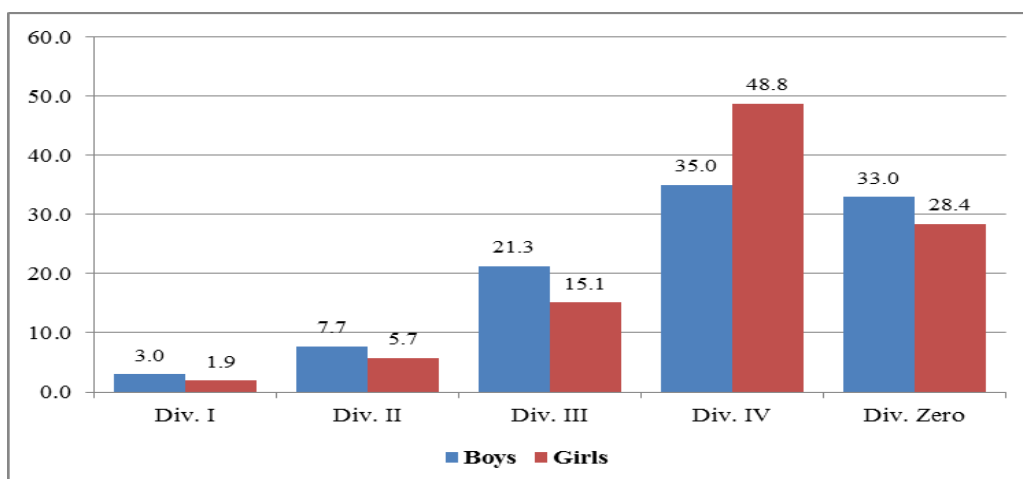
Figure 5.15: Overall Students Performance in Form VI Examinations in Public Secondary Schools, Bukoba Municipal Council; 2011, 2013 and 2015



Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

Looking at sex differences, Figure 5.16 shows that the overall proportion of girls' students performed better than boys, although boys performed better in the best grades (Division I) in the referred period. Data from department of education shows that, out of 6,587 total examinees who sat for Form IV examinations in the referred years, 3,394 were boys and 3,193 were girls. Figure 5.16 shows that 33.0 percent out of 3,394 male examinees failed their examinations and attained division zero, while 28.4 percent out of 3,193 female examinees failed completely and attained division zero. Different experiences were observed in higher grades with high proportions among boys than girls (Figure 5.16).

Figure 5.16: Overall Students Performance in Form IV Examinations in Public Secondary Schools by Sex, Bukoba Municipal Council; 2011, 2013 and 2015



Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

Different criteria which were set by the Ministry of Education and Vocational Training recognize a student has passed if he or she attains between division one and four. Table 5.43 shows that the council has improved its performance in recent years, pass rates have been increasing and proportion of students who failed their examinations has declined significantly in 2015. However, conditions set by the Ministry stipulates that only students who got divisions I and II were eligible to join Form V, while those who got Division III were able to join various institutions and colleges within and outside the council, while those who attained Division IV were eligible to join either vocational training centres or enter into labour market. The number of students who got divisions I and II increased from 6.7 percent in 2011 to 10.3 percent in 2013 and reached 11.0 percent in 2015, while students who failed completely decreased from 31.3 percent in 2011 to 21.5 percent in 2013 before it rose slightly to 27.6 percent in 2015 (Table 5.43).

Table 5.43: Students Performance in Form IV Examinations in Public Secondary Schools, Bukoba Municipal Council; 2011-2015

Year	Division I & II		Division III		Division IV		Division Zero		Total	Percent Passed
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	
2011	85	6.7	202	16.0	581	46.0	396	31.3	1,264	68.7
2012	78	6.3	206	16.7	467	37.8	485	39.2	1,236	60.8
2013	154	10.3	367	24.5	653	43.6	322	21.5	1,496	78.5
2014	134	11.6	247	21.4	347	30.0	428	37.0	1,156	63.0
2015	158	11.0	183	12.8	698	48.6	396	27.6	1,435	72.4
Cum. Total	609	9.2	1,205	18.3	2,746	41.7	2,027	30.8	6,587	69.2

Source: Municipal Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

5.2.3.4 State of Secondary School Facilities

The quantity and quality of facilities for the secondary school system in Bukoba Municipal Council are yet to comply with the standards set by the educational authorities. Apart from the capability of students themselves, lack of school facilities plays a significant role in improving quality of education in the council. The most common facilities that play major role in improving the quality of education include classrooms, toilets, staff quarters, libraries, laboratories, dormitories, desks and teachers, accessibility of electricity and clean and safe water.

(i) Teachers

Expansion of secondary education is directly related to the increase of the number of teaching staff. This is very crucial for the sustainable improvement of education quality. In 2015, Bukoba Municipal Council had 569 teachers distributed in 19 public secondary schools. This gave an average School Teachers Ratio of 1:30 representing a surplus of 119 teachers) in 2015 (Table 5.44). At ward level,

with an exception of Nshambya, Bakoba and Nyanga wards, the rest had an excess of teachers ranging between 11.8 percent (Kashai and Kagondo each) and 53.1 percent Hamugembe Ward.

Table 5.44: Availability of Public Secondary School's Teachers by Ward, Bukoba Municipal Council; 2015

Ward	No. of Schools	Available Teachers	School Teachers Ratio	Required Teachers	Deficit of Teachers	
					No.	Percent
Kashai	2	85	43	75	-10	-11.8
Bilele	1	29	29	15	-14	-48.3
Hamugembe	1	32	32	15	-17	-53.1
Rwamishenye	1	26	26	15	-11	-42.3
Kibeta	1	22	22	15	-7	-31.8
Ijuganyondo	1	23	23	15	-8	-34.8
Kagondo	1	17	17	15	-2	-11.8
Miembeni	2	85	43	60	-25	-29.4
Nyanga	1	15	15	15	0	0.0
Buhembe	1	20	20	15	-5	-25.0
Kahororo	2	46	23	25	-21	-45.7
Nshambya	2	68	34	80	12	17.6
Bakoba	1	14	14	15	1	7.1
Kitendanguro	2	87	44	75	-12	-13.8
Total	19	569	30	450	-119	-20.9

Source: Municipal Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

Table 5.44a shows that, out of 569 public Secondary school teachers available in Bukoba Municipal Council by 2015, 39.4 percent were diploma holders and 60.6 percent were degree holders. At ward level, secondary schools in Kashai Ward were the most privileged as out of 85 available teachers, 64 were degree holders and only 21 had diploma qualifications, followed by Nshambya Ward which had 63 degree holders and only 5 with diploma (Table 5.44a). Looking at sex difference, male teachers were more than female teachers in both qualifications; 62.5 percent out of 224 teachers with diploma qualification were males and 68.4 percent of 345 teachers with degree qualification were males (Table 5.44a). One general observation from these data is that the district council had more qualified teachers because over 65.3 percent had degrees and above and 34.7 percent were diploma holders (Table 5.44a).

Table 5.44a: Availability of Public Secondary School's Teachers by Ward and Qualifications, Bukoba MC; 2015

Ward	Diploma			Degree			Grand total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Kashai	10	11	21	48	16	64	58	27	85
Bilele	7	8	15	8	6	14	15	14	29
Hamugembe	13	4	17	9	6	15	22	10	32
Rwamishenye	7	6	13	6	7	13	13	13	26
Kibeta	5	5	10	8	4	12	13	9	22
Ijuganyondo	12	3	15	6	2	8	18	5	23
Kagondo	3	3	6	8	3	11	11	6	17
Miembeni	23	16	39	28	18	46	51	34	85
Nyanga	7	2	9	6	0	6	13	2	15
Buhembe	6	4	10	9	1	10	15	5	20
Kahororo	16	7	23	13	10	23	29	17	46
Nshambya	4	1	5	47	16	63	51	17	68
Bakoba	6	2	8	3	3	6	9	5	14
Kitendanguro	21	12	33	37	17	54	58	29	87
Total	140	84	224	236	109	345	376	193	569
Percent	62.5	37.5	39.4	68.4	31.6	60.6	66.1	33.9	100

Source: Municipality Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

Campaigns to increase the number of Science Teachers in Bukoba Municipal Council is being enhanced by the Municipal Council authority, since among 569 available teachers in 2015, only 19.2 percent were science teachers and the rest of them were arts teachers (Table 5.44b). At ward level, Kashai Ward had the highest number of science teachers (20) followed by Miembeni (17) and Kitendanguro (15) wards, while Buhembe Ward had no science teacher (Table 5.44b). Looking at sex differences, again both professions were dominated by male teachers than females. Out of 109 science teachers, 75.2 percent were male teachers and 64.1 percent out of 460 arts teachers were also males.

Table 5.44b: Number of Science and Arts Teachers in Public Secondary Schools by Ward, Bukoba Municipal Council; 2015

Ward	Science Teachers			Required Science Teachers	Arts Teachers			Required Arts Teachers
	Male	Female	Total		Male	Female	Total	
Kashai	18	2	20	12	40	25	65	12
Bilele	2	2	4	8	13	12	25	8
Hamugembe	6	1	7	8	16	9	25	8
Rwamishenye	3	2	5	8	10	11	21	8
Kibeta	3	2	5	8	10	7	17	8
Ijuganyondo	4	1	5	8	14	4	18	8
Kagondo	2	1	3	8	9	5	14	8
Miembeni	13	4	17	18	38	30	68	22
Nyanga	2	1	3	4	11	1	12	8
Buhembe	0	0	0	4	15	5	20	8
Kahororo	7	2	9	8	23	14	37	12
Nshambya	9	4	13	22	42	13	55	16
Bakoba	2	1	3	6	7	4	11	8
Kitendanguro	11	4	15	12	47	25	72	18
Total	82	27	109	134	295	165	460	152
Percent	75.2	24.8	19.2		64.1	35.9	80.8	

Source: Municipal Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

(ii) Administration Blocks

Administration blocks are important facilities for the provision of quality education. Therefore, shortage of administration blocks to the large extent hinders the provision of quality education to students. Table 5.45 shows that only 10 public secondary successfully established administration blocks, equivalent to 52.6 percent of total public secondary schools in Bukoba Municipal Council. Looking at ward level, 9 public secondary schools located in Bakoba, Buhembe, Nyanga, Hamugembe and Bilele wards had no administration blocks in 2015 (Table 5.45).

Table 5.45: Availability of Administration Blocks in Public Secondary Schools by Ward, Bukoba Municipal Council; 2015

Ward	No. of Schools	Available Admin. Block	Percent Schools with Admin Block	Required Admin. Blocks	Deficit of Admin.	
					No.	Percent
Kashai	2	1	50.0	2	1	50.0
Bilele	1	0	0.0	1	1	100.0
Hamugembe	1	0	0.0	1	1	100.0
Rwamishenye	1	1	100.0	1	0	0.0
Kibeta	1	1	100.0	1	0	0.0
Ijuganyondo	1	1	100.0	1	0	0.0
Kagondo	1	1	100.0	1	0	0.0
Miembeni	2	1	50.0	2	1	50.0
Nyanga	1	0	0.0	1	1	100.0
Buhembe	1	0	0.0	1	1	100.0
Kahororo	2	1	50.0	2	1	50.0
Nshambya	2	1	50.0	2	1	50.0
Bakoba	1	0	0.0	1	1	100.0
Kitendanguro	2	2	100.0	2	0	0.0
Total	19	10	52.6	19	9	47.4

Source: Municipal Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

(iii) Staff quarters

According to the Ministry of ducation, each school house needs to accommodate one teacher, but due to shortage of teacher's houses, in many areas in the council, one house accommodates two teachers. Table 5.46 shows that the council had shortage of 484 teacher's houses, equivalent to 85.1 percent of the required houses based on the demand of 2015. Looking at ward level, only seven wards had successfully constructed at least a house for teachers. Given the existing shortage of houses for teachers in Bukoba Municipal Council, efforts to improve performance of education system in the council are also focusing not only in employing more teachers but also on building more teachers houses.

Table 5.46: Availability of Teachers Houses in Public Secondary Schools by Ward, Bukoba Municipal Council, 2015

Ward	Available Teachers	Available Houses	House Teacher Ratio	Required Houses	Deficit of Houses	
					No.	Percent
Kashai	85	16	5	85	69	81.2
Bilele	29	1	29	29	28	96.6
Hamugembe	32	0	0	32	32	100.0
Rwamishenye	26	0	0	26	26	100.0
Kibeta	22	0	0	22	22	100.0
Ijuganyondo	23	0	0	23	23	100.0
Kagondo	17	0	0	17	17	100.0
Miembeni	85	3	28	85	82	96.5
Nyanga	15	0	0	15	15	100.0
Buhembe	20	2	10	20	18	90.0
Kahororo	46	12	4	46	34	73.9
Nshambya	68	21	3	68	47	69.1
Bakoba	14	1	14	14	13	92.9
Kitendanguro	87	29	3	87	58	66.7
Total	569	85	7	569	484	85.1

Source: Municipal Executive Director's Office (Education Department), Bukoba MC, 2017

(iv) Classrooms

Bukoba Municipal Council, among other facilities, had successfully complied with standard set by the Ministry of Education on having 45 students per classroom in 2015. Table 5.47 shows that Bukoba Municipal Council had class student ratio of 42 which actually is below the national standard of 45 students. This was made possible after they realized to have extra 12 classrooms, equivalent to 7.4 percent of the required 165 classrooms in 2015.

At ward level, Table 5.47 shows that, with an exception of Kashai, Ruziba, Bilele, Hamugembe, Rwamishenye, Nshambya and Bakoba wards, the remaining wards had extra classrooms ranging between a classroom (Kibeta and Miembeni each) and 7 classrooms recorded in Ijuganyondo and Kahororo wards. Kashai Ward, according to the 2015 requirement, had a critical shortage of 4 classrooms.

Table 5.47: Availability of Classrooms in Public Secondary Schools by Ward, Bukoba MC; 2015

Ward	No. of Schools	Total students	Available Classrooms	Classroom Student Ratio	Required Classes	Deficit of Classes	
						No.	Percent
Kashai	2	1,194	23	52	27	4	13.3
Bilele	1	467	7	67	10	3	32.5
Hamugembe	1	310	4	78	7	3	41.9
Rwamishenye	1	282	5	56	6	1	20.2
Kibeta	1	281	7	40	6	-1	-12.1
Ijuganyondo	1	147	10	15	3	-7	-206.1
Kagondo	1	145	5	29	3	-2	-55.2
Miembeni	2	978	23	43	22	-1	-5.8
Nyanga	1	83	4	21	2	-2	-116.9
Buhembe	1	201	7	29	4	-3	-56.7
Kahororo	2	628	21	30	14	-7	-50.5
Nshambya	2	881	19	46	20	1	3.0
Bakoba	1	260	3	87	6	3	48.1
Kitendanguro	2	1,558	39	40	35	-4	-12.6
Total	19	7,415	177	42	165	-12	-7.4

Source: Municipal Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

(v) Pit latrines

Table 5.48 shows that the council had 388 pit latrines (218 for boys and 170 for girls) utilized by 3,849 boys and 3,566 girls in 2015. Looking at the standard ratios set by the Ministry of Education, each pit latrine should be used by 20 girls and 25 boys respectively. The council, therefore, had not achieved the girl's ratio only as a pit latrine was used by 18 boys and another by 21 female students in 2015. However, Table 5.48 shows variations between sexes and among wards which resulted to have a deficit of 8 toilets for girls students but an excess of 64 toilets for boys. Looking at ward level, Nshambya Ward had experienced a critical shortage of 8 pit latrines for boys only, while Bilele Ward had shortage of 9 pit latrines for girls only. The remaining wards had shortage of toilets for boys and girls. Miembeni Ward had shortage of 7 toilets for boys and 7 for girls and Bilele Ward had shortage of 4 toilets for boys and 9 toilets for girls.

Table 5.48: Availability of Pit Latrines in Public Secondary Schools by Ward; Bukoba MC; 2015

Ward	No. of Enrolment		Available		Toilet Student Ratio		Required		Deficit	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Kashai	895	299	30	14	30	21	36	15	6	1
Bilele	207	260	4	4	52	65	8	13	4	9
Hamugembe	149	161	3	6	50	27	6	8	3	2
Rwamishenye	131	151	6	3	22	50	5	8	-1	5
Kibeta	138	143	7	6	20	24	6	7	-1	1
Ijuganyondo	77	70	6	6	13	12	3	4	-3	-3
Kagondo	72	73	23	3	3	24	3	4	-20	1
Miembeni	483	495	12	18	40	28	19	25	7	7
Nyanga	42	41	2	2	21	21	2	2	0	0
Buhembe	89	112	12	9	7	12	4	6	-8	-3
Kahororo	314	314	9	10	35	31	13	16	4	6
Nshambya	803	78	24	22	33	4	32	4	8	-18
Bakoba	135	125	6	6	23	21	5	6	-1	0
Kitendanguro	314	1,244	74	61	4	20	13	62	-61	1
Total	3,849	3,566	218	170	18	21	154	178	-64	8

Source: Municipal Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

(vi) Dormitories

Construction of dormitories in schools is essential due to the geographical location of wards and distribution of human settlements in Bukoba Municipal Council. The availability of dormitories can help students solve the problem of walking long distances and reduce the rates of drop outs, pregnancies and truancy. According to the status of the Municipality, only 5 wards out of 14 wards had planned to have dormitories based on their geographical locations as all of them had shortage of dormitories which ranged between 5.6 percent (Kitendanguro Ward) and 50.0 percent recorded in Miembeni and Kahororo wards in 2015. This implies that the council had shortage of 10 dormitories, equivalent to 25.6 percent of required dormitories. Lack of dormitories especially in rural areas has caused the increase of dropout rates and poor examination performances in the council (Table 5.49).

Table 5.49: Availability of Dormitories/Hostels in Public Secondary Schools by Ward, Bukoba MC; 2015

Ward	No. of Schools	Available Dormitories	Average Dorm. per school	Required	Deficit of Dormitories	
					Number	Percent
Kashai	2	4	2.0	6	2	33.3
Bilele	1	0	0.0	0	0	0.0
Hamugembe	1	0	0.0	0	0	0.0
Rwamishenye	1	0	0.0	0	0	0.0
Kibeta	1	0	0.0	0	0	0.0
Ijuganyondo	1	0	0.0	0	0	0.0
Kagondo	1	0	0.0	0	0	0.0
Miembeni	2	1	0.5	2	1	50.0
Nyanga	1	0	0.0	0	0	0.0
Buhembe	1	0	0.0	0	0	0.0
Kahororo	2	1	0.5	2	1	50.0
Nshambya	2	6	3.0	11	5	45.5
Bakoba	1	0	0.0	0	0	0.0
Kitendanguro	2	17	8.5	18	1	5.6
Total	19	29	1.5	39	10	25.6

Source: Municipal Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

(vii) Libraries

A library facility is considered to be essential for the development of knowledge and skills of a student. According to the standards set by the Ministry of Education and Vocational Training, every secondary school should have at least a library to enable students borrow and use supplementary books besides textbooks. Table 5.50 shows that only 6 out of 19 public secondary schools in 46 wards had established library facilities in 2015, while the remaining 13 secondary schools located in 10 wards had no library facility in the council. This implies that supplementary books were available for renting to students in those 6 schools only.

Table 5.50: Availability of Libraries in Public Secondary Schools by Ward, Bukoba MC; 2015

Ward	No. of Schools	Available Libraries	Average Libraries per School	Required	Deficit	
					No.	Percent
Kashai	2	3	1.5	6	3	50.0
Bilele	1	0	0	3	3	100.0
Hamugembe	1	0	0	3	3	100.0
Rwamishenye	1	0	0	3	3	100.0
Kibeta	1	0	0	3	3	100.0
Ijuganyondo	1	0	0	3	3	100.0
Kagondo	1	0	0	3	3	100.0
Miembeni	2	3	1.5	6	3	50.0
Nyanga	1	0	0	3	3	100.0
Buhembe	1	0	0	3	3	100.0
Kahororo	2	3	1.5	6	3	50.0
Nshambya	2	4	2	6	2	33.3
Bakoba	1	1	1	3	2	66.7
Kitendanguro	2	5	2.5	6	1	16.7
Total	19	19	1	57	38	66.7

Source: Municipal Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

(viii) Furniture (Tables and Chairs)

Table 5.51 shows that the council had 7,415 students in public secondary schools with 7,385 tables and 7,446 chairs in 2015. The ratios computed in Table 5.51 give an indication of adequate number of furniture for the enrolled students by having facility student ratio of 1.0 for each student for both table and chair in 2015. At ward level, Bakoba Ward had the highest deficit of chairs and tables (33), while Kagondo Ward had the highest surplus of both tables and chairs (23).

Table 5.51: Availability of Tables and Chairs in Public Secondary Schools by Ward, Bukoba MC; 2015

Ward	Total Students	Available		Furniture Student Ratio		Required		Deficit	
		Tables	Chairs	Tables	Chairs	Tables	Chairs	Tables	Chairs
Kashai	1,194	1,184	1,178	1.0	1.0	1,194	1,194	10	16
Bilele	467	452	492	1.0	0.9	467	467	15	-25
Hamugembe	310	315	315	1.0	1.0	310	310	-5	-5
Rwamishenye	282	286	292	1.0	1.0	282	282	-4	-10
Kibeta	281	269	271	1.0	1.0	281	281	12	10
Ijuganyondo	147	147	147	1.0	1.0	147	147	0	0
Kagondo	145	155	158	0.9	0.9	145	145	-10	-13
Miembeni	978	969	988	1.0	1.0	978	978	9	-10
Nyanga	83	86	89	1.0	0.9	83	83	-3	-6
Buhembe	201	201	201	1.0	1.0	201	201	0	0
Kahororo	628	630	634	1.0	1.0	628	628	-2	-6
Nshambya	881	882	887	1.0	1.0	881	881	-1	-6
Bakoba	260	251	236	1.0	1.1	260	260	9	24
Kitendanguro	1,558	1,558	1,558	1.0	1.0	1,558	1,558	0	0
Total	7,415	7,385	7,446	1.0	1.0	7,415	7,415	30	-31

Source: Municipal Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

(ix) Laboratories

A laboratory is a necessary facility for students majoring in science subjects. The standard set by the government is that each school should have at least three laboratories for physics, chemistry and biology subjects. Information provided by the Education Department shows that until 2015, the Municipality successfully established 19 laboratories in 5 wards, namely, Kitendanguro (5 laboratories), Miembeni (3 laboratories), Kahororo (3 laboratories), Nshambya (4 laboratories) and Bakoba (a laboratory). As a result, in 2015, the council had shortage of 39 laboratories, equivalent to 66.7 percent of the required 57 laboratories in the council.

(x) Electricity power

The geographical location of Bukoba Municipal Council has provided two different statuses as the headquarters of the council and at the same time headquarters of Kagera Region. As a result, Bukoba Municipal Council is well endowed with accessibility of electricity generated by TANESCO. Information provided by the Department of Education quantified the presence of electricity generated by national grid which had enabled 17 out of 19 public secondary schools to be connected with electricity in 2015. However, there is no other source of energy used in the Municipality to supply electricity in public secondary schools up to 2015.

(xi) Water

Availability of adequate supply of clean potable water for the secondary school students is of utmost importance for the development of education among school members or society. In 2013, Bukoba Municipal Council had successfully provided water supply mainly through water taps to 14 secondary schools and water tanks in five (5) secondary schools, while no school had established water supply by using water well. Similar observation was experienced in 2015, as the same number of schools in the same wards continues to be supplied with water through tap water and water tanks in the council (Table 5.52).

Table 5.52: Accessibility of Water in Public Secondary Schools by Ward, Bukoba MC, 2015

Ward	2013				2015			
	Schools with Working			Total Schools	Schools with Working			Total Schools
	Water Tanks	Water Wells	Tape Water		Water Tanks	Water Wells	Tape Water	
Kashai	0	0	2	2	0	0	2	2
Bilele	0	0	1	1	0	0	1	1
Hamugembe	0	0	1	1	0	0	1	1
Rwamishenye	0	0	1	1	0	0	1	1
Kibeta	1	0	0	1	1	0	0	1
Ijuganyondo	0	0	1	1	0	0	1	1
Kagondo	0	0	1	1	0	0	1	1
Miembeni	0	0	2	2	0	0	2	2
Nyanga	0	0	1	1	0	0	1	1
Buhembe	1	0	0	1	1	0	0	1
Kahororo	1	0	1	2	1	0	1	2
Nshambya	1	0	1	2	1	0	1	2
Bakoba	1	0	0	1	1	0	0	1
Kitendanguro	0	0	2	2	0	0	2	2
Total	5	0	14	19	5	0	14	19

Source: Municipal Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

5.2.4 Colleges and Vocational Training

Bukoba Municipal Council, like other councils in Kagera Region, is very limited with public and private colleges and vocational training centres. Until 2015, the Municipality had three colleges only, namely, Nshambya Teachers Training College, ERA Teachers College and King Rumanyika College. The Colleges offer different courses including teaching courses, and pharmacy and allied courses at diploma and certificates levels. Table 5.53 shows that these colleges had large numbers of students pursuing courses at each college.

Table 5.53: List of Registered Colleges, Courses and Enrolments by Sex, Bukoba Municipal Council; 2013- 2015

College	Program offered	2013			2015		
		Male	Female	Total	Male	Female	Total
Nshambya TC	Certificate in Primary Education	n.a	n.a	n.a	n.a	n.a	n.a
ERA TC	Certificate in Primary Education	0	0	0	8	11	19
King Rumanyika	Diploma in Primary Education	0	0	0	10	13	23
Total		n.a	n.a	n.a	n.a	n.a	n.a

Source: Municipal Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

Besides colleges, the council had only one public vocational training centre and a number of private centres, offering motor vehicle mechanics, driving, electrical installation, plumbing, masonry and joinery, carpentry, tailoring, secretarial courses, to mention a few. The information provided by the responsible persons in these centres shows poor enrolment of students in these vocations. Lack of awareness among residents is the main reason for low number of students.

Table 5.54: List of Registered Vocation Training Centres, Courses and Enrolments by Sex, Bukoba Municipal Council; 2013- 2015

Name of Centre	Course Offered	2013			2015		
		Male	Female	Total	Male	Female	Total
VETA Kagera	Driving, Electrical, Plumbing	n.a	n.a	n.a	n.a	n.a	n.a
Bhakita VCT	Secretarial course	0	12	12	0	9	9
Dan Computer	Secretarial course	n.a	n.a	n.a	n.a	n.a	n.a
King Rumanyika VTC	Secretarial course	0	0	0	11	19	30
Tuinueane VTC	Secretari course	5	11	16	8	12	20
Total		5	23	28	19	40	59
Percent		17.9	82.1	100	32.2	67.8	100

Source: Municipal Executive Director's Office (Education Department), Bukoba Municipal Council, 2017

5.2.5 Policy Implication on Education Sector

Although there is recognizable development in both primary and secondary education, policy intervention needs to take place to alleviate the existing challenges. Efforts are being taken by the council in the construction of dormitories especially for girls as well as for boys, which will help to prevent and reduce girls' dropouts due to a number of reasons like pregnancy.

Since primary schools in the council seem to have critical shortage of desks, teachers' houses, pit latrines for boys and girls and classrooms, efforts are being taken so as to ensure a good environment in the provision of quality education at primary levels

Moreover, secondary schools have shortage in laboratories and libraries. Hence, the council is in the process of drawing up plans to improve and provide high quality education.

5.2.6 Investment Opportunity in Education

Further investments in Bukoba Municipal Council are required in both secondary and primary education so that quality education is availed. Quality education can be attained when there is sufficient investment in all school facilities including qualified teachers, staff quarters, classrooms, laboratories, libraries, dormitories, school pit latrine, learning and teaching materials in all schools in the Municipality.

5.3 Water Supply and Sanitation

5.3.1 Water Supply

Water Supply and Sanitation Sector in Bukoba Municipal Council covers urban supply in terms of water sources, schemes and technology used to supply water. Besides, staffing situation is also highlighted especially the work of the council water and sanitation engineers and technicians in providing sustainable water and sanitation services. Sustainable access to clean and safe water is essential in reducing poverty, prevention of water-borne diseases and control of other health problems. A large quantity of water is used mainly for domestic purposes. However, according to Kagera Region Basic Demographic and Social Economic Profile, 2016, the main source of drinking water (improved facilities) accounts for 58.9 percent of household usage. Unprotected water sources such as shallow wells are the second water source by 35.1 percent. Unprotected water is primarily used for agricultural purposes.

5.3.2 Urban Water Supply

As Table 5.55 shows, in 2015, there were 92 water sources used by urban population of Bukoba Municipal Council. Out of all sources, rain water harvested through water tanks (43.5 percent) was the most dependable water source in the Municipality. Adequate rain in most part of the year provides assurance of rain water. Spring water, accounting for 40.2 percent was the second dependable water source. Piped water (10.9 percent) was the third dependable water source followed by shallow wells (4.3 percent) and river water (1.1 percent).

Table 5.55: Number and Type of Urban Water Sources, Bukoba Municipal Council; 2015

Water Source	Working	Percent Working	Not Working	Percent Not Working	Total	Percent Source
Charcoal dam	0	0	0	0	0	0
Spring	13	35.1	24	64.9	37	40.2
Shallow Well	2	50.0	2	50.0	4	4.3
Rain water Tanks	29	72.5	11	27.5	40	43.5
Bore holes	0	0.0	0	0	0	0.0
River water	1	100.0	0	0	1	1.1
Piped Water	8	80.0	2	20	10	10.9
Total	53	57.6	39	42.4	92	100

Source: Bukoba Municipal Council Executive Director's Office (Water Supply and Sanitation Department), 2015

In order to make sure that there is a fairly sufficient supply of water to the residents of Bukoba Municipal Council, different types of water delivery technologies have been used. Table 5.56 shows that out of 19 water delivery technologies, 89.5 percent used electricity pump which was regarded as the most dependable water delivery technology in Bukoba Municipal Council. Hand pump and gravity piped (5.3 percent each) were other used/dependable water delivery technologies.

Table 5.56: Number and Type of Water Delivery Technology Used in Urban Water Schemes, Bukoba Municipal Council; 2015

Technology	Working	Percent Working	Not Working	Percent Not Working	Total	Percent Source
Wind Mill	0	0	0	0	0	0
Electricity Pump	6	35.3	11	64.7	17	89.5
Diesel Pump	0	0	0	0	0	0.0
Hand Pump	0	0	1	100	1	5.3
Gravity Piped	1	0	0	100	1	5.3
Total	7	36.8	12	63.2	19	100.0

Source: Bukoba Municipal Council Executive Director's Office (Water Supply and Sanitation Department), 2015

Table 5.57 shows proportion of the urban population (71.2 percent) in Bukoba Municipal Council which is served with clean water. Bukoba Water Supply Authority (BUWASA) is responsible in supplying water to the residents of the Municipality. At ward level, Bilele, Hamugembe, Rwamishenye and Kitendaguro wards had all of their population (100 percent) supplied with clean water. Buhembe Ward had the smallest proportion of the population (28.2 percent) which is served with clean water.

Table 5.57: Percentage of Urban Population Served with Clean Water, Bukoba Municipal Council; 2015

Ward	Estimated Demand in Cubic Meters per Day	Actual Supply in cubic Meters per Day	Percentage of Population Served with Clean Water
Bakoba	519.1	504.8	97.2
Bilele	160.6	160.6	100
Hamugembe	383.4	383.4	100
Rwamishenye	366.8	366.8	100
Kashai	914.7	741.15	81.0
Miembeni	194.4	177.6	91.4
Kitendaguro	6741	6741	100.0
Ijuganyondo	3079	3026	98.3
Kibeta	9611	7091	73.8
Kagondo	4956	3198	64.5
Nyanga	3718	1938	52.1
Buhembe	4803	1355	28.2
Nshambya	10719	8555	79.8
Kahororo	7864	4255	54.1
Total	54030	38493	71.2

Source: Bukoba MC Executive Director's Office (Water Supply and Sanitation Department), 2015

5.3.3 Sanitation

Bukoba Municipal Council does not have good waste disposal system; therefore, there are 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. In line with sanitation facilities, Table 5.58 shows that 32,430 out of 32,540 households had toilet facilities equivalent to 99.7 of the total households in the Municipality. At ward level, the proportion of households with toilet facilities ranged between 98.6 percent in Nyanga Ward and 99.9 percent in Kashai, Rwamishenye, and Kibeta wards. On the other hand, Kibeta Ward had the least percentage of 0.1 of households without toilet facilities while Nyanga Ward had the highest proportion of households without toilet facilities (1.4 percent).

Table 5.58: Number of Households With and Without Toilet Facilities by Ward, Bukoba Municipal Council; 2015

Ward	Total Number of Households	Total Number of Households with Toilets	% of Households with Toilets	Total Number of Households without Toilets	% of Households without Toilets
Bakoba	4,523	4,512	99.8	11	0.2
Bilele	1,301	1,290	99.2	11	0.8
Hamugembe	3,636	3,630	99.8	6	0.2
Rwamishenye	3,423	3,418	99.9	5	0.1
Kashai	7,844	7,836	99.9	8	0.1
Miembeni	1,557	1,552	99.7	5	0.3
Kitendaguro	1,309	1,301	99.4	8	0.6
Ijuganyondo	588	582	99	6	1
Kibeta	1,993	1,991	99.9	2	0.1
Kagondo	995	986	99.1	9	0.9
Nyanga	726	716	98.6	10	1.4
Buhembe	927	917	98.9	10	1.1
Nshambya	2,197	2,189	99.6	8	0.4
Kahororo	1,521	1,510	99.3	11	0.7
Total	32,540	32,430	99.7	110	0.3

Source: District Offices, Water Supply and Sanitation Department, Kagera Region, 2017

5.3.4 Water Supply Personnel

To ensure water and sanitation services are accessible to the majority of Bukoba Municipal Council residents, equipping water and sanitation department with required number of staff and necessary working facilities is vital. The water and sanitation department has a shortage of 25 workers whereby the deficits of personnel are categorized as follows: 56 percent are pump attendants, 20 percent are technicians, 12 percent are engineers, 8 percent are plumbers and 4 pump mechanics (Table 5.59). The council has a long way to go to achieve the millennium development goal of supplying clean and safe water to significant number of her residents.

Table 5.59: Available staff in water sub-sector, Bukoba Municipal Council, 2015

Types of personnel	Demand	Actual	Deficit	Percent of deficit
Engineers	4	1	3	12
Technicians	6	1	5	20
Plumbers	2	0	2	8
Pump attendants	14	0	14	56
Pump mechanics	1	0	1	4
Total	27	2	25	100

Source: Bukoba Municipal Council Executive Director's Office (Water Supply and Sanitation Department), 2015

5.3.5 Policy Implication on Water Sector

Poor accessibility of clean and safe water is a very common problem in Bukoba Municipal Council. Lack of reliable and permanent water sources is believed to be the corner stone of the problem. To alleviate the situation, extensive research is needed to make sure the problem is alleviated by investing heavily to tap lake water or by drilling boreholes and harvesting rain water.

5.3.6 Investment Opportunities in Water Supply

Bukoba Municipal Council is endowed with various types of water sources. However, the region has very few piped water sources. In this regard, investment is needed in the supply of pipes, drilling, charcoal dam and pumping equipment and increase the capacity of water storage. Investment is also needed for the supply of electricity to be used in electricity pumps.

CHAPTER SIX

OTHER DEVELOPMENT ISSUES

6.0 Introduction

Other development issues in Bukoba Municipal Council include youth economic groups, gender empowerment such as day care centers, women economic groups, cooperative development (SACCOS) as well as women's participation in managerial, political, professional and technical fields. Additional issues which are examined in this chapter relate to orphanhood, plight of vulnerable children, financial institutions, non-government organizations and issues on crimes.

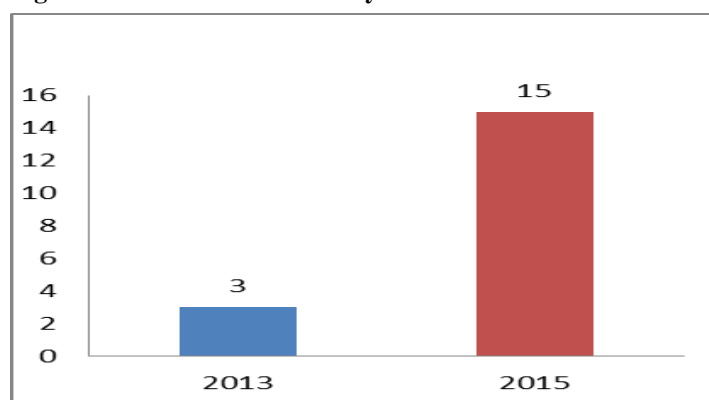
6.1 Gender Empowerment

The load in the social and family welfare for a woman is big as she is the one who bears the load of housekeeping and attending to household chores. At the same time, she is expected to participate in economic activities in order to increase the economy of their families. Challenges like poverty and HIV/AIDs affect women more than men since they are the ones who take the responsibility of taking care of the sick ones. In that aspect, various measures have been put in place to minimize the time spent by women to participate fully in policy and decision making as well as participate in economic activities. Measures that are taken include establishment of day care centers, establishment of women economic groups, establishment of SACCOS and other cooperative groups.

6.1.1 Day Care Centers

Day care centers are important and are established with a purpose of looking and taking care of children aged three to four years before they join pre-primary school. This is because they keep children away from their mothers who, in turn, get an opportunity to participate in economic activities and hence improve their social and economic status.

Figure 6.1: Number of Day Care Centers in Bukoba Municipal Council, 2016



Source: Bukoba Municipal Director's (Community Development Unit)

In Bukoba Municipal Council, the number of day care centers has increased from three in 2013 to 15 in 2015 and the number of pupils increased from 178 in 2013 to 548 in 2015. Out of the 14 wards in the municipality, Bakoba, Kashai and Miembeni wards led in the number of day care centers as well as the number of pupils in 2015 while eight wards had no day care centers.

Table 6.1: Distribution of Day Care Centers by Ward, Bukoba Municipal Council 2013 and 2015

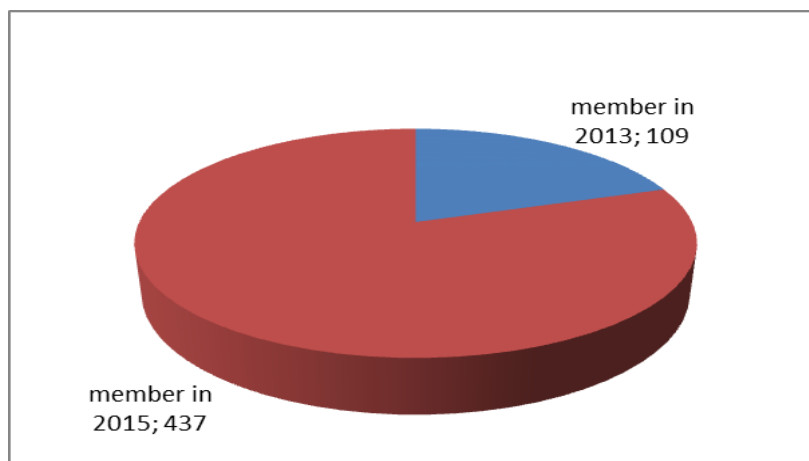
Ward	2013		2015		Difference in Number of Pupils	Percent Difference of Pupils
	Number of Centers	Number of Pupils	Number of Centers	Number of Pupils		
Miembeni	1	61	3	119	58	48.7
Nyanga	0	0	0	0	0	0
Kibeta	0	0	0	0	0	0
Kashai	1	101	4	166	65	39.2
Hamugembe	0	0	0	0	0	0
Buhembe	0	0	0	0	0	0
Bilele	0	0	1	75	75	100
Bakoba	1	16	5	146	130	89
Kahororo	0	0	0	0	0	0
Kitendaguro	0	0	1	0	0	0
Nshambya	0	0	1	42	42	100
Kagondo	0	0	0	0	0	0
Rwamishenye	0	0	0	0	0	0
Ijuganyondo	0	0	0	0	0	0
Total	3	178	15	548	370	67.5

Source: Municipal Director (Community Development Unit) Bukoba Municipal Council, 2016

6.1.2 Women Economic Groups

The emancipation of women from an economic discrimination is something women themselves can do with some help from an understanding government and society. The formation of economic groups for women is the strategy towards this emancipation. The groups also serve the additional purpose of providing a forum for the discussion of development and gender issues leading to women equality and equity between genders. Table 6.2 shows that women economic groups increased from 13 in 2013 to 58 in 2015. Group members also increased from 109 in 2013 to 437 in 2015. This increase of groups and members led to the increase and opportunities to many citizens to get loans for the growth of social and economic independences among women. In 2015, Kagondo, Buhembe, Bilele, Hamugembe, Ijuganyondo and Nyanga wards had not formed any women group. Out of the 58 groups in 2015, six groups were assisted, one group each from Kibeta, Miembeni, Kitendaguro, Rwamishenye wards and two groups from Kashai Ward. The groups in Kitendaguro and Miembeni wards got the highest assistance.

Figure 6.2: Women Economic Groups, Bukoba Municipal Council, 2016



Source: Municipal Director (Community Development Unit) Bukoba Municipal Council, 2017

Table 6.2: Number of Women Economic Groups by Ward; Bukoba Municipal Council; 2013 and 2015

Ward	2013				2015			
	Total no. of Registered Groups	Total Members	No. of Groups Assisted	Total Loaned Tshs	Total no. of Registered Groups	Total Members	No. of Groups Assisted	Total Loaned Tshs.
Kibeta	1	26	0	0	3	32	1	1,500,000
Kagondo	0	0	0	0	0	0	0	0
Bakoba	2	13	1	2,100,000	2	15	0	0
Miembeni	2	13	1	5,775,000	4	36	1	2,000,000
Kashai	4	23	3	6,000,000	6	101	2	3,500,000
Kitendaguro	1	8	0	0	3	36	1	2,000,000
Buhembe	1	11	0	0	0	0	0	0
Kahororo	1	10	0	0	1	12	0	0
Nshambya	0	0	0	0	1	15	0	0
Bilele	0	0	0	0	0	0	0	0
Hamgembe	0	0	0	0	0	0	0	0
Rwamishenye	1	5	0	0	38	190	1	1,500,000
Ijuganyondo	0	0	0	0	0	0	0	0
Nyanga	0	0	0	0	0	0	0	0
Total	13	109	5	13,875,000	58	437	6	10,500,000

Source: Municipal Director (Community Development Unit) Bukoba Municipal Council, 2017

6.1.3 Women's Participation in Policy and Decision Making

Table 6.3 reveals an encouraging level of women participation in managerial but not political posts. Up to 2015, among the 33 managerial posts, eight posts (24.2 percent) were filled by women. In politics, 23.8 percent of the 21 political posts have been filled by women. This indicates that more efforts are required if the council intends to reach the MDG goal of 50/50 in every aspect of participation in policy and decision making. At ward level, Kibeta, Kashai, Hamugembe, Rwamishenye and Ijuganyondo wards had equal representation in the political field.

Table 6.3: Participation in Managerial, Political, Professional and Technical Personnel by Ward and Sex, Bukoba Municipal Council: 2015

Ward	Managerial		Professionals/ Technicians		Politicians (MPs, DC, Councilors)		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
Kibeta	0	1	3	4	1	1	4	6
Kagondo	0	1	2	3	1	0	3	4
Bakoba	1	0	1	4	1	0	3	4
Miembeni	18	2	66	52	1	0	85	54
Kashai	1	0	6	5	1	1	8	6
Kitendaguro	0	1	4	3	1	0	5	4
Buhembe	1	0	2	2	1	0	4	2
Kahororo	1	0	2	2	1	0	4	2
Nshambya	0	1	2	3	1	0	3	4
Bilele	0	1	3	6	1	0	4	7
Hamugembe	1	0	3	3	1	1	5	4
Rwamishenye	1	0	2	3	1	1	4	4
Ijuganyondo	0	1	2	3	1	1	3	5
Nyanga	1	0	4	2	1	0	6	2
Total	25	8	102	95	14	5	141	108

Source: Municipal Director (Community Development Unit) Bukoba Municipal Council, 2017

6.2 Youth Economic Groups

In Bukoba Municipal Council, youths are mainly involved in commercial activities of agriculture and food crops. Employment of youths in these activities has helped to overcome the problem of youth's unemployment. However, self-employment in these sectors needs some preparation and capital input. Access to entrepreneurships, skills as well as credit is, therefore, essential facilities if these youths are to develop their potential and contribute to the council economy and poverty eradication. Availability of training and credit facilities depends on the formation of mutually beneficial economic groups because many youths have no collateral security. Youths can be provided with entrepreneurial skills and access to credit through these groups, which provide supervision and guarantee repayment of the loans. Based on this paradigm of helping youths to generate income for poverty alleviation, youths have initiated and formulated economic groups. In 2013, there were five youth groups with 46 members from all 14 wards of Bukoba Municipal Council. Out of these groups, only two groups were assisted (Bakoba and Kashai wards) a sum of Tshs. TZS 4,500,000. Other wards were not assisted at all. In 2015, the number of groups increased to 17 and only eight groups managed to get loans in Bukoba Municipal Council. A total of TZS 33,500,000 was given to the respective groups.

Among the wards in Bukoba Municipal Council, Kashai Ward had the biggest number of youth economic members (46) and was followed by Bilele Ward with 43 members and Rwamishenye Ward (18 members). Initiatives were made by the Bukoba Municipal Council together with NGO's to

encourage youths to organize themselves into economic groups so as to fulfill the condition of getting loans. It is expected to bring positive results in the future for youth development. However, education and mobilization of youths among themselves is highly recommended.

Table 6.4: Youth Economic Groups and Total Money Loaned by Ward, Bukoba Municipal Council

Ward	2013						2015					
	Total Members				No. of Groups Assisted	Total Amount of Funds Loaned (Tshs)	Total Members				No. of Groups Assisted	Total Amount of Funds Loaned (Tshs)
	Total no. of Groups	M	F	Total			Total no. of Groups	M	F	Total		
Kibeta	0	0	0	0	0	0	0	12	3	15	0	0
Kagondo	0	0	0	0	0	0	0	7	3	10	0	0
Bakoba	2	10	0	10	1	2,500,000	1	10	5	15	2	12,000,000
Miembeni	1	11	0	11	0	0	1	10	3	13	2	10,000,000
Kashai	2	10	5	15	1	2,000,000	4	33	13	46	3	9,500,000
Kitendaguro	0	0	0	0	0	0	2	10	0	10	0	0
Buhembe	0	0	0	0	0	0	0	0	0	0	0	0
Kahororo	0	0	0	0	0	0	0	0	0	0	0	0
Nshambya	0	0	0	0	0	0	2	10	2	12	0	0
Bilele	1	5	5	10	0	0	2	33	10	43	1	2,000,000
Hamgembe	0	0	0	0	0	0	0	0	0	0	0	0
Rwamishenye	0	0	0	0	0	0	4	15	3	18	0	0
Ijuganyondo	0	0	0	0	0	0	0	0	0	0	0	0
Nyanga	0	0	0	0	0	0	0	0	0	0	0	0
Total	6	36	10	46	2	4,500,000	16	140	42	182	8	33,500,000

Source: Municipal Director (Community Development Unit) Bukoba Municipal Council, 2017

6.3 Vulnerable Children and Orphan Hood

An orphan is a child aged below 18 years who has lost one or both parents. According to UNICEF, a child who has lost one parent is termed as ‘single orphan’ and who has lost both parents is a ‘double orphan.’ Table 6.5 shows the magnitude of vulnerability in Bukoba Municipal Council whereby out of 63,058 children aged 0-17 years, 645 children (one percent) were orphans and 1,232 children (two percent) were non-orphans. On sex differences, most vulnerable children were boys (962) who accounted for 51.3 percent while girls (915) constituted for 48.7 percent, both living vulnerable life in the council in 2015. At ward level, Kahororo Ward had the highest number of vulnerable children (236), followed by Kashai Ward (227). However, the ward with the lowest number of vulnerable children was Kitendaguro Ward with 28 children.

Table 6.5: Number of Most Vulnerable Children by Ward, Bukoba Municipal Council: 2015

Ward	Total Children Aged 0 - 17	Most Vulnerable Children										Total Vulnerable Children
		Orphans					Non Orphans					
		No. of Girls	Girls Percent	No. of Boys	Boys Percent	Total	No. of Girls	Girls Percent	No. of Boys	Boys Percent	Total	
Hamugembe	6,551	9	2.9	7	2.1	16	23	3.8	22	3.5	45	61
Nshambya	4,579	8	2.5	5	1.5	13	42	7.0	31	4.9	73	86
Buhembe	2,052	55	17.5	57	17.2	112	43	7.2	54	8.6	97	209
Kahororo	3,359	24	7.6	24	7.3	48	76	12.6	112	17.7	188	236
Kashai	15,630	18	5.7	35	10.6	53	83	13.8	91	14.4	174	227
Miembeni	3,321	33	10.5	18	5.4	51	25	4.2	20	3.2	45	96
Bilele	2,744	14	4.5	35	10.6	49	40	6.7	41	6.5	81	130
Bakoba	1,588	23	7.3	29	8.8	52	69	11.5	57	9.0	126	178
Ijuganyondo	1,315	16	5.1	17	5.1	33	7	1.2	4	0.6	11	44
Kitendaguro	2,879	2	0.6	3	0.9	5	11	1.8	12	1.9	23	28
Kibeta	4,105	25	8.0	19	5.7	44	25	4.2	10	1.6	35	79
Kagondo	2,117	38	12.1	38	11.5	76	46	7.7	38	6.0	84	160
Nyanga	6,551	31	9.9	30	9.1	61	61	10.1	70	11.1	131	192
Rwamishenye	6,267	18	5.7	14	4.2	32	50	8.3	69	10.9	119	151
Total	63,058	314	100.0	331	100.0	645	601	100.0	631	100.0	1,232	1,877

Source: Municipal Director (Community Development Unit) Bukoba Municipal Council, 2017

6.4 Savings and Credit Cooperative Societies (SACCOS)

About 44 SACCOS groups were registered in Bukoba Municipal Council out of which 30 were active and 14 were dormant. The SACCOS groups had slightly more male members (474) than female members (420). The total value of money loaned to members for the period of January to December 2015 was Tshs. 143,500,000. The total loans recovered were Tshs. 87,000,000. Bilele Ward had the highest number of active SACCOS groups (12) with many members compared to all wards. Miembeni Ward had the highest number of active SACCOS as well as members. Meanwhile, Kitendaguro, Ijuganyondo, Kahororo, Nyanga and Bakoba wards had no SACCOS groups. Bilele Ward had the highest share and received the highest loan and also had the highest loan recovery.

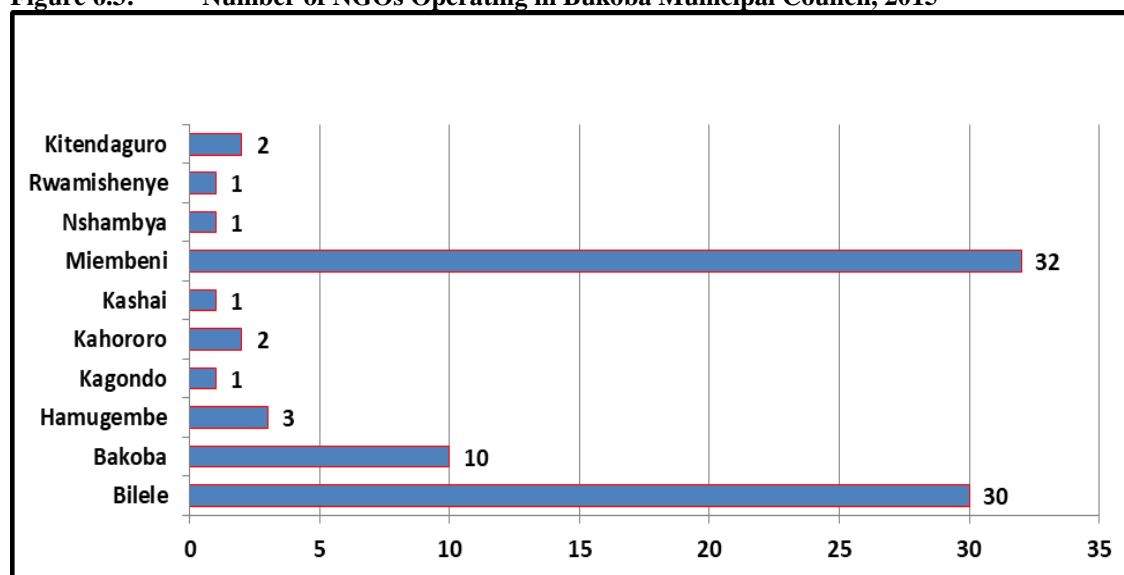
Table 6.6: Active SACCOS by Ward, Bukoba Municipal Council: 2015

Ward	No. of SACCOS (Registered)		Total Members		Total Value of Shares (Tshs) as at 31.12.2015	Total Money loaned to members Jan – Dec 2015 (Tshs)	Total loans recovered from members Jan – Dec 2015 (Tshs)
	Active	Dormant	Male	Female			
Kitendaguro	0	0	0	0	0	0	0
Kibeta	2	1	41	30	1,500,000	12,000,000	8,000,000
Ijuganyondo	0	0	0	0	0	0	0
Rwamishenye	1	1	17	21	2,000,000	3,000,000	1,000,000
Kagondo	1	0	57	14	7,000,000	3,500,000	2,000,000
Miembeni	7	4	62	78	13,000,000	24,000,000	17,000,000
Bilele	12	4	95	130	35,000,000	49,000,000	31,000,000
Kashai	4	2	80	55	17,800,000	23,000,000	12,500,000
Kahororo	0	0	0	0	0	0	0
Nshambya	1	0	35	42	8,000,000	15,000,000	6,000,000
Nyanga	0	0	0	0	0	0	0
Buhembe	1	0	17	32	6,000,000	10,000,000	7,000,000
Bakoba	0	0	0	0	0	0	0
Hamugembe	1	2	70	18	3,000,000	4,000,000	2,500,000
Total	30	14	474	420	93,300,000	143,500,000	87,000,000

Source: Municipal Director (Community Development Unit) Bukoba Municipal Council, 2017

6.5 Active Non-Government Organizations (NGOs)

There are 83 active non-governmental organizations (NGO's) operating in Bukoba Municipal Council with 414 beneficiaries. The types of the activities performed by these groups are education, HIV/AIDS and health, just to mention a few (Figure 6.3).

Figure 6.3: Number of NGOs Operating in Bukoba Municipal Council, 2015

Source: Municipal Director (Community Development Unit) Bukoba Municipal Council, 2017

Table 6.7: Active Non-Governmental Organization (NGOs) Bukoba Municipal Council, 2015

Ward	Number of Development Partners	Number of NGOs
Bilele	140	30
Bakoba	48	10
Hamugembe	13	3
Kagondo	5	1
Kahororo	6	2
Kashia	4	1
Miembeni	181	32
Nshambya	4	1
Rwamishenye	6	1
Kitendaguro	7	2
Total	414	83

Source: Municipal Director (co-operative units) Bukoba Municipal Council, 2017

6.6 Financial Institutions

Remarkable development in social and economic activities such as growth of industrial activities, increased number of higher learning institutions as well as growing of formal and informal small scale businesses tends to raise high demand for financial institutions in the Municipal Council. Table 6.8 shows that up to 2015, there were seven banks operating in Bukoba Municipal Council. Bank branches and Automatic Teller Machines (ATMs) allocated outside the bank buildings, to a large extent, improved the availability of financial services in the Municipality.

Table 6.8: Names of banks available in Bukoba Municipal Council 2015

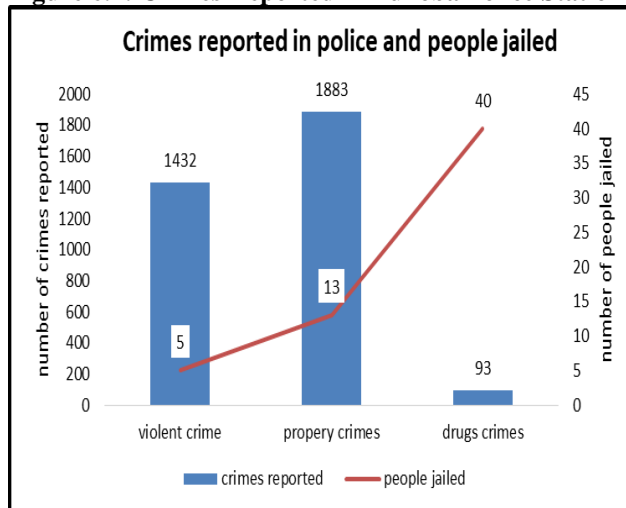
S/n	Name of the financial institution
1	CRDB BANK
2	Tanzania Postal Bank (TPB)
3	Kagera Farmers' Cooperative Bank (KFCB)
4	National Bank of Commerce (NBC)
5	National Microfinance Bank (NMB)
6	Mkombozi Bank
7	Finca Bank

Source: Municipal Director (co-operative units) Bukoba Municipal Council, 2017

6.7 Crime Statistics

The growth of Municipality, population increase, development of science and technology and the increase of crimes are the sources of catalysts leading to erosion of morals in the country. The statistics on the rate of crimes and the types of offences committed reveal that erosion of morals within the society has been increasing day to day. In Bukoba Municipal Council, there are 178 police officers in the council. Crimes which were reported can be described into three categories, namely violent crimes, property crimes and drug crimes. Out of these types of crime, the highest crime reported is the property crime whereby 1,883 cases were reported and the highest jailed crime in Bukoba Municipal Council is on drug crimes, in which 40 people were imprisoned due to this crime between January and December, 2015.

Figure 6.4: Crimes Reported in Bukoba Police Station



Source: OCD Bukoba

Table 6.9: Number of crimes reported at Bukoba Police Station and Number of persons jailed, 2016

Total no. of police officers in the council	Total number of			Total number of people jailed due to		
	Violent crimes reported	Property crimes reported	Drugs crimes reported	Violent crimes	Property crimes	Drug crimes
178	1,432	1,883	93	5	13	40

Source: OCD Bukoba

6.8 Motorcycle Operations (Bodaboda)

In Bukoba Municipal Council, the informal sector such as bodaboda business contributes a lot in reducing youth unemployment as well as reducing income poverty. Most of the people opted to use bodaboda as means of transport because they are cheap and they can reach places that are difficult to reach with other means of transport like vehicles. According to the report from the trade department of Bukoba Municipal Council is that by the end of 2015 Bukoba Municipal Council had 1,100 bodaboda operators allocated in 62 centers of the council. These centers include Mwangaza, Savannah, Bugamo, Aston villa, Igembe, Kashoto and Kombe center. One bodaboda operator earns between Tshs 400,000 to 450,000 per month.

6.9 Policy Implication

To deal with challenges of unemployment and gender equalities, formulation of policies for youths and women are the most basic important aspects. Nowadays, informal sectors are playing a big part in youths and women employment and empowerment. Therefore, policies have to focus on ways of enabling youths to employ themselves and to empower them so as to establish economic groups to make easy for youths and women to access loans. On the other hand, a significant number of women occupy managerial posts than in politics. More forces now should be directed towards maintaining the number of women and youth group for the development of the surrounding society.

6.10 Potential Areas for Investment

The council has identified sectors as potential areas for investment; these include industrial development and education.

(i) Industrial Development

The council has a relatively low level of industrial development. For that case, investors are invited to establish small, medium and large scale industries in the Municipality. Construction of fruit and vegetable processing and cereal milling in the council are other green areas for investment. The area for construction as well as raw materials is available such as oil seeds, fruits and dairy products. Transportation is not a problem as both air and road transportation is in good condition.

To widen the chance for investors, m 120 plots have been designated to be industrial areas whereby 9 plots for large scale industries 18 for medium and 41 for small scale industries have been set aside.

(ii) Education

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

(iii) Health

Up to 2015 the Municipal council had only 22 health facilities both government and private, which are not enough for service delivery to the community. Hence there is a room for investment in the health sector in terms of hospitals, health centers and dispensaries.

(iv) Energy

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

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Bukoba Municipal Council

Vision

“A council with a community of quality life, motivated, dynamic, with sustainable socio-economic development”

Mission

“Provision of quality services to the community through effective and efficient use of resources, capacity building and good governance leading to improved living standards of our people”