



PRIME MINISTER'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

**NYASA DISTRICT COUNCIL PROFILE -
2015**



**NYASA DISTRICT
COUNCIL
P.O. Box 90
MBAMBA BAY,
RUVUMA**

JUNE 2015

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LIST OF ABBREVIATIONS

GDP	Gross Domestic Product
BRN	Big Results Now
BFR	Big Fast Results
LDDC	Least Developed developing Country
LGAs	Local Government Authorities
LGRP	Local Government Reform Program
HCMIS	Human Capital Management Information System
ICT	Information and Communication Technology
DEO	District Education Officer
HBS	Household Budget Survey
SWOC	Strength, Weaknesses Opportunity , Challenges
PEDP	Primary Education Development Programme
SEPD	Secondary Education Development Programme
PMO-RALG	Prime Minister’s Office, Regional Administration and Local Government
MDGs	Millennium Development Goals
PCBs	Private Coffee Buyers
AMCOS	Agricultural Marketing Cooperatives
MKUKUTA	“ Mkakati wa Kukuza Uchumi na Kuondoa Umaskini Tanzania
HoDs	Heads of Departments
TCB	Tanzania Coffee Board
CPUs	Central Pulpery Units
DED	District Executive Director
DC	District Commissioner
KRA	Key Result Area

PPP	Public Private Partnership
CMT	Council Management Committee
PFM	Participatory Forestry Management
TSHS	Tanzanian Shilling
TANESCO	Tanzania Electric Supply Company
TTCL	Tanzania Telecommunication Company Limited
VODACOM	Cellular Network Provider
TV	Television
ITV	Independent Television
DSTV	Digital Satellite Television
MoHSW	Ministry of Health and Social Welfare
PHSDP	Primary Health Service Delivery Programme
HIV/AIDS	Human Immunodeficiency
ARI	Acute Respiratory Infections
UTI	Urinary Tract Infections
PID	Pelvic Inflammatory Diseases
FBOs	Faith Based Organizations
IMR	Infant Mortality Rate
U5MR	Under-Five Mortality Rate
MMR	Maternal Mortality Ratio
VRs	Vaccination Rates
FVR	Full Vaccination Rate
PMTCT	Prevention of Mother to Child Transmission
VCT	Voluntary Counselling and Testing
UNDP	United Nations Development Programme

WHO	World Health Organization
GBV	Gender Based Violence
NGOs	Non Governmental Organizations
CBOs	Community Based Organizations
CSOs	Civil Society Organizations
COWSOs	Community-owned Water Supply Organizations
SADC	Southern Africa Development Community
COMESA	Common Markets for Eastern and Southern Africa

SECTION ONE

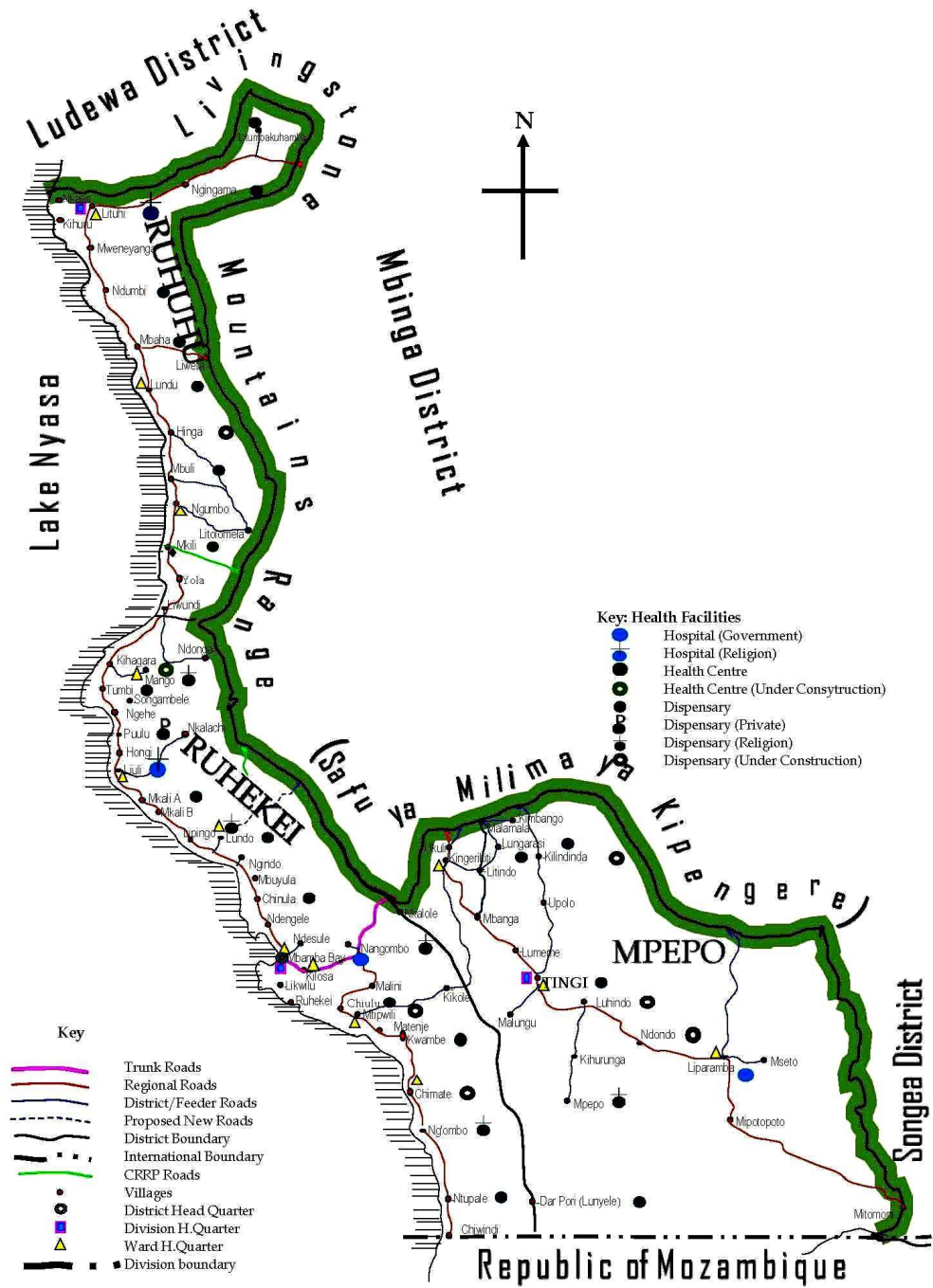
1.0 PHYSICAL LOCATION, TOPOGRAPHY, CLIMATE, DRAINAGE, LAND AND DEMOGRAPHIC CHARACTERISTICS

1.1 Physical Location

Nyasa District Council was established on 8th March 2013 under the Local Government Act No. 7 of 1982, with Local Government Notice No.87. Nyasa district lies on the South Eastern shores of the famous Lake Nyasa. It is located between latitudes 10⁰15' South and 11⁰34' South and longitudes 34⁰24' East and 35⁰28' East. Nyasa District borders Mozambique to the South, Malawi to the West, Mbinga and Songea districts to the East, and Ludewa district to the North.

The proposed headquarters of the new district council plus staff housing and associated infrastructure is under construction in a suburb called Kilosa, which is located about four (4) kilometres East of historical town of Mbambabay along the Mbambabay – Mbinga road.

Map 1: Nyasa District map showing boundaries



The district is blessed with unique ecological features such as brown sandy beaches (see Figure 1) along the shorelines of Lake Nyasa. The scenic Lake Nyasa lies on the bed of the Western arm of the rift valley. It is about 560 kilometres (km) long and has a greatest width of about 75 kilometres. It consists of a single basin with greatest depth of about 706 metres. It is believed that Lake Nyasa is 8th biggest lake in the world, the third deepest freshwater lake on Earth and the second deepest lake in the African continent.

Located at the junction of Malawi, Tanzania and Mozambique, Lake Nyasa (also called Lake Malawi in Malawi and Lago Niassa in Mozambique), is one of Africa's greatest lakes and the southernmost lake in the East African rift valley system. In addition to its great size, Lake Nyasa is distinguished by being home to a greater diversity of fish species than any other freshwater lake in the world.

Map 2: LAKE NYASA



Source: Internet

The lake is estimated to contain about 165,000 tonnes of fish of around 500 species, which provides sustenance for about 600,000 people living around the lake. As a result of its great size and biodiversity, Lake Nyasa is recognized as part of the global heritage.

According to information obtained from the Lake Nyasa Basin Water Board, the lake waters are distributed country-wise as follows: Malawi- 19,372km²; Tanzania- 8,105km² and Mozambique commands 5,980km², making a total lake area of 33,457 km².



Figure1: Brown sand beaches of Lake Nyasa

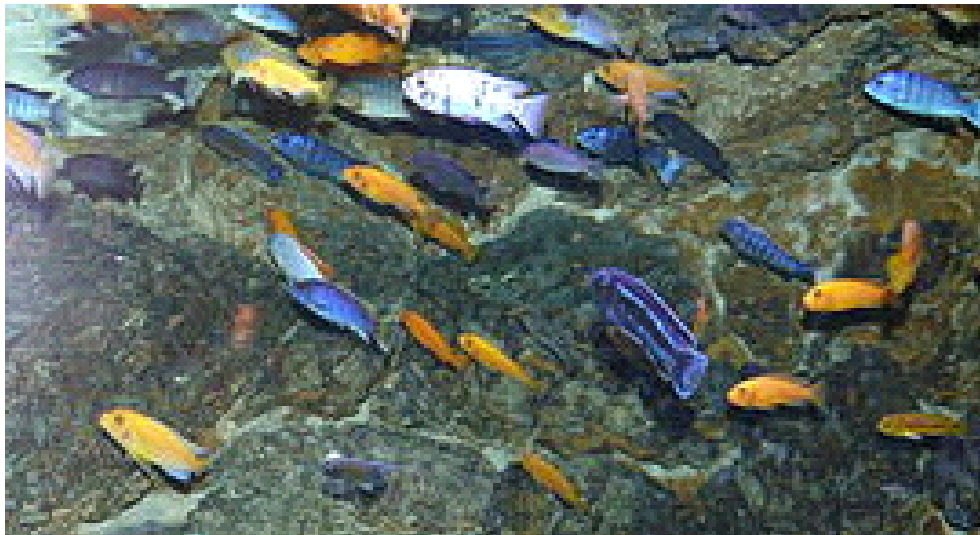


Figure 2: Mbuna cichlids of Lake Nyasa



Figure 3: Cichlids of Lake Nyasa

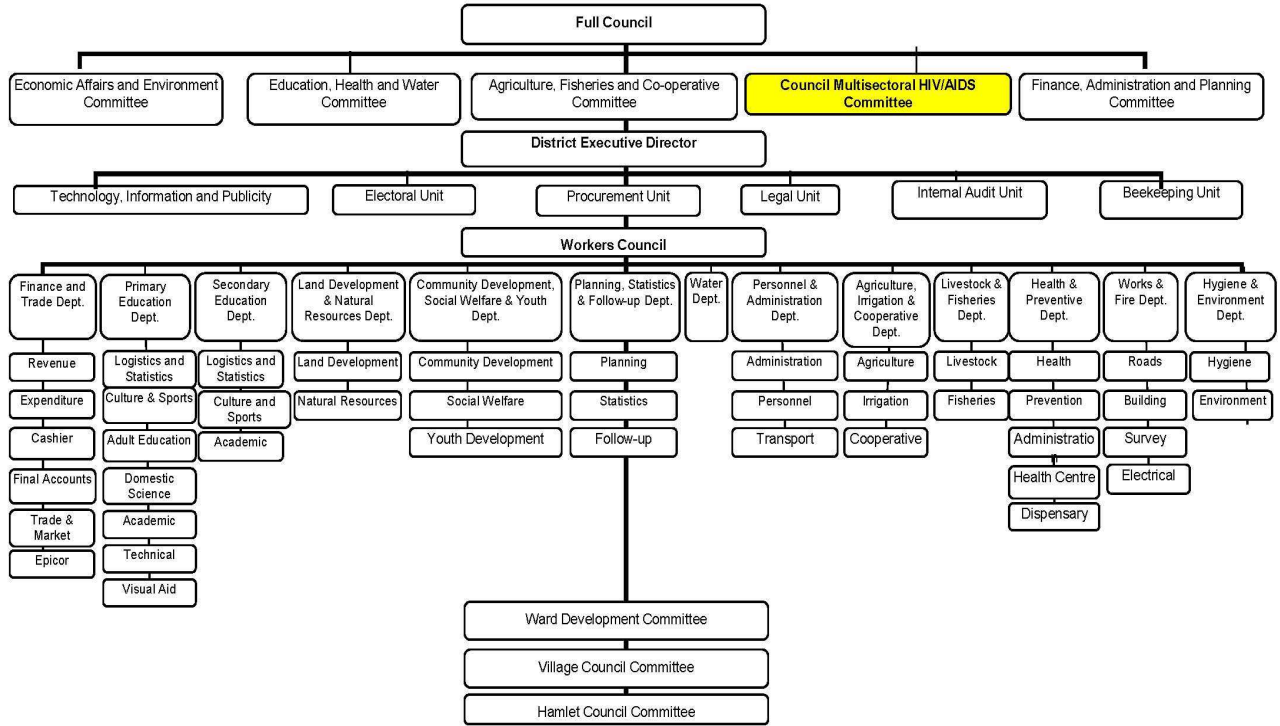
1.2 LAND AREA

Nyasa district covers an area which is approximately 3,811 square kilometers (km²) whereby 832 km² is land area, 2,979 km² is covered by water - Lake Nyasa - and 247.4 km² is covered by forests. Out of the 425 km² dry land area, approximately 264.59 km² is urbanized whilst the remaining area consist of village settlements, forested land, river valleys, cultivated plains, grassy and undulating rocky hill areas.

According to the records, Nyasa district council's total arable land is estimated at 150,000 hectares out of which, 79,000 hectares are already under cultivation. On the other hand, 10,600 hectares are potential for irrigation whereby 6,582 hectares are already under irrigation.

1.3 ADMINISTRATIVE STRUCTURE

Administratively, Nyasa District Council is divided into three (3) divisions; twenty (20) wards; eighty four (84) villages; four hundred twenty five (425) hamlets. It has four small towns, one constituency hence, one Member of Parliament, twenty elected councilors and four special seats councilors.



1.4 DEMOGRAPHIC CHARACTERISTICS

According to the Population and Housing Census report of 2012, Nyasa District Council had a population of 146,160 people, which is approximately 10.6% of the total regional population of about 1,376,891 people. In terms of gender composition, 71,393 (or 48.8%) are males and 74,768 (or 51.2%) are females. The sex ratio of male to female was 96/100 whilst the dependence ratio was 89/100 active to dependent population. The district council's population density is 38.3 people per square kilometre and the average household size is 4.7, which is the same as the national average.

The varying physical environment has exerted some influence on the settlement pattern and population distribution, in addition to the historical experience of the people and the economic and social development of the areas within Nyasa district. These have worked together with differential demographic processes to establish and develop the spatial pattern of the population. For example, long term migratory trends, internecine warfare and slave trade affected the early distribution of the people and the nature of the relation these occupying groups established

with the land. Later administrative organization, the development of economic activities and the establishment of social services introduced into the population new elements which produced the nodes of concentration, areas of settlement extension or reduction, and lines and directions of population movement.

The pattern of population distribution in Nyasa district is characterised by two major blocks of settled land subdivided according to the spatial and demographic characteristics of the population, Spatially in terms of general level of density and whether the population is spread throughout the area or occurs in discrete clusters; and demographically by noting the available evidence on the age, gender, and fertility characteristics of the inhabiting groups.

As indicated in Table 1.1, demographic characteristics of Nyasa District

Council wards vary considerably in terms of population size, gender composition, average household size and sex ratio. For instance, Tingi and Kingerikiti were the most populated wards while Kingerikiti and Mbaha wards recorded the highest household size. The ethnic composition of Nyasa District Council shows that dominant tribes are the Wampoto, Wamanda, Wanyasa and Wamatengo. These disparities have significant implications on the district council's development plans.

Table 1.1: Population of Nyasa District Council by Sex, Average Household Size and Sex Ratio

Serial No.	Ward	Population (Number)			Average Household Size
		Total	Male	Female	
	Total	146,160	71,392	74,768	4.7
1.	Liparamba	9,673	4,868	4,805	4.5
2.	Tingi	23,028	11,711	11,317	4.9
3.	Chiwanda	7,084	3,421	3,663	4.8
4.	Mtipwili	7,102	3,361	3,741	4.5
5.	Kingerikiti	15,875	7,680	8,195	5.0
6.	Luhangarasi	7,970	3,811	4,159	4.8

Serial No.	Ward	Population (Number)			Average Household Size
		Total	Male	Female	
	Total	146,160	71,392	74,768	4.7
7.	Kilosa	7,816	3,764	4,052	4.5
8.	Mbambabay	10,066	4,811	5,255	4.3
9.	Lipingo	8,945	4,379	4,566	4.5
10.	Liuli	12,611	6,058	6,553	4.4
11.	Kihagara	10,321	4,998	5,323	4.9
12.	Ngumbo	3,933	1,921	2,012	4.6
13.	Liwundi	4,906	2,453	2,453	4.4
14.	Mbaha	6,972	3,406	3,566	5.0
15.	Lituhi	9,858	4,750	5,108	4.5
*16	Lumeme				
*17	Linga				
*18	Mpepo				
*19	Mipotopoto				
*20	Upolo				

Source: 1. 2012 Population and Housing Census

*2. DED, Nyasa District Council, 2015. New Wards sub-divided from the existing ones, hence population figures not available.

1.5: TOPOGRAPHY AND CLIMATE

The topography of the district is characterized by hilly areas with altitude ranging between 800 metres and 1,500 metres above sea level to lowlands with narrow plains along Lake Nyasa whose altitude is between 500 metres and 600 metres above sea level. Hilly areas are found in Mpepo division and include areas such as Tingi, Liparamba and other areas while Ruhuhu, Ruhekei and other areas bordering Livingstone mountain ranges form part of the lowlands of Nyasa district.

Generally, key factors which influence the climatic conditions of Nyasa are , topography, vegetation and Lake Nyasa itself. Specific micro-climates are also found in specific localities. The district is moderately warm throughout the year. The lowlands, especially areas along the Lake are generally hot all the year round. Mpepo division, due to its altitude, experiences a relatively cold weather.

Depending on the season and altitude of the locality, temperatures range between 29⁰ and 31⁰ Celsius during the hot season and between 19⁰ and 23⁰ Celsius during chilly periods which are experienced during the months of June to August. In August some areas, especially in Matengo highlands in Mpepo division, temperatures may drop to 13⁰ Celsius. The months of October and November are regarded as the hottest months with an average temperature of about 30⁰ Celsius in the lowlands.

Nyasa district normally receives adequate annual rainfall. The rainfall pattern is uni-modal, which occurs between December and April/May. The quantity of rainfall received tends to differ from place to place depending on the altitude of a locality, with lowlands recording relatively less rain than the highlands. According to records, rainfall averages between 800 mm and 1225 mm annually.

There are three broad categories of soils in Nyasa district. The first category can be described as red clay soils mixed with sand. These are found in the uplands. The second category is clay soils mixed with sandstones found in the mountainous slopes, and the third category is black clay soils rich in humus which are found in lowlands with valleys.

1.6: VEGETATION

Areas of higher altitudes like the Livingstone mountain ranges still support some rain forests except for areas where most of the forest have been cleared for agricultural purposes. In general, Nyasa District Council vegetation consists of

woodland, bush land, thicket and grasslands. The common vegetation in the arable land areas comprise of planted trees, bamboos and shrubs. Miombo woodlands cover greater part of the district which includes some parts of areas surrounding Livingstone mountains. Some areas are covered by planted pines and eucalyptus trees.

The typical trees found in the region fall under three species namely, branchstegia, julbernardia and isoberlinia. In the lowlands, natural vegetation is predominantly Miombo woodlands. Woodlands used to cover a large area of Nyasa district. However, much of the woodlands is currently being depleted through human activities such as cutting trees for firewood, timber, tobacco curing and brick making. Consequently, the area covered by woodlands in the district is now declining.

Bushlands are found in lower slopes. Their occurrence is a result of forest clearing, shifting cultivation, tobacco curing and tree cutting. The grasslands are generally common in lowlands and plateaus due to destructive human activities mentioned above as well as drainage and rainfall effects. As will be discussed later, Nyasa District Council should strive to put in place an effective environmental management system for controlling wanton tree cutting.

1.7: DRAINAGE SYSTEM

The drainage of Nyasa district is characterized by mountain ranges act as river sources which drain its waters into Lake Nyasa. Ruvuma River, which drains its waters in the Indian ocean is the natural boundary on the South between Tanzania and Mozambique. This river and its perennial tributaries (Njuga, Likonde, Ngembambili, Lukimwa, Luegu, Mbarang'andu and Kukira) plus Ruhuhu, Lukali, Liweta, Ngano, Lumumba, Mnywamaji, Ndimbi, Yola, Nkalachi, Yungu, Mbuchi, Mbawa, Lwika, Luhekei and Chiwindi rivers form the major drainage systems in Nyasa District.

1.8: AGRO-ECONOMIC AND ECOLOGICAL ZONES

Nyasa District Council has two broad Agro-economic zones. An agro-economic zone is defined as an area in which agricultural conditions are sufficiently homogeneous to warrant the adoption of a single agricultural policy. The division is based on topography, altitude, climate, vegetation, agricultural activities practiced and similar issues as shown in Table 1.2 below.

Table 1.2: NYASA DISTRICT COUNCIL: AGRO-ECONOMIC AND ECOLOGICAL ZONES

Zone	Location	General Characteristics	Economic Activities
I: The Highlands	Tingi, Liparamba etc.	<p><u>Topography</u> Hilly with altitude between 800 to 1500 metres above sea level.</p> <p><u>Rainfall</u> 1100-1300 mm/year</p> <p><u>Soils</u> Deep dark reddish brown to red sandy clay loams</p>	<p><u>Agriculture</u> Main crops are coffee, maize, beans, cassava, sesame, finger millet, horticultural crops and sunflower.</p> <p><u>Livestock</u> Few cattle, goats, sheep, chicken and pigs</p>

Zone	Location	General Characteristics	Economic Activities
<p>II: Lowlands & Lake shore</p>	<p>Location Ruhekei and other areas bordering the Livingstone mountains</p>	<p><u>Vegetation</u> Woodlands</p> <p><u>Population</u> Very low density under 15 persons per sq. km</p> <p><u>Topography</u> Narrow planes along the shores of Lake Nyasa</p> <p><u>Altitude</u> 500-600 metres above sea level</p> <p><u>Rainfall</u> 1000 to over 1400 mm / year</p> <p><u>Soils</u> Very dark grey silts and clays with brown sands and loams. Low fertility and poorly drained</p> <p><u>Vegetation</u></p>	<p><u>Beekeeping</u> An important economic activity</p> <p><u>Soil conservation</u> Through fallowing, intercropping and tie ridging(ngoro)</p> <p><u>Agriculture</u> Main crops are: Cassava, groundnuts, beans, paddy, maize, cocoa, cashew nuts, sorghum, oil palm coconut palm and horticultural crops.</p> <p><u>Livestock</u> Some cattle, goats, sheep, chicken and pigs</p> <p><u>Fishing</u></p>

Zone	Location	General Characteristics	Economic Activities
		<p data-bbox="727 247 1102 338">Grass with woodland on high ground</p> <p data-bbox="727 415 894 449"><u>Population</u></p> <p data-bbox="727 468 1102 667">Very low to medium. More concentrated along the narrow plains causing localized land shortage</p>	<p data-bbox="1125 247 1354 449">This is the main occupation followed by agriculture</p> <p data-bbox="1125 527 1328 617"><u>Soil conservation</u></p> <p data-bbox="1125 636 1317 779">Ridging, fallowing and intercropping</p>

SECTION II

2.0 THE ECONOMY

2.1: Overview

Nyasa District Council is endowed with rich natural resources including fertile land, good weather, rivers, Lake Nyasa, forests, woodlands, wildlife and wetlands. These resources are potential assets and an opportunity which, given good governance, could spur the district's growth and economic development, and hence, poverty reduction. However, despite its rich endowment in natural resources, Nyasa District Council remains one of the poorest districts in Tanzania, its economy being largely dominated by agriculture and fishing.

Agriculture contributes about 70 per cent to the district's Gross Domestic Product (GDP) and employs approximately 90 per cent of the district's total working force. While coffee, cashew nuts and maize are the main cash crops, maize and paddy are regarded as both a cash and food crops.

2.2: DISTRICT'S GROSS DOMESTIC PRODUCT (GDP) AND GDP Per Capita

According to the 2011/12 Household Budget Survey (HBS), Nyasa district's per capita income was estimated at Tanzanian Shillings 600,000 per year, which was below the national average of TShs 995,931 (US\$ 569.10) per year. However, in coffee growing areas the income per capita is estimated at TShs 1,300,000, which is above the national average. Furthermore, it has been reported that in 2013, about 41.4 percent of Nyasa district's inhabitants had income per capita below the national average. It is important to note here that it is difficult to determine precisely Nyasa District Council's GDP and GDP per capita because it is a newly established district council and most of the sectors, especially agriculture and the informal sector, have unreliable and insufficient data.

2.3: PRODUCTIVE SECTORS

2.3.1: AGRICULTURE

Agriculture is the largest sector which employs the majority of Nyasa residents. Nyasa District Council wants farmers to produce enough crops for both food and cash crops so as to enhance food security and increase household incomes. Further to the above objective, the Council seeks to enable farmers to produce quality crops that will sustain agricultural produce and competition and increase crop yield productivity from the current 47% per acre in 2015 to 81% per acre by the year 2020.

Nyasa district is one of the districts making Ruvuma region. The region is a member of the nations "big six" in terms of maize production. It is estimated that about 90% of the population in Nyasa district depend on agriculture for their livelihood and it accounts for nearly 70% of the district's income. The district has 150,160 ha of arable land ideal for agriculture; but, only 79,000 ha or 52% is under cultivation. This implies that Nyasa district has immense potential for expanding the agricultural sector. Further, the district possesses favourable climate. Economists believe that the use of improved seeds and fertilizer could substantially increase productivity for both food and cash crops and hence, lift the majority of Nyasa residents out of poverty.

Nyasa district's agricultural sector faces a number of challenges. These are:

Limited access to credit facilities to buy inputs; low prices; unreliable market outlets and poor road network especially in rural areas rendering transport costs to be higher per millage, Agriculture is rain-fed and the majority of farmers use hand hoes. Except for the highlands, land for agriculture is regarded to be abundant. Data shows that in 2014/2015 the district produced 1,380,000 kilograms of coffee. It is also estimated that, the district accounts for about 30% of the region's total coffee production.

Other general challenges confronting the agricultural sector are:

- I. Inadequate budget allocations from the central government. For example, during the 2013/2014 Financial Year, the district received only TShs 23.4 million. However, the situation improved a lot in the financial year 2014/2015, whereby TZS 450 million was disbursed.
- II. Inadequate access to affordable fertilizers and other agrochemicals plus high costs of purchasing and transporting the same to the villages.
- III. Limited access to farm implements due to high prices of equipment such as tractors, high prices of fuel or hiring costs.
- IV. Lack of supporting clusters in the production, processing and packaging of agricultural products.
- V. Lack of value addition infrastructure which forces farmers to transport the products such as coffee to Mbinga district for processing.
- VI. Insufficient extension services
- VII. Lack of transport facilities for extension staff
- VIII. Lack of knowledge and skills in entrepreneurship
- IX. Lack of irrigation facilities and technology to utilize the idle river valleys and Lake Nyasa water.
- X. There are also gender related challenges in the agricultural sector. For instance, in Nyasa district crop cultivation and marketing of agricultural produce is dominated by women. It has been revealed that women are increasingly finding it difficult to access relevant market information and general knowledge on agriculture and livestock keeping. They also have limited knowledge on production, processing and marketing of agricultural produce, broader socioeconomic issues such as emerging national and local opportunities, national agricultural policies and strategies to confront poverty, environment and natural resources management.

Further, most women in Nyasa district have low levels of organizational and financial management skills. In addition to this they have inadequate business planning know how and ways to deal with competitive forces. Table 2.2 shows total output of coffee over the period of 6 crop seasons.

Cash crops

The main cash crops are coffee, cashew nuts, cocoa, sunflower and sesame.

Coffee.

Coffee is the most important cash crop in the district. According to information from DAICO (2015), land under coffee production increased from 9,788 Ha in 2013/2014 to 9,817.3 Ha in 2014/2015. According to the district's agricultural census, in 2014, 2,241 households were engaged in coffee production in Nyasa district. Table 2.2 provides production and price trends of coffee in Nyasa district (TShs per kilogram of parchment coffee). Despite accounting for 30% of the regions coffee output, Nyasa district's coffee industry has failed to lift smallholder farmers out of poverty. To many, growing coffee is perceived as a subsistence activity with low productivity. Further, the input supply system is disorganized and the market is not working in favour of farmers. To address the challenge, the district is planning to commercialize the industry. The project seeks to transform the district's coffee sector from subsistence activity with low productivity to a market oriented sector with high productivity. This will enable the district to create employment for more women and youths, generate incomes and reduce poverty. This, in turn, will contribute to the District Council's revenues, long-term local economic development and achievement of MDGs.

**Table 2.2: Nyasa District Council, Coffee Production and Price Trend:
2009/2010 - 2014/2015**

Season	Production (kgs)	Percentage change	Average Price (TShs/kg)	Percentage change
2009/2010	622,300	-	1,450	-
2010/2011	1,269,300	103.97	3,500	141.38
2011/2012	751,000	(40.83)	5,000	42.85
2012/2013	1,171,400	55.98	2,800	(44.0)
2013/2014	965,397	(17.58)	2,400	(14.28)
2014/2015	1,380,000	42.9	5,000	108.33

Source: DED, Nyasa, 2015.

In Nyasa district, key players in coffee marketing were private coffee buyers (PCBs), Farmers groups and Agricultural Marketing Cooperatives (AMCOS) and the Tanzania Coffee Board (Auction at Moshi) in 2013/2014 but in the 2014/2015 season the district decided to omit farmers groups due to the fact that most groups were actually not farmers groups but petty traders who were diverging to buy TCB licenses. AMCOS pays advance to farmers then second payment after auction. On-going initiatives to improve the coffee industry include establishment of clonal coffee nurseries whereby a total of 6 nurseries have been established as shown in Table 2.3.

Also a total of TShs 38,477,100/= was contributed by the district as diseases and pest control fund and for construction of Central Pulper Units (CPUs).

Table 2.3: Location and Number of Clonal Coffee Nurseries, 2014.

Ward	Number of Nurseries	Number of mother plants
Luhangarasi	1	2,730
Kingerikiti	2	4,320
Tingi	2	2,067
Liparamba	1	500
Total	6	9,617

Source: DED, Nyasa, 2015.

In addition to the general challenges facing the agricultural sector, below are specific challenges confronting the coffee industry in Nyasa district:

- I. All inputs stockists are based in Mbinga town
- II. Untimely and insufficient inputs supply including improved seedlings for expansion
- III. Aged coffee trees
- IV. Insufficient primary processing facilities and clean water supply for primary processing

respective production figures for other cash crops were as follows:

Table No2.4: Cash Crops: Area Under Cultivation & Output -2013/14-2014/15

Crop	Area under Cultivation (Hectares)		Production Figures (Tons)	
	2013/2014	2014/2015	2013/2014	2014/2015
Cashew nuts	17	18	26.2	27.9
Groundnuts	14.3	12.6	9.0	11.0
Sesame	8.0	11	3.5	4.6
Sunflower	14	17	9.0	11.8
Coconut	9.0	9.0	14	15.9

Source: DAICO, Nyasa District Council 2015

Food Crops

Ruvuma region is one of the leading maize producing regions in the country with no record of food shortages. In terms of land area under food crops, Nyasa and Mbinga districts command over 30 per cent of the region's total area under food crop cultivation. The two districts account for about 40 per cent of the region's total food crops output. Maize is district's leading food crop followed by cassava. In Nyasa district the crop is cultivated both as a food crop and a cash crop. It is largely grown by small holder farmers in Mpepo Division and it is estimated that in the year 2014, Nyasa district produced over 15,000 tons of maize.

Other food crops include cassava, sweet potatoes, horticultural crops and paddy. Nyasa and Mbinga districts account for more than 80 per cent of the region's total sweet potato output. Generally, the average farm size per household in Nyasa district ranges between half an acre (1/2) and two (2) acres. Paddy is also grown as a food and a cash crop. It is mainly grown in the lowlands and along river valleys by smallholder farmers. Prominent areas for paddy cultivation are Chiulu and Lundo basins and Ngindo village. Beans is another type of food and cash crop which is cultivated in Nyasa district. The crop is mainly grown in the highlands of Mpepo division.

Table No2.5: Food Crops: Area Under Cultivation & Output -2013/14-2014/15

Crop	Area under Cultivation (Hectares)		Production Figures (Tons)	
	2013/2014	2014/2015	2013/2014	2014/2015
Maize	10,189	14,673	18,600	26,016
Paddy	8,998	14,194	16,100	20,377
Cassava	30,674	29,888	54,212	33,137
Beans	234	412	106.4	428.6
Sweet Potatoes	3,006	8,538	377.9	1,706
Bananas	20.7	25.49	615	849
Millet	7.0	40.4	3.0	24.72
Sorghum	12	62.9	5.0	42.58

Source: DAICO, Nyasa District Council 2015

Farm Implements and Inputs

The trend in farm inputs supply in Nyasa district over the period 2013 – 2014 was quite satisfactory. Supply of fertilizers was more than 50 percent of the actual requirement.

Supply of farm implements such as tractors and power tillers left a lot to be desired, as shown in Table No. 2.3.

Table 2.6: Farm Implements

Type	Required	Available	Gap
Tractors	15	3	12
Power Tillers	45	7	38

Source: DED, Nyasa, 2015

The majority of farmers in Nyasa district used improved coffee seedling over the period 2013 - 2014. Supply of improved coffee seedlings is more than 50% of total

requirement in general. The challenge of shortage of improved coffee seedlings needs to be addressed as soon as possible if agricultural productivity is to improve.

Table 2.7: Farm Inputs

Type of Inputs	Amount Required (Tons)	Amount Available(Tons)	Gap (Tons)
Inorganic Fertilizers	12,160.8	7,219	4941.8
Quality Seeds	2,132.46	1,643	489.46

Source: DED, Nyasa, 2015

Irrigation Schemes:

Irrigation schemes are known to have the biggest immediate impact on agricultural productivity and could mitigate the impacts of climate change. Irrigation in Nyasa district is mostly undertaken during the rainy season with little irrigated agriculture during the dry season. Nyasa District Council acknowledges these facts and has therefore embarked on construction and rehabilitation of existing irrigation infrastructure in the district. Among other objectives, the aim is to:

- (i) Enhance water productivity in agricultural activities and ensure food security.
- (ii) Ensure reliable water for irrigation so as to facilitate optimization intensification and diversification of irrigated crop production.
- (iii) Establish proper water resources management mechanism and minimize risks which may lead to inequitable access to water resources and disadvantage poor smallholder farmers and other users.

Currently, there are irrigation schemes at Lundo, Lituhi, Nkalachi, Chiulu and Kwambe. Rehabilitation of irrigation infrastructure is going on at Kimbande, Lundo, Nkalachi and Ngingama. With a membership of 175 farmers, Kimbande Irrigation scheme is spread over an area covering 2 administrative wards and 3 villages. When fully operational, Kimbande Irrigation scheme will benefit more than 1,000 farmers. Other irrigation projects are two paddy irrigation schemes located at Lundo and Nkalachi (Mkali Village).

There is also a potential irrigation area at Nkalachi which started in 2006 as a farmers' group. It has 96 members, 40 of them or 41% are women. The scheme benefits 200 households; however, construction was not completed as part of the main canal, and tertiary and division boxes have not been constructed too. The scheme is not well managed. The shores of Lake Nyasa and valleys of perennial rivers are also other potential areas for irrigation farming - horticulture. In total Nyasa district has 11 irrigation schemes out of which 6 are operational. The district has 10,600ha potential for irrigation while only 6,582ha or 62.09 per cent are currently under irrigation.

Lundo Irrigation Project located at Lundo and Ngindo villages, Lipingo ward, Ruhekei division is one of the biggest irrigation schemes in Nyasa district. When fully operational, the project will cover more than 2,900 ha and more than 1,664 households will benefit from this project. The project seeks to improve productivity and increase paddy production from 0.2 tons per ha to 5.0 tons per ha. Currently, only 1,134 hectares are under irrigation.

Challenges confronting irrigation farming in the district are: Poor or lack of irrigation infrastructure such water storage facilities, lack of agricultural implements and inputs and lack of education among farmers. The Council needs to improve the available infrastructure and the government should provide agricultural implements and inputs at affordable prices. Further, the Council should provide education to farmers on how to run irrigation schemes and the government should also establish new irrigation schemes in all potential areas.

Food Storage Facilities:

Nyasa district has 2 food storage facilities which include 2 godowns located at Tingi and Mbambabay.

2.3.2: LIVESTOCK

Livestock keeping in Nyasa district is not a pre-dominant occupation. Animals reared include pigs, free-range chicken, goats, cattle and sheep to a small scale. On the whole, livestock keeping activity is mainly undertaken on a relatively small scale.

Table 2.8: Nyasa District Council Livestock Population, 2014.

Chicken - free range	49,2375
Pigs	79,216
Goats - free range	23,089
Cattle - free range	17,493
Sheep	3,291
Cattle - modern species	3,030
Goats - modern species	1,410
Donkeys	29
Chicken - broilers/layers	-

Table 2.9: Nyasa District Council Livestock Infrastructure, 2014.

Slaughter slab	2
Cattle dips	8
Auction places	0
Dams	0
Water troughs	6
weirs	0
Vet care centres	2

Livestock Sector challenges:

- (i) Livestock pests and diseases leading to poor pig and poultry health and even death.
- (ii) Inadequate livestock health services including supply of drugs and vaccines at village level.
- (iii) Inadequate human and financial resource allocations and working tools causing low contribution to the district economy.

2.3.3 NATURAL RESOURCES

By definition, the natural resources sector includes forestry, beekeeping, fisheries and wildlife. The natural resources sector is one of the most important sectors of Nyasa district since it contributes significantly to the district's Gross Domestic Product (GDP).

Fisheries

Lake Nyasa is regarded to be the main source of livelihood for the majority of Nyasa district council inhabitants living along the lake shore, fishing being the main pre-occupation. Fishing gears are generally very rudimentary and the most common fishing vessels are traditional wood canoes with no engines, as shown in Figure 4 below.

Figure 4: Wood canoes: Major fishing gear in lake Nyasa



Source: Field survey

This tend to limit fishermens' ability to go into deep waters several kilometres from the lake shore thus lowering the industry's productivity. It is estimated that Nyasa district commands 297,900 ha of Lake Nyasa waters which are believed to have about 165,000 tonnes of over 500 different fish species. These include *copadichromis spp (ntaka/mbalule)*; *diplotaxodon spp (vitwi)*; *ramphochromis spp (hangu)*, *bathyclarias (kambale)* *synodontis njassae (ngolokolo)*, *engraulicypris sardella (usipa/dagaa)*, *opsaridium-microlepis (mbasa)*, *labeo (ningu)*, *bagrus (mbufu)*. TheTable below provide fish production statistics between July 2014 to March 2015.

Table No. 2.10: Fish Production Statistics- 2014/2015

July- September 2014

Specie	Price Per (Kg)	Quantity (Kg)	Value
Ramphochromis (mbasa)	2,500/=	638	1,595,000/=
Bathyclarias(kambale)	3,000/=	111	333,000/=
<i>engraulicypris sardella (dagaa)</i>	2,500/=	31,200	78,000,000/=
bagrus (Mbufu)	3,000/=	102	306,000/=
Total		31,940	80,234,000/=

October-December 2014

Specie	Price Per (Kg)	Quantity (Kg)	Value
Ramphochromis (mbasa)	2,500/=	2,853	7,132,500/=
Bathyclarias(kambale)	3,000/=	286	858,000/=
<i>engraulicypris sardella (dagaa)</i>	2,500/=	29,470	73,675,000/=
bagrus (Mbufu)	3,000/=	450	1,350,000/=
Total		33,059	83,015,500/=

January- March 2015

Specie	Price Per (Kg)	Quantity (Kg)	Value
Ramphochromis (mbasa)	2,500/=	2,416	6,040,000/=
Bathyclarias(kambale)	3,000/=	792	2,376,000/=
<i>engraulicypris sardella (dagaa)</i>	2,500/=	17,860	44,650,000/=
bagrus (Mbufu)	3,000/=	1,012	3,036,000/=
Total		22,080	56,102,000/=

Wildlife and Tourism

Nyasa District has one game reserve - Liparamba Game reserve (57,099ha) which is located close to River Ruvuma. Three quarters of the game reserve lies in Nyasa district and the remaining portion lies in Mbinga district. Liparamba Game Reserve was officialy gazzeted on the 3rd August 2004. The management of game reserves is vested in the Wildlife Conservation Act and the main responsibility of the wildlife sector is to protect and encourage protection of wildlife which is one of the country's natural resources. It has also the responsibility to protect and conserve Liparamba Game Reserve and people (and their properties) living in villages around the game reserve against wild animals.

Figure 5 : Liparamba Game Reserve



Liparamba Game Reserve has varieties of wild animals such as lions, leopards, elephants, eland, waterbuck, greater kudu, duicker, baboons, monkeys and snakes to mention but some.

Figure 6: Pictures of some of the animals found in Liparamba Game Teserve

Elephants



Waterbuck



Lions



Eland



Greater Kudu



Leopard



Nyasa district is also blessed with several tourist attractions. The lake is home to a significant colourful ornamental fish which are found in all colour combinations of

black, blue, yellow and green. The Lake is endowed with islands, namely, Lundo, Mbamba and Hongi. These can also be used for tourism purposes by organising boat camping trips from the mainland to the small islands. The council can develop a secluded marine park for tourism purposes as an exclusive area, where fishing is not allowed.

Mbamba Hill Forest Reserve is a natural forest that can be developed for eco-tourism activities such as nature walk. In addition, there is Pomonda Rock in Liuli as another tourist attraction. The rock is located within the Lake and has a cave that can accommodate over 100 tourists for camping purposes. Other tourist attractions are the unpoluted beaches with brown sands, the magnificent Livingstone mountains and forests. However, the tourism industry in Nyasa needs to be developed, by investing in necessary infrastructure such as beach hotels, lodges, restaurants, tour operators, roads and other associated amenities and services. The council has already earmarked some plots for tourist hotels along the beach as one of the strategies to develop tourism in Nyasa district.

Forestry

Nyasa District Council has 247.4 square kilometers of forestry reserves. The district has 1,699 ha of natural forests in Ruhekei which are managed by the central government. The Ndengele forest was recently declared as a forest reserve and is a catchment area which is an important source of water for Mbambabay, Kilosa and Nangombo. The Namswea – Lilengalenga community forests covers 23,043 ha and are conserved under Participatory Forestry Management (PFM) project being implemented in 14 villages, out of which 11 villages are in Nyasa district and 3 are in Mbinga district. The project seeks to involve the community in protecting and conserving natural forests, water sources and animals and ensure sustainable utilization of forests. In addition to this, the project has 350 beehives which produce 2,400 litres of honey per annum.

There is also a by law that was passed in 1998 on the establishment of environmental committees in each village, ward and division. 15 committees have already been established in 73 villages and at the district level. There is also an afforestation project to address environmental degradation. The plan is to plant 1,600,000 trees per annum, buy seedlings, viriba and educate people through seminars, meetings and discussions on actions and stakeholders participation.

However, in recent years land under forest cover has been declining. The ecosystems in Nyasa are facing a numerous challenges, most notably, increasing pressures on resources as a result of rapid population growth, fishing and agriculture. Notable inappropriate farming practices include intensive cultivation, frequent and uncontrolled burning of vegetation including natural forests; encroachment of marginal areas of cropland such as in steep slopes and fragile soils and reduction in the use of crop rotations and fallows. This has caused progressive reduction in farm sizes and unsustainable land use and management practices leading to land degradation, declining productivity capacity of croplands and rangelands, disruption of water sources, deforestation and encroachment of agriculture into wetlands. These practices have contributed to the loss of productive vegetation cover and biodiversity. The situation is further worsened by the effects of climate change.

Beekeeping

Beekeeping is one of the most important economic activities in Nyasa district. The district has 17 beekeeping groups and 24 individuals with 431 traditional beehives and 730 modern beehives. In total, there are 1,161 beehives. The district has natural forests suitable for beekeeping. The district continues to educate people on beekeeping in order to encourage people to establish beekeeping groups.

Compared to agriculture and fishing, beekeeping or apiary farming is a relatively new activity in Nyasa District although it has been practiced for many years, albeit in small scale. Renewed interest in beekeeping is derived from two inter-related

factors: One is deliberate efforts of the District Council and two is the declining fishing industry. Beekeeping is practiced in villages such as Liuli, Mango, Mkali, and Nangombo where beekeeping groups have been formed. They include groups such as Jiendeleze Beekeeping group at Mandalawe village, in Liuli ward. The same groups are also engaged in planting trees and forest conservation.

2.3.4 INDUSTRIAL DEVELOPMENT

Industries in Nyasa district industries comprise of port facilities, the proposed TANESCO power station located at Kilosa, fish processing facilities, warehouses, garages and workshops, saw mills and grain mills. There is no single heavy industry in Nyasa district. Others are boat making workshops and Central Pulper Units.

2.3.5 THE LAND SECTOR

Nyasa District's settlement pattern and land use is defined by the limits of the major needs for land, physical configuration and social-economic factors. With respect to settlement pattern and land use, one can identify two major categories, namely, urban and rural. In urban areas demand for land is a function of needs for construction of residential buildings, commercial properties, institutional buildings, recreational areas and industries. In rural areas, demand for land is derived from demand for agricultural land, village uses and other production activities.

According to the district's land use inventory, in 2014 urban land in Nyasa District Council was occupying a small portion of (6.9%) of the district's total land area. This implies that out of the district's total land area of 832 square kilometres, only 264.59 square kilometres of land were under the urban activities. The remaining proportion was accommodating agriculture, villages and other uses/activities. Table 2.6 provides a summary of different existing land use components in Nyasa District.

The proportion of urban land has been increasing steadily from 39.13 km² in year 2012 to 264.59 km² in 2014 whereas potential agricultural land in villages was

decreasing steadily. Most land area which was categorized as difficult has been invaded and developed.

Agriculture and other rural oriented activities occupy 150,600 hectares of the district's land area. This implies that Nyasa District Council has ample potential rural land for future agricultural activities. The district has only one big farm (21 ha⁺) and 10 small farms (5ha-20ha) that have been surveyed. The analysis supports the notion that, in future, agricultural activities will continue having enough land. The present land occupied by villages including agricultural land is expected to decrease by 6.9 % of the total land area in the next 10 years due to increased population, construction of modern houses and depletion of farm land. Other factors are increased interaction and influx of people seeking for various investments opportunities and presence of potential tourism attractions.

Table 2.11: Existing Land Use Components in Nyasa District Council, 2014.

Type of Land Use	Area coverage		
	Square km	Hactres	(%)
Existing Urbanised Area	264.59	-	6.90
Existing village land	467.59	-	12.30
Forests	223.19	-	5.85
Fisheries	2,979	-	78.16
Game Reserves	570.99	57,099	
Land Potential for Agriculture	1,506	150,600	
Existing Land under Agriculture	756	75,600	
Land potential for Irrigation	106	10,600	
Existing Land under Irrigation	4.03	4,030	
Industrial	0.437	43.7	
Open spaces	3.8	380	
Special areas			
Commercial			
Transport and communications			

Source: DED, Nyasa District Council, 2014.

Present Urban Form

There are four (4) small towns/urban centres in Nyasa District. These are Kingirikiti and Tingi located at Mpepo division and Mbamba bay and Liuli located in Ruhekei division. Mbambabay township, the biggest of them all, was established by German rulers in the 1800's as an administrative and commercial centre. Since its establishment, Mbambabay grew up steadily and became one of the leading urban centres in the Lake Nyasa zone up to late 1950s. Its growth declined drastically in the 1960s and 1970s due to the liberation war against Portuguese rulers in neighbouring Mozambique.

The physical configuration and social-economic factors appear to have influenced the existing urban form of Mbambabay. A transact walk across the town reveal that to the west of the town along the shores of Lake Nyasa is a small harbour with natural depth. The presence of the harbour has sparked-off development towards three distinct development corridors. The corridors include the Northern Corridor which runs towards Liuli and Lituhi along the Mbambabay - Lituhi road; the Eastern Corridor which runs along the Mbambabay - Mbinga - Songea road and the Southern Corridor which runs Southwards along the road towards the Mozambican border off Kilosa area.

Another factor which has influenced the physical growth of Mbambabay is the lowland and rocky hill terrain which surrounds most parts of the township. This factor has disrupted the spatial and well defined development pattern of the town. For instance, it has caused a disjointed urban structure to dominate the township. The expansion in the western direction is hampered by the presence of Livingstone mountain ranges. The hilly and rocky topography has made Mbambabay to develop in a finger-like pattern along the Mbambabay - Mbinga road, Mbambabay - Lituhi road to the north and Kilosa - Mozambican border road to the South.

After attaining the district council status in 2013, the District Council Management declared Kilosa area as a planning area that will accommodate infrastructure for the proposed headquarters for the new district. This is the area covering 264.59 square kilometer, southwards towards the beach and along the road leading to the Mozambican boarder. Consequently, areas which were predominantly agricultural land have been declared as planning areas. The area is already attracting investments including new residential housing, a new market, office buildings, a range of small businesses and hotels.

Among the challenges hindering developing of the planning area include lack of funds for compensation and underdeveloped infrastructure such as water supply systems, road network etc. However, despite of the aforementioned challenges, the Council is taking appropriate initiatives to develop the area, which include preparing a project proposal to solicit funds to finance the project and collaborate with financial institutions in developing the project area. Currently there are 779 surveyed plots versus 1,050 applications for surveyed plots.

Residential Areas

Residential land can be categorised into planned and unplanned residential areas. Planned areas are classified into low, medium and high density. Unplanned settlements which occupy a approximately 70% of residential land in urban areas in Tanzania is in most cases dominated by high density housing development. According to the 2006 country's land use inventory, it was found that the country's planned areas constituted only 25% of the country's urban areas total housing stock. In Nyasa's urban areas there is no area with characteristics of a low density area. A low density plot is normally 1,500 square metres but in some cases the size goes up to 2,000 - 3,000 square metres. Low density areas are well serviced with good roads and adequate utilities with good quality high class housing structures.

Medium density plots are mixed up in residential areas in a way that is rather difficult for one to define a predominantly medium density area. Likewise, there is

no area in Mbambabay with characteristics of a medium density area. Medium density plot size varies from 600-1,000 square metres. Such areas are moderately serviced and thus provision and availability of infrastructure and services is satisfactory. Most of the houses are in good condition built of permanent building materials.

High density residential areas are found in most parts of Mbambabay. They are also found in Kingirikiti, Tingi, Liuli and Lituhi. Plot sizes in high density areas range from 300-450 square metres. In Mbambabay, except for access roads, provision of infrastructure and services is in most cases poor. In some places, infrastructure and services are in pathetic condition. The recently built housing structures are mostly of good quality compared to some houses in rural areas that are thatched with grass.

Figure 7: Typical residential houses in Nyasa District



Source: Field survey, 2015

Special Residential Areas

There is also another category within the planned residential areas in urban centres known as Special Residential (housing) areas. These are mostly institutional housing estates for staff or residential houses built for sale to the public and individuals through real estate development initiatives. Institutions with such housing areas in Mbambabay include the Police Force and Schools.

Unplanned Residential Areas

Though not very serious, Mbambabay is facing a number of development challenges particularly the rapid urbanisation rate and unguided urban expansion. As noted above, the demographic changes in Mbambabay will likely have serious implications on the quality of life in the town due to its limited capacity to provide for adequate services and shelter for all residents. If not sustainably managed now, the inadequacy of shelter delivery systems to cater for the ever increasing population is likely to lead to extensive and continued proliferation of unplanned development. Unplanned development is taking place because unplanned areas provide not only cheap houses but also plots for housing construction. These areas has a total of 1,448 residential houses accommodating about 75% of the population.

Unplanned residential areas also emerge due to social and economic factors. These areas provide affordable housing options to new urban migrants, limited capacity of the district council to provide serviced land for development, hence individual efforts used to develop land without infrastructure and services. Unplanned settlements are likely to become a challenge in Mbambabay because:

- I. Inadequate or lack of surveyed plots and serviced land.
- II. Ineffective building regulations and codes.
- III. Lack of community awareness on planning and building standards
- IV. Lack of Housing Finance institutions.
- V. High demand for accommodation resulting from population increase
- VI. Simple and cheaper procedures for acquiring land in unplanned areas

Furthermore, since unplanned developments cause considerable environmental degradation and expose their inhabitants to restricted and unhealthy living conditions, Nyasa District Council must plan how to manage such areas.

Village Settlements

Nyasa District Council has a total of 84 villages. The village settlements occupy a total land area of 46,700 hectares (467km²) which is 56% of the district's land area. Land in villages is mainly used for agricultural activities especially crop farming and animal husbandry (grazing purposes). While farming land is in most cases located around family or clan homesteads, grazing land is located a bit far from the homesteads.

Other uses include residential built homesteads, shops and market stalls, places of worship, social facilities such as schools, dispensaries, recreational areas, open spaces, sports' grounds and cemetery sites. With the exception of farming and grazing land other uses are mostly situated within the village centre which functions as the settlements' focal point. The villages are potential area for future urban activities because they occupy large portion of open land which is suitable for urban expansion. The survey carried out in Mpepo division revealed that provision of infrastructure differs from one village to another but in general the villages are accessible and are provided with some utility services. Accessibility becomes a problem during the rainy season as most roads linking the wards and villages have no tarmac roads.

Housing conditions

In comparison with other districts in Tanzania, approximately 95 percent of Nyasa residents have good houses. Measured in terms of percentage distribution of private households by building materials of housing, Nyasa district have more than 75 % of the houses built from baked and sundried bricks compared to the national average of about 45%. There are very few patches of houses in Nyasa district that are built or roofed with grass. A large proportion of the houses are roofed with corrugated iron sheets compared to the national average of 45%. More than 20% of the houses have cement floors. Nyasa district's upscale houses are generally built from biomass-fired bricks, with cement floors, and roofed with corrugated iron sheets.

Commercial Areas

The central area which also accommodates the bus terminal is the main commercial hub of Mbambabay although not all activities are entirely commercial. A large portion of the area is also under residential use. Most of the buildings cater for both commercial and residential uses. The area is a place where a variety of commodities are accessed. The business community, from both, within and outside Nyasa and within and outside the region, depends on the area to purchase a variety of goods and services.

Another growing commercial area is Kilosa. A number of small and medium shops have in recent times been emerging in this area. Commercial areas in the town occupy an approximately 46 hectares of the urban land. As of 2014, the town had 1 market, 209 retail shops and 2 wholesale shops.

Industrial Areas

The area covered by industries is estimated to be 43.7hectares (0.437 km²) of the land area. In view of the future land use plans, the district should consider allocating more land for industrial developments e.g. Special economic zones.

Institutional Areas

Nyasa district council possesses various institutions of different levels and functions, dispersed all over the district. These include nursery and primary schools, health centres such as dispensaries, clinics and pharmacies, places of worship, community facilities and recreational places. These occupy large portions of land. They include religious institutions such as Catholic Church, Anglican Church, Evangelical Lutheran Church, and Mosque. Major institutions include Tanzania Ports Authority, Primary schools, Secondary school, Tanzania Police Force, Immigration, Livestock and Fisheries, The Office of Member of Parliament, District Commissioners' Office, District Executive Directors' Office, Ward and hamlet offices.

Major institutional areas cover an area approximately 30.5 hectares (0.305 km²) of land of the total land area of the town. There are numerous institutions occupying large proportion of the city land but a point worth noting is the fact that underutilization of land is evident in a number of institutional areas. This implies that there are several institutions, for example faith based organizations which occupy large parcels of land which is underutilised.

Open Spaces and Recreational Areas

Urban areas in Nyasa District Council has several open spaces and recreational areas including amenity green areas. There are also several cemeteries located in various places in the towns and villages which constitute open spaces and recreational land as well. Cemetery sites are found in Mbamba bay and parts of Kilosa ward. Open spaces occupy about 10 % of the land area.

Special Areas

Special areas accommodate specific sensitive activities. Such area include military waste disposal sites, waste water treatment plants, communications installation places such as TTCL, VODACOM, Airtel transmission stations and airports.

Transport and Communications

Transport encompasses road, marine and air transport. The two airstrips in Nyasa (Kilosa and Lituhi) have runways measuring approximately 2 km each. Land Use planning challenges in Nyasa District Council include:

- I. Proliferation of unplanned settlements
- II. Brick making in harzard lands - it contributes to soil erosion and deforestation.
- III. Urban Agriculture and Urban Livestock/Poultry keeping
- IV. Other challenges - crop cultivation in mountains and in the protected land areas such as in water sources

Environmental and Natural Resources Management

In Nyasa District, the forests and vegetations are encroached and threatened by illegal activities such as harvesting forest products for timber, building materials, production of charcoal, fuel wood, bricks, and, expansion of agricultural activities, and establishment of human settlements. This is attributed to lack of alternative livelihood activities and declining land for agriculture in mountainous areas. Further, severe land degradation linked to unsustainable farming methods, causing Livingstone mountain ranges to lose its vegetation cover. Land cover depletion including deforestation is widespread with little reforestation.

Unsustainable fishing practices which degrade fish breeding habitats in the Lake Nyasa ecosystem is another environmental challenge. It causes fish to move further into deep waters of the Lake and towards Malawi, where the breeding grounds are conserved. Expansion of brick making businesses increasing is also another challenge which cause land degradation and loss of the district' beautiful scenery. On the other hand there is an increasing stress on the natural resource base and climate change related risks whilst there is lack of viable local long term adaptation strategies.

Lack of rain water drainage systems and waste water and solid waste management/treatment facilities in the fast growing Mbamba Bay town, resulting in environmental pollution and affecting the well-being of people. For example, as of 2014, the district was generating 975 tons of solid waste; however, had capacity to collect only 1.5 tons.

(viii) High dependence on biomass for energy is resulting in fast clearing of forests and vegetation for firewood and charcoal production;

(ix) Lack of reliable sustainable water sources in some areas.

SECTION III

3.0: ECONOMIC INFRASTRUCTURE

3.1: Road Network

3.1.1: Overview

Nyasa District is located on the periphery of Ruvuma region, South West of Tanzania. Being a newly established district council, this locational factor has a huge implication on the district council's development process since it has a bearing on the planning process, more specifically, on accessibility of the district and its connectivity with the country's major administrative, industrial and commercial centres. On the other hand, if properly harnessed the location could provide the district with a competitive edge that could unleash the export and import trade for the Eastern side of Malawi and Zambia. Hence, the district's road network is extremely crucial for Nyasa District Council's development.

Mbambabay, which is the district headquarters, can be accessed by the following three major roads: From the East, there is a 68 kilometers Mbambabay - Mbinga gravel road; from the North, Mbambabay can be reached by a 131 kilometers earth road that runs northwards through Ndengele, Liuli to Lituhi. From the South, the district headquarters can be reached via the 39 kilometers earth road which runs through Nangombo - Chiulu - Mtipwili - Chimate to Chiwindi.

3.1.2: Nyasa District Council's Road Network

The district's total internal road network is estimated at 1278.4 kilometers (Table 3.1). This excludes part of the Mbambabay - Mbinga road. In general terms, roads can be categorized into three broad groups. Trunk roads, regional roads, district and community roads. Trunk roads are conceptualized as roads that link the district with neighbouring regions. *Regional* roads are roads that link the district with the other six districts of the region whilst District and community roads are roads linking the district's wards and villages.

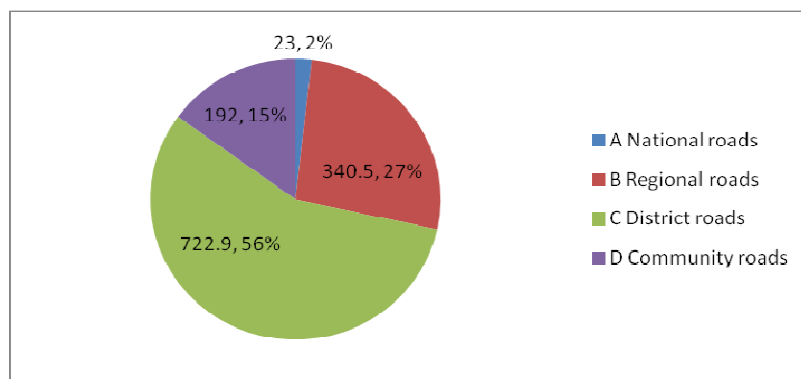
Nyasa District Council categorizes its roads into the following groups: Trunk/National roads (23 km); Regional roads (340.5 km); District roads; (722.9 km) and Community roads (192 km). In this regard, Nyasa District Council has only one Trunk/National road, which is the 23 kilometers Mbambabay – Chunya road. The road links Nyasa with Lindi, Morogoro and Njombe regions through Mbinga, Songea, Namtumbo and Tunduru districts. A plan is on the drawing board to upgrade the Mbambabay – Mbinga road to a tarmac level.

Table 3.1: Length of the Nyasa District Council's Road Network

S/NO	ROAD NAME	ROAD LENGTH
		(KM)
A	National roads	
	TOTAL	23
B	Regional roads	
	TOTAL	340.5
C	District roads	
	TOTAL	722.9
D	Community roads	
	TOTAL	192.0
	TOTAL NETWORK	1278.4

Source: Nyasa District Council, 2015.

Figure 6: Nyasa District Road Network



Source: Nyasa District Council, 2015

In comparison with other district councils in Ruvuma region, Nyasa District Council ranks second to Mbinga in terms of the number and kilometers of regional roads..

3.1.3: Road Pass-ability

Road passability is a function of the type of road surface which determines the durability of surface which in turn influences pass-ability of the road. In Nyasa district, except for few roads, the pass-ability of the road network can be described as good throughout the year. Most of the roads have reasonable durable surfaces to withstand pressure of existing traffic in the district. However, earth surface roads appear to have a short life span after grading compared to gravel roads. They tend to develop unpleasant corrugated surfaces or even rutted making it difficult for motor vehicles to move smoothly. Sometimes, they may become completely impassable especially during rain seasons.

Generally, the national road i.e. a section of the Mbambabay - Mbinga road and regional roads are in good condition and passable throughout the year although they require periodic maintenance. District roads are in fair condition but also require periodic maintenance. Most of the roads are in a poor state especially during the rainy season. Some of the roads do not have permanent bridges and culverts which make them impassable during rain seasons due to floods. 33.16 per cent of the road network is considered to be passable for the greater part of the year.

3.1.4: Productivity of Nyasa District Council's Road Network

Agriculture is the backbone on Nyasa District Council. For this reason, in order to assess the productivity of roads in the district, agricultural production would be an appropriate yardstick. In 2014 Nyasa District Council's road productivity of 0.76 tons per kilometer. Compared to other districts in the region, Nyasa District Council had the lowest productivity. Thus, the district was undersupplied with roads compared to other districts in the region.

3.2: Air Services

Nyasa District has two air strips in Liuli and Mbambabay (Kilosa). Each air strip has a runway of two kilometers long. The air strips do not have necessary facilities such as buildings, safety facilities,

3.3: Telecommunication Services

3.3.1: Telephone services

Nyasa District Council has postal services and is served by Tanzania Telecommunications Company Limited, cellular telephone services providers - Tigo, Vodacom and Airtel.

3.3.2: Radio Call Stations

There are 3 radio call stations in Nyasa. These are located in Lituhi, Nangombo and Liuli.

3.3.3: Television

Nyasa has access to TV channels including ITV, DSTV

3.4: Energy Sector

3.4.1: Electricity

Nyasa District Council is not connected to the national grid. However, there are privately owned generators in Nyasa and some households use solar batteries to light their homes. TANESCO is currently implementing a project to connect Nyasa with Mbinga. Construction of power transmission line between Mbinga and Mbambabay is underway. Power transmission poles have already been erected as shown in Figure 8 below.

Figure 8: Power transmission line under construction in Nyasa.



Source: Field survey

3.4.2: Fuel wood

For the majority of households in Nyasa district, fuel wood is the main source of energy for cooking and heating. In urban centres such as Mbambabay, the most common source of energy is charcoal whilst in rural areas it is firewood. Compared to charcoal, fire wood is relatively cheaper for rural households and can be collected freely from the bushes. Nyasa district has abundant forest reserves estimated at 247.4 square kilometers. However, the area under forests is expected to decrease with an increase in population. The regional average per capita consumption rate of fuel wood is estimated at 2 cubic meters of round wood per annum.

3.4.3: Fossil Fuels

Nyasa district consumes large quantities of kerosene for lighting and cooking while diesel and petroleum is used for various economic activities including commercial, industrial (running electric generators and saw mills), transport and service sectors.

SECTION IV

4.0 SOCIAL SERVICES

4.1: THE HEALTH SECTOR

4.1.1: Introduction

Improvement of the social and economic well being of the people through the provision of fair, equitable and quality social services - health, education and water - is one of the Tanzania government's long term commitments. Unfortunately, despite the adoption of health sector reforms in the early 1990s, little has been achieved in the health sector. The burden of diseases along with mortality continues to be high, access to health services and its coverage is still limited to few people. Some of the factors that constrain government's efforts include underfunding of the sector due to inadequate resources, insufficient staffing levels, equipment, supplies, transport and poor communication and long distances to health facilities.

An analysis of the staffing level against existing staff of the Ministry of Health and Social Welfare (MoHSW) reveals a serious shortage across all cadres. Further, the country's 126 training institution is unable to bridge the existing human resources gap. While HIV/AIDS continues to wreak havoc, many people still die of diseases that can be prevented. To address the challenge the government has formulated a a ten years (10) programme codenamed "Primary Health Service Delivery Programme " (PHSDP) aimed at promoting access to basic health care for all as well as empowering and involving the community in the provision of health services. Development of human resource for the health sector is the first priority of this programme.

The status of Nyasa District Council's health sector does not differ much from the national picture. Public health facilities are old and unmaintained. The supply of drugs to these public facilities is inadequate and unreliable. The total effect has been the lowering of the morale of health workers and the general public. Cost sharing was introduced two years back in an attempt to rectify this undesirable state

of affairs. Then, immunization against early childhood diseases is equally crucial to protect infants and children, improve child survival and hence reduce morbidity and deaths. Table 4.1 provides a list of the ten (10) most common causes of morbidity or illness in Nyasa District Council.

Morbidity

Protection and prevention efforts can improve population health. Quality health services delivery and treatment can also contribute to population health. However, many causes of ill health may not be directly attributed to the health sector. In Tanzania, and Nyasa district in particular, poverty and illiteracy are among the factors that contribute to ill health. Other underlying causes of poor health in Nyasa are poor sanitation. Protection of the population from human waste and providing portable, clean and safe water still represents the greatest challenge for Nyasa District Council. Though not very serious, inadequate nutrition – hunger and stunting – is another health challenge as well as family planning. Family planning can lower the birth rate and control population growth.

Furthermore, Tanzania is mainly an agrarian economy, the agriculture sector remains the main employer of 69 per cent of women and 62 per cent of men. In some areas, farmers apply pesticide mixtures in combinations exceeding allowable standards. Some people apply pesticides every week and 18 per cent apply them twice per week. Some spray 100 litres per hour for 2–10 hours in a day, risking high exposure. Pesticide application, weather conditions, and lack of protective gear exacerbate health and environmental problems.

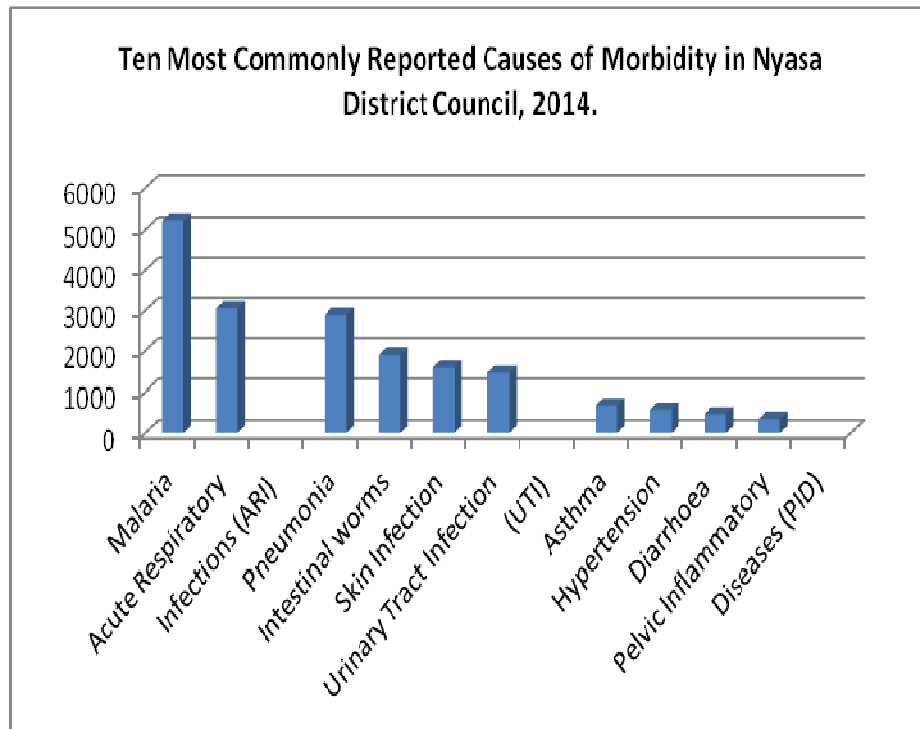
Little is known about the long-term pesticide-related ill health effects of such extensive pesticide use in coffee growing areas of Nyasa. However, short-term side effects of pesticide use on vegetables and coffee farms in Northern Tanzania, particularly by those related to self-reported poisoning, including dermatological and neurological symptoms have been reported.

As Table 4.1 shows, the most commonly reported causes of morbidity in Nyasa District Council are malaria, Acute Respiratory Infections (ARI), Pneumonia, Intestinal Worms, Skin Infections, Urinary Tract Infections (UTI), Asthma, Hypertension, Diarrhoea and Pelvic Inflammatory Diseases. In 2014, malaria cases accounted for 28.7 per cent of all cases. Malaria also ranked first in all other districts in Ruvuma region.

Table 4.1: Ten Most Commonly Reported Causes of Morbidity in Nyasa District Council, 2014.

Serial Number	Disease	Reported Cases	%
1.	Malaria	5225	28.7
2.	Acute Respiratory Infections (ARI)	3055	16.8
3.	Pneumonia	2895	16.0
4.	Intestinal worms	1905	10.5
5.	Skin Infection	1593	8.7
6.	Urinary Tract Infection (UTI)	1451	8.0
7.	Asthma	681	3.7
8.	Hypertension	568	3.1
9.	Diarrhoea	463	2.5
10.	Pelvic Inflammatory Diseases (PID)	342	2.0
TOTAL		18,178	100

Source: Nyasa District Council Health Management Information System, 2014.



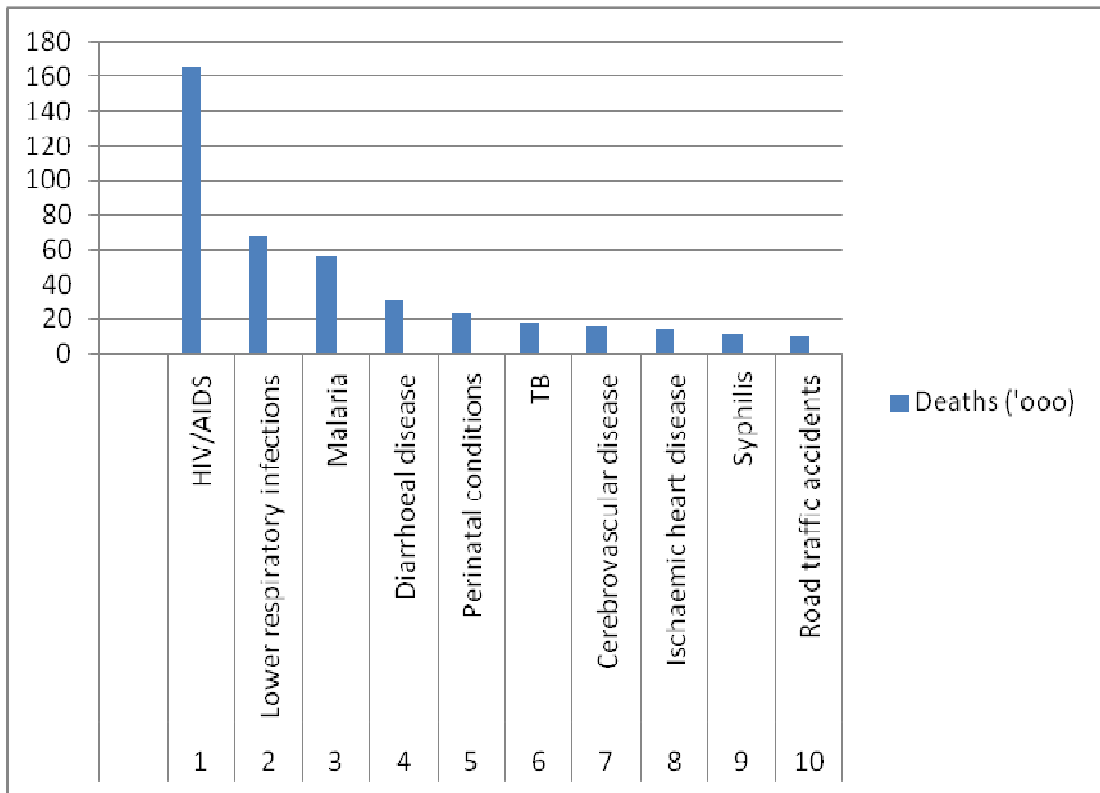
Source: Nyasa District Council Health Management Information System, 2014.

Malaria has been a leading cause of morbidity and mortality in Tanzania, for many years, accounting for over 40 per cent of overall outpatient attendances and 30 per cent of the national disease burden (Table 4.2). Most parts of the country including uplands have reported malaria transmission throughout the year, although it increases during and soon after the rainy season. Usually, malaria diagnosis in places having no microscope and qualified laboratory staff relies on simple and easiest method known as Malaria Rapid Diagnostic Test (MRDP) though a qualitative study. A qualitative study in hospitals in Tanzania revealed that clinicians rely on experience rather than guidelines when deciding treatment. That malaria is a more socially acceptable diagnosis in Tanzania when fever is the presenting symptom than bacterial and viral infections or *pyrexia of unknown origin* may contribute to malaria over-diagnosis. Availability and increased popularity of rapid diagnostic tests may make malaria diagnosis more accurate and treatment more rational.

Table 4.2: Top Ten Causes of Death, All Ages. United Republic of Tanzania, 2002

S/N	Causes	Deaths ('000)	(%)
	All causes	583	100
1.	HIV/AIDS	166	29
2.	Lower respiratory infections	67	12
3.	Malaria	56	10
4.	Diarrhoeal disease	31	6
5.	Perinatal conditions	24	4
6.	TB	18	3
7.	Cerebrovascular disease	16	3
8.	Ischaemic heart disease	14	3
9.	Syphilis	11	2
10.	Road traffic accidents	10	2

Source: Death and DALY Estimates by cause, 2002.



Source: Death and DALY Estimates by cause, 2002.

In 2002, Tanzania developed the National Malaria Medium-Term Strategic Plan aimed at reducing malaria morbidity and mortality by 25 per cent by 2007 and by 50 per cent by 2010. The programme initiated four primary interventions against malaria: use of insecticide-treated bed nets; indoor residual spraying; intermittent preventive treatment during pregnancy; and prompt and effective treatment using effective drug therapy. Unfortunately, overall trends in reported cases have not changed significantly although sentinel sites in Zanzibar, where the interventions were most intensive, show dramatic reductions in malaria transmission and mortality. The impact of all four interventions in Zanzibar suggests the potential population level impact of scaling up these interventions.

4.1.2 Health facilities

As of 2014, Nyasa District Council had two (2) hospitals, all owned by faith based organizations (FBO). There were three (3) health centres, all publicly owned and twenty four (24) dispensaries. Out of the twenty four dispensaries, one was privately owned, sixteen (16) public and seven were owned by faith based organizations. Table 4.3 below shows categories and the total number of hospitals, health centres and dispensaries. These are manned by one Medical Officer and several other categories of health personnel as shown in Table 4.3. Nyasa district is served by three (3) ambulances. Considering the MDGs and national guidelines, existing facilities are inadequate which limits access to health services.

Table 4.3 Nyasa District Council's Health Facilities by Ownership, 2014

Type of		Ownership		
Health Facility	Number	FBO	Public	Private
Hospital	2	2	-	-
Health Centre	3	-	3	-
Dispensary	24	7	16	1
TOTAL	29	9	19	1

Source: Nyasa District Council Health Management Information System, 2014.

The population covered per hospital and per health centre is 9,165. The regional average coverage of the population by health facilities was 1.8 health facilities per 10,000 people in the year 2004 with Songea rural having the best coverage ratio of 4,103 people per health facility and Songea urban having the worst coverage of 8,176 people per health facility. Compared to other regions on Tanzania Mainland, the number of population per hospital and health centre bed for 2012 ranks Ruvuma region very high.

The number of patients per doctor in Nyasa District Council is 6,834 while the number of patients per hospital bed is 21. The average distance to the nearest hospital is 10 kilometers which is well above the national average. According to the

year 2012 Housing and Population Census, in the year 2007, 76% of the households in Tanzania were living within 6 kilometers of the primary health facility. In the year 2004, only one third of health facilities in Ruvuma region were located within a walking distance. Songea urban had the best coverage where there were 4.3 health facilities within walking distance. On the other hand, Namtumbo and Tunduru districts had the worst ratios of 0.2 health facilities per 100 kilometers.

Table 4.4 shows Nyasa District Council's Health personnel by category as of 2014.

Table 4.4: Nyasa District Council's Health Personnel by Category, 2014.

S/N	Category of Personnel	Establishment	Actual Strength	Gap
1	Medical Doctor	3	1	2
2	Dental Surgeon	1	1	-
3	Pharmacist	3	1	2
4	Assistant Medical Officer	3	3	-
5	ACO	16	15	1
6	CO	25	10	15
7	Nursing Officer	13	10	3
8	Nurse Tutor		1	
9	ENT	71	34	37
10	MCH Aides	15	3	12
11	Laboratory Technician	3	1	2
12	Health Officer	3	2	1
13	Health Secretary	3	2	1
14	Medical Attendant	70	103	33
TOTAL		229	187	42

Source: Nyasa District Council Health Management Information System, 2014.

The picture emerging out of the analysis is that being a newly established district council, Nyasa's ratio of population covered per hospital and per health centre is poor compared to both the regional and national ratios. However, Nyasa district was better positioned compared to Rukwa, Singida and Tabora regions. Secondly,

there is hardly much difference in dispensary coverage between districts. This shows that dispensaries are evenly distributed in the rural areas of Ruvuma region.

4.1.3 Life Expectancy

Life expectancy at birth is the ultimate measure of excellence of health service and environment. According to the outcome indicator, Tanzanian's healthy life expectancy at birth is 52 years (WHO, 2014) compared to 51 years in 2002 and 50 years in 1988. Nyasa district's life expectancy is 52, which is the same as the national average.

4.1.4 Infant and Under Five Mortality

Unlike adults children are more at risk from death. The most vulnerable age is the first year of life followed by the next four years. It is argued that children in sub-Saharan Africa are about over 16 times more likely to die before the age of five than children in developed regions. Tanzania has reduced the infant mortality rate (IMR) of 101 to 38 per 1000 live births from 1990 to 2012 respectively. Also, it has reduced substantially the under-five mortality rate (U5MR) of 166 to 54 per 100,000 live births from 1990 to 2014, respectively. Infant mortality declined from 88 to 51 per 1000 live births.

4.1.5 Maternal Mortality

Complications during pregnancy and childbirth are a leading cause of death and disability among women of reproductive age in developing Tanzania. Defined as the death of women while pregnant or death within 42 days after the baby is born, maternal mortality is one of the major health challenges confronting women in Nyasa District Council. Statistically, maternal mortality contributes to only 2.3 per cent of the total mortality. The maternal mortality ratio (MMR) represents the risk associated with each pregnancy. MMR is estimated by using both number of maternal deaths and live births. According to estimates in 2013, total maternal deaths and MMR in Tanzania were 7,900 and 410 per 100,000 live births, respectively. In 2014, Nyasa's Maternal Mortality rate was 59/100,000.

Maternal and neonatal mortality remain high, although the maternal mortality ratio declined from 578/100 000 live births in 2005 to 410 per 100, 000 live births in 2014. The 2010 Tanzania Demographic and Health Survey attributes the slowly declining infant mortality rate largely to slow improvement in full immunization coverage, from 71 per cent of children 12–23 months in 1991–1992 to 75 per cent in 2010 with Nyasa district recording an immunization coverage average of over 85% in 2014.

In Nyasa district infant mortality is 3/1000 and under-5 mortality rate is 14/1000. The ten most common causes of illness mentioned above are among the major causes of infant mortality. In addition the ten most common causes of illness, immunizable early childhood diseases also contribute to infant mortality in Nyasa District Council.

In relation to MDG 5, Tanzania is supposed to reach the MMR of 230 per 100,000 live births by 2015. Reduction of maternal deaths is one of the main goals of the Tanzanian poverty reduction strategy and the health sector reform program, but progress has been slow. The slow progress in reducing maternal mortality on mainland Tanzania is compounded by the impact of the HIV/AIDS epidemic. Compared to other poorer regions (Lindi, Mtwara, Coast and Kigoma), the number of deaths in Nyasa district was relatively lower than the national average of 410 per 100,000 live births recorded in 2014.

4.1.6: Immunization of Children

In Tanzania, current vaccination rates (VRs) is estimated to range from 80% to 90% for standard vaccines. However, little information on levels and trends of the immunization status of infants is available especially among rural populations and "difficult-to-reach" nomadic pastoralists. A study on children vaccination which was undertaken in a number of clinics in the country in the late 1990s found that in 1998, the full vaccination rate (FVR) across surveyed clinics was 72%, significantly higher than in the years 1999 (58%), 2006 (58%) and 2007(57%). BCG and measles VRs were highest in 1998 and 1999, whereas VR was lowest for poliomyelitis in

1999, and for diphtheria-pertussis-tetanus in 2007. Measles VR showed a declining trend (1998: 72%; 1999: 73%; 2006: 62%; 2007: 59%) affecting the FVR, except in 1999 when poliomyelitis VR was lower (67%).

FVR of more than 80% was only achieved at one clinic during the three (3) years under review. No clinic showed a consistent increase of VRs over time. The study revealed that the following health system-related factors were associated with low FVRs: Interruption of scheduled monthly immunisation clinics and lack of vaccines (depending on vaccine), predominant cultural beliefs, lack of vaccines and low rates of skilled attendance at birth.

Overall, the study concluded that vaccination rates in difficult-to-reach populations are markedly lower than the national average for almost all years and clinics. Affiliation to the nomadic tribes and lack of vaccines determine VRs in rural populations. Improvements in immunisation service delivery, vaccine availability, stronger involvement of communities and special outreach services are required to improve VRs in remote areas of Tanzania. Nyasa District's immunization coverage against selected early child hood diseases is as shown in Table 4.5.

Table 4.5: Nyasa District Council Coverage with BCG, OPV, Penta, PVC, ROTA and Measles Vaccination, 2014.

S/N	Type of Vaccination	Coverage (%)	National Coverage
			(%)
1	BCG	100%	95%
2	OPV 0	72.60%	95%
3	OPV 1	84.50%	95%
4	OPV 2	85.30%	95%
5	OPV 3	82.30%	95%
6	Penta 1	91%	95%
7	Penta 2	86.70%	95%

8	Penta 3	84%	95%
9	PVC 1	89.70%	95%
10	PVC 2	88%	95%
11	PVC 3	89.60%	95%
12	ROTA 1	90%	95%
13	ROTA 2	89.60%	95%
14	Measles	97.0%	95%

Source: Nyasa District Council Health Management Information System, 2014.

Maternal and neonatal mortality remain high, although the maternal mortality ratio declined from 578/100 000 live births in 2005 to 410 per 100, 000 live births in 2014. The 2010 Tanzania Demographic and Health Survey attributes the slowly declining infant mortality rate largely to slow improvement in full immunization coverage, from 71 per cent of children 12–23 months in 1991–1992 to 75 per cent in 2010 with Nyasa district recording an immunization coverage average of over 85% in 2014.

In Nyasa district infant mortality is 3/1000 and under-5 mortality rate is 14/1000. The ten most common causes of illness mentioned above are among the major causes of infant mortality. In addition the ten most common causes of illness, immunizable early childhood diseases also contribute to infant mortality in Nyasa District Council.

4.1.7 Children Malnutrition

In general terms, Nyasa district is self-sufficient in food production, despite some areas experiencing low animal protein in their diet. This is partly due to the fact that the district has few livestock. Nevertheless, the animal protein deficiency is supplemented by high consumption of fish, sardines, beans and other types of pulses. For this reason, Nyasa district has no cases of severe malnutrition. In 2014, the district recorded a moderate malnutrition of 0.7%.

4.1.8 HIV/AIDS

HIV/AIDS is an increasing health, social and economic problem in Nyasa district. The number of HIV/AIDS cases in Ruvuma region has been increasing since 1980s when the first victim was diagnosed. According to the record, Mbinga district has recorded more cases than any other districts. Nyasa district has an infection rate of 5.4%. In 2014, 2307 HIV/AIDS cases were reported and the number of HIV/AIDS related deaths was 312. Nyasa district has services codenamed Prevention of Mother to Child Transmission (PMTCT) services and Voluntary Counseling and Testing (VCT) services. In the year 2014 a total of 13,461 mothers attending ante-natal clinics in Nyasa district were screened for HIV infection. 456 out of 13,461 or 3.38 screened were found to be HIV positive and all were getting ARVs. Besides the PMTCT programme, there are also Voluntary Counseling and Testing (VCT) services. As Table 4.6 shows, in the year 2014, 4,951 people screened under the programme 269 or were found to be positive and are all receiving treatment.

Table 4.6: Expectant Mothers who participated in the PMTCT and VCT services in Nyasa District, 2014.

Service	Number Screened	Number +ve	% +ve	Number Receiving Treatment	% of +ve receiving treatment
PMTCT	13,461	456	3.38	456	100
VCT	4,951	269	5.43	269	100
TOTAL	18,412	725	8.81	725	100

Source: Nyasa District Council Health Management Information System, 2014.

Currently, the district has three programmes addressing the HIV/AIDS challenge. These include Walter Reed Programme (WRP), ROA and GSM. However, it is important to note that these cases were only those which were reported. The reported cases may not reflect the actual situation since not all cases were reported.

4.1.9 Tuberculosis and Leprosy

TB infection rate is 1%. A total of 38 cases of TB and 9 cases of Leprosy were reported in the year 2014. The two diseases have a big negative economic impact on individual and household wellbeing. A deliberate programme focusing on their eradication is in place. While the number of leprosy cases is decreasing, tuberculosis cases are on the rise.

4.1.10 Epidemics

These are diseases which, if their spread is not controlled early, could cause massive deaths within a short period of time. In 2014, a total of 108 cases (46 males and 62 females) of dysentery were reported in Nyasa district. The district also reported 11 cases (4 males and 7 females) of meningitis, 35 cases (11 males and 24 females) of typhoid and 2 cases (all girls) of animal bites.

4.1.11 Cost Sharing

Since attaining independence in 1961, it has been the policy of the Tanzanian Government to offer free medical services in all public hospitals and health centres. However, faced with political, economic, social and technological challenges, the Government of Tanzania resolved to undertake various public sector reforms in mid 1980s to cope, address and manage changes for improved performance and quality service delivery. One of the implications of public sector reforms was introduction of "cost sharing" in the health sector.

Since then, people were required to contribute towards health delivery by way of direct labour, materials and money. Later, health insurance schemes and funds e.g. the National Health Insurance Fund (NHIF)(public); Strategis, AAR, Medical Express, etc. (private) and Community Health Fund were established. Despite these reforms, health insurance coverage is still low in Tanzania. Low insurance coverage leads to over-reliance on direct payment at the point of use of health care, which is one of the fundamental challenges that limit the government's endeavour towards universal health coverage.

4.2: EDUCATION SECTOR

The history of formal education in Nyasa district goes back to late 1890s when the Catholic Missionaries established schools in the areas of their religious influence to cater for their interests. Examples of early missionary schools include middle schools in Nkaya near Lituhi and Mango off Kihagara along the Mbambabay - Lituhi road. Similar schools in the region were established in Mpitimbi, Litembo, Kigonsera, Peramiho and St. Michael. According to the 2012 population census, the region's literacy rate was estimated at 77% and the region's school attendance status for population aged 5 years and above was above the national average at 25.4% (national, 24.5%). Further, the percentage of persons aged 25 years and over who have never attended school in the region was 25% compared to the national figure of 32.8%. However, todate, no systematic assessment has been undertaken to understand the contribution of Catholic Missionaries to the region's remarkable status of literacy rate. Tables 4.7 and 4.8 below sheds light on the status of education in Ruvuma region.

Table 4.7: Persons aged 25 years and over who have attended school, by level of educational attainment.

Region/ National (%)	Never attended (%)	Primary (%)		Secondary (%)		University (%)
		Std 1- 4	Std 5 - 7	Form 1- 4	Form 5- 6	
Ruvuma	22.9	14.7	40.1	2.5	0.2	0.1
National	34.1	12.3	45.8	5.1	0.7	0.4

Table 4.8 School Attendance Status of persons aged 25 years and over

Region/National	Never		Having Attended (%)

(%)	Attended (%)	Attending (%)	Dropped out	Completed
Ruvuma	25.0	25.4	8.6	41.1
National	32.8	24.4	8.7	33.8

After gaining independence in 1961, the post colonial government attempted several times to reform the education system to meet its different development objectives and generate desired outcomes. Several policies were passed including the 1967 Education for Self-Reliance Policy, the 1995 Education and Training Policy and the most recent 2014 National Education Policy. It is worth noting that during this period the education system has undergone a number of changes in the approach and focus. The most significant of these changes is a shift in emphasis from rural-oriented vocational education to technology education as the major focus of work-oriented education, demonstrated through supplementary education policies such as the 2007 Information and Communication Technology policy.

In 1974 the government launched a Universal Primary School Education Programme (UPE) with the objective of providing primary school education to all children aged 7-13. Further, the programme sought to reduce the country's adult illiteracy rate from 69% to 5%. The programme resulted into many children going to school and many schools being built throughout the country. In the new education policy (2+7+4+2+3), a 2 years pre-school now becomes compulsory.

4.2.2: Pre- Primary Education

Pre- Primary education is regarded as the most important stage that contributes to the mental and social development of a child. In addition to preparing children for

joining primary schools, early childhood education (nursery schools) which admit children aged between 3 and 6 years, helps to prevent stunted cognitive development of a child and has been associated with better performance in schools. It is also acknowledged that pre-school education is very important in laying a solid foundation for further education and future productivity of a child. In view of these facts regarding the importance of the pre-schools, Nyasa district council needs more preschools to cater for more children.

There are 98 Pre-Primary schools with a total enrollment of 5,252 pupils out of whom 2,603 are boys and 2,649 are girls. The Council has a pre-primary class in each primary school.

4.2.3: Primary School Education

4.2.3.1 Number of Schools and Enrolment Rate

Since gaining independence, primary school education has always been given priority by the government. This is reflected in the dramatic increase in the number of primary schools in Ruvuma region from 494 schools in 1995 to 637 in 2004 or 29% increase. Mbinga district recorded the highest increase estimated at 41%. Records show that by 2003, 44% of all primary schools in Ruvuma region were in Mbinga district. This partly helps to explain why the district has one of the highest gross enrolment rates in the region.

During the period under review, the proportion of privately owned schools in the region was very low. By the year 2000, Mbinga had only 2 private schools or 0.3% out of 637 schools. In 2012, Tanzania had 806 private primary schools or 4.9% out of a total of 16,331 schools. To its credit, the region had at least one school within a walking distance and there was an average of one school per 1,800 people, Mbinga having the best coverage at 2.4 schools within a walking distance and one school per 1,540 people. Table 4.9 provides details on primary school education in Nyasa district.

4.2.3.2: Primary School Enrolment:

Compared to other districts in the region, Mbinga district also recorded the highest Gross Enrolment Rate estimated at about 86 percent (1996) against only 57 percent recorded by Tunduru District. The 2002 Population Census shows that the region had almost as many male seven year old children enrolled as females and the pupil's enrolment rate has been on the rise between 1995 and 2004. Using the Net Intake Ratio (NIR) which measures the extent of success in the standard one pupils recruitment process, the region missed 12% of eligible children. Mbinga recorded the lowest proportion of seven year old children who missed recruitment at 13%. The regional NIR in 2004 was 99. Overall, as a percentage of total enrolment, Nyasa district's enrolment rate was 92.6 in 2015.

Table 4.9 Primary School Enrollment in Public and Private Schools in Nyasa District, 2014/2015

Class	Actual Enrolment		Total Enrollment
	Boys	Girls	
Pre-Primary	2603	2649	5252
I	2884	2751	5635
II	2756	2723	5479
III	2471	2550	5051
IV	2434	2380	4814
V	2131	2112	4243
VI	1878	1967	3845

Class	Actual Enrolment		Total Enrollment
	Boys	Girls	
VII	1559	1586	3145
Public	18,521	18,656	37,177
Private			

Source: DED, Nyasa District Council, 2015.

4.2.3.3: Education Facilities

It is widely acknowledged that a primary school teacher is the single most important factor in the development of the primary education system in Tanzania. Down the ladder, the second most important factor is school facilities which include classrooms, toilet facilities, teachers housing and office spaces, desks and miscellaneous facilities such as furniture and water supply system. Being a newly established district council in the region, Nyasa District Council is facing a shortage of educational facilities. This limits efforts to expand enrolment and offer quality education. Overcrowding in classrooms, for example, contributes to poor performance and causes truancy. Further, inadequate educational facilities such as shared housing for teachers, contribute to low morale among teachers as well.

Classrooms

As of March 2015 2015, Nyasa District Council had 598 classrooms while the requirement was 960 classrooms. This implies that the Nyasa district has a deficit of 362 classrooms or 37.7% of the total classrooms requirement. The number of pupils per classroom was 62 compared to regional average of 57 pupils per classroom whilst the required ratio is 38 pupils per classroom. Songea district council's classrooms were the second most crowded classrooms in the region with 60 pupils per classroom. Tunduru classrooms were the least crowded of all districts in the region with 47 pupils per class.

Toilets

In 2015 Nyasa district had a total of 1,297 pit latrines holes to cater for 37,177 primary school pupils. This was equivalent to 35 pupils per toilet hole while the required ratio for the region was 22 pupils per toilet hole.

Pupil's desks

In 2015, a total of 37,177 primary school pupils in Nyasa District were sharing 8,124 desks. This was equivalent to 4.5 pupils per desk while the regional required ratio is 2.8 pupils per desk. The demand for desks in Nyasa district stands at 18,335 desks, hence a deficit of 10,201 desks. This is equivalent to 55.6% deficit. Songea urban had deficit estimated at more than 50% and Mbinga was considered to be better-off at about 10%.

Water supply

Water is one of the basic necessities which sustain human life. In primary schools, water is needed for the washrooms, drinking, cleaning the buildings, cleaning tools and utensils, preparation of meals, gardening etc.

Table 4.10: Details on Primary Education Facilities in Nyasa District

Serial No.	Item	Number	
		Available	Requirement
1.	Public Schools	98	
2.	Faith-based Schools	-	
3.	Schools owned by public institutions	98	
4.	Private schools	-	

Serial No.	Item	Number	
		Available	Requirement
5.	Teachers	625	
6.	Pupils by type of school ownership	37,177	
7.	Toilets	1,278	1,458
8.	Desks	8,124	18,325
9.	Tables	742	1656
11.	Chairs	951	1906
12.	Cupboards	225	1103
13.	Book shelves	79	
14.	Classrooms	598	960
15.	Teachers houses	346	925
16.	Pupils/Teacher	59 (national 45:1)	
17.	Teachers/house	2	
18.	Pupils/book	2	
19.	Infrastructure for disabled pupils		

Source: DED, Nyasa District Council PEDP, 2015

Primary School Teachers' Housing

By March 2015, Nyasa district had a total of 346 houses for primary school teachers, compared to actual requirement of 925 houses. On average, 2 teachers

were sharing one house. The region had a deficit of more than 50%, with Nyasa having the worst deficit of 62.5%.

4.2.4: Secondary School Education

According to the Ruvuma region socio-economic profile (2007), coverage by the number of secondary schools of the total enrolment of ordinary level secondary school students has deteriorated in the region. This implies that the rate of increase in enrolment of secondary school students has been faster than the rate of increase in the number of secondary schools. The same trend is also true for the newly established Nyasa District Council where number of primary schools leavers is reported to be on the upward trend. The above phenomenon is exerting immense pressure on the District Council, more specifically, on existing social infrastructure such as secondary schools. The need to construct more secondary schools to ensure more access, equity and quality education is increasingly becoming a necessity now than before. As of 2014 Nyasa District Council had a total of fifteen (15) secondary schools out of which fourteen (14) were public schools whilst only one (1) was privately owned.

A common practice exists in Tanzania whereby every ward must have at least one secondary school. Distribution of secondary schools is therefore regarded as a yardstick upon which effectiveness of the practice is measured. In 2014, Nyasa District Council had attained this objective i.e. there was an average of one secondary school per ward.

4.2.4.1: Secondary School Enrolment

Secondary school enrolment has been dynamic from year to year. As Table 4.11 shows, in the year 2013/2014, total secondary school enrolment in Nyasa District Council stood at 4630 students in both public and privately owned secondary schools. The figure jumped to 3652 in 2014/2015 and is projected to reach 3888 in the year 2015/2016. In 2014/2015, the district's mean average number of students

per school was 243. The district had no single advanced level secondary school. The district's enrolment in terms of sex ratio is as shown in Table 4.11. According to the Table, in 2014/2015 Nyasa District Council enrolled more male students than female students. The sex imbalance on school enrollment is due to drop-out; pregnancies, early marriages and cultural beliefs. Among the strategies adopted by the Council to reduce imbalance on school enrollment include awareness creation on the importance of educating girls, construction of dormitories for girls, and instituting legal measures for non-cooperating parents.

Table 4.11: Nyasa District Council Secondary School Enrollment, 2014/2015

Form	Boys	Girls	Total
I	505	451	956
II	642	612	1254
III	483	401	884
IV	281	180	461
V			
VI			
Total (Govt)	1911	1644	3555
Total (Private)	43	54	97

Teachers

Table 4.12 shows the situation regarding the needs and availability of secondary school teachers in Nyasa District Council as of 2014. The table reveals that Nyasa District Council had a shortage of 45 teachers against its requirement of 316 teachers. According to the Ruvuma region profile, urban schools had more teachers per school than rural based schools.

Table 4.12: Needs and Availability of Secondary School Teachers by School

School	Teachers		
	Needs	Available	Shortage
Mbamba bay	20	18	2
St. Pauls	28	27	1
Lituhi	28	18	10
Ngumbo	17	15	2
Mango	24	19	5
Monica Mbega	19	14	5
Lundo	22	22	0
Limbo	28	27	1
Urberkant	20	21	-1
Kingerikiti	20	21	-1
Kilumba	19	16	3
Tingi	28	18	10
Liparamba	19	16	3
Nyasa	24	19	5
TOTAL	316	271	45

Source: DEO Secondary, Nyasa District Council 2015

4.2.4.2: Secondary School Facilities

Teachers

On the other hand, as of 2014 Nyasa District Council had 271 teachers, out of whom 229 or 84.5% were for Arts and Languages subjects whilst only 42 or 15.5% were for Science subjects. The district had a shortage of 78 science and mathematics teachers as Tables 4.13 below shows.

Table 4.13.: Nyasa District Council - Demand for Secondary School Teachers by Subject

Subject	Teachers		
	Demand	Available	Shortage
Civics	21	21	0
History	53	52	-
Geography	45	47	-
Kiswahili	49	51	-
English Language	50	51	0
Physics	22	8	14
Chemistry	18	14	4
Biology	30	20	10
Basic Maths	28	7	21
TOTAL	316	271	45

Source: DEO Secondary, Nyasa District Council 2015

4.2.4.3: Secondary School Performance

The performance of secondary schools in Nyasa district has not been impressive as Table 4.13 show. This is partly explained by lack of awareness on the importance of education among parents and students and lack of teaching and learning facilities.

Table 4.14: Nyasa District Council Performance in Form Four Examination, 2014

Year	Division					Total	Total (I – IV)	% (I – IV)
	I	II	III	IV	O			
2013	-	-	-	-	-			
2014	3	11	38	252	495	799	304	38

Source: DEO Secondary, Nyasa District Council 2015

4.3: WATER SUPPLY AND SANITATION

4.3.1 Water resources

Nyasa District council has an advantage of having enough water resources mainly being springs originating from the ranges of mount Livingstone which stretches on the Eastern side, covering almost the entire part of the District. There are other sources of water from streams, traditional wells, rivers, lake and ground water.

Apart from the advantages of availability the water from all sources is soft requiring minimum treatment (boiling for drinking purposes) and no treatment before use for other domestic purposes.

4.3.2 Water sector development

In the development of water sector for both rural and urban areas there are a number of guiding documents used in the planning and management process. The main document used are:- The National Water Policy (NAWAPO 2002), the National Water Sector Development Strategy (NWSDS 2006-2015), Mkukuta I and II, water laws (The Water Resources Management Act No. 12 of 2009) which gives guidelines on the sector's institutional arrangement frame work in the management of the water resources that it will be under nine (9) water basins managed by Basin

water boards country wide). The laws also gives powers for basin water boards to grant permit for water use applications, set tariff rates for different category of water users as well as different penalties for all offences against development of water resources. For rural and urban water supply development the main guiding legal documents used is the Water supply and sanitation Act Na.12 of 2009 and the Environmental Management Act 2004.

4.3.3 Applicable Water Supply Technology for Nyasa District.

The technology which is widely used for water supply in Nyasa district council is by gravity due to the fact that most of its water sources comes from the Mount Living stone ranges where it flows to different areas by gravity. The technology has high investment costs but has very low operation costs. For rural areas, this is considered to be the most appropriate option.

4.3.4 Situation of water supply services.

The coverage of water supply services in Nyasa District council is at 48%, which is below to the target set by the National water sector development strategy (NWSDS 2006-2025) i.e. that by 2015 coverage for rural should be 62%. This has been mainly contributed by the fact that most of the existing water supply schemes in the district council were constructed between nineteen seventies and nineteen nineties by financial support from UNICEF and DANIDA which now are operating beyond the design life span and their infrastructure are experiencing wear and tear problems.

In Nyasa District council there are 39 villages with water supply services out of 84 total villages. These villages provide water at different levels due to their functionality status as follows 0-50%=30 villages, 50-90%=5 villages and 90-100%=4 villages as Table 1-3 below shows.

Table 4.15: List of Villages with status of their functionalities from 0-50%

Sn	Village	Percentage
1	Chinula	0-50%
2	Ndengele	
3	Kihagara	
4	Tumbi	
5	Mango	
6	Songambebe	
7	Puulu	
8	Hongi	
9	Liuli	
10	Nkalachi	
11	MkaliA	
12	Mkali B	
13	Mkili	
14	Ngindo	
15	Lipingo	
16	Lundo	
17	Mwerampya	
18	Nkaya	
19	Lituhi	
20	Kihuru	
21	Ngingama	
22	Lukali	
23	Tingi	
24	Liparamba	
25	Kwambe	
26	Matenje	
27	Ngumbo	
28	Mitomoni	

Sn	Village	Percentage
29	Chimate	
30	Mbuyula	

Source: Water Department Nyasa District Council, 2015.

Table 4.16: List of Villages with status of their functionalities from 50-90%

S.n	Village name	Percentage
1	Mtipwili	50-90
2	Tingi	
3	Lunyele	
4	Mbambabay	
5	Kilosa	

Source: Water Department, Nyasa District Council, 2015.

Table 4.17: List of Villages with status of their functionalities from 90-100%

sn	Village name	Percentage
1	Lundu	90-100
2	Litumbakuhamba	
3	Ng'ombo	
4	Nangombo	

Source: Water Department, Nyasa District Council, 2015.

Currently Nyasa district council is implementing water supply projects in nine (9) villages (Lundu, Litumbakuhamba, Mbambabay, Ndesule, Kilosa, Ukuli, Kingerikiti, Litindoasili and Lumecha) under WSDP Phase One. Two of these projects have been completed (Litumbakuhamba and Lundu) and the remaining seven projects are at different stages of construction. After its completion, scheduled in September 2015, the projects will serve about 23,218 people and it will raise coverage to 55%.

According to the National Water Policy (2002), people in the villages should get water supply services at 400 meters walking distance and one domestic water point should serve a minimum of 250 people per every DP (Domestic water point).

4.3.5 Strategies for project developments in rural areas

The water department has set plans for project preparation in every financial year by carrying out scoping study, detailed designing and preparation of project proposals. Under this arrangement, there are fourteen villages (Upolo, Malungu, Luhindo, Mpepo, Kwambe, Chimate, Matenje, Mtupale, Chiulu, Malini, Kikole, Kimbango, Luhangarasi, Nkalachi) whose project proposals have been completed. The total cost for the projects is Tshs 3,104,685,600.00.

4.3.6 The Management frame work for water projects in rural areas

The water management of any water supply facility in rural areas after completion is put under the village government whereby Community-owned Water Supply Organizations (COWSOs) is given the mandate, on behalf of the village government, to manage the utility. NAWAPO (2002) and Water Act Na.12 (2009) sets out the responsibilities of the beneficiaries of the water facilities at the village level. Nyasa District Council and the region as whole are facing a number of challenges in ensuring sustainability of the projects as most of COWSOs suffer from inadequate managerial skills and capacities.

4.3.7 The Urban Water Supply and Sanitation

At present Nyasa District Council is planning to establish the Mbambabay Urban Water Supply and Sanitation Board. The water supply and sanitation Act No.12 of 2009 and National Water Policy 2002 spells out the institutional arrangement for the management of the urban water supply and sewerage - Authority for towns and headquarters of the region, district and small towns.

4.3.8 Solid Waste disposal

The solid waste management in the town area is not a serious challenge in the township of Mbambabay because the town has a small population; hence amount of waste generated is still small. Thus, its management is affordable though plans for improving the future management are on the drawing board together with the plan to establish the Urban Water Supply which also incorporates the issues of waste water management.

- Sources of water - piped, hand pumped shallow wells, springs fed gravity piped, bore holes etc.
- Water development schemes - rural schemes, urban schemes, no. of working schemes, not working etc. and planned/or ongoing water development projects
- Percentage of population/villages enjoying clean safe water
- Distance to the nearest source of water
- Management of the district's water supply and the aspect of Community participation and its challenges

Sanitation

- Waste disposal - details on the status of both solid and waste water disposal
- Toilets - details on the status of toilets e.g. no. of households with proper latrines and without proper latrines; no. of households with flash toilets etc

SECTION V

5.0 OTHER RELATED DEVELOPMENT ISSUES

5.1 WOMEN IN DEVELOPMENT:

Over the last three decades gender issues and women's empowerment have received greater visibility and attention on global, regional, and country level development agendas. There is now a growing global consensus that failure to pay closer attention to the differentiated positions of women and men in society (resource allocation, rights, and opportunities) in formulating policies and designing projects can have adverse impact on development outcomes. Gender equality and empowerment of women are pillars of economic development.

In this case, *gender* is loosely defined as socially constructed roles, relationships and learned behaviors of male or female and *gender equality* is conceptualized in terms of rights, resources and voices - equality under the law, equality of opportunities (including access to human capital and other productive resource) and equality of rewards for work and equality of voice. It is worth noting here that much of the women and development literature suggests that gender norms and practices systematically put women in sub-ordinated position in society. To address the inequality, the world is advocating for gender equality in order to achieve equality and equity between men and women and to enable women to realize their full potential.

Empowerment of women on the other hand, refers to giving women the ability to make choices which entails a process of change of all the components of societal structures that shape and reproduce power relations and the subsequent unequal distribution of society's resources and opportunities. The empowerment of women and improvement of their status in the society are considered to be essential for the achievement of sustainable development.

UNDP sees gender equality and women's empowerment not only as human rights, but also a pathway to achieving the Millennium Development Goals and sustainable development. To that end, it coordinates global and national efforts to integrate gender equality and women's empowerment into poverty reduction, democratic governance, crisis prevention and recovery, and environment and sustainable development. It works to ensure that women have a real voice in all governance institutions, from the judiciary to the civil service, as well as in the private sector and civil society, so they can participate equally with men in public dialogue and decision-making and influence the decisions that will determine the future of their families and countries.

Cognizant of the centrality of gender equality as one of the prerequisites for poverty reduction, the world leaders agreed to a set of time-bound and measurable goals and targets, codenamed Millennium Development Goals (MDGs). The MDG 3 indicators track key elements of women's social, economic and political participation and guide the building of gender-equitable societies. MDGs are inter-dependent. For example, better health enables children to learn and adults to earn and gender equality is essential to the achievement of better health. Thus, promoting gender equality and empowerment of women is recognized not only as a goal in itself but also as an essential step for achieving all other goals - universal primary education (MDG.2), lower under-five mortality (MDG.4), improved maternal health (MDG.5) and lower likelihood of contracting HIV/AIDS (MDG.6).

Along the same line of thinking, at the World Summit in 2005, leaders of the governments of Africa and other regions and international development organizations, reaffirmed their commitment to gender equality and women's empowerment as essential to development, peace and security. Paragraph 58 of the summit document articulates the resolution of the world leaders to eliminate pervasive gender discriminations in primary and secondary education, property and housing rights, access to reproductive health, access to labor markets, sustainable employment, and labor protection, and representation in government decision-

making bodies as well as elimination of all forms of violence against women and the girl/child.

Similarly, in partnership with member states and others, the World Health Organization (WHO) pushes for the empowerment of women, especially as it contributes to health, supports the prevention of and response to gender-based violence, promotes women's participation and leadership, especially in the health sector and defines ways in which men can be engaged to promote gender equality and to contribute more to their own health and that of their families and communities. In addition to this, WHO builds the capacity of WHO and its Member States to identify gender equality-related gaps and provides support for gender-responsive policies and programmes.

Nyasa District Council's initiatives to ensure gender equality and empowerment of women:

Gender status in Nyasa District Council resembles many other district councils in the country. Recent studies in the district found that gender relations in Nyasa District are unequal with men having more freedom, power and self determination than women. In many households men tend to control the properties, finances and investment decisions. In recent years, however, there have been advances in some communities regarding access by women to income generating activities, in particular agriculture, sardine fishing and participation in leadership. Over 60 percent of women are estimated to be engaged in agriculture, which is the backbone of the district's economy followed by fishing which is practiced in the villages along the lake shore. It is worth noting here that both men and women participate in the fishing business with different roles.

The gender roles in the district's households and communities are divided along traditional cultural values with women involved in all household activities, including looking after the family welfare and utility, upbringing of children, fetching water,

collecting fuel wood, preparation of local brew, and preparing food. Women are also involved in the production sectors in their respective villages. Agricultural activities are performed by men, women, and youth, though men generally are more preoccupied in the production of cash crops while women focus more on food crops such as vegetables. Both men and women cultivate cassava, the most important food crop in Nyasa. Men, both as adults and youth, are primarily responsible for cross border trade, transportation, lumbering, and masonry.

In addition to the above situation, it can be observed that many small-scale entrepreneurs at Mbamba bay township are women. This has helped them to own many of the quality houses with iron sheets in the township and they have also started giving out small loans to people, including men, to start up small and medium size enterprises at Mbamba-bay Township. The critical issue, according to the women interviewed, is polygamy. To many women, polygamy contributes to the downward mobility of a household, as resources are stretched over a larger number of wives and children. However, some had different views. Some women believe that polygamy results to a larger number of working adults in the household, which is a source of upward mobility whilst others believe that the household friction resulting from multiple wives is a reason for downward mobility.

To uplift them and accelerate their progress, some women proposed that deliberate efforts be taken to empower them by way of education and training in entrepreneurship, formulation of groups and associations, business orientation and training, enterprise development, and processing, packaging and marketing, and availing them with low cost seed capital. This suggests that gender awareness in Nyasa district is rising and education and mainstreaming needs to be promoted.

Despite various legislations, social stigmatization and ethnically conceived inequality still persists in some families and communities in Nyasa District. Some women have experienced gender based violence at some point in their life, which can lead to unwanted pregnancy and abortion, among other things. Formation of

social and economic groups is one of the strategies which Nyasa district uses to uplift the status of women and protect them in vulnerable situations resulting from their biological roles as mothers and producers and from community prejudice and exploitation. Table 5.1 below provides basic statistics on Community Development in Nyasa District Council.

Table 5.1: Basic statistics on Community Development

No.	Category of Group/Organization/Type of Service	Current Delivery Level 2014	Targeted/ Required Level 2014
1	Comm. Development Staff Establishment	7	28
2	Community engagement ers staff	-	3
3	Number of economic groups	106	600
4	Number women economic groups	23	300
5	Number Youth economic groups	19	300
6	Number of Fisheries group	3,194	-
7	Training to community groups	-	600
8	HIV/ AID economic groups	5	-
9	Number of NGOs	13	-
10	Number of CBOs	172	-
11	Number of FBOs	-	-
12	Number loaned women economic groups	5	300
13	Number of loaned youth groups	-	300
14	Amount of loan disbursed (Tshs)	-	-
15	Number orphans	2,186	-
16	Neglected children	1,365	-
17	Children with Disability	444	-
18	Children Labour	5	-
19	Children Marginalization	84	-
20	Early Pregnancies	100	-
23	Sexual Business	1	-
24	Street Children	32	-
25	Child Headed House	82	-

27	Disaster Affected	40	-
28	Children living under vulnerable condition	4,349	-
29	Vocational groups (Nyasa District Council)	-	20
30	Education on establishment of income generating groups	-	20
31	Education on establishment of SACCOs	3	20
32	Education on sensitization of construction of better houses in rural areas	-	20
33	Number of child care centres	85	120
34	Number of older people	-	
35	Needs assessed MVC/OVC	-	
36	Needs assessed to Older people	38	7,528
37	Number of older people supported	38	7,528
38	Children With CHF medical cards	340	65,503
39	Children With CHF medical cards	-	

Source: Source: Nyasa District Council, Community Development Department, 2014

Women's social participation and Social Protection

As noted above, social stigma is prevalent in Ruvuma region. Several cases of gender discrimination, gender based violence (GBV), exploitation, rape/sexual assaults etc have been reported. Apart from legislations, the council takes various measures to support and protect vulnerable groups such as women, old people, children living under difficult conditions and orphans. Measures include awareness creation, education, sensitization and facilitation of women's social/community development groups through which gender equality and empowerment agenda is deliberated. Table 5.2 shows the type of groups and vulnerable people supported and protected by the Council.

Table 5.2 Nyasa District Council, Vulnerable Groups Protected

S/No.	Type of Group	Amount
1	Number orphans	2,186
2	Neglected children	1,365
3	Children with Disability	444

4	Child Labour	5
5	Children Marginalized	84
6	Early Pregnancies	100
7	Sexual Business	1
8	Street Children	32
9	Child Headed Households	82
10	Disaster Affected People	40
11	Children living under difficult conditions	4,349
12	Number of child care centres	85
13	Older people needs assessed	38
14	Number of older people supported	38
15	Children With CHF medical cards	340

Source: Nyasa District Council, Community Development Department, 2014.

According to the Nyasa District Executive Director (DED), most of these pressure groups are strong enough to effectively engage the council on a number of issues to further the MDG 3 goal of promoting gender equality and empowerment of women. Apart from the above mentioned initiatives, to further the MDG 3 goal and achieve target 3.A - "Eliminate gender disparity in primary and secondary education in all levels of education by no later than 2015", Nyasa District Council recognizes that girls' education is critically linked to self-determination, improved health, social and economic status as well as positive health outcomes for the mother and the child. Sadly, girls still account for about 55% of the out-of-school population in the district.

In addition to this, Nyasa District Council acknowledges that maternal deaths and pregnancy-related conditions cannot be eliminated without the empowerment of women. In Nyasa District maternal mortality is no longer the number one cause of death for adolescents 15–19 years old and, sexual and reproductive health services are one of the areas which the district gives exclusive attention. Empowerment of women, including ensuring access to health information and control of resources such as money, is also considered to be an important factor for achieving gender

equality and health equity. However, in Nyasa District, the ratio of female-to-male earned income is still below parity.

Women's economic participation

A recent study in the country showed that unemployed women in the country outnumber unemployed men by 33%. Formation of women economic groups is one of the strategies used to address this challenge. As of 2014, Nyasa district had a total 106 economic groups out of which 23 were women economic groups. The target is to have 600 economic groups and 300 women economic groups. 5 of 23 women groups or 25.73% had received loans from the District Council. In 2014, TShs 10 million was budgeted to support women economic groups. Apart from the economic groups, Nyasa District had 3,194 fisheries groups.

A big project is on the drawing board to empower the fisheries groups economically by way of fishing gear and construction of fish landing sites. Again, these groups are believed to possess ability to engage the council to further the MDG 3 goal - economic empowerment of women, ensuring access to markets for women entrepreneurs, access to resources etc. Challenges confronting women economic groups include lack of sufficient level of education among members. To address the challenge, the district council, in cooperation with NGOs, offers subject specific training to group members.

Women's political participation

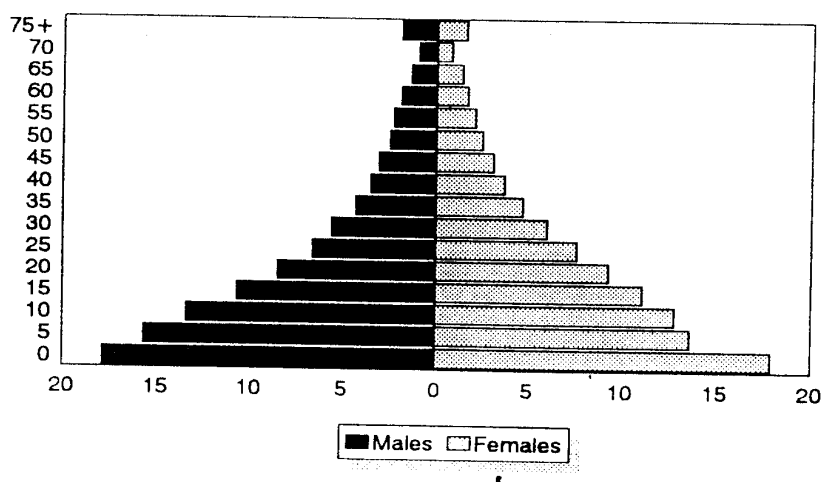
Nyasa district have several women in decision making positions. The District Commissioner is a lady; and in terms of Women representation in legislative bodies, the District Council has 4 women Councilors out of 19 Councilors. In village councils, 40% of the seats are reserved for women which implies that for each village council at least 10 councilors are women. In the district council, 4 departments are headed by women and the head of Academic Section (Secondary education) is also a woman. These representatives are believed to be strong enough to effectively engage the council on matters related to the MDG 3 goal.

5.2: YOUTH IN DEVELOPMENT:

The age structure of Tanzania (2012 Population Census) in general and that of Nyasa district in particular, is best observed by a first impression of its pyramid resembling figure that shows a typically broad age groups; namely, young age, middle age (hereinafter referred to as the core labour force) and the old age. Nyasa district depicts a typical young age structure which is broad at the base with about 44% of its total population below the age 15, and older ages where only 4% of its total population is 65 years and older.

Most important as far as the district's profile are the underlying causes for the differences and the social and economic implications of these varying age structure and distributions for the district's development. Development practitioners claim that the broad based structure is a result of high fertility rate of about 4 (children per woman) and improved health care delivery system. The resulting social and economic implication is high dependency ratio i.e. number of people supported by 100 in the working ages is high, that is, more than 100 persons being supported by 100 workers. However, it is important to take into account that in Nyasa district children do also contribute significantly to work, both in economic and domestic activities right from the early ages.

AGE SEX -PYRAMID FOR TANZANIA 1967 CENSUS



Implications for Nyasa District Council's youth development plans:

Being a newly established district council, Nyasa lacks data on both the age structure of its population and the status of youths in the district. Hence, data used herein is based on findings from recent studies in the district, literature review, interviews and discussions, observations, internet and the regional social economic profile of 2007. Most of the literature accepts that the rights and needs of young people are not being addressed. Young people have few resources and lack institutions that would enable them to advance their interests or negotiate with the government. In most cases, young people are being used as voluntary (unpaid) labour to execute decisions reached by elders. On the other hand, it is acknowledged that when young people are given the chance to participate in governance, they are enthusiastic and effective.

The 2014 TWAVEZA study which explored the state of the youth in Tanzania, focusing on youths' sexual and reproductive health and rights, livelihoods and employment and civic participation revealed that 47% of the country's population is under 15 and the youth boom is expected to unfold in the next decade. The percentage of population under 25 is 66% whilst the percentage of population aged between 15 and 24 years is 17.3%. It also revealed that young people are burdened by three key challenges, namely, staying healthy, achieving a sustainable income, and participating in development and decision making as Agnes (15 years) from Ruvuma region was quoted as saying:

“I see that we as youths are not being involved, but if we became involved we would bring development into the whole community” (Agnes, 15, Lilondo - Ruvuma, TWAVEZA, 2014).

The study further revealed that young people become sexually active early, and many progress from sexual debut to parenthood between the ages of 15 and 24 as a result of multiple partners, transactional sex, inter-generational sex, and cultural norms. Against this background, the youth group is vulnerable to sexual exploitation and violence (especially women), contracting HIV and other sexually transmitted infections and unwanted pregnancies. In 2008 the percentage of youth aged 15-24

infected with HIV was estimated at 2.4%. However, today HIV prevalence among this group is said to be around 5.9%, which is higher than the national average of 5.7%. 45% of new infections are among young people aged between 15 and 24.

Another finding was that young women account for 75% of youths aged between 15 and 24 living with HIV/AIDS. Young women face further burdens through early marriage, teenage pregnancy, and their overall status within society. 44% of women are either mothers or pregnant with their first child by the age of 19. By the age of 15 years, 5% of them have started child bearing which curtails their education, and results in morbidity, creating a loss to the potential of young people for the country's growth and development. They are poorly informed with regard to family planning and child spacing, and, young women especially, are not empowered to make behaviour choices even when they have knowledge.

Nyasa District Council, as an implementing agency of Mkukuta II, recognizes unemployment as a key development challenge. Mkukuta II has set ambitious targets to reduce unemployment rates from 10% (2008) to 5% by 2015. The Council knows that young people are the most affected group making up 53.3% of the unemployed population. This figure is more likely to rise with an increase in the number of youths moving from rural areas to the proposed district's headquarters. TWaweza further noted that only 25% of young girls were transitioning from primary to secondary school implying that Nyasa District Council needs to make significant investments to harness the potential of young women for development and economic productivity of the district.

Whilst agriculture remains the principle employer for young people in Nyasa district, the sector is characterised by limited incentives and negatively affected by the impact of climate change. The private sector is considered to be the potential engine of growth and development in Nyasa district. However, the sector is very small in Nyasa district and its rate of job creation does not meet demand. On the other hand, massive movement of unemployed youths from rural areas to the urban areas continues with the hope that they will gain employment in this sector. Young women face a triple burden compared to their male counterparts. Most of them

they face hostile conditions when seeking employment and within the limited workplaces including sex bribes, harassment and negative stereotyping.

Youths in Nyasa District have few opportunities to learn entrepreneurship skills to help them start and sustain enterprises. Access to financial support is extremely limited with less than 1% of youths getting access to the micro-credit facility offered by the District Council. At the end, they end up being unemployed or working long hours earning low incomes, and facing risks to their health. Nyasa District Council needs to prepare itself now for these demographic shifts and tilts.

To address the challenge, Nyasa District Council has a Community Development department with 7 staff (establishment is 28 staff) and plans to add 3 Community Engagement staff. There are 5 HIV/AIDS economic groups and 19 Youth Economic groups in Nyasa district. The district plans to have 300 youth economic groups. In 2014, the district had budgeted TShs 10 million for youth economic groups. So far 300 youth groups have received loans from the district council. The district has identified 4,349 children living under difficult conditions, 2,186 orphans, 1,365 neglected children and 444 children with different types of disability. To address the challenge, the district has established 85 child care centres. The target is to establish 120 such centres to cater for these disadvantaged groups. As of 2014, 340 children had CHF medical cards while the district's target is to support 65,503 children with CHF medical cards.

In 2014, Nyasa District Council recorded 5 cases of child labour, 84 cases of children marginalization, 100 cases of early pregnancies and 1 case of sexual business. There were 32 street children, 82 children headed households and 40 disaster affected children. In total, 4,349 children were categorized as children living under vulnerable conditions. To fill the knowledge and skills gap, the district in collaboration with several NGOs and CBOs, organizes/facilitates youth and community training programmes on various subject areas. In 2014, the district planned to conduct 600 group training programmes. Table 5.3 provides a list of NGOs and CBOs operating in Nyasa district.

5.3 COOPERATIVE DEVELOPMENT:

A cooperative association is an association of persons who have voluntarily joined together for the purpose of achieving a common need through the formation of a democratically controlled organization and who make equitable contributions to the capital required for the formation of such an organization, and who accept the risks and benefits of understanding in which they already participate. Cooperatives can be categorized into two main groups: Cooperatives with inward functions which act on behalf of its members, obtaining for them goods or services which they need for their personal or professional requirements e.g. consumer cooperatives, credit cooperatives, housing cooperatives etc. The second category is cooperatives with outward functions which act as obtaining outlets for its members. Examples include productive cooperatives, agricultural marketing cooperatives etc.

The history of cooperatives in Tanzania goes back to the year 1925 when the Kilimanjaro Native Planters Association was formed. However, the first Cooperative legislation was passed in 1932 when the Cooperatives Ordinance (Cap. 211) was enacted. After independence, the post colonial government wanted to make cooperatives an engine for economic development. The 1967 Arusha Declaration molded cooperatives into instruments for transforming rural community production into a socialist planned economy. Following the adoption of free market and trade liberalization policies in mid 1980s, cooperatives became independent (member-based) with commercial orientation. To keep abreast with the policy shift, Cooperative Societies Act of 1991 was enacted and then the first Cooperative Development Policy was formulated in 1997 in conformity with the International Cooperative Alliance Principles.

Evolution of the Cooperative Movement in Nyasa District

In Ruvuma the first cooperative association - Matengo Cooperative Union - was registered in 1933 in the former Southern Province to cater for the interests of

coffee growers. Later, in 1934 the Ngoni Matengo Cooperative Union was registered to cater for the interests of tobacco growers. Nyasa District Council is only one year old hence, evolution of the cooperative movement in the district is intrinsically linked with that of Mbinga district and the region. The dominant cooperative societies in Nyasa district are Agricultural Marketing Cooperative Societies (AMCOS) and SACCOSs. Currently there are 3 SACCOSs and 6 AMCOS in Nyasa district. The AMCOSs are: Luhangarasi AMCO, LIPO AMCO at Lumeme, Mapendo AMCO at Tingi and Mpepo, Kingerikiti AMCO and Nambawala AMCO at Ukuli village. Agricultural Marketing Cooperative Societies (AMCOS) refers to cooperatives whose principal objective is undertaking the business of supplying inputs for agricultural crop production, the purchasing, processing, marketing and distribution of agricultural products. They are essentially based in rural areas. (Cooperative Society Act No 20, 2003)

Marketing Cooperative Societies can be defined as organizations of small producers who join efforts to have a central marketing position which also serve other purposes such as procuring inputs, joint bargaining, facilitating credit, transportation, warehousing and providing education/skills for the improvement of the commodities which they produce. The organization can eliminate middlemen (merchants) who manipulate individual producers to buy cheaply and sell dearly to the market, thus generating super-normal profits, which could have gone either to the producers or the final buyers.

Agricultural marketing cooperatives play a significant role in Nyasa district to the poor smallholder farmers. With the majority of them living and working in the agricultural sector, AMCOS offer an appropriate channel by which the incomes of poor smallholder farmers can be increased or stabilized. Such cooperatives provide farmers with the agricultural supplies they need, mechanisms for the sale of their produce and other essential services such as warehousing, marketing, credit, insurance and transportation. Through mutual insurance and farm credit, members

of AMCOS are better placed to cope with shortcomings in the value chain and other emergencies.

By organizing themselves as cooperatives, small holder farmers can reap benefits of economies of scale through better access to inputs, sharing of common equipment and better access to markets and information. The increased efficiency that agricultural cooperative achieve often place them in a better position to compete with larger business than an individual farmer operating in isolation. This is particular relevant in those sectors where farmers have to maintain their competitiveness in the face of increasing globalizations. Through AMCOS the rural poor are able to mobilize for collective action and achieve better bargaining power as buyers and sellers in the market place.

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- (i) Inability to operate under a liberalized economy due to their weak structural and financial position. Consequently, they have not been able to compete with better-prepared private traders.
- (ii) They have limited ability to provide adequate services to their members, who resort to do business with private traders.

- (iii) Weak institutional management resulting from inherited structures and attitudes. Professional management is lacking
- (iv) Lack of training to members which erodes their ability to direct or hold responsible their cooperative leadership and managers.
- (v) The changing environment for cooperatives and their reduced role in input supply, crop marketing and processing.
- (vi) Market access is poor and market information is inadequate.

5.4 NON GOVERNMENTAL ORGANIZATIONS (NGOs) AND COMMUNITY BASED ORGANIZATIONS (CBOs) IN NYASA DISTRICT

Non Governmental Organizations (NGOs) and Community Based Organizations (CBOs) are very important development partners. The district has 13 Non Governmental Organizations and 172 Community Based Organizations performing various/different economic and social activities. Some of the activities include the provision of agricultural skills, education, health facilities, construction of food storage facilities and modern house roofing.

Table 5.3: Number of NGOs and CBOs in Nyasa District Council, 2014.

1	Number of NGOs	13
2	Number of CBOs	172
3	Number of FBOs	-

Source: Nyasa District Council, Community Development Department, 2014.

Table 5.4: List of NGOs in Nyasa District Council

S/No.	Name	Address	Head Office	Activities	Areas covered
1.	HOJA PROJECT TANZANIA	S.L.P. 117, SONGEA	Songea	<ul style="list-style-type: none"> education on HIV / AIDS and Malaria sensitization on sustainable development 	Mbamba-bay
2.	GOOD SAMARITAN MISSION (GSM)	S.L.P. 187, SONGEA	Songea	<ul style="list-style-type: none"> Fight against new HIV / AIDS infections in sensitive areas - mining and fishing areas 	<p>Mpepo</p> <ul style="list-style-type: none"> Kingerikiti, Ukuli Lumeme Tingi DarPoli Luhindo Ndondo Liparamba Litindo asili Luhangarasi <p>Ruhekei</p> <ul style="list-style-type: none"> Mbamba – Bay Chinula Kilosa Nangumbo Chiwanda Liuli Lipingo Kiagara Mtipwili Chiulu
3.	SHIDEPHA+	S.L.P. 13713 DAR ES SALAAM	Dar Es Salaam	<ul style="list-style-type: none"> Fight against new HIV / AIDS people living with HIV / AIDS (PLWH) 	Nyasa District

S/No.	Name	Address	Head Office	Activities	Areas covered
4.	LUSONGA POVERTY ALLEVIATION ASSOCIATION (LUPOAA)	S.L.P. 745 SONGEA	Songea	<ul style="list-style-type: none"> • fight against new HIV/AIDS, poverty and Malaria. 	No specified areas
5.	MWAMBAO COMMUNITY DEVELOPMENT ASSOCIATION (MCOEA)	S.L.P. 1196/791 SONGEA	Songea	<ul style="list-style-type: none"> • Community development, identify opportunities, plan using participatory methods to achieve sustainable development. • Nutrition issues (PANITA) 	No specified areas
6.	TANZANIA AGRICULTURAL AND LIVESTOCK PROMOTION ASSOCIATION (TALIPA)	S.L.P. 376, DAR ES SALAAM	Dar Es Salaam	<ul style="list-style-type: none"> • Sensitization of farmers and livestock keepers on how to use their resources for sustainable development • Poultry keeping. 	<ul style="list-style-type: none"> • Mbamba-bay • Kilosa
7.	RESTLESS DEVELOPMENT	S.L.P. 483, SONGEA	Songea	<ul style="list-style-type: none"> • Education on Maternal health • Entrepreneurship skills • Employment and civics 	<ul style="list-style-type: none"> • Ndengele • Mbamba-bay
8.	NDUNI CENTRE	S.L.P. 445, MBINGA	Mbinga	<ul style="list-style-type: none"> • ducation on HIV/AIDS, Malaria and entrepreneurship • identify vulnerable groups • IV/AIDS Testing and Counselling. 	<ul style="list-style-type: none"> • Mbamba-bay • Tingi
9.	TANZANIA INFORMAL ECONOMY NETWORK ON AIDS INITIATIVES	S.L.P. 1196, SONGEA	Songea	<ul style="list-style-type: none"> • Bring together entrepreneurship groups • Fight against new HIV/AIDS 	No specified area

S/No.	Name	Address	Head Office	Activities	Areas covered
	(TIENAI)				
10.	RUVUMA ORPHANS ASSOCIATION (ROA)	S.L.P. 1196, SONGEA	Songea	<ul style="list-style-type: none"> • Fight against new HIV/AIDS • identifying children living under difficult conditions • Home based care 	Mpepo Kingerikiti (PT) Liuli (PT) Kihagara Luhangarasi Tingi Ruhekei Mbamba-bay Mtipwili Chiwanda Kilosa Lipingo Tuhuhu Ngumbo Liwundi
11.	ENDELEZA JAMII SUSTAINABLE DEVELOPMENT (EJASUDE)	S.L.P. 62283, DAR ES SALAAM	Dar Es Salaam	<ul style="list-style-type: none"> • Formation of entrepreneurship groups • Education on entrepreneurship 	No specified area
12.	LIULI ENVIRONMENTAL PROTECTION AND	S.L.P. Liuli		<ul style="list-style-type: none"> • Environmental conservation 	Liuli Ward

S/No.	Name	Address	Head Office	Activities	Areas covered
	AGRICULTURAL DEVELOPMENT (LEPADA)				
13.	Ruvuma Network of Organization Working with HIV	S.L.P. 1196, SONGEA	Songea	Fight against new HIV/AIDS	<ul style="list-style-type: none"> • Mbamba-bay • Chiwanda

Source: Nyasa District Council, Community Development Department, 2014.

5.5: Good governance and Development

The linkage between enhanced good governance and development is not questionable. Some leading academic economists have even declared that good governance is development itself. However, in order for good governance to facilitate economic development, it requires three conditions, namely, clear definition of roles for institutions and other players; responsiveness of governance arrangements to existing conditions, plus adaptability to change and a consistent focus on the public interest to be situated first.

Based on the basic indicators of good governance, Nyasa District Council does embrace good governance. The Council Management Team is *predictable, transparent and responsive. Participatory*, in this case implies that the CMT strives to enlist inclusiveness; consultation and involvement of stakeholders, affording its people the opportunity to be involved in determining their destiny whilst effectively taking part in discussions or allowing its citizens to exercise influence over decisions and sharing control of institutions (in this case, the council) which manage their lives.

CMT is able to serve, respond to and to readily react to citizens' expectations, preferences and needs. Despite being a new council, the Council functions quite efficiently with respect to service provisioning, maintenance of a legal and

regulatory framework. All meetings are held according to the law and there is a close follow-up of deliberations at all levels. There is affective feedback which sends information back to the lowest levels e.g on budgets. The Councilors are fair, they embody the rule of law and respect for human rights. They possess strategic vision i.e. a broad and long term perspective of issues and a sense of what is required for the development of the people in Nyasa District.

SECTION VI

6.0: POTENTIAL INVESTMENT AREAS:

6.1: Overview

Being a newly established district council with no strong economic base, Nyasa district must aggressively embark on an economic transformation of its economy to lift the district's population out of poverty through inclusive growth and change the structure of the economy to make it more resilient. Economic transformation, in this context, refers to making informed adjustments of the district's economy, society and institutions. In the management of economic transformation process, Nyasa District Council needs to undertake innovations in the legal and institutional frameworks, in which the district council and other institutions play key roles.

The transformation process must be underpinned by policy measures that are general in scope, such as improving the quantity and quality of infrastructure (roads, power, logistics, airport, telecommunication etc) creating a good business environment and investment climate to entice potential investors, building adequate human capital, promoting technological adoption and exploiting the locational and comparative advantages. Nyasa needs to exploit its geographic location which endows it a potential of being the gateway to Mozambique and the landlocked Malawi. With appropriate investment policies, the district can take advantage of its shorter distance to destinations to the two countries without going through other regions. This will open up a huge opportunity for growth in transit trade and logistical services, location of major warehouses for trade and huge potential for growth of services in trade.

Nyasa district has a strong comparative advantage in natural resources including abundant arable land and water sources for irrigation, forest reserves and wildlife and a wide range of ornamental fish and industrial minerals. Discoveries are at an early stage and potential is huge. What these endowments offer for economic transformation of Nyasa district is resource-based industrialization such as food manufacturing and agro processing and services linked to tourism to take

advantage of the district's natural attractions. Borrowing from renowned economists, Nyasa district needs to identify opportunities it has to diversify and change the structure of the economy and selectively focus on key sectors. The district needs to:

(i) Add value to its raw commodities and natural resources by establishing natural resources based and labour-intensive industries.

(ii) Reduce cost of doing business and infrastructure services by enforcing property rights, getting rid of corruption and bureaucratic red tape to attract investments and to enhance the competitiveness of the district's economy.

(iii) Enhance the stock of youth skills into skilled labour force which can easily adapt modern technology.

(iv) Exploit the regional integration initiatives (SADC & COMESA) to gain economies of scale and coordination in economic transformation.

6.2: PRIORITY INVESTMENT AREAS BY SECTOR

Nyasa district has a lot of either untapped or not yet fully exploited sources of wealth with huge investment opportunities which, if unleashed, will not only quickly transform the district's economy but will exert a massive impact on the economy. Following a number of consultative meetings with various stakeholders, it is recommended that the consultant be commissioned to undertake detailed sectoral studies and prepare the district's Investment Profile. Thereafter, bankable Feasibility Studies/Business Plans will be prepared and showcased in different investment forums. The same can also be used to market the district as an investment destination of choice. Below are recommended priority areas with huge investment potential.

6.2.1: Agriculture:

Agriculture is the main activity supporting livelihood of most of the people in Nyasa district. It accounts for employment of about 90 per cent of the labour force. However, agricultural productivity in Nyasa district remains very low. Since most of

the poor in Nyasa district reside in the rural areas, improving productivity in the agricultural sector could significantly contribute towards employment creation especially among youths and women. This could help to increase income, reduce income inequality and poverty in the district.

Nyasa District Council, which covers an area of 3,811 km², has 150,600 hk of land suitable for agriculture. Studies conducted in the district have revealed that out of 150,600 hk, 79,000 hk are under cultivation. This implies that 71,600 hk or 47.54 per cent of the land suitable for agriculture is not cultivated.

Coffee is one of the cash crops which, despite accounting for more than 30 per cent of the region's coffee output, has failed to lift smallholder farmers out of poverty. Mpepo ward produces some of the best coffees in Tanzania. However, many smallholder farmers in Nyasa district still consider coffee cultivation as a subsistence activity with low productivity .For instance, as of 2014, only 4,528 ha were under coffee production but, 8,843 ha suitable for coffee cultivation lies idle. Further, agricultural statistics pertaining to Nyasa district show that only 2,241 households were engaged in coffee production in 2014. The District Agricultural Officer reckons that if transformed from subsistence activity with low productivity to a market oriented industry with high productivity, the number of households engaged in coffee production in Nyasa district could increase to more than 5,000 households.

Recommended interventions to promote productivity of the coffee industry should be directed towards development and distribution of improved higher-yielding coffee seedlings to smallholder farmers, promoting the use of quality inputs to increase yields per hectare, making strategic investments in rural roads and formulating right agricultural and land policies as well as opening up the profitable markets to improve productivity and sustainability of the sector.

Recommended strategies are: Intensive community mobilization and empowerment of smallholder farmers; partnering of small holder farmers, AMCOS, input suppliers

and agro processors and ensuring reliable and adequate rural transport, power, water and communication infrastructure. The District Council needs to identify and enlist the support of the private sector (small, medium and large-scale coffee processors and input suppliers) to establish linkages with farmers; make markets work better for coffee producers through dissemination of market information, creating sustainable linkages with AMCOS and strengthening their capacity (e.g. provide seed capital) to enable them to support its members and enhancing farmers bargaining power. Transformation of the coffee industry must also go hand-in-hand with value addition in order to increase rural employment opportunities, which is an important vehicle for poverty reduction.

Irrigation Farming: With 10,600 hk of land suitable for irrigation along lake Nyasa and in Chiulu and Lundo basins in Ruhekei division, Nyasa district possesses great potential for commercial irrigation farming. Currently, 6,582 hk or 62.09 per cent of the land suitable for irrigation are under irrigation. The Lundo Irrigation Project is an outcome of studies that were undertaken by the Zonal Irrigation office and is already at an advanced stage. Located at Lundo and Ngindo villages, Lipingo ward, Ruhekei division, the project seeks to put more than 2,900 ha of land under irrigation and engage more than 1,664 households. The overall objective of the project is to improve productivity and increase paddy production from 0.2 tons per ha to 5.0 tons per ha. The total potential area under Lundo Irrigation Project is estimated at 3,000 hectares. Currently, only 1,134 hectares are under irrigation.

Horticulture, including production of horticultural products such as vegetables and fruits is another potential economic activity under the Lundo Irrigation Project. Horticulture offers a realistic opportunity for economic diversification, given the sustained demand of horticultural products in the district, within the region and in the neighbouring countries of Malawi, Mozambique and northern Zambia.

To add value on agricultural products, Nyasa district needs to promote labour intensive agro processing industries. With a pool of unemployed youths, Nyasa

district has the relatively lower labour cost which opens an opportunity to attract labour intensive agro processing industries. However, this can only be possible if the other complementary factors are available so that productivity growth combined with comparatively lower labour cost becomes a basis of enhanced competitiveness of the industries. Complementary factors include reduced cost of doing business, good infrastructure and developed skills.

Given an anticipated increase in coffee production, establishment of a coffee curing plant is highly recommended. Similarly, paddy hulling, grading and packaging plant is another recommended investment with an anticipated increase in paddy production from the Lundo Irrigation Project. Demand for paddy is increasing in neighbouring countries and the Middle East particularly demand for organic paddy/rice with a natural flavour.

6.2.2: Fisheries

Lake Nyasa provides the major fishing ground, with fishing potential of 100 tonnes per year. With 2,979 km² of land under water, estimated to contain about 168,000 tonnes of fish of nearly 1000 species, Nyasa district is one of the few districts with huge potential for developing the fishing industry. Fishing activities are currently limited to shallow waters due to rudimentary fishing gear being used. Hence, there is potential for large scale fishing in deep waters without affecting the fish biomass of the lake. In addition to this Lake Nyasa has a large quantity of sardines currently harvested in small quantities. This is another potential area for investment.

Potential industries in this sub-sector include fish drying, canning of sardines, ornamental fishing, fish freezing and production of fishmeal used to make animal feeds. The market for fishmeal both in Tanzania and neighbouring countries is huge. This is exhibited by the high demand of fishmeal, which is presently produced on small-scale bases in Mwanza. Kenyans have placed orders in advance up to a year. Other associated industries include fishnet industry, boat making and fishing gear.

6.2.3: Transport

Lake Transport

As noted earlier on, adequate and reliable transport is crucial for the district's economic transformation. Nyasa lake basin has one of Africa's highest population densities. Lake Nyasa facilitates transportation for three Tanzanian regions of Ruvuma, Njombe and Mbeya and two neighbouring countries of Malawi and Mozambique. However, despite its strategic position for the development of trade and commerce of the country and that of the SADC region, the lake does not have reliable marine transport and adequate port facilities to meet the demand.

Mbambabay is a potential focal point of the lake's transport routes as a distribution centre for traffic to Malawi and Mozambique. The planned development of the road network and rail network under the Mtwara Corridor project will stimulate inter regional and inter country business. This anticipated growth in business will create demand for the lake to serve Northern Zambia and the Eastern part of the Democratic Republic of Congo. Currently, transport in the lake is dominated by Tanzania Railways Corporation's vessels which are neither reliable nor scheduled. This is a very potential subsector for investment.

Air Transport

Except for an airstrips in Mbambabay and Liuli, which are not well maintained, Nyasa district does not have reliable and regular air services. The demand for air service in Nyasa district is likely to grow after the completion of Mtwara Corridor projects which is likely to turn Mbambabay as a hub of business in the region. Furthermore, increased mineral prospecting in the district will exert additional demand for air transport. The mineral sector is a fast growing sector in Nyasa district. Mineral deposits include coal, gold, uranium, diamond and limestone. However, further exploration work is required to determine the quality and quantity. Mineral prospecting activities are undertaken by both registered companies and small scale miners. Small- scale miners are not regulated, they lack modern mining

technology and equipment. This is a sector which provide a wide range of investment opportunities.

Telecommunication

Telecommunication services in Nyasa district are inadequate while demand for the services is enormous. There are investment opportunities for establishing radio stations and TV stations, modern telephone systems, email and internet services for fast information dissemination and advertisements.

6.2.4: Tourism

Non-manufacturing activities such as tourism could serve as drivers of structural change and job creation in Nyasa district. Tourism closely resembles manufacturing and can open up space for economic transformation of the district by enhancing export earnings and creating employment opportunities. The district is endowed with enormous tourist attractions; however, the district's tourism industry is least developed. There are possibilities created by the present efforts to develop the rich culture of the people of Nyasa, unpolluted beaches with brown sands, the Livingstone mountains and game reserves. However, Nyasa district does not have a single tourist hotel.

6.2.5: Education

Youths in Nyasa District have few opportunities to learn entrepreneurship skills to help them start and sustain enterprises. However, enhancement of youth skills into skilled labour force that can easily adapt modern technology is regarded to be one of the pre-requisites for transforming the economy. According to the country's basic demographic and socio-economic survey of 2014, the percentage of the country's young population (0-17 years) is 50.1% whilst the percentage of the population under 25 is 66%. Ruvuma region's school attendance status for the population aged 5 years and above is 25.4% (national, 24.5%). A total of 30,902 primary school pupils in the district were sharing 6,336 desks. This is equivalent to 4.8 pupils per desk (regional required ratio is 2.8).

Secondary school enrolment is on the rise in the district. In the year 2012/2013, total secondary school enrolment was 3,652 students in both public and privately owned secondary schools. The district had no single advanced level secondary school or vocational training centre. These statistics suggest that massive investment in education is required to enhance youth skills into skilled labour force and hence, transform the district's economy, enable youths to achieve sustainable incomes and effectively participate in development.