

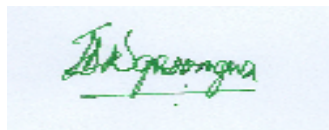


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FOREWORD

1. *Tanzania's Vision 2025 continues to be the guiding beacon of all our future developmental efforts summarized broadly as being:*
 - *High quality livelihood including the absence of abject poverty.*
 - *Good governance and the rule of law.*
 - *A strong and competitive economy.**The goals of our Vision 2025 are in line with the United Nations' Millennium Development Goals with MKUKUTA as the main vehicle of implementation.*
2. *Yet at this point in our history, problems especially in rural areas are many and daunting. Social and economic services require sustainable improvement. The high primary school enrollment rates recently attained have to be maintained; the food situation is still precarious; infant and maternal mortality rates continues to be high. Unemployment is still triggering mass migration of youth from rural areas to already overcrowded urban centers.*
3. *Added to these problems in the menace poised by HIV/AIDS, the prevalence of which throughout Tanzania is negating our efforts to advance into this century of science and technology. The pandemic has been exacting a heavy toll on the economically active age group, leaving in its wake an increasing number of orphans, broken families and much suffering. AIDS together with environmental deterioration are the new developmental problems. They cannot be ignored.*
4. *Our efforts to meet both the new and the old challenges have been hampered by many factors including ill prepared rural development programmes followed by weak implementation, monitoring and supervision of these programmes and sectoral strategies. The shortcomings in policy formulation, project identification, design and implementation is in turn balanced on the lack of reliable and adequate data and information on the rural development process.*
5. *The publication of the Regional Socio-economic Profile series by the Ministry of Planning, Economy and Empowerment, in collaboration with the National Bureau of Statistics and various regional commissioners' offices is a major attempt at finding a solution to this data and information gap.*
6. *Regional profiles cover a wide range of data and information on geography, population, socio-economic parameters, social services, economic infrastructure and the productive sectors. Such data and information has proved vital to many policy makers, planners, researchers, donors and functional managers.*
7. *This Morogoro Regional Socio-economic Profile contains the detailed data and information on the region and is one of the Second Edition series. The second editions take advantage of experience gained in the production of the First Edition publications. They are proving even more valuable and informative to our clients. Constructive view and criticisms are still invited from readers to enable such profiles to become a better tool in the implementation of the country's policies.*
8. *Lastly but not least, I wish to thank the staff of the Ministry of Planning, Economy and Empowerment, the National Bureau of Statistics and the Morogoro Regional Commissioner's Office, for their devotion in ensuring the successful compilation of this document.*



Dr. Juma Ngasongwa

**MINISTER OF PLANNING, ECONOMY
AND EMPOWERMENT**

Dec, 2007

SECTION I

LAND, PEOPLE AND CLIMATE

1.1 GEOGRAPHICAL LOCATION

Morogoro Region is located on the eastern side of Tanzania Mainland. The Region lies between latitudes 5°58' and 10°00' South of the Equator and between longitudes 35°25' and 38°30' East of Greenwich. It is bordered by seven regions. In the north are Tanga and Manyara while in the eastern side are the Coast Region and Lindi regions. On the western there are Dodoma and Iringa Regions while Ruvuma is located in the southern side of the Region.

1.2 LAND AREA AND ADMINISTRATIVE UNITS

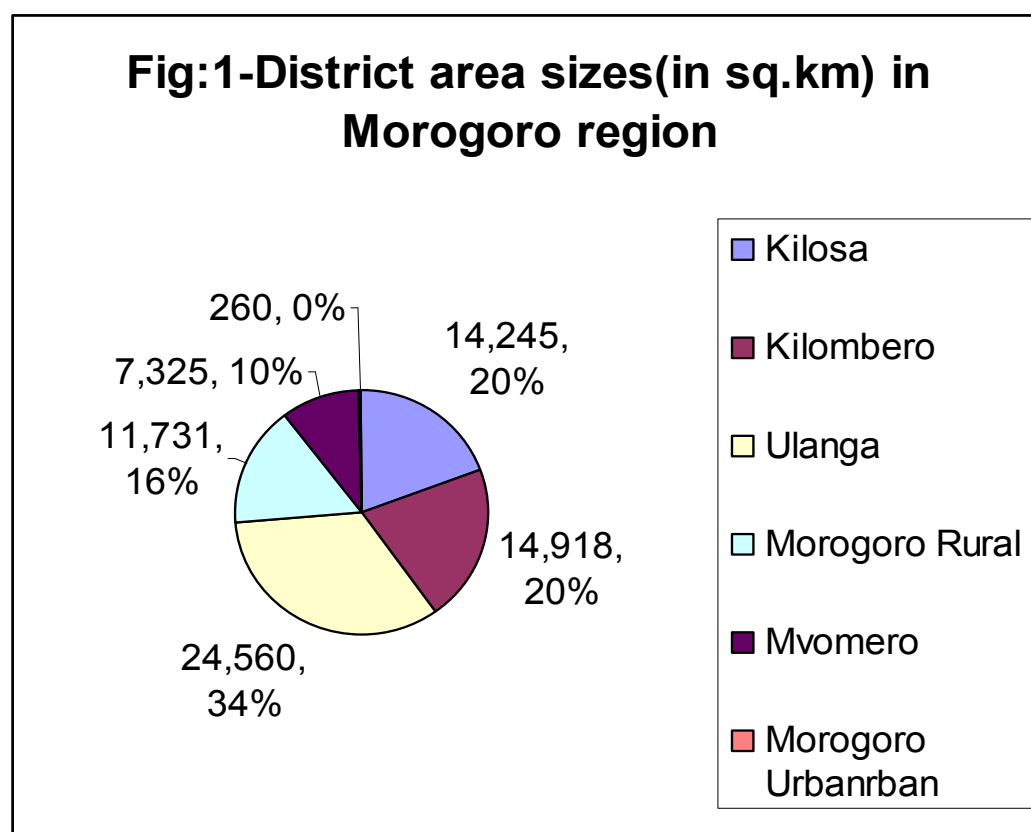
Morogoro Region has a total area of 73,039 km² out of which 2,240 km² is covered by water. This area makes it the second largest region in Tanzania (the largest is Tabora). The Region covers about 7.7 percent of the total area of Tanzania.

Table 1.1: Land and Water Surface Area in the Region by District/Councils, 2006

District Name	Land Area (km ²)	Water Area (km ²)	Total Area
Kilosa	14,245	Insignificant	14,245
Kilombero	13,577	1,341	14,918
Ulanga	23,681	879	24,560
Morogoro Rural	11,711	20	11,731
Mvomero	7,325	Insignificant	7,325
Morogoro Urban	260	Insignificant	260
Total	70,799	2,240	73,039

Source: Morogoro Regional Commissioners Office, 2006.

Table 1.1 indicates that most of the land of Morogoro Region is covered by land (96.9 percent) and water bodies cover only a small part of the Region (3.1 percent). Out of six district councils of the Region, only three districts of Kilombero, Ulanga and Morogoro have significant water bodies. Kilombero District alone has a total area of 1,341 km² an equivalent of 60 percent of the Region's total water body.



Administratively, Morogoro Region is divided into five (5) districts, namely Kilosa, Kilombero, Ulanga, Mvomero and Morogoro Districts. The Districts are subdivided into divisions, wards, villages and streets (for urban wards)/vitongoji (for rural wards). As indicated in Table 1.2, the Region has a total of 30 divisions, 141 wards, 542 villages, 275 streets and 3,204 vitongoji/hamlets.

Table 1.2: Distribution of Administrative Units by District in the Region, 2006

District Name	Divisions	Wards	Villages	Streets	Vitongoji/Harmlets
Kilosa	9	37	161	-	1,030
Kilombero	5	19	81	-	355
Ulanga	5	24	65	-	605

Mvomero	4	17	101	-	577
Morogoro (Urban)	1	19	Mitaa	275	-
Morogoro	6	25	132	-	657
Total	30	141	540	275	3,204

Source: Morogoro Regional Commissioners Office, 2006

1.3 ETHNICITY

The indigenous people of Morogoro Region are mainly of Bantu origin. The tribes that dominate in each district are as follows:

Kilosa : Wakaguru, Wasagara and Wavidunda.

Kilombero : Wambunga, Wandamba, Wabena and Wahehe.

Ulanga : Wapogoro, Wandamba, Wangindo, Wabena and Wangoni.

Morogoro Rural: Waluguru, Wakutu, Wazigua, Wanguu and Wakwere.

Mvomero : Waluguru, Wakaguru and Wakwere.

Morogoro Urban: Mixed tribes reside in this District as it is highly urbanized.

Although, the dominant ethnic tribes are those mentioned above, the Wamasai and Wasukuma are now widely observed in various districts such as Ulanga, Kilosa, Mvomero and Morogoro. These tribes moved and settled in the districts in search of grazing lands for their cattle. These new settlers have occasionally clashed with existing ethnic groups. The conflicts are always based over the land use and occupancy rights.

1.4 POPULATION CHARACTERISTICS

1.4.1 Introduction

In Tanzania, the latest population and housing census that covered all regions was carried out in 2002. The 2002 census was preceded by three other post-independence population censuses which were conducted in 1967, 1978 and 1988. This sub-section discusses the total population of the Region and its distribution at the district and village levels.

1.4.2 Population Size and Growth

According to the 2002 Population and Housing census, Morogoro Region had a total population of 1,753,362 male being 873,245 and females 880,117 with a total of 385,269 households. The

average population growth rate stood at 2.6 percent per annum. According to URT (2002), the Regional intercensal population growth rates between 1967-1978, 1978 -1988 and 1988-2002 were 2.9%, 2.6% and 2.6% respectively.

Table 1.3 shows the Region's intercensal population growth rates between 1988 and 2002. Across the districts of Morogoro Region, the growth rate over the period ranged from 1.1 to 4.7 percent. Morogoro Rural District Councils experienced the lowest growth rate of 1.1 percent while Morogoro Urbanrbn experienced the highest population growth rate. The data showing lowest growth rate of Morogoro District Council population during the 1988-2002 intercensal period might be attributed to the establishment of Mvomero District in 2002 which was split from the Morogoro District. The high rate of population growth rate in Morogoro Urbanrbn District during this period is due to the fact that the District is relatively highly urbanized therefore more immigration rates are experienced.

Table 1.3: Population size and growth rates by district, Morogoro Region for 1978, 1988 and 2002

District	Population			Inter-censal Growth Rate (percent)	
	1978	1988	2002	1978-1988	1988-2002
Kilosa	274,544	346,575	488,191	2.3	2.4
Kilombero	133,013	187,608	321,611	3.4	3.9
Ulanga	113,510	138,658	193,280	2.0	2.4
Mvomero	-	-	259,347	-	1.7
Morogoro	344,083*	430,202*	263,012	2.2	1.1
Morogoro (Urban)	74,114	117,601	227,921	4.6	4.7
Total	939,264	1,220,564	1,753,362	2.6	2.6

* The figure also contains data for Mvomero.

Source: United Republic of Tanzania Population and Housing Censuses: 1978, 1988, 2002.

Table 1.4 shows the national population size and growth trends in all Regions of Tanzania. It shows that while Morogoro Region ranked 12th between 1967-1978 in terms population growth rate, the region ranked 9th and 11th during 1978-1988 and 1988-2002 inter-censal periods respectively.

According to the 2002 Population and Housing Census during the 14 years period from 1988 to 2002, the population of Tanzania increased by 11.3 millions or 49.1 percent. The average annual

growth rate of the population declined from 3.2 percent during the period 1967-1978 to 2.8 percent during 1978 -1988, but recorded a slight rise to 2.9 percent in 1988-2002. This change in the trend in population growth was attributed to the influx of a large number of refugees from the neighbouring countries.

All regions recorded population increases during the period between 1988 and 2002, but the average annual population growth rate varied between regions ranging from 1.4 percent to 4.8 percent. The highest growth rate of Kigoma and Dar es Salaam Regions are attributed to inflow of refugees and high rate of urbanization respectively. Morogoro Region was among the six regions whose population change was between a half million and one million persons. Other Regions with similar population change include Kigoma, Kagera, Tabora, Mbeya and Arusha.

**Table 1.4: Morogoro Region Population Trends Compared to Other Regions
In 1967, 1978, 1988, and 2002 Censuses**

Region	Population				Average Annual Rate of Growth		
	1967	1978	1988	2002	1967-78	1978-88	1988-02
Tanzania	12,313,469	17,512,610	23,095,882	34,446,603	3.2	2.8	2.9
Tanzania Mainland	11,958,654	17,036,499	22,455,207	33,461,842	3.2	2.8	2.8
Morogoro	682,700	939,264	1,220,564	1,753,362	2.9	2.6	2.6
Arusha	610,474	926,223	1,351,675	1,288,088	3.8	3.8	3.9
Mwanza	1,055,883	1,443,379	1,878,271	2,929,644	2.8	2.6	3.2
Dodoma	709,380	972,005	1,237,819	1,692,025	2.9	2.4	2.3
Kilimanjaro	652,722	902,437	1,108,699	1,376,702	2.9	2.1	1.6
Tanga	771,060	1,037,767	1,283,636	1,636,280	2.7	2.1	1.8
Coast	428,041	516,586	638,015	885,017	1.7	2.1	2.4
Dar es Salaam	356,286	843,090	1,360,850	2,487,288	7.8	4.8	4.3
Lindi	419,853	527,624	646,550	787,624	2.1	2.0	1.4
Shinyanga	899,468	1,323,535	1,763,960	2,796,630	3.5	2.9	3.3
Mtwara	621,293	771,818	889,494	1,124,481	2.0	1.4	1.7
Ruvuma	395,447	561,575	783,327	1,113,715	3.2	3.4	2.5
Iringa	689,905	925,044	1,208,914	1,490,892	2.7	2.7	1.5
Mbeya	753,765	1,079,864	1,476,199	2,063,328	3.3	3.1	2.4
Singida	457,938	613,949	791,814	1,086,748	2.7	2.5	2.3
Tabora	502,068	817,907	1,036,293	1,710,465	4.4	2.4	3.6
Rukwa	276,091	451,897	694,974	1,136,354	4.5	4.3	3.6
Kigoma	473,443	648,941	853,263	1,674,047	2.9	2.8	4.8
Kagera	658,712	1,009,767	1,326,183	2,028,157	3.9	2.7	3.1
Mara	544,125	723,827	970,942	1,363,397	2.6	2.9	2.5
Manyara	NA	NA	NA	1,037,605	NA	NA	3.9

Source: United Republic of Tanzania Population and Housing Censuses: 1978, 1988, 2002.

1.4.3 Population Density

During 2002, Morogoro Region had a density of 24 persons per km². As it can be observed in Table 1.5, Morogoro Region is estimated to have the density of 27 persons/ km² in 2006. Table 1.5 gives the Region's estimated population and their respective population density by district in 2006. The regions population density is in the group of the regions with low density. Others in this group include Ruvuma (18 persons per km²), Rukwa (17 persons per km²), Lindi (12 persons per km²), Manyara (25 persons per km²) and Tabora (22 persons per km²). Among districts of Morogoro Region, Morogoro Urban and Mvomero districts are leading in terms of population density. They are followed closely by Kilosa and Kilombero Districts. Among all districts of Morogoro Region, Ulanga has the lowest population density. The high population density in the leading districts is explained by their potential in attracting immigrants. The districts are endowed with abundant agricultural land suitable for crops production. Furthermore, the abundance of grazing land has also attracted livestock keepers from regions such as Arusha, Shinyanga and Mwanza.

Table 1.5: Population Density by District in the Region, 2006.

District	Area(km ²)	Population 2002	Estimated Population 2006	Population Density (Persons/km ²)	
				2002	2006
Kilosa	14,245	488,191	538,065	34.3	37.7
Kilombero	14,918	321,611	355,219	23.7	27.6
Ulanga	24,560	193,280	212,288	8.2	9.0
Mvomero	11,731	259,347	280,475	35.4	37.9
Morogoro	7,325	263,012	278,824	22.5	23.5
Morogoro (Urban)	260	227,921	264,216	876.6	1,053.4
Total	73,039	1,753,362	1,929,087	24.8	27.5

Source: 1. Morogoro Regional Commissioners Office, 2006.

2. United Republic of Tanzania Population and Housing Censuses: 1978, 1988, 2002.

Ulanga District has the lowest population density in the region despite its high agricultural potential. This can be explained by the fact that most of its land area is mountainous which are covered by forest reserves. Another factor which has contributed to this situation is its inland location, as compared to other districts in the Region. The mountainous land terrain and inland location have contributed to poor development of inland communication infrastructure in Ulanga District.

Fig.3-Regional Population in Morogoro in terms of districts

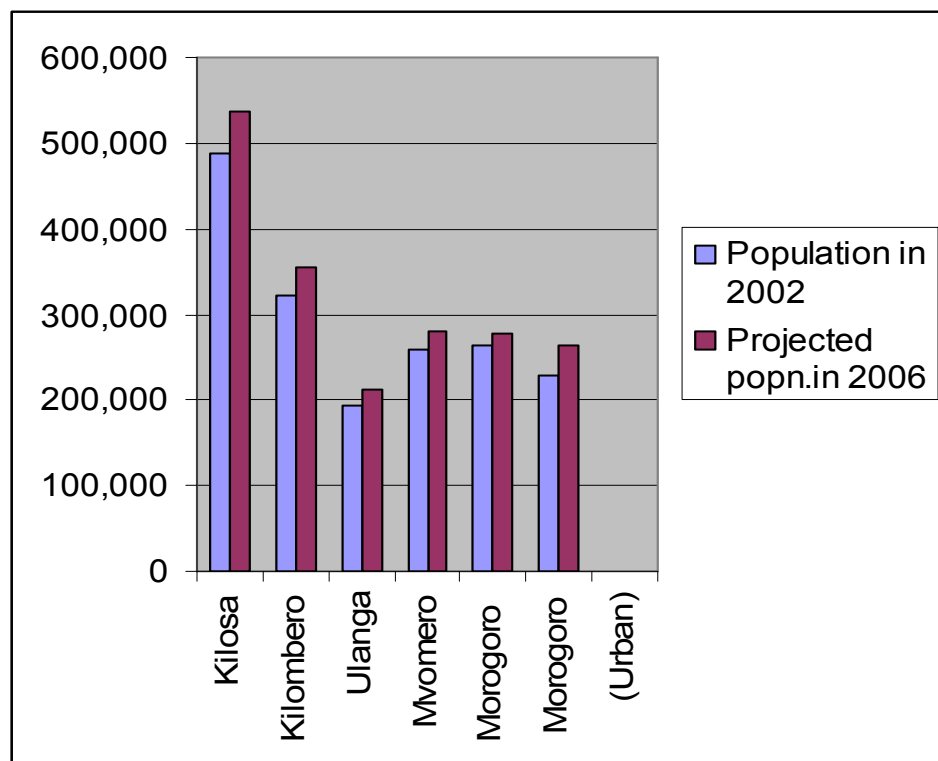


Table 1.6 shows the estimated population of Morogoro Region in 2006 and the average population per village. It shows that Kilosa District has the highest population density per village as compared to the other regions. This could be attributed to the fact the District also has relatively fewer villages as compared to the others.

Table 1:6: Distribution of average population per village by district, Morogoro Region 2006

District	Estimated population 2006	Number of villages	Average population per village
Kilosa	538,065	164	3,281
Kilombero	355,219	81	4,385
Ulanga	212,288	65	3,266
Mvomero	280,475	100	2,805

Morogoro	278,824	132	2,112
Morogoro (Urban)	264,216	275	961
Total	1,929,087	817	2,355

Source: 1. Morogoro Regional Commissioners Office, 2006.
2. United Republic of Tanzania Population and Housing Censuses: 2002.

1.4.4 Population Age Groups and Dependency Ratios

Table 1.7 shows the distribution of population by age groups in Morogoro Region in the year 2002. The age groups structure in all districts shows typical characteristics of the population structure in developing countries. In these countries, the dominant age group is the young, that is, between 0-4 and 5-14 years age groups. This is followed by the youth age group, which includes the population in the 15-44 and 45-64 years age group. The group with least population is the one in the age group of 65 years and above.

Table 1.7: Distribution Population by Age Groups and District, Morogoro Region 2002

District	Year 0-4	Year 5-14	Year 15-44	Year 45 - 64	Year 65+
Kilosa	79,122	133,407	209,182	46,884	19,596
Mvomero	40,256	70,836	110,646	26,480	11,129
Morogoro (Urban)	27,629	52,684	121,412	20,170	6,026
Ulanga	31,553	54,769	80,405	19,162	7,391
Morogoro	39,297	71,410	105,975	36,791	15,772
Kilombero	47,512	81,311	147,916	32,615	12,257
Total	265,369	464,417	775,536	175,869	72,171

Source: 1. Morogoro Regional Commissioners Office, 2006.
2. United Republic of Tanzania Population and Housing Censuses: 1978, 1988, 2002.

Population age structure has an implication of the magnitude of the burden on the working-age population in the society. Tables 1.8 and 1.9 show dependency ratios which indicate the number of people supported by 100 persons in the working age group of 15-64 years. The dependency ratio is the ratio of populations aged 0-14 years and 65 years and above to the population aged 15-64 years.

Table 1.8: Distribution of Dependency Ratios by District in the Region 2002

District	Economically Active Age Group			Dependants (0-14 & 65+)	Dependency Ratio
	15 - 44	45 - 64	Total		
Kilosa	209,182	46,884	256,066	232,125	90.6
Mvomero	110,646	26,480	137,126	122,221	89.1
Morogoro (Urban)	121,412	20,170	141,582	86,339	61.0

Ulanga	80,405	19,162	99,567	93,713	94.1
Morogoro	105,975	36,791	142,766	126,479	88.6
Kilombero	147,916	32,615	180,531	141,080	78.1
MOGORO REGION	775,536	182,102	951,405	801,957	84.3

Source: 1. Morogoro Regional Commissioners Office, 2006.

2. United Republic of Tanzania, 2002 Population and Housing Census.

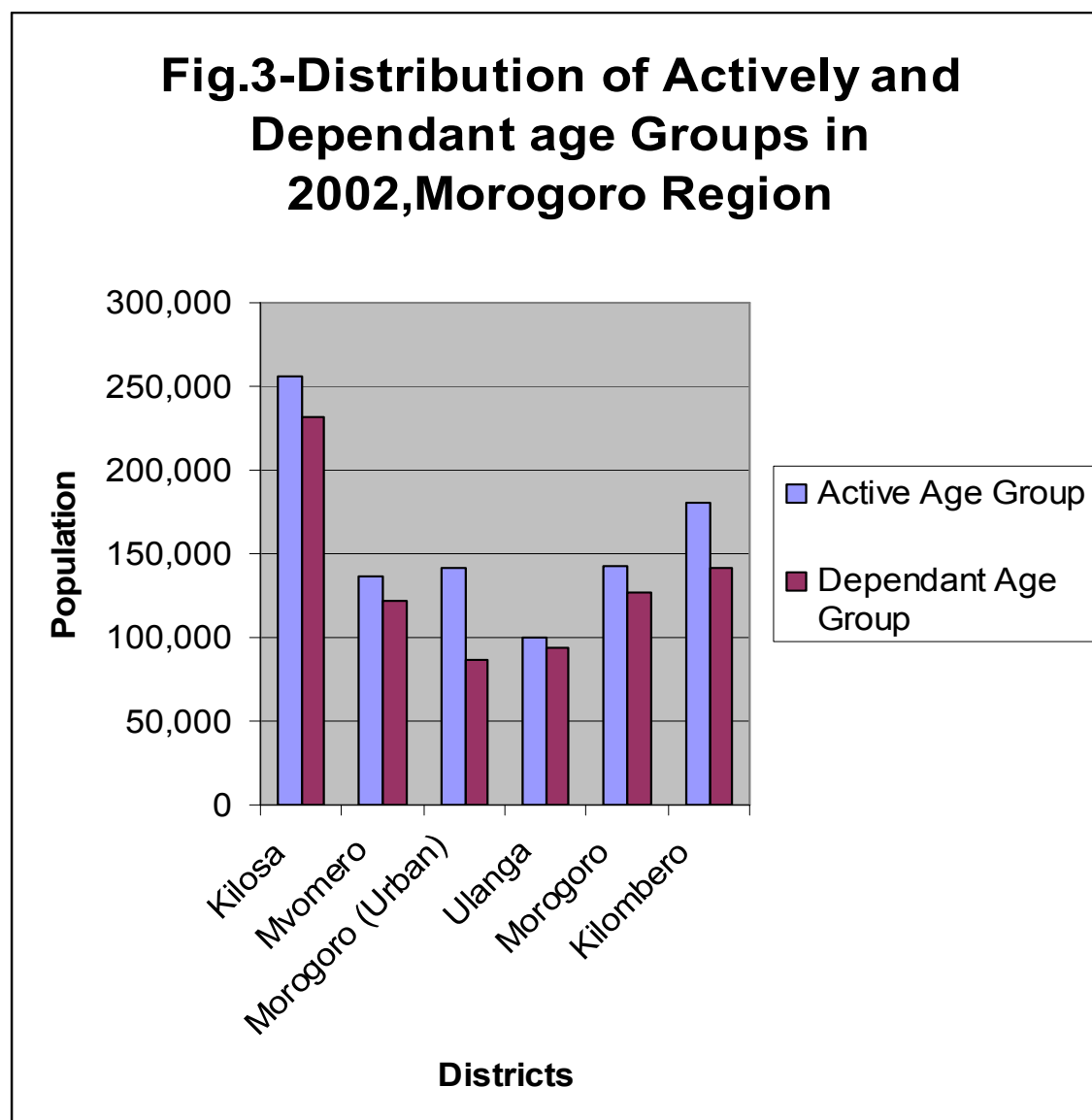


Table 1.9: Distribution of Dependency Ratios by District, Morogoro Region 2006

District	Economically Active Age Groups			Dependants (0-14 & 65+)	Dependency ratio
	15 - 44	45 - 64	Total		
Kilosa	229,998	51,550	281,548	255,224	90.6
Mvomero	128,943	30,859	159,802	142,432	89.1
Morogoro (Urban)	133,494	22,177	155,671	94,931	70.0

Ulanga	86,014	20,499	106,513	100,250	94.1
Morogoro	110,715	38,437	149,152	132,137	88.6
Kilombero	177,746	39,193	216,939	169,532	78.1
MOROGORO REGION	866,910	202,715	1,069,625	894,506	83.7

Source: 1. Morogoro Regional Commissioners Office, 2006.

2. United Republic of Tanzania, Population and Housing Censuses: 1978, 1988, 2002.

1.4.5 Population Sex Structure and Sex Ratios

Table 1.10 presents the Region's data on the sex structure and sex-ratios for the Population and Housing Censuses of 1978, 1988 and 2002. It shows that of the total Regional population of 1,753,362 in 2002, there were 877,238 males and 882,571 females or 99.4 males per 100 females. Kilombero District showed higher sex ratios in 1978 and 2002 although the ratio dropped in 1988. Kilosa and Morogoro Rural Districts showed higher sex ratio only in 1978.

Table 1:10: Distribution of Sex Ratio by District in the Region, 1978 to 2002

District	1978			1988			2002		
	Males	Females	Sex Ratio	Males	Females	Sex Ratio	Males	Females	Sex Ratio
Kilombero	67,735	65,278	104	91,868	95,725	96	162,942	159,837	102
Ulanga	54,286	59,224	92	67,068	71,574	94	95,915	98,294	98
Kilosa	139,918	134,626	104	172,528	173,998	99	244,201	245,312	99
Morogoro	170,046*	174,037*	98*	202,950*	225,752*	90*	129,285	134,635	96
Mvomero	-	-	-	-	-	-	131,256	129,269	102
Morogoro (Urban)	37,370	36,744	102	58,450	59,151	99	113,639	115,224	99
Total	469,355	469,909	99	592,864	626,200	95	877,238	882,571	99

*Contains Mvomero district

Source: 1. Morogoro Regional Commissioners Office, 2006.

2. United Republic of Tanzania Population and Housing Censuses: 1978, 1988, 2002.

1.4.6 Household Size and Characteristics of Rural and Urban Populations

The term household refers to a group of persons who live together and share living expenses. Usually these include husband, wife and children. With regards to population censuses the definition includes other relatives, boarders, visitors and servants as members of the household, if they are present in the household on the census night. In these censuses, household members staying in more than one house are emulated as one household if they eat together.

Table 1.11: Distribution of Household Size by Districts Morogoro Region, 2002 and 2006.

District	Total households in 2002	Average household size 2002	Estimated Population 2006	Number of households 2006 (Estimated)	Est.Average Household size in 2006
Kilosa	105,635	4.6	538,065	116,689	4.6
Kilombero	73,393	4.4	355,219	85,180	4.1
Ulanga	36,988	5.3	212,288	40,097	5.3
Morogoro	56,723	4.7	280,475	58,463	4.7
Mvomero	58,314	4.5	278,824	61,653	4.7
Morogoro (Urban)	54,207	4.2	264,216	65,211	4.1
Total	385,260	4.6	1,929,087	427,293	4.5

Source: 1. Morogoro Regional Commissioners Office, 2006.

2. United Republic of Tanzania Population and Housing Censuses: 1978, 1988, 2002.

Table 1.11 shows the total number of households and average household size in 2002 in the districts of Morogoro Region. It also shows the estimated number of households in 2006. The observed characteristics of household size the Region and its districts compares well with household size figures at the national level. According to the 2002 Population and Housing Censuses, the average size of households for Tanzania as a whole in 2002 was 4.7 persons compared to 5.2 persons in 1988.

The observed characteristics of household size in the Region compares well with national figures on the same. According to the 2002 Population and Housing Census, the average size of households for Tanzania as a whole in 2002 was 4.7 persons while in 1988 the figure was 5.2. However, the census showed that differences exist between rural and urban areas. The average household size for Tanzania in rural areas was 4.9 persons while that of the urban areas was 4.2 persons. The smaller average size of urban households compared to that of rural households was explained to be due to the continued rural-urban migration which compels movers to break away from large rural households. Upon reaching the destination, that is urban areas, the migrants usually establish their own households.

Morogoro Region like most of other regions in Tanzania has more people living in rural areas than in urban area. According to the 2002 population housing census out of 1,753,362 total population of Morogoro Region, 473,849 (27.0 percent) lived in urban areas and 1,279,513 (73.0 percent) lived in rural areas. Table 1.12 shows that all districts of the Region except Morogoro Urban in 2002 had more population living in rural areas. Morogoro Urban District is different from others in terms of the number of people living in urban areas due to its urban nature, and harbouring the headquarter of the Region.

Table 1.12: Distribution of Population by Rural/Urban Orientation by District in the Region, 2002

District	Rural Areas	Urban Areas	Total Population
Kilosa	374,690	113,501	488,191
Kilombero	230,774	90,837	321,611
Ulanga	168,267	25,013	193,280
Morogoro (Rural)	255,229	7,783	263,012
Mvomero	229,500	29,847	259,347
Morogoro (Urban)	21,053	206,868	227,921
Total	1,279,513	473,849	1,753,362

Source: 1. Morogoro Regional Commissioners Office, 2006.

2. United Republic of Tanzania Population and Housing Censuses: 1978, 1988, 2002.

The urban population is distributed in various urban centres in the urban wards. Table 1.13 shows urban wards, urban centres and population in these centres.

Table 1.13: Urban Wards, Centres and their Population by District in the Region, 2002.

District	Type of Wards Urban	Number	Name of Ward	Population
Ulanga	Urban	1	Mahenge	7,113
	Mixed	5	Lupiro	10,684
			Vigoi	12,812
			Mwaya	7,072
			Malinyi	25,336
			Mtimbira	10,355

Kilombero	Mixed	5	Kidatu	35,209
			Mang'ula	28,802
			Kibaoni	20,872
			Ifakara	45,518
			Mlimba	32,799
Kilosa	Urban	6	Kimamba A	5,651
			Kimamba B	4,886
			Mbumi	4,040
			Mkwatani	7,903
			Magomeni	8,381
			Kasiki	5,736
	Mixed	8	Magubike	14,221
			Dumila	20,289
			Magole	17,522
			Msowero	16,742
			Mikumi	15,705
			Kidodi	33,695
			Kisanga	10,284
			Gairo	35,565
Moro Rural	Mixed	2	Ngerengere	16,152
			Kisemu	13,589
Morogoro Urbanrban	Urban	13	Sabasaba	3,002
			Uwanja/Taifa	7,101
			Uwanja/ndege	11,077
			Mji mpya	10,191
			Kingo	4,225
			Mji mkuu	6,157
			Suhir area	3,102
			Mafiga	14,056
			Mwembesongo	28,128
			Kichangani	13,259
			Kilakala	13,709
			Boma	8,937
	Mixed	5	Mbuyuni	8,854
			Mazimbu	52,400
			Mlimani	6,520
			Kingolwira	10,653
			Bigwa	6,611
			Kihonda	12,381
Mvomero	Mixed	4	Mvomero	29,312
			Mhonda	16,646
			Mtibwa	27,079
			Longali	8,491

Source: 1. Morogoro Regional Commissioners Office, 2006.

2. United Republic of Tanzania Population and Housing Censuses: 1978, 1988, 2002.

1.4.7 Urbanisation

The term urbanization refers to the changes in the proportion of the population living in urban areas in reference to the total population of a particular locality or country over a specified period of time. In the 2002 Population and Housing Census the urban areas were defined as the localities that are identified as urban areas by the district authority. As such there was no clear and uniform definition applied by various districts in the country. As such the classification of human settlements in Tanzania which is stipulated in the official National Human Settlements Development Policy of Tanzania of 2000 was not strictly adhered to. Table 1.14 shows the number of population living in urban areas in the Districts of Morogoro Region. Table 1.14 shows that Morogoro Urban District is highly urbanised as the District forms the Morogoro Municipal which is one of the major urban localities in the country.

Table 1.14: Extent of Urban Population by District in the Region 2002

District	Total Population 2002	Urban Population (2002)	Rural Population 2002	% Urban Population
Kilosa	488,191	113,501	374,690	23.2
Kilombero	321,611	90,837	230,774	28.2
Ulanga	193,280	25,013	168,267	12.9
Morogoro	263,012	7,783	255,229	3.0
Mvomero	259,347	29,847	229,500	11.5
Morogoro (Urban)	227,921	206,868	21,053	90.8
Total	1,753,362	473,849	1,279,513	27.0

Source: 1. Morogoro Regional Commissioners Office, 2006.

2. United Republic of Tanzania Population and Housing Censuses: 1978, 1988, 2002.

Table 1.15 shows the urbanization levels of Regions in Tanzania for the period of 1978 – 2002. It shows that Dar es Salaam is the most urbanized region in the country with 93.9 percent of its population being urban. Morogoro Region (27.0 percent) and Arusha (31.3 percent) are the only two regions which have the proportion of their urban population above the national figure of urbanization which is 23 percent. The Region experienced 12.6 percent level of urbanization in the period between 1978 and 2002. The figure which was reached by three Regions, that is, Arusha

(23.4 percent) and Pwani (13.9 percent) and Kilimanjaro (13.4 percent). The rapid urbanization in Morogoro Region is largely attributed largely to rural-urban migration and changes in the classification of urban boundaries.

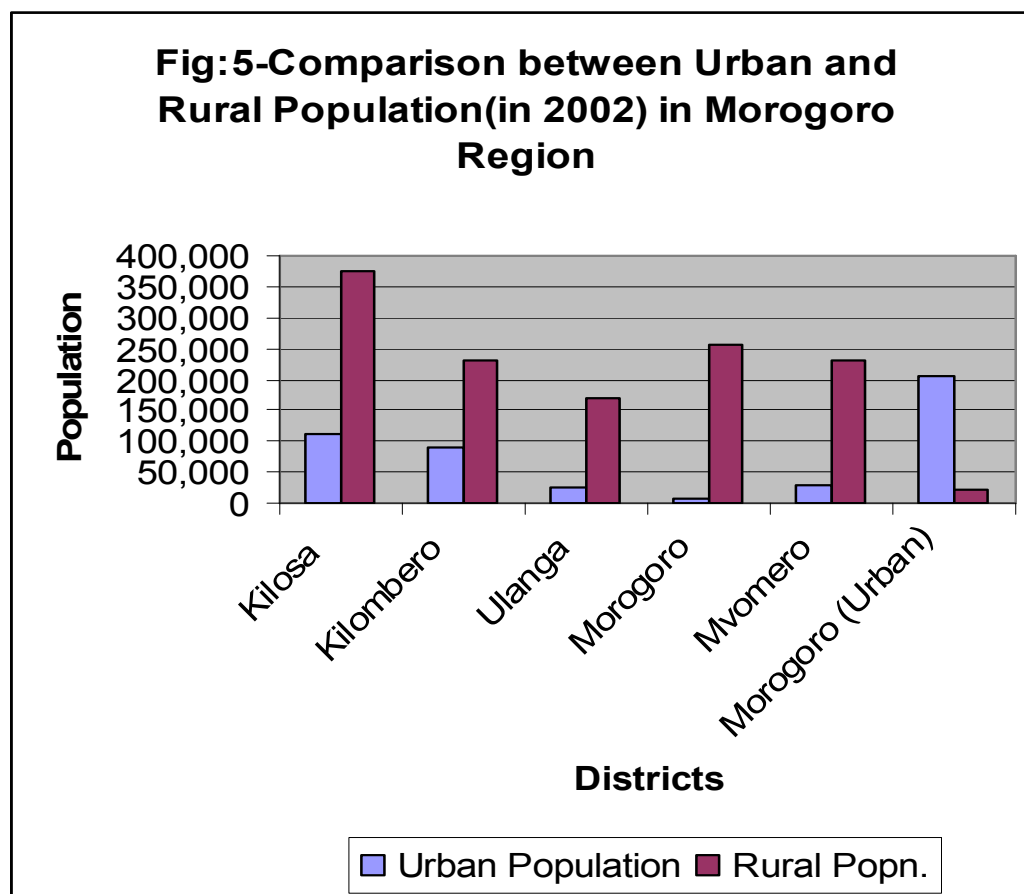


Table 1.15: Urbanisation Levels of Regions in Tanzania (1978-2002)

Regions	2002			1988	1978	Change in % urban (1978-2002)
	Total Population	Urban Population	Percent	Percent	Percent	
Tanzania	34,443,603	7,943,561	23.1	18.8	13.8	9.3
Tanzania Mainland	33,461,849	7,554,838	22.6	19.9	13.3	9.3
Dodoma	1,692,025	213,243	12.6	11.2	8.8	3.8
Arusha	1,288,088	403,597	31.3	12.4	8.0	23.4
Kilimanjaro	1,376,702	288,091	20.9	15.2	7.5	13.4
Tanga	1,636,280	301,196	18.4	17.6	14.1	4.3
Morogoro	1,753,362	473,849	27.0	21.1	14.4	12.6
Pwani	885,017	186,861	21.1	15.4	7.2	13.9
Dar es Salaam	2,487,288	2,336,055	93.9	88.6	91.3	2.7
Lindi	787,624	126,396	16.0	15.3	10.1	6.0
Mtwara	1,124,481	228,539	20.3	14	12.0	8.3
Ruvuma	1,113,715	169,670	15.2	11.9	7.7	7.5

Iringa	1,490,892	256,332	17.2	10	9.1	8.1
Mbeya	2,063,328	421,145	20.4	18.2	9.0	11.5
Singida	1,086,748	148,667	13.7	8.8	9.5	4.2
Tabora	1,710,465	219,884	12.9	14.3	13.1	-0.3
Rukwa	1,136,354	200,122	17.6	14.2	11.8	5.9
Kigoma	1,674,047	202,807	12.1	12.8	9.9	2.2
Shinyanga	2,796,630	256,052	9.2	6.8	4.2	4.9
Kagera	2,028,157	126,750	6.2	5.5	3.4	2.9
Mwanza	2,929,644	601,257	20.5	18.6	10.2	10.3
Mara	1,363,397	253,606	18.6	10.5	7.3	11.3
Manyara	1,037,605	140,719	13.6	N/A	N/A	N/A

Source: 1. Morogoro Regional Commissioners Office, 2006.

2. United Republic of Tanzania Population and Housing Censuses: 1978, 1988, 2002 General Report.

According to the 2002 population and Housing, Housing Census, the rapid urbanization in Tanzania has largely been a result of rural to urban migration rather than natural increase. The report stipulates that in recent years, there has been a notable wave of the young generation migrating into urban areas to do petty business. Furthermore, the report points out that, this feature is common in all urban areas regardless of location and cultural background. Also, that the consequences of such rapid urbanization include rapid expansion of squatters, poor social services, inadequate infrastructure inadequate housing and increasing urban un employment.

1.4.8 Migration

Migration is defined as a form of movement over a geographical space, often with a purpose. The movement entails a change of residence in permanent or semi-permanent terms. Knowledge on these movements, as is the case with population redistribution, is very important in understanding social and economic dynamics and development of a particular geographical or administrative area. It is also an essential element in planning for social and economic development.

The 2002 Population and Housing census revealed that Morogoro Region experiences in-migration as of the total number of residents in the Region, 16.2 percent were born in other regions in Tanzania but were living in Morogoro Region. The data showed that the Region also faces out-migration. The census showed that, there were lifetime out-migrants (12.7 percent) who were born in Morogoro Region but were living in other Regions of Tanzania. This revealed that, the Region experienced a net migration of lifetime migrants of about 4.2 percent.

The 2002 Population and Housing Census data showed that the migration flows were heavily between the Region and neighbouring regions such as Pwani, Dodoma, Tanga and Iringa. Also, Dar es Salaam, being a primate city in Tanzania attracted most of migrants from the Region in the form of urban-urban and rural-urban migration. Table 1.17 summarizes data on lifetime in-migration, out-migration and net migration in Tanzania Mainland in 2002.

Table 1.16 Lifetimes Inward- and Out-Migration, and Net Migration by Region in Tanzania 2002

Region	In-Migrants	Out-Migrants	Net Migration	Rates (%)		
				In	Out	Net
Tanzania Mainland	5,044,080	5,050,913	-6,833	15.1	15.3	-0.2
Morogoro	284,542	210,282	74,260	16.2	12.7	4.2
Dodoma	139,808	321,276	-181,468	8.3	17.3	-10.7
Arusha	264,978	183,250	81,728	20.6	15.5	6.3
Kilimanjaro	148,238	411,735	-263,497	10.8	25.4	-19.1
Tanga	132,087	294,130	-162,043	8.1	16.6	9.9
Pwani	189,204	245,454	-56,250	21.4	26.4	-6.4
Dar es Salaam	1,208,479	237,446	971,033	48.6	16.0	39.0
Lindi	100,020	179,293	-79,273	12.7	21.0	-10.1
Mtwara	53,102	186,911	-133,809	4.7	15.3	-11.9
Ruvuma	85,799	138,289	-52,490	7.7	12.0	-4.7
Iringa	79,869	299,189	-219,320	5.4	17.7	-14.7
Mbeya	239,644	171,692	67,952	11.6	8.7	3.3
Singida	104,623	255,894	-151,271	9.6	20.9	-13.9
Tabora	353,132	243,720	109,412	20.6	15.4	6.4
Rukwa	113,954	75,241	38,713	10.0	7.2	3.4
Kigoma	85,424	238,345	-152,921	5.1	13.3	-9.1
Shinyanga	455,087	390,367	64,720	16.3	14.4	2.3
Kagera	201,483	176,312	25,171	9.9	9.1	1.2
Mwanza	417,872	437,209	-19,337	14.3	14.9	-0.7
Mara	108,263	299,432	-191,169	7.9	19.5	-14.0
Manyara	278,472	55,446	223,026	26.8	6.9	21.5

Source: 1. Morogoro Regional Commissioners Office, 2006.

2. United Republic of Tanzania Population and Housing Censuses: 1978, 1988, 2002.

1.5 CLIMATE AND SOILS

Morogoro Region experiences climate of moderate temperature and rainfall. The average annual temperatures vary between 18⁰C to 30⁰C in lowlands. The Region experiences moderate temperature of around 25⁰C almost throughout the year. The warm season normally runs from July to September.

Generally, the region experiences two major rainfall seasons, that with long rains between November and May and short rains between January and February. The average annual rainfall varies between 600mm and 1800mm. However, the average annual rainfall varies from year to year and between ecological zones. Moreover, the mountainous topographical nature of the Region affects the patterns of the rainfall. The eastern parts of Uluguru mountains receive very high rainfall of up to 2,850mm annually while the leeward side of these mountains are generally dry receiving rains of up to less than 600mm per annum. The areas experiencing least rains include Gairo and Mamboya divisions in the North of Kilosa District and Ngerengere division in Morogoro Rural District. Also, the Region's climate especially that of Ulanga and Kilombero Districts in the southern parts is greatly influenced by Mahenge and Udzungwa mountain ranges which have high altitude and harbour dense forest reserves.

Soils in the Region vary according to topographical and ecological zones. In the mountainous and hilly areas the common type of soils found are mainly oxisols which are generally low in nitrogen and phosphorus. Valley and low lands are generally characterized by alluvial soils which are fertile in nature. Sandy and clay soils are common in woodlands and grasslands.

1.6 TOPOGRAPHY

The topography of Morogoro Region is characterized by two remarkable natural features. First are the mountainous and hilly areas which include the Ukaguru mountains, and the Uluguru and Nguru mountain ranges. Others include Mahenge and Udzungwa mountain ranges which extend to Njombe Highlands in Iringa Region. These mountains form the eastern and southern part of the "Eastern Arc Mountains" which extend from southern Kenya to southern Tanzania. These mountains are part of ancient crystalline block- faulted mountains on the eastern part of Africa stretching from the Taita hills in Kenya to Drankersberg in South Africa. The second feature that characterize the Region's topography are the lowlands especially the Kilombero valley and the Northern parts of the Region.

The Region's drainage is formed by many rivers that flow from highlands to lowlands in the valleys. The major rivers among others include Kilombero, Ruaha, Wami, Luwegu, Ruvu, Ngerengere, Mkata, Mkondoa and Mkindo.

1.7 AGRO-ECOLOGICAL ZONES

Morogoro Region can broadly be divided into three broad Agro-Ecological Zones which include the mountain zone, the intermediate zone, and the river valleys and basins

i) The Mountain Zone:

The mountainous agricultural zone receive the highest amount of rains with average annual precipitation ranging from 800mm-2500mm in the windward side of mountains and lowest rains in the leeward side at an annual average rains of less than 600mm. The zone has an altitude ranging from 600m to over 1250m above sea level. The zone experiences the coolest temperature in the Region with an annual average of 18⁰C. The zone is densely populated in the eastern side due to its windward nature which brings high rainfall. On the other hand the Western side is sparsely populated as it experiences dry climate due to its leeward location.

A variety of crops are grown in this zone. Food crops are mainly maize, Irish potatoes, banana, peas, yams, beans, groundnuts, wheat, cassava and horticultural crops. Major cash crops include coffee, oil seeds, vegetables and fruits such as pineapple and oranges. Due to its mountainous nature which calls for environmental cooperation activities, the zone is limited to small stock such as goats, sheep and pigs.

The zone experiences a number of problems including deforestation which has culminated in serious soil erosion. Deforestation is caused by residents who excessively cut forests while clearing for farming. Roads and transport infrastructure are poor especially in the mountainous areas of the Region.

ii) The Intermediate Zone

This zone takes the biggest part of the southern parts of Morogoro District and greater part of Kilosa District in Mikumi, Ulanga, Magubike, Magole and Chakwale wards. The altitude of this area ranges from 300m to 600m above sea level, with an average rainfall between 700mm and 1200mm per annum. The temperatures in this zone average 18⁰C annually.

Crops grown for food in this zone include maize, millet, cassava, sorghum, paddy and legumes. Major cash crops raised include cotton, sisal and oilseeds. The zone is densely populated due to its suitability to agriculture and livestock keeping.

iii) The River Valleys and Basins

The zone is constituted by the valleys of rivers Mgeta, Kafa, Ruvu, Wami, Msongozi, Mbulumi and Ngerengere in Morogoro and Mvomero District;

Wami-Mkata plains and Mkondoa valley in Kilosa District, and Luhombero Plains in Ulanga District. The topography of these areas is predominantly plain with rainfall ranging between 900mm and 1400mm annually. Temperatures in this zone are high with an average of 30⁰c due to its lowland nature. The zone is densely populated in the upper parts of the valleys and sparse in the inner parts of the valleys.

Major food crops grown in this zone include maize, paddy, sorghum, beans, cassava, fruits and vegetables. Cash crops are cotton, sisal, oil seeds, sugar cane and coconuts.

Livestock raised in this zone include cattle, sheep and goats in the areas with no tsetse fly problem. Roads and transport communication infrastructure in this area face problems due to frequent flooding during the rainy season.

SECTION II

REGIONAL ECONOMY

2.1 INTRODUCTION

Morogoro Region is one of the Regions in Tanzania with great potential of economic development and prosperity. The Region has a very good climate and land favourable for agriculture and other economic investments. The Region contains Morogoro Urbanrban centre which is its headquarters. The urban centre is strategically located at the junction point of major roads from Dodoma and Iringa to Dar es Salaam and Arusha. This section discusses the characteristics of income, employment and major economic activities in the region.

2.2 REGIONAL GROSS DOMESTIC PRODUCT (GDP) AT CURRENT PRICES

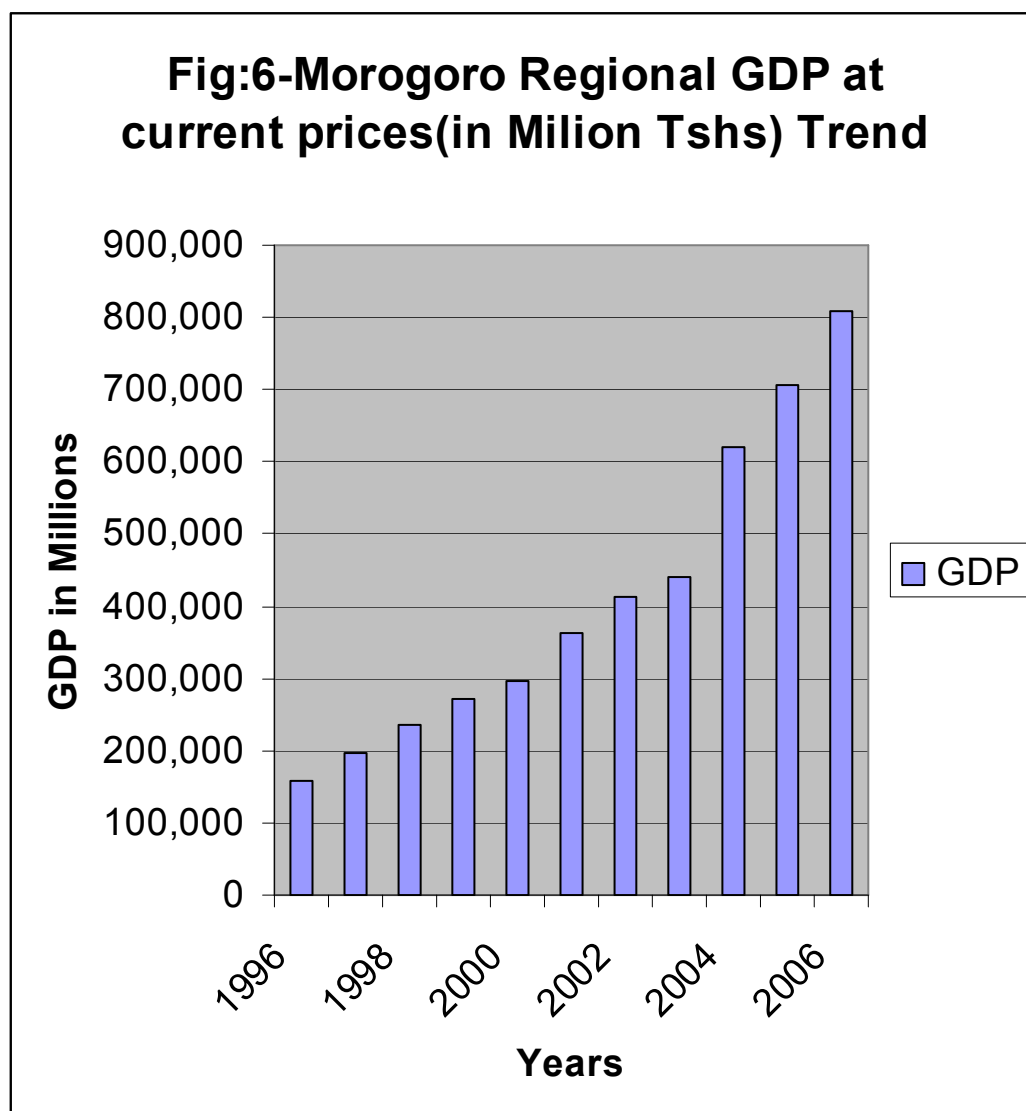
Morogoro Region Gross Domestic Product has been growing overtime. According to the National Accounts of Tanzania Mainland, the Region in 1996 recorded GDP at current prices of Tshs. 159,195 million which increased to Tshs. 439,142 million in the year 2003 and it was projected to Tshs, 619,792 million in the year 2004. Table 2.1 shows the Regions GDP and its percentage change between 1996 and 2004.

Table 2:1 Morogoro Region GDP at Current Prices in Million Tshs. 1996-2006

Year	GDP at Current Prices in Tshs Million	% Changes	Average % Contribution to National GDP
		GDP	
1996	159,195	-	4.61
1997	196,076	23.2	4.58
1998	234,402	19.6	4.57
1999	272,769	16.4	4.56

2000	296,370	8.7	4.42
2001	363,271	22.6	4.76
2002	413,889	13.9	4.76
2003	439,142	6.1	4.47
2004	619,792	41.1	5.49
2005	706,296	13.9	5.41
2006	807,998	14.4	5.39

Source: United Republic of Tanzania, National Accounts of Tanzania Mainland (NBS), 2006.



Over the period between 1996 and 2003 Morogoro Region managed to contribute significantly to the national economy (See Table 2.1). The contribution was 4.61 percent in 1996 which increased to 4.76 percent in 2002. Despite falling up to 4.47 percent in 2003, the contribution was estimated

to be 5.49 percent to the national economy over the period of 1998-2004 in the year 2004 following the expected revival of sisal estates and industries in the Region. Table 2.2 shows the National GDP and the contribution of different Regions in Tanzania over the period of 1998 and 2006.

Table 2.2 Tanzania Mainland Regional GDP at Current Prices (Million Tshs.)

REGION	YEAR								
	1998	1999	2000	2001	2002	2003	2004	2005	2006
Dodoma	178,947	208,237	226,254	264,197	303,905	324,953	351,998	392,726	457,376
Arusha	383,893	446,730	510,055	582,554	393,050	388,567	492,386	592,244	679,066
Kilimanjaaro	217,244	252,803	274,676	310,701	352,292	427,374	535,000	639,617	721,397
Tanga	209,450	243,734	281,873	336,986	382,095	418,456	603,977	754,432	834,274
Morogoro	234,402	272,769	296,370	363,271	413,889	439,142	622,226	706,296	807,998
Pwani	111,314	129,534	140,741	155,014	174,066	226,488	235,467	253,922	291,807
Dar es salaam	916,280	1,066,259	1,158,513	1,282,449	1,473,226	1,589,174	1,715,051	1,961,505	2,323,743
Lindi	113,905	132,550	144,018	158,814	178,333	229,264	238,616	257,565	295,857
Mtwara	192,821	237,846	255,028	296,548	333,645	291,834	303,804	326,984	376,119
Ruvuma	192,412	223,907	242,947	242,630	273,779	376,291	435,908	533,352	583,718
Iringa	284,543	331,118	359,767	424,602	486,091	542,737	607,402	709,802	797,187
Mbeya	292,993	340,951	370,450	438,082	501,523	581,086	766,340	929,164	1,051,413
Singida	153,376	178,481	193,923	202,192	225,126	227,114	236,459	239,561	285,538
Tabora	195,094	227,028	246,671	262,849	296,594	362,872	447,294	560,574	612,978
Rukwa	191,944	223,362	242,688	249,370	280,838	348,625	391,931	447,846	510,746
Kigoma	125,560	146,112	158,754	188,712	212,940	357,088	378,528	420,755	480,876
Shinyanga	369,846	430,383	520,504	589,032	677,560	667,311	695,248	744,692	884,347
Kagera	192,509	224,019	261,739	289,808	327,649	467,959	488,706	526,618	623,567
Mwanza	395,229	459,921	573,094	730,697	847,241	834,329	965,448	1,102,181	1,294,503
Mara	173,550	201,957	248,316	256,109	288,989	442,805	472,772	525,022	606,851
Manyara					277,057	273,897	347,078	438,461	475,886
TANZANIA MAINLAND	5,125,311	5,977,699	6,706,381	7,624,616	8,699,887	9,816,319	11,331,638	13,063,317	14,995,247

Source: United Republic of Tanzania, National Accounts of Tanzania Mainland (NBS), 2006.

2.3 REGIONAL PER CAPITA GDP AT CURRENT PRICES

Per capita GDP, which is the average individual income in Morogoro Region, has been improving over a period of time. Table 2.3a shows the Regional per capital GDP at current prices over the period of 1996-2004. During 1998, the average per capita income in the Region was Tshs. 145,819. Per capita GDP for Morogoro Region rose to Tshs. 173,501 in 2000 before shooting to Tshs. 245,299 in 2003 and estimated to be Tshs. 337,032 in the year 2004. Table 2.3b shows the Regional per capita GDP at current prices in Tanzania mainland over the period of 2000-2004.

Table 2.3a: Regional Per Capita GDP at Current Prices in Tshs from 1996 to 2006

Year	Per Capita GDP at Current Prices in Tshs.	
	TShs.	Change %
1996	104,777	-
1997	125,739	20.0
1998	145,819	15.9
1999	164,610	12.9
2000	173,501	5.4
2001	206,304	18.9
2002	235,190	14.0
2003	245,299	4.3
2004	338,356	37.4
2005	375,467	10.9
2006	418,850	11.5

Source: United Republic of Tanzania, National Accounts of Tanzania Mainland (NBS), 2006.

**Fig:7-Morogoro Regional Per Capita
Income at current prices**

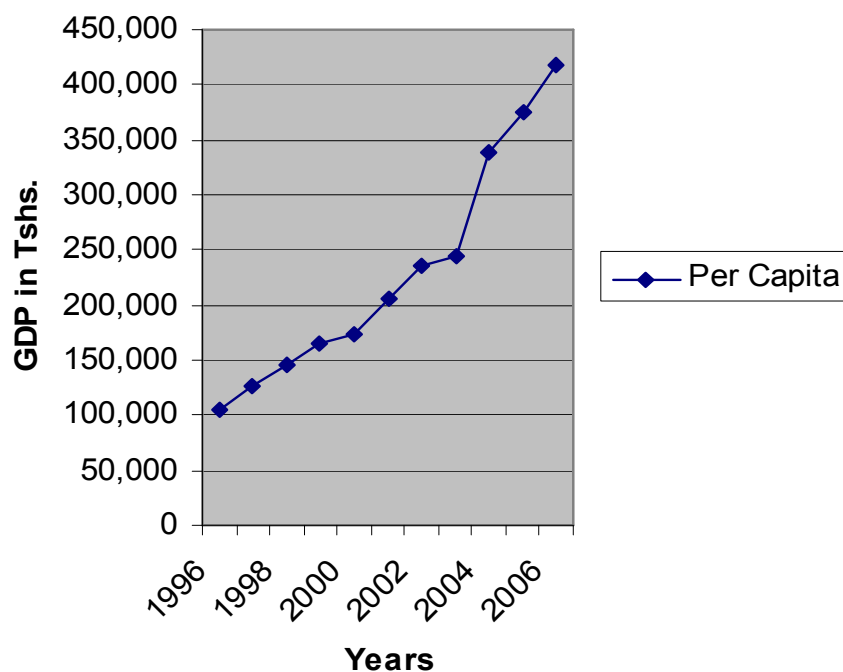


Table 2.3b: Regional Per Capita GDP at Current Prices Tanzania in Mainland 2000 to 2006 in TShs.

Region/year	2000	2001	2002	2003	2004	2005	2006
Dodoma	137,278	155,503	178,873	189,840	200,791	219,882	241,132
Arusha	251,522	278,678	303,990	293,764	357,349	414,764	460,231
Kilimanjaro	139,179	152,722	255,071	306,563	377,349	445,463	479,967
Tanga	165,576	192,028	232,699	252,128	357,109	439,576	475,835
Morogoro	173,501	206,304	235,190	245,299	338,356	375,467	418,850
Pwani	169,808	181,432	195,765	251,059	254,603	268,944	301,255
Dar es Salaam	518,602	556,905	589,776	616,780	637,471	700,727	829,412
Lindi	173,018	185,085	225,365	287,936	295,260	315,328	347,346
Mtwara	235,057	265,147	295,647	256,080	261,864	278,022	308,231
Ruvuma	214,306	207,622	245,066	331,186	373,489	447,188	472,584
Iirnga	217,041	248,491	325,072	359,496	395,998	456,937	492,792
Mbeya	176,550	202,535	242,276	276,280	355,413	422,116	448,098
Singida	181,861	183,942	206,394	206,209	209,632	208,247	233,510
Tabora	178,352	184,363	172,649	206,064	244,843	296,992	305,860
Rukwa	222,518	221,804	245,973	298,275	323,191	357,791	392,195
Kigoma	134,657	155,279	126,817	205,221	207,169	220,223	244,007
Shinyanga	210,306	230,873	241,504	232,364	234,031	243,350	269,800

Kagera	140,150	150,536	161,095	225,056	227,664	238,633	282,129
Mwanza	224,468	277,635	287,967	277,556	310,793	344,786	408,502
Mara	183,194	183,290	211,157	318,093	330,949	359,292	386,021
Manyara	-	-	266,283	258,537	315,126	384,151	397,216
TANZANIA MAINLAND	210,232	231,866	259,044	286,859	321,300	360,892	399,594

Source: United Republic of Tanzania, National Accounts of Tanzania Mainland (NBS), 2006.

Ranking the Region at the national level in terms of income per capita, showed that it is one of the relatively higher income regions in the country. For the year 2006 Morogoro Region ranked 8th in comparison with other Regions. Regions with higher average per capital income than Morogoro Region include Dar es Salaam which ranked first followed by Iringa in the second position. Others included Kilimanjaro, Tanga, Ruvuma, Arusha, and Mbeya (See Table 2.3b above).

2.4 MAIN OCCUPATIONS AND INDUSTRY

2.4.1 Main Occupation

Main occupation provides an account with regard to what activity the labour force in the given locality is engaged in. Table 2.4 shows the labour force of Morogoro Region engaged into various economic activities as revealed by the 2002 population and housing census. Crop farming had been the major economic activity employing 77 percent of the total labour force. Other occupations that employ a significant number of the labour force include street vending which has become the largest employer of the young dwellers in urban areas, crafts, small business, professional jobs and other elementary occupations. Fishing and livestock are also significant in some of the districts in the Region.

Table 2.4: Main Occupation of the Labour Force by District in the Region, 2002

Occupation	Mvomero	Kilosa	Ulanga	Kilombero	Morogoro	Morogoro (Urban)	Regional Total
Legislators, Administrators, & Managers.	273	506	142	493	268	973	2,656
Professionals	349	595	133	860	361	3,231	5,529
Tech. and Associate Professionals	1,608	4,303	946	3,063	3,787	5,990	19,696
Clerks	446	514	181	790	117	2,156	4,205
Small Business Managers	2,201	862	341	3,249	599	1,550	8,804
Service & shop sales workers	2155	3,126	1,023	2,892	1,147	8,227	18,573
Street vendors	1,901	10,454	901	4,249	2,745	9,978	30,227

Craftsmen	2,754	4,692	1,067	3,064	2,559	7,576	21,710
Farmers	106,808	168,436	77,705	114,651	93,746	24,821	586,168
Livestock keepers	1,296	1,989	934	1,344	1,426	889	7,882
Fishermen	69	166	145	566	109	579	1,639
Plant operators and Assemblers	604	1,051	165	842	143	3,284	6,090
Elementary Occupations	9,992	15,878	1,495	4,336	6,710	8,256	46,669
Others	417	421	177	585	784	719	3,105
Total	130,873	212,992	85,373	140,977	114,498	78,240	762,952

Source: 1. Morogoro Regional Commissioners Office, 2006.

2. United Republic of Tanzania Population and Housing Censuses: 1978, 1988, 2002.

2.4.2 Main Industry

According to the 2002 National Population and Housing census, main activities in the Region are clustered into several groups including agriculture; forestry, finishing and other related activities, mining and quarrying; manufacturing; electricity, gas and water; construction; raw food sales (uncooked); trade and commerce; etc. Table 2.5 shows the main industry in the Region by District in 2002. Agriculture has been the main industry in the Region as it employs about 80 percent of the labour force. Other industries that employ a significant number of the labour force include trade and commerce; forestry, fishing and other related activities; and public administration and education.

Table 2.5: Main Industry of the Labour Force by District in the Region, 2002

Industry	Mvomero	Kilosa	Ulanga	Kilombero	Morogoro (Rural)	Morogoro (Urban)	Regional Total
Agriculture	117,876	181,220	76,935	113,977	96,402	24,642	611,049
Forestry, Fishing & Others	3,335	9,843	3,644	9,141	3,996	5,100	35,062
Mining and Quarrying	75	166	90	287	444	321	1,386
Manufacturing	1,192	3,525	513	3,124	1,173	5,210	14,741
Electricity, Gas and Water	103	127	87	426	39	1,534	2,318
Construction	490	903	300	1,041	618	2,728	6,079
Raw food sales (uncooked)	987	1,419	176	1,864	382	2,748	7,582
Trade and Commerce	2,620	7,844	1,572	4,422	4,922	15,867	37,250
Transport and Communication	554	520	107	623	94	2,869	4,768
Finance and Insurance	70	66	44	97	50	499	823
Public Administration & Education	2,478	4,712	1,395	3,960	2,210	12,106	26,863
Other	1,083	2,647	500	2,015	4,170	4,615	15,031
Total	130,873	212,992	85,373	140,978	114,498	78,239	762,952

Source: 1. Morogoro Regional Commissioners Office, 2006.

2. United Republic of Tanzania Population and Housing Censuses: 1978, 1988, 2002.

2.5 PRODUCTIVE SECTORS

2.5.1 Agriculture

2.5.1.1 Introduction

Tanzania mainland is divided in four feature zones. Morogoro region is found in the feature zone II of the Agro Ecological Zones. The essence of having such zone is due to the fact that the physical features of Tanzania mainland consist of diverse ecological and climatic zones that accommodate different agriculture patterns. The feature zone two, of which Morogoro is within, is that of coastal areas, having rainfall of between 500-1000 mm, allowing crop production, fishing and intensive use of poultry. The Agro ecological zones for Tanzania are indicated in Table 2.6.

Table 2.6: Main Features and Agro Ecological Zones for Tanzania Mainland

Feature Zone	General Characteristics Feature	Rainfall	Specific Dominant Food Crop	Characteristics Main Activity	Features/Representative Areas
I	Semi and Central Area of Tanzania	Less than 500 mm	Sorghum, maize	Livestock rearing	Lowland area in Dodoma, Singida, Arusha & Iringa regions
II	Mostly Coastal Areas	500 – 1000 mm	Paddy, composite maize, cassava and groundnuts	Agriculture, fishing, intensive use of poultry	Mtwara, Lindi, Coast, Dar es salaam, Morogoro, Tanga & Ruvuma region
III	Mostly Western part of Tanzania	1000 – 1500 mm	Cassava, composite maize, pea & sweet potatoes	Intensive agriculture, keeping cattle, goats, sheep and poultry	Mwanza, Mara, Shinyanga, Tabora, Kigoma & Rukwa regions
IV	Mostly Highland area	Above 1500 mm	Plantains, hybrid maize, beans & Irish potatoes	Agriculture, dairy, keeping swine, goats, sheep & cattle	Mostly all the highlands around Kilimanjaro, Arusha, Tanga & Mbeya regions

Source, Ministry of Agriculture and Food Security

Still smallholder production is key to agriculture production for Tanzania, a marginally food secure country. Agriculture sector produces about 46 % of Gross Domestic Product in Tanzania. Of the total 4, 901,837 rural agriculture households in Tanzania, the number of crop growing households in the country was 4,858,810 representing 99 % of the agriculture households. The number of households growing crops has increased by 32 % over the period of the past decade, being an increment of 3.5 % households per annum. Specifically, in Morogoro Region the few facts with

regards to smallholder crop production are displayed in Table 2.7, as obtained during the 2002/2003 National Sample Census of Agriculture.

Table 2.7. Crop Production in Morogoro Region, 2002/2003

Item	Details
Total households for the region	385,260
Number of Agriculture households	260,746
Number of crop growing household	259,246
Average total usable land available to household	2.1 ha
Average usable land utilized by household	1.9 ha
Utilized land area / percent of available land	446,676 ha / 82 %
Total planted area in the region	398,661 ha
Land area / percent of annual crops	383,753 ha/ 68 %
Land area / percent of permanent crop	57,164 ha / 10 %
Land area of planted trees	2,891 ha
Planted area / percent planted area cultivated by oxen	35,941 ha/ 9.0 %
Planted area / percent planted area cultivated by hand hoe	309,887 ha / 77.7 %
Planted area / percent planted area without fertilizer	361,265 ha / 90.6 %
Planted area / percent planted area with Farm Yard Manure	15,048 ha / 3.8 %
Planted area / percent planted area with inorganic fertilizer	15,108 ha / 3.8 %
Planted area / percent planted area with insecticide application	18,720 ha / 4.7 %
Planted area / percent planted area with fungicide application	6,954 ha / 1.7 %
Planted area / percent planted area with herbicides application	37,843 ha / 9.1 %
Number of households / percent storing crops for 3 – 6 months	117,601 / 53.92 %
Percent of households using unprotected means of storage	67.5 %
Quantity of annual crops stored in tones	40,407 t
Number of households / percent selling crops	182,902 / 2.1 %
Number of households / percent selling processed crops	182,902 / 2.1 %
Number of households / percent receiving crop extension service from government	67,368 / 25.84 %
Number of households / percent receiving crop extension service outside government	4,005 / 6.1 %

Source; National Sample Census of Agriculture 2002/2003

2.5.1.2 Food Crops

Maize, paddy, sorghum cassava, sweet potatoes and legumes/pulses are among the major food crops grown in the Region. Table 2.8, shows area used for land production, and productivity in the region during the 2002/2003 census, while Table 2.9 shows land area (ha) cultivated in respective districts starting from the year 1989/99 to 2005/2006.

Table 2.8: Land Area used for Food Crop Production and Productivity, Morogoro Region, 2002/2003

Crop	Total planted area (ha)	Percent of total area	Area / growing households	Productivity (tones/hectares)
Total cereal	337,461	4.8	-	-
Maize	195,090	3	0.8	0.6
Paddy	126,527	1.8	0.91	0.9
Sorghum	14,830	0.91	0.91	0.4
Cassava	17,207	0.2	0.1	

Beans	20,407	0.3	0.5	0.42
Groundnuts	2,527	0	0.5	0.5
Tomato	6,159.3	0.1	0.3	3.5
Cabbage	1,888.9	0.03	0.3	3.4
Onion	965.5	0	0.3	4.8
Banana	9,395.6	0.1	0.6	5.3

Source; National Sample Census of Agriculture 2002/2003.

Table 2.9. Estimated Area (Ha) Under selected Major Food Crops in the Region by District

District/Crop	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Maize								
Kilosa	-	-	39417	58014	42530	59492	67983	50183
Morogoro	50535	43096	55816	52971	38839	34446	39429	39429
Kilombero	13585	10548	14214	14501	17138	20261	18879	16307
Ulanga	25250	34945	12533	15302	26326	20508	23117	20744
Mvomero	-	-	-	-	-	56258	21812	44865
Morogoro Urbanban	-	-	-	2227	2345	490	3722	5824
Total	89370	88589	121980	143015	127178	191455	174942	177352
Paddy								
Kilosa	-	-	88	18684	13065	18915	18399	17262
Kilombero	21308	24717	23792	29698	35246	38488	38269	38969
Ulanga	28614	44648	11831	3061	22159	27792	34055	26404
Mvomero	23603	29873	32826	33367	36604	28264	11500	9432
Morogoro Urbanban	-	-	-	3002	1255	686	3328	2696
Morogoro	-	-	-	-	26604	16764	16764	17349
Total	73525	99238	68537	87812	134933	130909	122315	112112
Sorghum								
Kilosa	-	-	4434	2255	3652	1176	916	1935
Ulanga	662	692	288	220	112	300	452	50
Mvomero	-	-	-	-	-	20908	8817	6375
Morogoro Urbanban	-	-	-	182	263	20	34	216
Morogoro	6343	8607	10859	10471	7058	12099	12091	4509
Total	7005	9299	15581	13128	11085	34503	22310	13085
Cassava								
Kilosa	-	-	1952	7802	3376	2134	10028	6009
Kilombero	2370	3190	3234	2747	2820	4386	4321	2023
Ulanga	7754	9303	2235	2205	3757	8649	6938	7106
Mvomero	-	-	-	29938	23119	28746	15914	1370
Morogoro Urbanban	-	-	-	89	354	105	400	268
Morogoro	15307	26127	21328	17952	11133	12832	12832	11496
Total	25431	38620	26797	52931	41183	54718	40405	22263
Sweet Potatoes								
Kilosa	-	-	542	1815	4100	153	36321	6018
Kilombero	852	906	780	702	510	859	1381	611
Ulanga	-	1093	1518	1590	9254	3015	2008	4666
Morogoro	-	-	-	9.6	-	-	40	12

Urbanrban								
Total	852	1999	2298	2301.6	9764	3874	3429	5289
Legumes								
Kilosa	-	-	6810	8513	3481	7242	9981	8002
Kilombero	-	-	321	167	119	488	320	266
Ulanga	3458	2457	1087	1787	847	3445	2358	4360
Mvomero	-	-	-	-	-	16387	7625	8257
Morogoro Urbanrban	-	-	-	328	6.2	38	93	38
Morogoro	4433	7630	7430	5820	4084	8768	8768	1207
Total	7891	10087	8517	7935	4937.2	28638	18844	13862
Banana								
Kilombero	812	732	812	1358	802	2313	1247	2318
Morogoro							980	640
Total	812	732	812	1358	802	2313	2227	2958

Source: Morogoro Regional Commisioners' Office, 2006

Table 2.10 shows that maize was mostly cultivated for a total of 44.33 % of all the area cultivated during all eight crop growing seasons. Following maize in consecutive order was paddy (32.99 %), cassava (12.03 %), sorghum (5.01 %), pulses/legumes (4.01 %), sweet potatoes (1.19 %), and banana (0.48 %). In a way, the analysis can predict the importance of the food crop cultivated, suggesting maize as the most important food crop and sorghum as the least important food crop the region. Comparing the eight crop growing seasons, the year 2003/2004 came out as the year witnessing most of the land utilized for food crop production cultivated (17.76 %), while the year 1989/99 being the year with less land cultivated (8.15 %).

Table 2.10 Proportion of Land used in Cultivating Food Crop, Morogoro Region, 1998/99 – 2005/06

District/ Crop	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	Total	% crop
Maize	89370	88589	121980	143015	127178	191455	174942	177352	1,113,881	44.30
Paddy	73525	99238	68537	87812	134933	130909	122315	112112	829,381	32.99
Sorghum	7005	9299	15581	13128	11085	34503	22310	13085	125,996	5.01
Cassava	25431	38620	26797	52931	41183	54718	40405	22263	302,348	12.03
Sweet potatoes	852	1999	2298	2301.6	9764	3874	3429	5289	29,806.6	1.19
Legumes	7891	10087	8517	7935	4937.2	28638	18844	13862	100,711.2	4.01
Banana	812	732	812	1358	802	2313	2227	2958	12,014	0.48
Total	204886	248564	244522	308480.6	329882	446410	384472	346921	2,514,137.8	100.00
% year	8.15	9.89	9.73	12.27	13.12	17.76	15.29	13.80		

Source: Morogoro Regional Commisioners' Office, 2006

Table 2.11 shows the estimated production of major food crops (tones) in the respective districts of Morogoro Region. The table shows the analysis of estimated food crops harvested during the period between the crop growing seasons 1989/99 – 2005/06.

Table 2.11: Estimated Production of Major Food Crops (Tons) in the Region by District 1998/99 – 2005/06

District/Crop	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Maize								
Kilosa	-	-	-	98623	72301	101136	115571	85311
Kilombero	33962	13185	35535	31614	38561	45600	42478	36691
Ulanga	21260	253512	16320	16526	24255	20508	26917	206625
Mvomero	-	-	-	-	-	-	-	44865
Morogoro Urban	-	-	-	4009	562	1225	1861	10483
Morogoro	40427	25876	10046	95348	19419	51669	55669	70,973
Total	95649	292573	61901	147497	82797	199827	166187	370,277
Paddy								
Kilosa	-	-	-	35499	24824	35939	34958	32798
Kilombero	40485	34687	45205	56427	66967	73127	72711	24041
Ulanga	26360	40463	13310	29614	15243.6	45778	38551	34186.5
Mvomero	-	-	-	-	-	-	-	4344
Morogoro Urban	-	-	-	8406	602	1715	3994	5380
Morogoro	36762	23898	65653	88417	19322	28498	28499	51,469
Total	103607	99048	124168	182864	102134.6	165578	154593	119,420.5
Sorghum								
Kilosa	-	-	-	2255	3652	1176	916	1933
Ulanga	70	56	74.9	59	30	172	271	17.2
Mvomero	-	-	-	-	-	-	-	4344
Morogoro Urban	-	-	-	328	110	50	27	315
Morogoro	5052	3442	21718	12565	6484	12091	12091	28,562
Total	5122	3498	21792.9	12952	6624	28773	23227	33,238.2
Cassava								
Kilosa	-	-	-	54614	23632	14938	70196	42063
Kilombero	23700	31900	32340	27470	28200	43860	43210	39320
Ulanga	8790	9969	6705	6615	4187.2	86490	9699	13195
Mvomero	-	-	-	-	-	-	-	41280
Morogoro Urban	-	-	-	222.5	2832	262	2490	804
Morogoro	45561	40078	63986	53888	11134	29496	38496	43,829
Total	78051	81947	103031	232623.5	105245.2	261284	211833	180,491
Sweet Potatoes								
Kilosa	-	-	-	14075	20500	10765	18160	30090
Kilombero	-	9760	7800	7020	5100	8590	13810	6110
Ulanga	1450	1013	4554	648	2776.2	8753	3795	880
Morogoro Urban	-	-	-	-	-	-	280	36
Total	1450	10773	12354	21743	28376.2	28108	36045	37116
Legumes / pulses								
Kilosa	-	-	-	7969	3276	6896	9010	9282
Kilombero	-	-	143	100	95	298	256	181
Ulanga	127.6	88	619.6	37	490.6	2756	3553	483.94
Mvomero	-	-	-	-	-	-	-	11358

Morogoro Urban	-	-	-	32.8	0	31	49.4	19
Morogoro	-	0	0	-	0	-	0	410
Total	2863.6	3140	4477.6	11921.8	5495.6	20632	13364.4	21,733.94
Banana								
Kilombero	10150	8784	10150	13582	10025	28912	5587	28925
Morogoro	2322	2736	3052	3715	3783	1634	5699	97,500
Total	12472	11520	13202	17297	13808	30546	11286	126,425

Source: Morogoro Regional Commissioners' Office, 2006

Table 2.12 shows that the crop growing seasons 2003/04 and 1998/99 witnessed the peak and lowest production having 17.55 % and 7.15 % of all crops harvested during the whole period. During all eight years assessed, maize made 33.37 % of all harvest, contributing most to food harvested in the region. Maize was followed by cassava (29.85 %), paddy (24.60 %), sweet potatoes (4.20 %), banana (3.34 %), sorghum (2.66 %) and legumes/pulses (1.99 %).

Table 2.12. Proportion of Food Crops Harvested in Tones, Morogoro region, 1998/99 – 2005/06

Crop	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	Total	%
Maize	95649	292,573	61,901	147,497	82,797	199,827	166,187	350,333	1,396,764	33.37
Paddy	103,607	99,048	12,4168	182,864	102,134.6	165,578	154,593	97,444.5	102,9437.1	24.60
Sorghum	5,122	3,498	21,792.9	12,952	6,624	28,773	2,3227	9,185.2	11,1174.1	2.66
Cassava	78051	81947	103031	232623.5	105245.2	261284	211833	175150	1249164.7	29.85
Sweet Potatoes	1450	10773	12354	21743	28376.2	28108	36045	37116	175965.2	4.20
Pulses/ Beans	2863.6	3140	4477.6	11921.8	5495.6	20632	13364.4	21323.94	83218.94	1.99
Banana	12472	11520	13202	17297	13808	30546	11286	29649	139780	3.34
Total	299214.6	502499	340926.5	626898.3	344480.6	734748	616535.4	720201.64	4185504	
%	7.15	12.01	8.15	14.98	8.23	17.55	14.73	17.21		100.0

Source: Morogoro Regional Commissioners' Office, 2006

2.5.1.3 Food Adequacy

The majority of the population in Morogoro Region depends largely on grains for their staple food. Harvested food crops are also sold as cash crops in different proportions. Harvested food crops are estimated to be available as food in the following proportion: Maize (60 %), Paddy (30 %), Cassava (50 %), Sorghum (80 %), Banana (10 %), Sweet potatoes (60 %), Beans (40 %).

Calculations for food adequacy are averaged at 0.12 tons of carbohydrates per unit of population per year. For pulses / beans, they are based at an average of 0.06 tons per person per year, irrespective of age. As shown in Table 2.13, Morogoro Region is self sufficient in starch foods.

While the season 2004/2005 experienced the most surplus in starch food, the season 1998/99 experienced the least surplus of the same.

Pulses/ beans which are normally used as relish are the major sources of proteins. However, this type of food is usually complemented by fish (especially in Kilombero and Ulanga), and in some of the seasonal streams in Mvomero, and the use of other vegetables. Cattle, small ruminants and chicken are also used to fulfill the same. As shown in Table 2.13, there has been a growing deficit for pulses / beans despite the increment in production starting from the year 1989/99 to 2004/05. This therefore reflects the fact that beans/pulses production is failing to catch up with population growth.

Table 2.13: Food Adequacy in Morogoro Region

Food Category	Crop Growing Season			
	1995/96	1998/99	2000/01	2004/05
1. Food Crop Production				
Maize	223,171	163,489	228,726	166,187
Paddy	181,628	108,897	164,058	154,593
Sorghum	35,500	10,297	15,826	23,227
Cassava	147,031	90,983	142,905	211,833
Bananas	86,682	187,335	23,410	11,286
Sweet potatoes	10,760	3,199	7,230	36,045
Total Production	684,772	564,200	582,155	603,171
Crop Ava. For starch food	305,431	205,143	253,169	293,343.8
Estimated Population	1,464,663	1,585,254	1,671,589	1,899,595
2. Starch Food Requirement	175,760	190,230	200,591	227,951.4
3. Starch Food Surplus (+) Deficit (-)	+129,671	+14,913	+52,578	+65,392.4
Pulses/ Beans Production	12,985	8,354	9,452	13,364.4
Beans Available for Food	5,194	3,342	3,781	5,345.76
Protein Requirement	87,879	95,115	100,296	113,975.7
Protein Food Surplus (+)/Deficit (-)	-82,685	-91,773	-96,515	-108,630

Source: Morogoro Regional Commissioners' Office, 2006

2.5.1.4 Cash Crops

Sisal, sugarcane, cotton, coffee, sunflower, simsim, palm oil, cashewnuts, mangoes, coconuts and tobacco are among the cash crops found in the region. Sisal was once the most important cash crop in the region. Since early 1990, many sisal estates reduced production due to low prices in the world

market as compared to production costs. Low prices for cotton, high prices for insecticides, poor roads conditions and poor condition of some ginneries has resulted into decline of cotton production. Coffee is cultivated in the mountain ranges of Uluguru, Ukaguru, Nguru and Mahenge. So far, Oil palms, Sugarcane and Mangos are crops with high productivity per unit area in Morogoro region. Table 2.14, shows area used for land production, and productivity in the region during the 2002/2003 agriculture census, while Table 2.15 shows land area (ha) cultivated in respective districts starting from the year 1999 / 2000 to 2005/2006.

Table 2.14: Land Area Used for Cash Crop Production and Productivity for Smallholder, Morogoro Region, 2002/2003

Crop	Total planted area (ha)	Percent of total area	Area / growing households	Productivity (tones/hacters)
Cotton	620			-
Tobacco	78		0.2	0.5
Cashewnuts	569.88	0.1	1.4	-
Coffee	373.16	0.2	0.8	0.723
Mango	5,301.95	5.3	0.9	19.7
Coconuts	7,550.21	11.1	0.9	6.5
Oranges	4,548.8	10.9	1.1	10.1
Sugar cane	8,329.93	38.6	1.1	28.8
Oil palm	758.24	4.4	3.5	27.3

Source; National Sample Census of Agriculture 2002/2003

Table 2.15 Estimated Areas (Ha) Under Major Cash Crops in the Region by District 1999/2000 – 2005/2006

District	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Cotton							
Kilosa	-	-	-	3320	6113	208	585
Ulanga	113.5	133.3	135.3	144.7	212	623.1	301.3
Mvomero	-	-	-	-	-	-	158
Morogoro Urbanrban	-	-	6	6.5	20.6	256	5
Morogoro	2138	162	64	296	276.4	-	1,269
Total	2251.5	295.3	205.3	3767.2	6765.5	1102.1	2,318.3
Cashew nuts							
Mvomero	-	-					190
Morogoro Urbanrban	-	-	10	-	-	-	-
Morogoro							1,000
Total			203	200	250	197	1,190
Sesame							
Kilosa	-	-	-	4345	4663	5174	4976
Kilombero	-	1382	163	196	-	629	1226
Ulanga	4508	513	432	462	770.4	2200	2724
Mvomero	-	-	-				1293
Morogoro Urbanrban	-	-	11	-	6	12	35
Morogoro	16506	8490	5318	4348	561	6602	5052

Total	21014	10385	5924	11478	7012.4	15053	15306
Coconut							
Kilosa	-	-	-	83	83	83	83
Mvomero	-	-					1973
Morogoro Urbanrban	-	-	31	-	-	59	59
Total			1544	1750	1903	1992	2115
Fruit							
Kilosa	-	-	-	1520	1520	1520	1520
Morogoro Urbanrban	-	-	92	67	-	-	34
Morogoro				60	70	69	-
Total			92	1647	1590	1589	1554
Sugar cane							
Kilombero	-	1403	1353	1648	2859	3228	2206
Mvomero							8792
Total	9857	11472	6364	6659	11628	11126	10998
Sunflower							
Kilombero	-	-	-	-	-	117	50
Mvomero							346
Total	3280	1050	1055	436	664	362	396

Source: Morogoro Regional Commissioners' Office, 2006

As it is seen in Table 2.16, 1999/2000 has been the season with the peak use of land in cash crop production while 2001//2002 was the year with the minimum land cultivated for cash crop production. In overall, sesame occupied the largest cultivated area occupying 44.52 % of all land used for cash crop production. Sugarcane was the second largely cultivated cash crop in the region occupying 35.18 % of all land cultivated. Cashew nut had been the cash crop occupying the least area (0.54 %) among land cultivated cash crop during the period 1999/2000 to 2005/2006.

Table 2.16. Proportion of land used in cultivating cash crop, Morogoro region, 1998/99 – 2005/06

Crop	Production year / season							Total for crop	% for crop
	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06		
Cotton	2251.5	295.3	205.3	3767.2	6765.5	1102.1	1049.3	15436.2	7.97
Cashew nuts	-	-	203	200	250	197	190	1040	0.54
Sesame	21014	10385	5924	11478	7012.4	15053	15306	86172.4	44.52
Coconut	-	-	1544	1750	1903	1992	2115	9304	4.81
Fruits	-	-	92	1587	1520	1520	1554	6273	3.24
Sugarcane	9857	11472	6364	6659	11628	11126	10998	68104	35.18
Sunflower	3280	1050	1055	436	664	362	396	7243	3.74
Total year	36402.5	23202.3	15387.3	25877.2	29742.9	31352.1	31608.3	193572.6	
% year	18.81	11.99	7.95	13.37	15.37	16.20	16.33		

Source: Morogoro Regional Commissioners' Office, 2006

Five cash crops are grown by large scale producers. These crops are sugarcane, rubber, paddy, teak and sisal. As shown in Table 2.17, large scale farming practiced in Kilosa district occupies a total of 119,189 hectares, 55,887.9 hectares in Kilombero district, 34,246.13 hectares in Morogoro Rural district and 11052.5 hectares in Mvomero district. Different from other district which has been growing cash crop perse, Kilombero District has large farms growing dual purpose crops such as paddy and maize.

Table 2.17 Large Scale Cash Crop Production and Producers per District 2006

District	Crop	Name of farm	Area (ha)
Kilosa	Sisal	120 Kivungu	5624
		121 Madoto	7712
		Msowero	7650
		Rudewa	7145
		Kimamba	42170
		Kilosa	19612
		Myombo	11742
		Isanga	1305
		Sub total	102,960
	Sugar cane	30 Magole	520
		105 Luembe	11,307
		177 Kidodi	515
		Kidodi	515
		Mhenda	500
		Mvumi	297
		Mvumi	344
		Myombo	268
		Luhembe	553
		Isanga	200
		Mnaga	264
		Sub total	15,283
		TOTAL	118198
Morogoro rural	Sisal	Tungi	10785
		Pangawe / Kingolwira	12590
		Lukose farm	1776
		Likose farm	245.63
		Kidugalo Estate	8849.5
		TOTAL	34,246.13
Mvomero	Sugar cane	Mtibwa Sugar	9352.5
		Dizungu Farm	1700

		TOTAL	11052.5
Kilombero	Sugar cane	- Illovo	7919
		- Ulanga Co	
		- Mbega farm	212
		- New sanja estate	140
		- Kiberege prison	2800
		Sub total	11071
	Rubber	Karungwa rubber	754.4
	Teak	- KILOMBERO TEAK	2112
	Paddy	Idete prison	10000
		Chita JKT	15000
		Kambenga farm	4000
		Mangula farm	100
		Ally Mwakilashe	40
		Mohamed Islam	96
		Amin Ramadhan	38.5
		Edward Mwisumo	40
		Stanford Magige	40
		Dustan Chiduo	236
		Kanal Mwigonya	40
		Sub total	29630.5
	Maize	D.Balali	400
		Sister dioceses	80
		Mchanga	
		Ifakara sekondary	8100
		Sub total	8580
	Paddy / maize	Mbingu sisters	3600
		Udzungwa Plantations	140
		Sub total	3740
		TOTAL	55887.9

Source: Morogoro Regional Commissioners' Office, 2006

Knowledge of the quantities of cash crops sold and the price obtained is necessary in understanding the potentiality of crops in relation to income generating value. The efficiency of the crop marketing system can also be measured through variations of the price within the region, where higher price variation indicated imperfections of the market within the region. As it is shown in Table 2.18, there has been the variation for sesame. The minimum price for sesame was reported in Kilosa, being 300 Tshs, while the maximum price for the same was reported in Morogoro District (800 Tshs).

Table 2.18: Amount and Value of Cash Crops Purchases in the Region by District 2005/06

District/Crop	Amount Purchased (Kgs)	Price per Kgs (Tshs)	Value in Tshs
Cotton			
Kilosa	731,000	350	255,850,000
Ulanga	451,973	300	139,100,797
Mvomero	-	300-350	-
Cashew nuts			
Mvomero	-	150 – 300	-
Sesame			
Kilosa	3,483,000	300	1,044,900,000
Kilombero	-	-	3,922,560
Ulanga	4,903.2	800	-
Mvomero	-	600 – 700	-
Morogoro Urban	-	-	24,248,000
Morogoro	30,310,000	800	-
Coconuts			
Kilosa	4,500,000	400	1,800,000,000
Mvomero	-	150 – 300	-
Fruits			
Kilosa	16,500,000	200	3,300,000,000
Mvomero	-	150 – 200	-

Source: Morogoro Regional Commissioners' Office, 2006

2.5.1.5 Irrigation

National wise, despite abundance of water from lakes and rivers, the area under irrigation is still small. Irrigation, both traditional and modern, has been practiced in all Tanzania Regions. There are regions where traditional irrigation is a must and there are those regions where modern irrigation has been tried and showed encouraging results. Table 2.19 shows total area and per Region under irrigation through traditional and modern methods in Tanzania mainland.

Table 2.19: Area under irrigation by Region in 1991/92 and 2002/03 Tanzania Mainland

Region	Tradition irrigation (ha)		Modern irrigation (ha)		Total area under irrigation (ha)		Changes total area under irrigation (ha)
	1991/92	2002/03	1991/92	2002/03	1991/92	2002/03	
Dodoma	484	3150	1079	300	1,563	3,450	1,887
Arusha	4520	89,833	0	3361	4520	93194	88,674
Kilimanjaro	4260	92949	3160	16250	7420	109199	101,779
Tanga	6535	17549	430	360	6965	17909	10,944
Morogoro	1110	122684	4783	48698	5893	171382	165,489
Coast	687	11500	24	33660	711	45160	44,449
D'salaam	71	142	49	5185	120	5327	5,207
Lindi	425	6258	0	1900	425	8158	7,733

Mtwara	2877	7100	40	-	2917	7100	4,183
Ruvuma	-	7850	0	-	0	7850	7,850
Iringa	688	15981	80	1534	768	17515	16,747
Mbeya	2130	51343	4322	7094	6452	58437	51,985
Singida	-	11840	20	-	20	11840	11,820
Tabora	1312	9980	472	1500	1784	11480	9,696
Rukwa	253	43272	96	2400	349	45672	45,323
Kigoma	618	20930	40	-	658	20930	20,272
Shinyanga	8036	700	107	400	8143	1100	-7,043
Kagera	0	17166	122	-	122	17166	17,044
Mwanza	70	358	163	4975	233	5333	5,100
Mara	1620	-	203	11965	1823	11965	10,142
TOTAL	35699	530585	15190	139582	50886	670167	619,281

Source: Ministry of Agriculture and Food Security, Irrigation Department

As it is seen in Table 2.19, there have been an increase in traditional irrigation in Morogoro Region as well as decrease in modern irrigation during the period between 1996/97 and 2002/2003. On the overall, the land irrigated in Morogoro Region had increased by 165,489 hectares, being an increase of 2808.23 % during the same period. Table 2.20 shows the potential irrigation areas in Morogoro Region. Relating the fact that there is a potential for irrigation of 434,390 hectares and there was only 171,382 hectares under irrigation by the year 2002/2003, depict that 60.1 % of the potential area for irrigation is yet to be utilized.

Table 2.20: Potential Areas Irrigation Areas in Morogoro Region, 2006

	RIVER BASIN	POTENTIAL AREA (HA) FOR IRRIGATION
I	Kilombero river basin	
	1. Luri, Mchilipa and Lwasesa plains	17,960
	2. Lufupa and Sofi plains	36,740
	3. Ruhuji, Mnyera and Mpanga plain	134,700
	4. Kihansi, Mugeta, Ruipa and Lumemo plain	146,940
	Sub total	336,340
II	Luwengu river basin	
	1. Luhombero and Luwengu plain	16,500
	2. Ruaha and Chilombola plain	10,450
	Sub total	26,950
III	Wami river basin	
	1. Wami – Dakawa plain	10,500
	2. Mkindo and Mgongola plain	15,600
	Sub total	26,100
IV	Great Ruaha river basin	
	1. Kibegere plain	15,000
	2. Kidatu and Msolwa plain	30,000

	Sub total	45,000
	GRAND TOTAL	434,390

Source: Morogoro Region Commissioners Office, 2006

Kilombero with irrigation schemes covering 17,606 hectares is the district with largest irrigated area in the Region. Morogoro District having three irrigation schemes has a total of 2,140 hectares which are developed and used. The crops which are mainly serviced by these irrigation schemes are sugar cane, paddy, maize, vegetables and pulses. Table 2.21 shows the irrigation schemes already developed and in use, at least partly in Morogoro Region.

Table 2.21: Irrigation Schemes already Developed and in use at least Partly in Morogoro Region.

District	Scheme	Area (ha)
KILOSA	Ilonga	640
	Lumuma	980
	Mwega	780
	Kilangali	1810
	Msolwa	1110
	Malolo	1960
	Mgogozi	740
	Chabi	1008
	Chanzuru	340
	Mvumi	720
	Kisanga	624
	Madizini	388
	Msowero	210
	Idole	256
	Mkughulu	216
	Kitati	171.2
	Manowore	64
	Kidete	432
	Mwasa	830
	Ibindu	30
	Vidunda	76
	Kihondo	160
	Kidayi	12
	Mlegeni (Manyenyere)	1200
	Mzaganza	98
	Manisagara	94
	Chanjale	148

	Lukando	121.2
	Iyogwe	152
	Rubebo	94
	Msowero	850
	Udunghu	500
	Chabima	50
	Sub total	16,864.40
	Kiroka	80
	Sub total	80
Mvomero	Mhonda	16
	Mgeta	2000
	Mlali	60
	Mkindo	60
	Mgongola	520
	Patel	140
	Mbigiri	936
	Dakawa	4024
	Ndole	80
	Mtibwa Sugar Estate	4700
	Subtotal	15,136
Kilombero	Kisawasawa	2
	TAC	38
	Kihoko	230
	Mkula	51
	Msolwa	60
	Sonjo	480
	Mngeta	5000
	Ihanga	2900
	Lumemo	60
	Ruipa	1800
	Idete	60
	Kilombero Sugar Estate	6700
	Msolwa Estate	150
	Njagi	75
	Sub total	17,606.00
	Usangule	20
	Minepa	55
	Itete	280
	Sofi	80

Ulanga	Kichangani/Igota	1000
	Mabanda	1000
	Mzelezi	5
	Mwaya	1000
	Chirimbola	1500
	Ruaha	1000
	Iputi	400
	Lupiro	60
	Sub total	6400
	GRAND TOTAL	55,546.40

Source: The Regional Commissioner's Office, Morogoro, 2006

2.5.2. Livestock Production

2.5.2.1 Introduction

During the 2002/2003 agriculture season there were 1,745,776 livestock keeping households in Tanzania representing 37 % of the total 4,901,837 smallholder households. As of October 2003, there were 33,728,717 head of the major livestock types in the country. Cattle are the predominant species kept by smallholders with a population of 16,999,793 followed by goats (11,808,181), sheep (3,945,566) and pigs (974,507). The number of chicken was 34,371,037 being kept by 62 % of all smallholder farmers in the country. During the period 1995 to 2003, per annum growth rate of cattle goats, sheep, pigs and chicken was 0.92, 1.2, 3.1, 11 and 4.3 respectively. Some facts with regards to livestock production in Morogoro Region are displayed in Table 2.22, as obtained during the 2002/2003 National Sample Census of Agriculture.

Table 2.22: Livestock Production in Morogoro Region as of 1st October 2003

Item	Details
Cattle population	461,063
Cattle density per km ²	7
Improved dairy cattle population	5,052
Improved beef population	26
Goat population	243,175
Goat density	3
Dairy goat population	5,147
Goat for meat population	1,141
Sheep population	95,680
Sheep density	1.4
Pig population	44,986

Pig density	0.6
Chicken population	2,100,861
Chicken density	30
Indigenous chicken population	2,018,227
Layers chicken population	82,168
Milk production per day during wet season	111,017
Egg production per day	16,706,787
Number of households receiving livestock extension services	22,380
Number of household involved in fishing	809
Number of cattle, sheep & goats infected by helminthiosis	120,931
Number of cattle, sheep and goats infected by pleuro pneumonia	37,404
Number of cattle, sheep and goats infected by foot and mouth disease	120,931
Number of cattle, sheep and goats infected with foot rot disease	23,701
Number of cattle infected by trypanasomiasis	1,880
Number of cattle infected with tick borne disease	27,845
Percentage of households 15 km or more from vet clinic	28
Percentage of households 15 km or more from water point	1
Percentage of households 15 km or more from nearest primary market	24
Percentage of households 15 km or more from nearest secondary market	25
Percentage of households 15 km or more from hide and skin shed	18

Source: National Sample Census of Agriculture 2002/2003

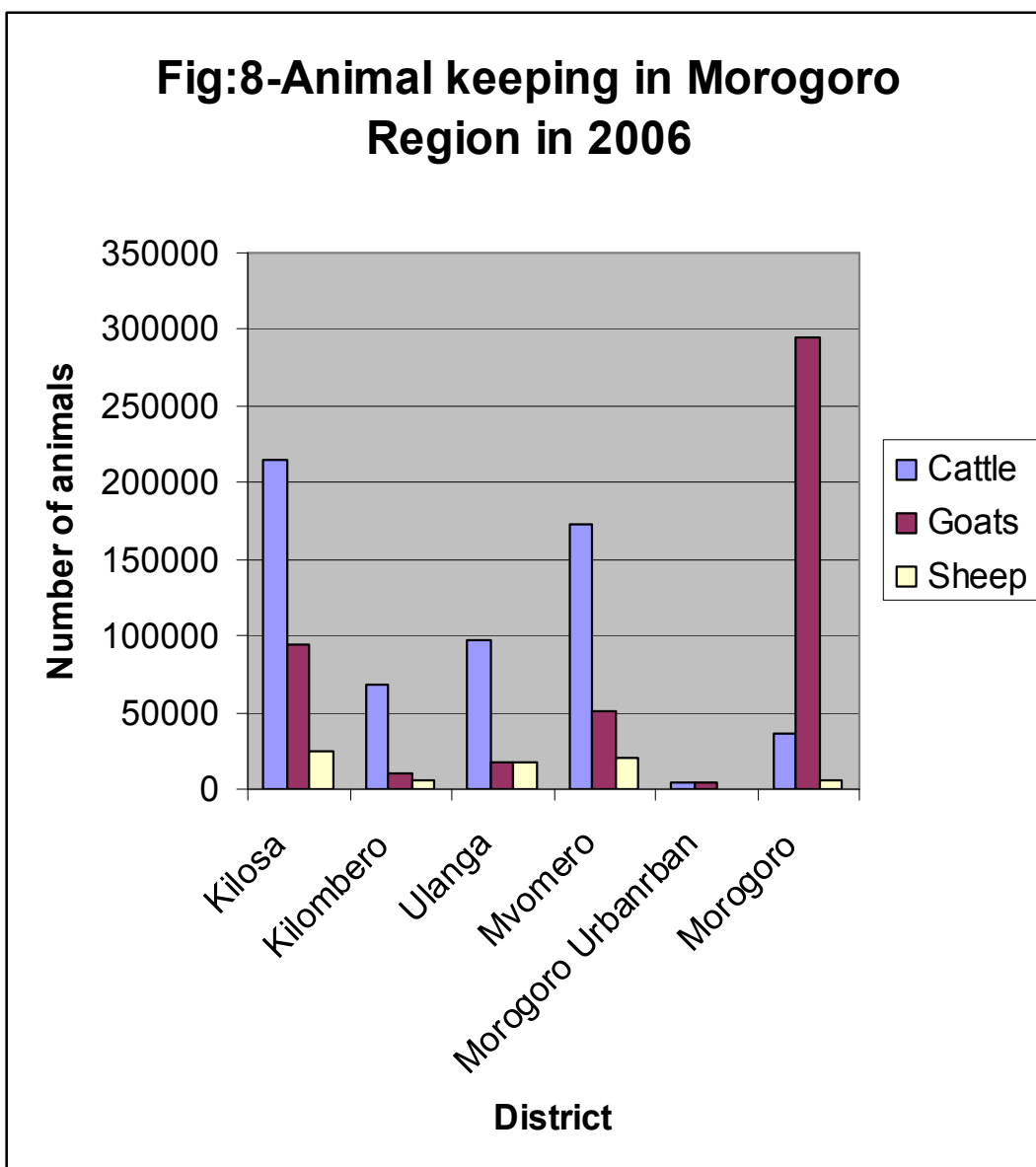
2.5.2.2 Livestock Population

Data collected in 2006 across Morogoro Region shows that chicken occupy the largest proportion (55.5 %) of all livestock kept, followed by cattle (22.6 %), goats (18.6 %), sheep (2.9 %), pigs (0.9 %) and donkeys (0.1 %) (See Table 2.23).

Table 2.23: Estimated Livestock Keeping in the Region by District, 2006

District Name	Cattle	Goats	Sheep	Donkeys	Pigs	Chicken	Total/district	% district
Kilosa	215040	93737	25098	2930	5097	500612	842,514	32.1
Kilombero	68106	10090	5806	157	6902	365670	455,446	17.4
Ulanga	97263	16714	18084	262	495	346219	479,037	18.3
Mvomero	172,827	51,161	20,121	385	6243	192325	383,584	16.9
Morogoro Urbanrban	4170	4300	180	3	3130	25640	37,423	1.4
Morogoro	35,935	295,404	5467	55	2543	25804	364,908	13.9
MOROGORO REGION	593,341	471,406	74,756	3,792	24,410	1,456,270	2,623,975	
% livestock type	22.6	18.0	2.9	0.1	0.9	55.5		100.0

Source: Morogoro Regional Commissioners' Office, 2006



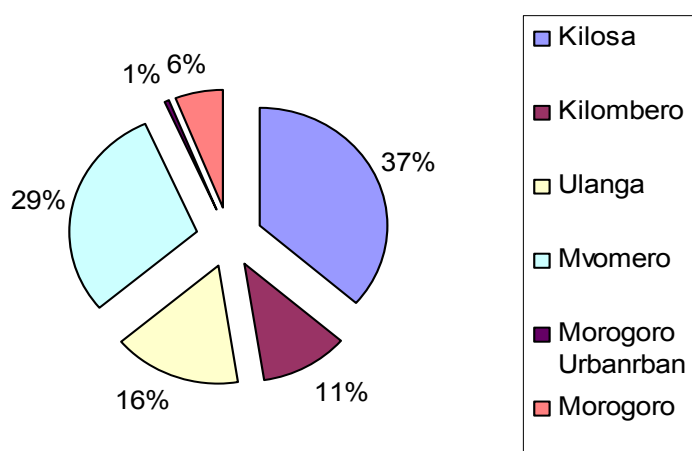
Kilosa District has been found to contains the largest share of livestock kept (32.1 %), followed by Ulanga (18.3 %), Kilombero (17.4 %), Mvomero (16.9 %), Morogoro (13.9 %) and Morogoro Urbanban (1.4 %). Proportional wise, indigenous cattle have been mostly kept followed by dairy cattle and lastly improved beef cattle. Improved beef cattle have only been kept in Mvomero district. Table 2.24 shows the estimated number of cattle by type and districts in 2006.

Table 2.24: Estimated Number of Cattle by type and by District, Morogoro Region 2006

District	Indigenous	Improved/Exotic		Total
		Dairy	Improved indigenous	
Kilosa	212,708	2332	-	215,040
Kilombero	66821	1285	-	66,106
Ulanga	96818	445	-	97,263
Mvomero	146,414	16,940	9,473	172,827
Morogoro Urbanrban	940	3230	-	4,170
Morogoro	30718	2527	2,690	35,935
TOTAL	554,419	26,759	12,163	593,341

Source: Morogoro Regional Commissioners' Office, 2006

Fig.9-Estimated number of cattle in Morogoro Region in 2006



2.5.2.3 Dairy Production

Smallholders are still the leading keepers for dairy cattle in Morogoro. During the 2006 survey, Kilosa was reported to be a District with most organizations involved in dairy production. For the respective year, Mvomero District was having the largest proportion of dairy cross cows in the region making 49.72 % of all dairies in Morogoro. Least number of dairy cross cattle was kept in Ulanga making 2.38 % of all dairy cows raised in the Region. Table 2.25 displays the dairy cross cattle raised and their ownership across the districts of Morogoro region.

Table 2.25: Distribution of Dairy cross Cattle in the Region by district, 2006

District Name	Number of Cattle	No. of Individual Owner	No. of groups	% dairy / district
Kilosa	2332	1693	653	12.45
Kilombero	1285	1200	2	6.86
Ulanga	445	210	7	2.38
Mvomero	16,940	367	5	49.72
Morogoro Urban	3230	350	11	17.24
Morogoro	2527	-	5	11.35
TOTAL	18733	3820	683	

Source: Morogoro Regional Commissioners' Office, 2006

Assuming that organizations involved represented a single household / individual keeping dairy cattle, there is an average of 2 dairy cattle kept by each dairy cattle keeper.

Although dairy cattle are fewer than to indigenous cattle in Morogoro, there has been a remarkable increase in dairy cross cattle in the region for the period starting from 1990 to 2006 (Table 2.26). During the period 2000 to 2006 Kilosa District registered the highest increment (2434.40 %) in dairy cross cattle population. The decrease of cattle population during the same period was registered in Morogoro district (-181.50 %). The situation in Morogoro is obviously caused by the formation of Mvomero district which was once part of Morogoro District. The current attribute has brought a positive effect in Mvomero district which has witnesses the big increment of dairy cattle population during the period from the year 2000 to 2006. Morogoro Region has registered dairy cross cattle increase of about 638.15 % during the same period.

Table 2.26: Estimated Dairy cross Livestock Population Trend by District, Morogoro Region 2000 and 2006

District	Number of Dairy cross Cattle							
	1990	1995	2000	2002	2006	Total dairies/district	% District	% Increase 1990 - 2006
Kilosa	218	322	1000	1653	2332	5525	9.50	2434.40
Kilombero	426	681	578	976	1285	3946	6.78	826.29
Ulanga	117	65	147	215	445	989	1.70	745.30
Mvomero	na	na	0	-	16,940	19814	34.07	
Morogoro (U)	-	4620	-	-	3230	7850	13.50	
Morogoro	7118	7491	3299	-	2527	20035	34.45	- 181.50
total dairies/year	7879	13179	8524	9844	19,233	58159	100	638.15
% year	13.55	22.66	14.66	16.93	32.21	100		

Source: Morogoro Regional Commissioners' Office, 2006

Still one of the factors limiting livestock keeping in the region is having an abundant grazing land allocation. Most of land is set by villages as reserve land.

Table 2.27: Estimated Area under Grazing in the Region by District, 2006

District	Land fit for grazing (ha)	Land used for grazing (ha)	Tse tse fly infested area (ha)	Unutilised area (ha)	Ratio unutilised:tsetse infestation area
Kilosa	509,790	290,688	192,702	219,102	1.14
Kilombero	120,000	30,000	10,000	90,000	9
Ulanga	818,800	35,900	1,637,200	782,900	0.48
Mvomero	2664	2664	156679	0	
Morogoro Urbanrban	500	400	0	100	
Morogoro	91200	10,944	59280	80,256	1.35
TOTAL	1,542,954	370,596	2,055,861	1,172,358	0.57

Source: Morogoro Regional Commissioners' Office, 2006

The ratio of unutilized land area suitable for grazing to tsetse fly infested area shows that Kilombero District has nine times more land unutilized for grazing than land infested by tsetse fly. It is only in Ulanga District where unutilized land area suitable for grazing is a half of the land infested by tse tse fly. The underlying facts therefore show that there is potential to rear more cattle in Morogoro Region despite current tse tse fly infestation. However there is conflict of interest between livestock and wildlife. The area is game controlled area and ramsair site.

The distribution of livestock infrastructure is one of the key issues with regards to livestock development. In summary, Table 2.28 shows household's accessibility to veterinary clinics, water point, nearest primary and secondary markets as well as hides and skin sheds at the Regional level. At the regional level, accessibility (in terms of distance) to veterinary clinic has been hardest, followed by secondary markets, primary markets hide and skin sheds and lastly water points. Percentage of households living 15 km or more from veterinary clinics has been 28 %, secondary markets (25 %), primary markets (24 %), hides and skin sheds (18 %), water point (1 %). Table 2.28 also shows the distribution of livestock infrastructure in districts of Morogoro by the year 2005. The status of the infrastructure is also displayed in the same Table, in terms of whether it is working or not working.

Table 2.28: Livestock Infrastructure Distribution in the Region by District 2005

District Name	Dips		Veterinary centers		Crushes	Hides/skin sheds	Abattoirs
	W	NW	W	NW			
Kilosa	17	26	3	3	3	1	5
Kilombero	-	-	-	-	-	-	-
Ulanga	-	6	-	2	-	1	1
Mvomero	16	2	0	2	13	-	6
Morogoro Urban	4	-	3	-	-	1	1
Morogoro (Rural)	9	3	-	-	-	-	3
Total	29	37	3	7	16	3	16

W – Working, NW – Not working

2.5.2.4 Livestock Diseases

As is the case for the whole country, livestock diseases are quite a problem in Morogoro Region contributing to low livestock production. As shown in Table 2.29, Newcastle Disease has been the largest causative agent for animal mortality, causing a large proportion of livestock starting from the year 1991 to 2000. During 1991 and 1992, East Coast Fever (ECF) disease has been the second causative factor for mortality for livestock kept. During the 2006 survey, Newcastle Disease had shown up as the most mortality causing disease followed by East coast Fever. Due to its nature of transmission, the increase of Newcastle Disease deaths indicates the need for improved availability of vaccines through improved veterinary services.

Table 2.29: Trends in Livestock Diseases in Morogoro Region, 1993-2006

Disease	Status	Year								Total affected/ deaths
		No.	% of Total	1993		2000		2006		
				1993	% of Total	2002	% of Total	2006	% of Total	
Anaplasmosis	Affected	766	6.45	1462	8.58	449	10.60	377	8.84	3,054
	Death	240	9.74	345	7.03	33	1.67	11	1.91	629
ECF	Affected	1231	10.37	3545	20.82	599	14.15	992	23.25	6,367
	Death	994	40.32	2022	41.19	36	1.82	52	9.03	3,104
Babesiosis	Affected	199	1.68	428	2.51	5	0.12	2	0.05	634
	Death	9	0.37	104	2.12	0	0.00	1	0.17	114
Trypanosomiasis	Affected	8283	69.76	7761	45.57	1620	38.26	2396	56.15	20,060
	Death	161	6.53	610	12.43	314	15.87	300	52.08	1,385
Newcastle Disease	Affected	1395	11.75	3834	22.51	1561	36.87	500	11.72	7,290
	Death	1061	43.04	1828	37.24	1595	80.64	212	36.81	4,696

Total	Affected	11874	100.00	17030	100.00	4234	100.00	4267	100.00	37,405
	Death	2465	100.00	4909	100.00	1978	100.00	576	100.00	9,928

Source: Morogoro Regional Commissioners' Office, 2006

The market registers for the year 2006 showed that marketed cattle have made the biggest income, followed by chicken, pigs, goats and lastly sheep (See Table 2.30). For the year 2006, there has been a total of Tshs 8,727,344,000.00 generated through registered livestock sales in Morogoro region. The information is based on data collected through official sales and does not involve sales done traditionally. This therefore suggests that there is more income earned through livestock sales than what is really registered.

Table 2.30: Marketed Livestock (Official Markets) by Type and Value by District in the Region 2006

District /Livestock	Number of Livestock sold	Total Value (Tshs)
Cattle		
Kilosa	10,913	3,273,900,000.00
Kilombero	1,628	1,628,000.00
Ulanga	4,299	859,800,000.00
Mvomero	11,874	2,968,500,000.00
Morogoro Urbanrban	8,640	17,280,000.00
Morogoro	690	96,475,000.00
subtotal	38,044	7,217,583,000.00
Goats		
Kilosa	7,192	215,760,000.00
Ulanga	432	6,480,000.00
Mvomero	1,999	31,984,000.00
Morogoro Urban	298	5,960,000.00
subtotal	9,921	260,184,000.00
Sheep		
Kilosa	494	12,350,000.00
Ulanga	108	1,296,000.00
Mvomero	294	5,346,000.00
subtotal	896	18,992,000.00
Pigs		
Kilosa	4,256	276,640,000.00
Mvomero	153	6,120,000.00
Morogoro Urban	149	7,450,000.00
	4,558	290,210,000.00
Poultry		
Kilosa	370,000	925,000,000.00
Morogoro Urban	615,000	15,375,000.00
subtotal	985,000	940,375,000.00
GRAND TOTAL	1,038,419	8,727,344,000.00

Source: Morogoro Regional Commissioners' Office, 2006

2.5.3 Natural Resources

2.5.3.1 Introduction

The natural resources sector in Morogoro Region is comprised of various sub-sectors including forestry, fisheries, bee-keeping and wildlife. The sector is vital for the social and economic development of the Region and the nation in general. According to the 2002 Population and Housing Census, the sector employs a total of 35,062 people which is about 4.6 percent of the Region's labour force. Over the period of 1996-2005, the sector contributed around 6 percent to the country's Gross Domestic Product (GDP) on average.

The sector also plays an important role in the maintenance of climate stability, protection of water sources, and soil fertility; controlling land erosion; and providing source of wood fuel, industrial raw materials and hydro-electric power. The Region is very rich in natural resources which include perennial streams, springs and rivers such as the great Ruaha; wildlife areas of attraction such as Selous Game Reserve, the Mikumi Nation Park, Kilombero nature reserve, the Ramsas site and Udzungwa Mountains National Park.

2.5.3.2 Forestry

The 1974 survey on the extent of forest cover in the Region of Morogoro indicated that forests covered about 88 percent of the Region's total area. The area covered by forests was estimated at 64,000km². However, since that period tremendous changes have taken place in terms of population and economic activities that have significantly contributed to the depletion of this valuable resource. In particular, the Region's forest cover has been under serious pressure from agricultural and livestock activities as well as excessive tree cutting for fuel wood and other domestic uses. The government and community response to these destructive forces include the increase in tree planting and forest conservation initiatives including the demarcation of more land as forest reserve.

Most of the forest reserves in the Region are found in four districts, namely Kilombero, Kilosa, Ulanga and Morogoro Rural. Most of the reserves cover mountainous areas under a high rainfall and so are the important catchments. The main mountain ranges include the Uluguru and Nguru in Morogoro and Mvomero Districts, Udzungwa in Kilombero District, Mahenge in Ulanga District and Ukaguru and Rubeho in Kilosa District. Tables 2.31 to 2.35 show the number, size and names of forest reserves in the districts of Morogoro region.

Table 2:31: Forest Reserves by District in Morogoro Region, 2006

District Name	No. of Reserved Forests	Total Area (Ha)	Encroached Area (Ha)
Kilombero	13	127,364	2,547
Ulanga	8	7,692	1,430
Mvomero	20	80,662	3,496
Morogoro	17	112,444	Not available
Morogoro (Urban)	3	14,255	-
Total	61	342,417	7,473

Source: Morogoro Regional Commissioners Office, 2006.

Table 2:32: Forest Reserves in Kilosa District, 2006

No.	Name of Forest Reserve	Area in hectares	No.	Name of Forest Reserve	Area in hectares
1.	Ikwamba	899	6.	South Mamiwa-Kisarara	6,266
2.	Kihiriri	208	7.	Palaulanga mountains	10,610
3.	Mamboya	503	8.	Talagwe	1,085
4.	Mamboto	137	9.	Ukwiva	78,780
5.	North Mawiwa-Kisarara	8,203	10.	Uponera	292
Total					106,983

Source: Morogoro Regional Commissioners Office, 2006.

Table 2:33: Forest Reserves in Kilombero District, 2006

No.	Name of Forest Reserve	Area in hectares	No.	Name of Forest Reserve	Area in hectares
1.	Mwanihana(wholly under U.N.P)	17,923	6.	Matundu (75% under U.N.P)	17,700
2.	Nyanganje(75% under U.N.P)	18,998	7.	Udzungwa scarp	18,988
3.	Ihanga	3,467	8.	Masagati	6,475
4.	Iwonde (wholly under U.N.P)	24,748	9.	Namwai	18(not gazzetted V.L.F.4)
5.	Iyondo	27,972	10.	Iwungi	9(not gazzetted V.L.F.4)
Total					

Source: Morogoro Regional Commissioners Office, 2006.

Table 2:34: Forest Reserves in Ulanga District, 2006

No.	Name of Forest Reserve	Area in Hectares	No.	Name of Forest Reserve	Area in hectares
1.	Nawenge scarp	623	5.	Mahenge scarp	500
2.	Sali	1,890	6.	Nambiga	1,390
3.	Mselezi	2,245	7.	Ligamba	16
4.	Muhulu	989	8.	Myowe	39
Total					

Source: Morogoro Regional Commissioners Office, 2006.

Table 2:35: Forest Reserves in Morogoro (Rural) District, 2006

No.	Name of Forest Reserve	Area in Hectares	No.	Name of Forest Reserve	Area in hectares
1.	Uluguru South	17,272.7	11.	Mangalea	26
2.	Uluguru North	8,357	12.	Kisego	118.6
3.	Chamanyani	786.4	13.	East pangawe	768.5
4.	Kitulanghalo	4778	14.	West Pangave	84.2
5.	Dindili	1,006.9	15.	Lukenge	57.9
6.	Kimbiza	405			
7.	Ruvu	3,092			
8.	Vigoregore	904			
9.	Mkulazi	68,627			
10.	Kungwe	5,645			
	TOTAL				111,929.2

Source: Morogoro Regional Commissioners Office, 2006.

The main purpose of forest reserves includes protection of catchments and production enhancement. Although there is no recent survey on the purpose and use forests in the Region, Table 2.36 shows the picture as it was in 1975 on this subject.

Table 2.36: Distribution of Area under Forest Reserves by Purpose of Forest by District, Morogoro Region, 1975

District	Square Kilometres		
	Protection of Catchments-area in forests	Production forests	Total
Kilombero	1,096.2	1,583.7	2,679.9
Ulanga	49.3	8,324.8	8,374.1
Kilosa	850.8	-	850.8
Morogoro (R)*	1,496.7	313.5	1,810.2
TOTAL	3,493.0	10,222.0	13,715.0

Source: DTH, The Hague, 1975.

In addition to forest reserves there are a considerable number of forests which exist in other land uses such as agricultural and grazing land. Most of these forests are controlled by the communities and village governments. The size of land covered by these types of forests is not known.

Environmental Conservation:

Morogoro Region is one of the Regions in Tanzania, which has succeeded in environmental conservation. The Region has undertaken remarkable efforts in addressing environmental degradation through afforestation. In these efforts the Region has been involving various stakeholders in planting trees in order to offset deforestation which has occurred in the past. Stakeholders involved include the Government Forest Division, villages, primary schools, NGOs, individuals and other institutions such as prisons and army camps etc. Normally seedlings are raised and distributed to schools, villages, institutions and individuals for transplanting.

Up to the year 2005 there was over 20 NGOs are involved in environmental conservation activities. Table 2.37 shows the type of institutions that have been involved in environmental conservation activities and the number of seedlings raised in various districts of the Region over the period of 1999-2005.

Table 2.39: Tree Seedlings Raised ('000) in Morogoro Region by Institutions from 1999 to 2005

Institution Name	1999	2000	2001	2003	2004	2005
Govt/District councils	432.5	462.9	571.2	1,401.9	831.6	724.1
Villages	315.0	540.2	521.3	586.9	1,552.4	1,724.7
Primary schools	234.1	375.0	406.0	575.7	673.5	786.5
Other institutions	1,863.0	3,170	876.2	1,266.5	1,347.4	1,405.1
Individuals	293.1	1,257.1	853.1	643.2	1,437.8	689.6
Total	3,137.7	5,805.2	3,227.8	4,474.2	5,842.7	5,330.0

Source: Morogoro Regional Commissioners Office, 2006.

Table 2.38 shows the number of NGOs involved in environmental conservation in the Region by district. A total of 42 NGOs are involved in various conservation activities. The activities include tree seedlings production, water catchments conservation schemes, bee keeping, and wildlife conservation.

Table 2.38: NGO's Involved in Environmental Conservation in the Region by District, 2006

District	No. of NGOs	Activities
-----------------	--------------------	-------------------

Kilosa	5	Tree seedling production and water catchments conservation
Kilombero	8	Raise tree seedling, extension services, planting trees ,water catchment conservation and fire campaign
Ulanga	1	Tree planting and bee-keeping
Mvomero	5	Participatory forest management and tree planting
Morogoro Rural	17	Environmental conservation, wildlife conservation and tree planting
Municipal	6	Tree seedlings raising, tree planting, and environmental conservation
Total	42	

Source: Morogoro Regional Commissioners Office, 2006.

Forest products have the potential for earning substantial incomes to the people of Morogoro Region. Tables 2.39 and 2.40 show the estimated value of harvested timber/poles and charcoal in the Region respectively.

Table 2.39: Estimated Value of Timber/Poles Harvested Morogoro Region by District 2000/01-2005/06(Tshs)

District Name	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Kilosa	13,210,000	15,000,000	12,750,000	4,200,000	10,000,000	3,000,000
Kilombero	14,518,908	10,081,050	15,130,546	16,953,641	16,862,202	9717220
Mvomero	-	-	-	-	-	5,300,000
Morogoro (Rural)	-	18,264,194	15,885,654	25,520,643	-	-

Source: Morogoro Regional Commissioners' Office, 2006

Table 2.40: Estimated Value of Charcoal (Tshs '000') in Morogoro Region by District in 2000/01-2005/06(Tshs)

District Name	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Kilosa	2,100,000	3,250,000	2,451,000	120,191,000	2,455,000	3,454,000
Kilombero	309,181,000	8,550,000	101,420,000	41,200,000	53,000,000	54,180,000
Ulanga	-	-	-	-	-	-
Mvomero	-	-	-	-	-	1,372,000

Source: Morogoro Regional Commissioners' Office, 2006

2.5.3.3 Bee-Keeping

Bee-keeping is a well suited economic activity in the Region due to its extensive forest cover and well-watered lands. However, this important activity is handicapped by low technical know-how in modern bee-keeping. As such the potentials in this sub-sector have not been adequately exploited.

Table 2.41 shows the number of traditional and modern beehives in the Region. It shows that Kilosa District is leading in terms of traditional and modern beehives in the Region. The District is followed by Kilombero, Ulanga, and Morogoro Districts in this aspect. All districts have relatively

fewer modern beehives as compared to traditional beehives. Morogoro Urban District has no traditional beehives and has fewer modern beehives. Its low performance in this sub-sector is attributed to lack of adequate forest resources because of its urban nature.

Table 2.41: Number of Traditional and Modern Beehives by District in the Region 2006.

District Name	Traditional Beehives	Modern Beehives	Total
Kilosa	19,189	705	19,894
Kilombero	3,500	350	3,850
Ulanga	2,242	282	2,524
Mvomero	880	10	890
Morogoro	2,212	571	2,783
Morogoro (Urban)	-	45	45
Total	27,496	1,748	29,244

Source: Morogoro Regional Commissioners Office, 2006.

Table 2.42 shows the estimated amount of bee products by district in the Region by the year 2005. As shown in the Table, Kilosa had been the major producer of bee products producing 82.6 % and 63.3 % of the Region's bee wax and honey. Following Kilosa in bee products production are Kilombero and Ulanga respectively. However, in terms of beeswax production Ulanga is not featuring well as it produced only 400 Kgs in 2006.

Table 2.42: Estimated Production Levels of Bee-Products by District in the Region 2005/06.

District	Bee-wax (Kgs)	District % to total	Honey (Kgs)	District % to total %
Kilosa	29,919	82.6	199,460	63.3
Kilombero	2,775	7.6	41,625	13.3
Ulanga	400	1.1	18,026	5.8
Mvomero	387	1.1	1,204	0.1
Morogoro (Rural)	2,746	7.5	54,910	17.4
Morogoro (Urban)	13	0.1	460	0.1
Total	36,240	100.0	315,685	100.0

Source: Morogoro Regional Commissioners Office, 2006.

The production levels show that generally bee keeping is a very important economic activity in the Region especially in Kilosa District. The activity can be of great significance if bee-keepers in all districts can be urged and assisted to change from using traditional beehives to modern ones which

are more effective and efficient in beeswax and honey production. This calls for more extension services to farmers who are engaged in this important economic undertaking.

2.5.3.4 Fisheries

Fishing activities in the Region are mainly carried out in rivers as it has no large water bodies such as lakes or ocean. The rivers on which fishing activities are carried out originate from within and outside the Region. Mountain ranges that are found in the Region are the sources of these rivers. These rivers include Kilombero, Ruaha, Kihanzi Luwegu, Ruvu, Wami, Ngerengere, Mkondoa and Mkindo.

Fishing in the Region is also carried out on man-made dams which are mainly found in Kilosa, Kilombero and Morogoro Rural District. In Morogoro Urban District there is one man-made dam, the Mindu, which obtains gets its water from Ngerengere River. The size of the dam is 320 hectares.

Fishing is a predominant activity in Ulanga District. The district enjoys the presence of abundant natural fisheries resources. These include rivers such as Kilombero, Ruaha, Mwatisi, Mnyera, Ruhoji, Luhombero, Furua, Fuli, Lukanda, Luwegu, Mafinji, Pitu, Isaka, Mselesi, Mtipa, Mbalu and many other tributaries which pour water into big rivers. The resources also include 40 natural dams and man-made small dams which have been locally made by the community purposely for fishing activity.

Caritas-Mahenge is the NGO currently operating in Ulanga District. Together with other activities in the District, it has a fishing project which provides training on effective fish farming. The project also provides improved fish fingerlings free of charge to the participating members of the villages in which it is operating. The villages in which the NGO is operating include Makanga, Mdindo, Msogezi, Ruaha and Isongo. Fishing is also an established economic activity in Morogoro and Mvomero Districts. The rivers used for this purpose in these districts include Wami, Mgeta and Divue. The districts have a total of 249 man-made and natural dams.

Table 2.43 shows the fisheries resource facilities and production by district in the Region in the year 2005/2006. Table 2.44 shows the weight of fish catches (tons) and value by district in the Region over the period of 2001/02-2005/06. Currently there is no fish processing industry in the Region.

Table 2.43: Fisheries Resource Facilities and Production by District in the Region 2005/2006.

District Name	No. of Fishing Licenses	No. of Fishermen	No. of Registered Fishing Vessels
Kilosa	5,500	5,500	Nil
Kilombero	1,100	1,300	75
Ulanga	-	-	-
Mvomero	200	200	30
Morogoro (Rural)	328	385	30

Source: Morogoro Regional Commissioners Office, 2006.

Table 2.44: Weight of Fish Catches (Tons) and Value, by District Morogoro Region 2001/02– 2005/06

District	2001/02		2003/04		2004/05		2005/06	
	Tons	Value Tshs (000)	Tons	Value Tshs (000)	Tons	Value Tshs (000)	Tons	Value Tshs (000)
Kilosa	2.8	400	-	-	-	-	-	-
Kilombero	113	27,341	263	78711	206	154,500	199	238,800
Ulanga	79.8	20,349	-	-	-	-	36	96,118
Mvomero	-	-	-	-	-	-	7.5	8,500
Morogoro	88	22,000	70	17,500	60	15,000	188	188,000

All fish are locally consumed – no processing or export.

Source: Morogoro Regional Commissioners Office, 2006.

The Government earns revenue from the fishing industry through fishing licenses, registration of fishing vessels, fish trading licenses, fish transportation permits and fish marketing levy which is always charged at market prices, Table 2.45 shows the amount of revenue earned by the Government from the fishing industry by district in the Region.

Table 2.45: Government Revenue (000) from Fishing Industry by District in the Region 2000/01 – 2005/06

District Name	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Kilombero	2157.66	5595.85	5171.008	3235.356	3925.656	4,879.3
Ulanga	-	-	-	-	-	8,009.2
Mvomero	-	-	-	-	-	-
Morogoro Rural	180,000	182,000	185,000	176,000	156,000	188,000

Source: Morogoro Regional Commissioners Office, 2006.

In Kilombero District fishing is ranked second to agriculture in terms of economic importance. On average, about 120 tons are fished annually. It is estimated that about 48 tons are exported out of the District per annum. Fishing is done mainly in Kilombero and Ruaha rivers and other small rivers. Fishing is also done in man-made and natural dams. Currently there are 34 man-made dams which supply fish fingerlings to groups and individuals who practice fish-farming. The dams are owned by community fishing groups in the District.

Types of fish found in the Region are mostly tilapia and clarias. Fishing in the Region is done by seining gillnets, fish traps, and hooked lives with many hooks. Fish is processed locally by smoking in fishing camps normally along the borders of the rivers.

2.5.3.5 Wildlife and Tourism

Wildlife conservation, protected area management and game hunting have long been well established in Tanzania, dating back to German hunting laws in 1901-1920. Nation wise, the “Protected Area Network” now covers about 28 percent of the country (19 percent is high protection where farming and residence are not allowed). In Tanzania the responsibility for managing wildlife and protected areas is split between National and Local/District Governments, and then between Government ,Ministry and Parastatals, such as Tanzania National Parks Authority (TANAPA).

Morogoro is one of the regions in Tanzania endowed with a number of wildlife natural resources. The Region has two famous National Parks in the country, namely Mikumi and Udzungwa. Also, part of famous the Selous Game Reserve (the largest game reserve in Africa) is in this region. This game reserve which, due to its unique ecological importance, was designated by UNESCO, United Nations World Heritage Site in 1981. It covers a wide variety of wildlife habitats including lakes, open grasslands, acacia and miombo woodlands and riverine forests. The reserve is the home of a

variety of animals including elephants, buffalos, wild-dogs and hippos. Other animals of tourist status include the lion, bush buck, impala, giraffe, baboon and zebra.

Mikumi National Park is located in the North of the Selous Game Reserve and shares borders with the Uluguru Mountains in the north and Rubeho Mountains in the south-east. The park which was gazetted in 1964, shares the eco-system with Selous Game Reserve and Kilombero Game Controlled Area. With 3,230 km² coverage, the park is famous for its large population of elephants, giraffes, buffalos, zebra, elands, greater kudu, and wildbeest, roan and sable antelope. Predators include the tree climbing, the lion, leopard, wild hunting dogs and black-backed jackals. The park has more than 400 species of birds which include Shelley's double coloured sun bird, pale billed hornbill and violet-crested Turaco as well as violet-backed starling. The surrounding mountains and hills bring compelling natural beauty with addition to superb light; make it a wonderful venue for wildlife tourists.

The Udzungwa Mountains Park which covers about 2000 km² is the first terrestrial national park in Tanzania. The mountains which are covered with dense forest, rise abruptly from the Kilombero plain area in Morogoro Region and then extend towards Iringa Region. It is famous for its biologically diverse forest with about 20-30 percent of plant species that are not found anywhere in the world. Among the factors that contribute to the richness of this park is high altitude which ranges between 200 to 2600 metres above sea level. This helps the condensation of moist winds from the Indian Ocean, which then forms rains. The characteristic climate has made it to be the source of water catchment for the tributaries of river Kilombero, which joins Ruaha to form Rufiji River in the Coast Region.

A variety of animal species can be found in the Udzungwa Mountain National Park. These include water buffalo, elephants, leopards and a number of reptiles, such as chameleons and snakes. Other animals include rare primates such as red colobus, Sanje crested mangabey, monkeys, black and yellow baboon, which live in the slopes of the mountains all sharing the same habitat. The Park is also one of the top ten forests for bird conservation in Africa. Recent discoveries of animal species in the Park include a single skins Lowe's servaline genet, the highland mangabey which is a long-tailed medium-sized primate with tree-dwelling life style. Another famous discovery is the three-

toed frog which gives live-births instead of eggs. This type of frog-species is not found elsewhere in the world.

Poaching is a problem in these national parks and game reserves. About 344 poachers have been netted over the period of 1999-2005. The government earns substantial revenue from tourism and hunting activities in these wildlife conservation areas. Tables 2.46 and 2.47 show the revenue earned from tourism and hunting over the period of 2000/01-2004/05 respectively.

Table 2.46: Revenue Collected from Local Hunting in Tshs in the Region, 2000/01-2005/06

District	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Kilosa	437,600	408,300	482,700	506,500	438,150	
Ulanga	703,100	2,379,712	996,290	1,374,321	918,787	
Morogoro	-	2,000,000	2,966,686	1,789,804	2,428,394	6,274,550
Kilombero						

Source: Morogoro Regional Commissioners Office, 2006.

Table 2.47: Revenue Collected from Tourist Hunting in Tshs in the Region, 2000/01-2004/05

District	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Ulanga	18,791,000	27,270,656	27,230,250	45,079,000	35,171,398	
Morogoro	-	6,700,000	14,383,083	6,846,317	17,338,038	12,132,482

Source: Morogoro Regional Commissioners Office, 2006.

2.5.4 Mining

Morogoro Region is endowed with high grade metamorphic rocks of Usagara system. These rocks host a variety of gemstones and industrial minerals such as mica and asbestos. There are also deposits of precious minerals such as gold. Table 2.48 shows existing types of mineral deposits and number of small scale miners by district in the Region. Table 2.49 shows the quantity of minerals mined in the year 2006 by district in the Region.

Table 2.48: Types of Existing Mineral Deposits and Number of Small Scale Minors by District in the Region 2006

District Name	Miners (Small	Type of Mineral Deposits
---------------	---------------	--------------------------

	scale)	
Ulanga	20	Ruby/spinel/garnet
		Rhodolite
		Mica
Kilosa	70	Moonstone Gold,
		Rhodolite Garnet
		Feldspar, sapphire
		Nute, Quartz, Amethyst
		Asbestos
Morogoro Rural	40	Gold, Ruby, Garnet, Rhodolite,
		Grocutoirmaline, Quartz, Amethyst, Marble
Morogoro Urban	15	Gravel, Sand
Mvomero	350	Gold, Gravel, Rhodolite, Garnet, Quartz

Source: The Regional Minerals Office, Morogoro, 2006

Table 2.49 Weight and Value of Minerals Mined in the Region by District 2006

District	Type of Mineral	Quantity (Tones)
Morogoro Rural	Sand	13,635
Kilosa	Germstone - Moonstone	1,110
Ulanga	Germstone - Spinel	340
Mvomero	Gold	114

Source: The Regional Minerals Office, Morogoro, 2006

2.5.5 Industrial Development

At present there are very few meaningful industrial activities in Morogoro Region. The industrial development in the Region still needs more efforts since the region is endowed with a wide range of natural resources that could lead to the establishment of resource based industries. Such resources necessary for industrial development include various types of cash and food crops, minerals, and forest and bee products. The Region also possesses produces a variety of fruits including pineapples and oranges. Table 2.50 shows the existing industries in the Region. Most of the industries which were once owned and run by Government have been privatized.

Table 2:50 Status of Industries in Morogoro Region as per 2006

Name of industry	District	Name after privatization
Kilombero Sugar Company	Kilosa	K2-ILLOVO
Kimamba Fibres	Kilosa	
New Msowero Farm	Kilosa	
Kilosa Coop. Union	Kilosa	
Mikumi Poa Rice mill	Kilosa	
SUMAGRO Sisal Industry	Kilosa	
Mangula furniture	Kilombero	
Kidatu HP	Kilombero	
Kihansi HP	Kilombero	
Kilombero sugar company	Kilombero	K1-ILLOVO
Morogoro canvas mills	Morogoro (Urban)	Morogoro Canvas Mills 1998 Ltd
Tanzania Tobacco Factory	Morogoro (U)	Tanzania Tobacco Processors Co. Ltd.
Moproco Ltd	Morogoro (U)	Abood Seed Oil Industry Ltd
Morogoro Packaging Industry	Morogoro (U)	Tanzania Packaging Manufactures (1998) Ltd
Abood Soap Industry	Morogoro (U)	-
Karakana ya Reli (TRC)	Morogoro (U)	TRL Workshop
Morogoro Tanneries Ltd		Tanzania Leather Industries Ltd
Morogoro Polyester Textile mills	Morogoro (U)	21 st Century Textile Mills Ltd
Morogoro Ceramic and Wares Ltd	Morogoro (U)	Purebod UK
Mtibwa Sugar Estates	Morogoro (R)	Mtibwa Sugar Estates Ltd

Source: The Regional Commissioner's Office, Morogoro, 2006

While Table 2.51 shows the number of small and medium scale industries by activities in the Region, Table 2.52 presents the number of license issued in the year 2006/07 in the Region.

Table 2:51: Small and Medium Scale Industries by Activities in the Region by District 2006

District Name	Total Number	Major Activities
Kilombero	134	Milling machine
	30	Capentry/ workshop
	10	Hand looms
Ulanga	62	Flour and rice mills, weaving, cotton, capentry and furniture workshop
Morogoro Urbanrban	9	Production of plastic bags, nails, metals, oil cookers, twine sisal, cotton,

Source: The Regional Commissioner's Office, Morogoro, 2006

Table 2:52 Number of licence issued in the Region by District 2006 /07

DISTRICT	LICENSES ISSUED
Kilosa	252
Kilombero	352

Ulanga	381
Mvomero	288
Morogoro Urbanrban	1015
Morogoro	111

Source: The Regional Commissioner's Office, Morogoro, 2006

SECTION III

ECONOMIC INFRASTRUCTURE DEVELOPMENT

3.1 ROAD NETWORK DEVELOPMENT

3.1.1 Introduction

Because of the position of Morogoro Region there is an elaborate connection of road networks. This position makes the region a centre for Regional roads network; to Coast, Dar es Salaam in the East, Dodoma in the West and Iringa in the South. All the roads connecting all these regions are tarmac roads. The region is also served by inter-districts links by regional roads, district roads and feeder roads. The roads are important as they link different parts of the region and in particular help transportation of different produce to the processing area and other economic activities around the Region.

3.1.2 Road Types and Length

Morogoro Regional road network is mainly of four types distributed across Districts. Table 3.1 shows the distribution of road networks by type in various districts of the Region.

Table 3.1: Road Networks in the Region by Types and District, 2006

District Name	Type (Km)				
	Trunk	Regional	District	Feeder	Total
Kilosa	290	129	446	470	1,335
Kilombero	75	210	88.7	141.4	515.10
Ulanga	70	152	453.10	113.5	788.60
Mvomero	112	232.89	80.9	214.90	640.69
Morogoro	31.5	144	348	262	785.5
Morogoro (Urban)					376.00
Total	578.5	867.89	1,146.7	1,201.8	4,440.89

Source: The Regional Commissioner's Office, Morogoro, 2006

3.1.3 Road Surface

Road network surface conditions are another important component in this sector of transportation. Most of these roads are in good condition. Types of roads covering the Morogoro Region and their conditions are shown in Table 3.2.

Table 3.2 Road Networks Surface Condition in the Region by District, 2006

District Name	Surface Condition (km)			
	Tarmac	Gravel	Earth	Total
Kilosa	290	245	880	1415
Kilombero	37	263.3	214.80	515.10
Ulanga	3	296.45	489.14	788.59

Mvomero	120.08	253.69	267.00	640.77
Morogoro	33	197.7	411	641.7
Morogoro (Urban)				376.00
Total	487.08	1,165.44	2,513.44	4,541.96

Source: The Regional Commissioner's Office, Morogoro, 2006

Morogoro Rural District is indicated to have the worst road condition in comparison to the others; while Kilosa is leading by having better road surface of 290 kms of tarmac. Other details related to roads in Morogoro region are as stipulated in tables below.

3.1.4 Road Density

With improvement in the length of the regional network, coverage in terms of road density, which is length of road per 100 square kms of land area, is also improved. Table 3.3 shows the length of the roads in the Region that are passable the whole year by district. Table 3.4 shows the distribution of road density by land area in the Region and by district and Table 3.5 presents distribution of road network by population in the Region by district.

Table 3.3: Road Length Passable the whole year by District, Morogoro Region 2006

District Name	Total Road (Length in kms)	Length of Road Passable the whole year	% of Total distance
		kms	
Kilosa	1,415	1,055	74.5
Kilombero	515.1	329.9	64.0
Ulanga	788.6	380.7	48.3
Morogoro	641.7	197.7	18.0
Mvomero	640.7	389.0	60.7
Morogoro (Urban)	376.0	376.0	100.0
Total	4,541.96	2,674.6	58.9

Source: The Regional Commissioner's Office, Morogoro, 2006

Table 3.4: Distribution of Road Density by Land Area and by District, Morogoro Region 2006

District	Land Area (sq. kms)	Total Road (Length in kms)	Road Density (kms/sq. Km)
Kilosa	14,245	1,415	0.10
Kilombero	13,577	515.1	0.04
Ulanga	23,681	788.6	0.03
Morogoro (Rural)	11,711	641.7	0.05

Mvomero	7,325	640.7	0.09
Morogoro (Urban)	260	376.0	1.45

Source: The Regional Commissioner's Office, Morogoro, 2006

Table 3.5: Distribution of Road Network by Population by District in the Region 2006

District	Estimated Population 2006	Total Road Length kms	Road Density Kms/1000 Population
Kilosa	538,065	1,415.0	2.6
Kilombero	355,219	515.1	1.4
Ulanga	212,288	788.6	3.7
Mvomero	280,475	654.5	2.4
Morogoro (Rural)	278,824	641.7	2.9
Morogoro (Urban)	264,216	376.0	1.4
Total	1,929,087		

Source: The Regional Commissioner's Office, Morogoro, 2006

The observed situation of road network in the Morogoro Region is similar to that in of most other Regions in Tanzania. Table 3.6 shows the characteristics of road network in Tanzania Mainland.

Table 3:6 Distributions of Trunk and Regional Roads by Region, Tanzania Mainland 2004/05

Table 5.6
Distributions of Trunk and Regional Roads by Region, Tanzania Mainland 200/03

Region	ROADS CLASS										TOTAL
	TRUNK (Km)		REGIONAL(Km)		FEEDER (Km)		DISTRICT(Km)		URBAN (Km)		
	Paved	Unpaved	Paved	Unpaved	Paved	Unpaved	Paved	Unpaved	Paved	Unpaved	
Arusha	263	351	0	979	0	2840	0	3368	41	4	7846
Coast	355	56	0	710	0	1297	0	733	0	0	3151
DaresSalaam	83	0	10	257	0	0	0	0	119	35	504
Dodoma	133	423	60	517	15	1590	0	1300	32	41	4111
Iringa	457	109	6	1200	0	1806	0	2635	36	68	6317
Kagera	194	388	0	1093	0	911	32	1275	4	29	3926
Kigoma	6	427	0	418	0	372	0	642	8	54	1927
Kilimanjaro	326	109	26	462	0	834	0	1075	57	33	2922
Lindi	127	221	0	736	20	637	6	1750	4	20	3521
Mara	112	137	7	637	0	416	0	740	5	56	2110
Mbeya	335	502	0	805	0	849	0	1619	3	69	4182
Morogoro	312	186	0	942	0	870	0	1140	4	65	3519
Mtwara	94	103	0	565	0	1460	0	1584	6	32	3844
Mwanza	162	236	15	987	0	1446	12	969	31	3	3861
Rukwa	10	831	0	717	0	1059	0	1270	1	98	3986
Ruvuma	179	526	29	1097	47	598	0	1303	0	8	3787
Shinyanga	189	87	0	912	0	1780	0	1460	8	15	4451
Singida	0	613	0	766	0	873	0	399	0	15	2666
Tabora	0	800	0	806	0	1784	0	1594	30	75	5089
Tanga	263	64	0	879	0	1093	0	1602	70	26	3997
Total	3,600	6169	153	15485	82	22515	50	26458	459	746	75,717

Source: Ministry of works

Note. Total road network in Tanzania is about 85,000Km, unclassified roads make up about 9,400Km of the network which is not included in the table above.

3.2 RAILWAY NETWORK

Morogoro Region is well connected with Tanzania central railway and TAZARA line which are major railway lines in Tanzania. The central line runs west from Dar es Salaam to Kigoma while the TAZARA line runs from Dar es Salaam to neighboring country Zambia.

Currently the railway is mainly used to transport goods rather than passengers because the road networks are well distributed around the district. It is in Dodoma town station where goods are loaded or unloaded for being moved to other parts of the country.

Morogoro region does not depend much on railway transportation because it is connected to other neighbouring regions by tarmac roads. As shown in Table 3.7 there are only very few railway stations and most of them being in Kilombero.

Table 3:7 Railway Services in the Region by District, 2006

District Name	Railway Services		
	No. Stations	Cargo Services (Tons)	No. of Passengers
Kilosa	5	NA	NA
Kilombero	13	NA	NA
Ulanga	-	NA	NA
Mvomero	2	NA	NA
Morogoro	4	NA	NA
Morogoro (Urban)	-		

Source: The Regional Commissioner's Office, Morogoro, 2006

3.3 AIR SERVICE

Air service is one of transport services available in the Morogoro Region. However due to its location in close proximity to Dar es Salaam where there is a large airport, most people who come to Morogoro Urbanse Dar es Salaam airport. As such air services in the Region is only limited to air-strips as shown in Table 3.8.

Table 3.8: Air Services in the Region by District, 2006

District Name	Air Services	
	No. of Airports	No. of Air Strips
Kilosa	-	1
Kilombero	-	4
Ulanga	-	2
Mvomero	-	1
Morogoro (Rural)	-	1
Morogboro (Urban)	-	1
Total	-	9

Source: The Regional Commissioner's Office, Morogoro, 2006

3.4 TELECOMMUNICATIONS

Within the Morogoro Districts, there are various telecommunication networks. These include land line (TTCL) and four cellular networks namely Celtel, Vodacom, tiGo and Zantel. Internet connection is also available but only in Morogoro town and other few urban centers. Numerous radio stations are broadcasted. Service provision of some of these stations (e.g. Radio Abood, Radio Tanzania, Radio Free Africa, Radio One and Radio Ukweli).

The Region is also accessible to other Television services including Television ya Taifa, Independent Television, Agape Television Net Work, Abood Television, SUATV and Channel Ten.

The telecommunication means especially the local radio medium and mobile phones have increased access to market information among local inhabitants. Thus, enhancing this service in all districts will contribute to economic development. Table 3.9 shows the status of telecommunication services in the Region.

Table 3.9: Telecommunications Services in the Region by District, 2005

District Name	No. of Radio Stations	No. of Internet Centres	Mobile phones services provider	No. of Post Offices	No. of Sub Post Offices
Kilosa	1	2	-	1	4
Kilombero	-	11	4	2	2
Ulanga	-	3	-	1	1
Mvomero	-	1	4	1	1
Morogoro (Rural)	-	2	3	(Not stated)	(Not stated)
Morogoro (Urban)	3	16	4	5	1
Total	4	35	15	9	8

Source: The Regional Commissioner's Office, Morogoro, 2006

3.5 ENERGY

Energy is an important economic infrastructure in any area. It is a source for industrial development as well as domestic use. In the rural areas, charcoal and firewood are the major sources of cooking energy. Source of energy for lighting is mostly determined by economic means of the residents of particular area. Many rural residents use kerosene lamp, firewood or wick lamp. Urban areas main sources of lighting are electricity and kerosene lamp. Table 3.10 shows the number households by main source of energy for lighting as revealed by the 2002 Population and Housing Census.

Table 3.10: Main Source of Energy for Lighting by Households in the Region, 2002

	Morogoro (Urban)	Morogoro	Kilombero	Ulanga	Kilosa	Mvomero
Electricity	18,963	862	5,653	417	5,231	2,303
Hurricane Lamp	17,823	7,273	11,565	5,026	16,713	11,529
Pressure lamp	2,322	186	777	273	705	382
Firewood	421	1,658	2,232	1,906	3,374	1,312
Candle	201	105	142	21	175	83
Wick lamp	14,811	47,297	53,557	29,361	79,681	43,157
Solar	12	66	20	5	85	26
Other	29	10	52	87	136	43
Total	54,582	57,457	73,999	37,097	106,101	58,836

Source: 2002 Population and Housing Census, Regional Profile

In urban areas, charcoal is the most prominent source of energy for cooking. As it is the case in other parts of the country, a very few households can afford using electricity for cooking. Table 3.11 shows the main source of cooking energy in the Region by district as was found in the 2002 Population and Housing Census. Morogoro Urban District was leading in use of charcoal as a source of energy for cooking. Households in all other districts use firewood as a main source of cooking energy followed by charcoal. Very few households in all districts use electricity as source of energy for cooking due to its high cost and limited supply.

Table 3.11: Main Source of Energy for Cooking in the Region by District, 2002

Main source of Energy for cooking	Morogoro (Urban)	Morogoro	Kilombero	Ulanga	Kilosa	Mvomero
Electricity	886	80	815	10	1,129	188
Paraffin	4,598	367	692	146	982	555
Gas	90	39	23	21	34	26
Firewood	13,791	53,136	56,374	34,479	87,726	49,326
Charcoal	34,594	3,685	15,863	2,380	15,703	8,569
Others	587	140	167	40	318	89
Not applicable	37	9	65	21	210	81
Total	54,584	57,457	73,999	37,097	106,101	58,836

Source: 2002 Population and Housing Census, Tanzania.

Table 3.12 shows the quantity of electricity sold by TANESCO in various regions in Tanzania over the period of 2000-2004. It shows that compared with other regions Morogoro Region is a moderate consumer of electricity as its consumption ranges between kWh 89 to kWh 114 only.

Table 3:12: Quantity of Electricity Sold (kWh) by TANESCO in Regions, Tanzania Mainland 2000 – 2004

Region	2000	2001	2002	2003	2004
Dodoma	40	39	43	47	46
Arusha	126	156	171	167	194
Kilimanjaro	106	91	106	105	103
Tanga	89	101	126	155	144
Morogoro	73	87	80	90	86
Coast	1	1	1	6	6
Dar	836	957	1110	1077	1130
Lindi	5	9	8	10	11
Mtwara	1	23	15	19	20
Ruvuma	9	9	11	12	13
Iringa	41	69	62	53	59
Mbeya	86	81	84	83	113
Singida	11	12	13	15	15
Tabora	72	49	52	60	69
Rukwa	8	8	9	9	9
Kigoma	7	10	9	9	13
Shinyanga	38	36	142	157	174
Kagera	161	18	18	20	20
Mwanza	82	78	105	117	128
Mara	18	24	29	37	42
Manyara	1810	1858	2194	2248	2395

Source: Tanzania Electricity Supply Co. 2005/06

SECTION IV

SOCIAL SERVICES

4.1 HEALTH SECTOR DEVELOPMENT

4.1.1 Health Profile of the Region

Morbidity and Mortality are important criteria in defining health status of human beings. Morbidity shows the number of people who have developed various diseases while mortality shows the number of such sick people who have failed to recover. In short, Morbidity is the term used to refer to illness and mortality refers to death. Health wise, children who are underfive years old are regarded as most vulnerable and hence do receive special attention through Maternal and Child Health for their survival. Understanding the prevalence of morbidity and mortality is of paramount importance in planning health strategies for each portion of the population. Such information is also important to health managers and policy makers in deriving their objectives and priorities respectively. As shown in Table 4.1, Malaria was the largest cause of morbidity making 51.11 % for underfives morbidity in Morogoro region.

Table 4.1: Ten most commonly reported causes of morbidity for underfive, Morogoro Region, 2005

Disease	Occurrence							
	Morogoro Urban	Morogoro	Mvomero	Kilosa	Kilombero	Ulanga	TOTAL	% total
Malaria	72880	153,273	52102	88306	60511	80122	418198	51.11
ARI	28810	48,561	14506	29291	21474	11910	117907	14.41
Diarhorrea	21889	19,792	6998	10450	9664	7550	65957	8.06
Intestinal worms	298	21,022	6124	6374	3919	2301	25655	3.14
Pneumonia	19631	35,040	18513	19853	9112	10800	104474	12.77
Eye Infections	735	14,407	4669	5127	2793	1229	18138	2.22
Ear Infections	592	4380	2140	-	3786	658	11556	1.41
Skin Infections	3391	13,047	4591	5645	4656	1892	24939	3.05
Anaemia	2180	14,262	2302	2271	3086	1331	17455	2.13
surgical conditions	5062	2636	1874	3235	-	1201	14008	1.71
TOTAL	155,468	140,453	113,819	170,552	119,001	118,994	818,287	100.00
% total	19.00	17.16	13.91	20.84	14.54	14.54	100.00	

Source: Morogoro Regional Commissioner's Office

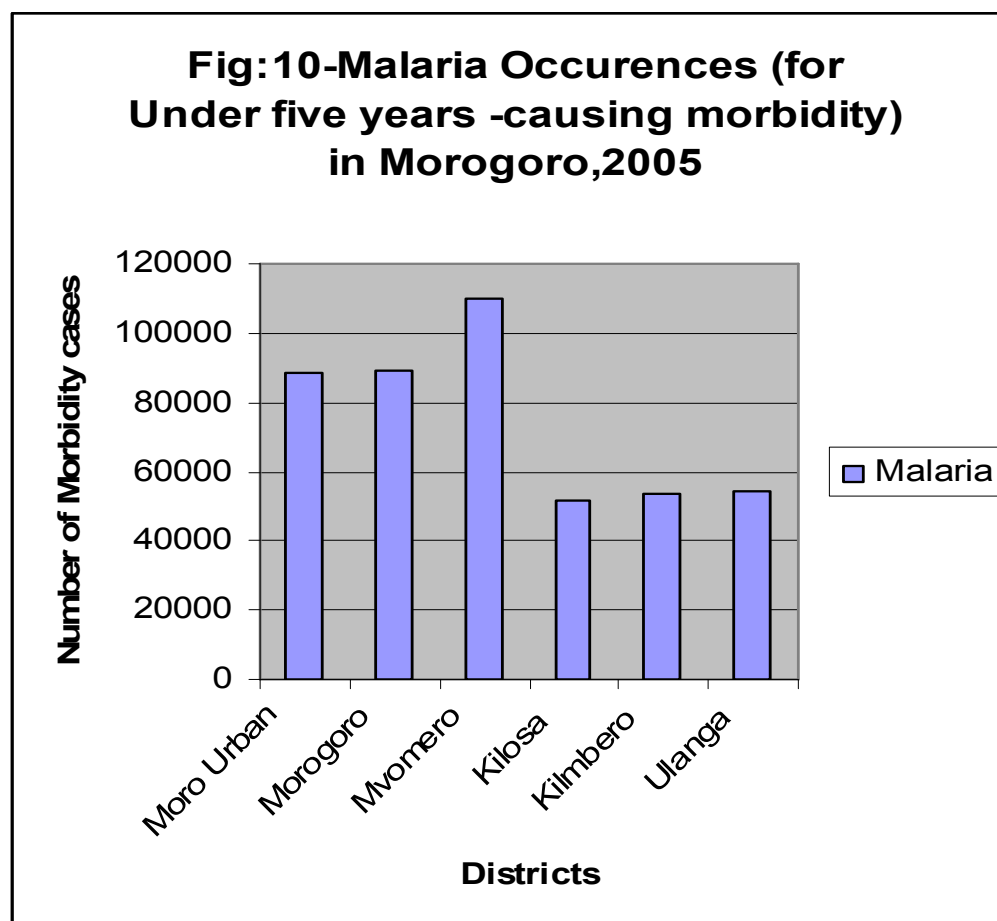
Malaria was followed by Acute Respiratory Infection (ARI) and Pneumonia leading to 14.41 % and 12.77 % of underfive morbidity in the region. While respiratory diseases such as Phneoumonia and ARI are associated with highland zones (low temperatures) and high relative humidity as a result of wet conditions, diarhorrea, and worms are water borne diseases. Anaemia, shortage of red blood cells (RBC)in human blood is mainly caused direct by the malaria plasmodium parasite which attack RBC and indirectly by malnutrition (unavailability of iron rich/containing food). Iron is necessary for production of red blood cells. In short, anaemia is closely associated to malaria and malnutrition.

As it was in the case of underfives, malaria has been the leading cause of morbidity for overfives (see Table 4.2). ARI, pneumonia and diarhorrea have been following diseases causing morbidity in the region. As it was described before, all these diseases are related to highland zones and wet condition. Surprisingly the epilepsy prevalence in Ulanga District has been unusual, raising the concern whether the Nation, Region or District have the strategy to address it.

Table 4.2: Most commonly reported causes of morbidity for overfive years, Morogoro Region, 2005

Disease	Occurrence							
	Morogoro Urban	Morogoro	Mvomero	Kilosa	Kilombero	Ulanga	TOTAL	% total
Malaria	88812	88995	110117	51621	53352	54230	447127	45.58
ARI	23219	36645	33884	15325	14514	9521	133108	13.57
Diarhorrea	29112	5797	17970	6460	9124	2313	70776	7.21
Intestinal worms		14383	15382	7957	7718	3218	48658	4.96
Pneumonia	24981	14475	13960	9280	7158	2808	72662	7.41
Eye Infections	1100	10677	31	2699	2531	934	17972	1.83
Ear Infections		6148*			1720	488	8356	0.85
Skin Infections	11120	8283	6849	3739	3989	2293	36273	3.70
Anaemia	5216	8122	6371	1597	2315	989	24610	2.51
surgical conditions	7068	12760		7408		233	27469	2.80
Urinary Tract Infection (UTI)	13090	7890*		3827	6773	1078	32658	3.33
Tuberculosis (TB)	1083						1083	0.11
cardiovascular/hypertension	217	3331*			1734	794	6076	0.62
Asthma	753	5179*			1107	480	7519	0.77
Pregnancy comp/genital diseases	450	4340			2258	489	7537	0.77
Stochomiasis	664	6725*			1739	535	9663	0.98
Sexually Transmitted Infection (STI)	2341	6335*			3502	684	12862	1.31
Fungus	26	5681*			1612	358	7677	0.78
Neuroses	141	1032*			317	103	1593	0.16
Psychoses	263	549*			293	93	1198	0.12
<i>Epilepsy</i>						6181	6181	0.63
TOTAL	209,656	247,347	204,564	109,913	121,756	87,822	981,058	100.00
% total	21.37	25.21	20.85	11.20	12.41	8.95	100	

Source: Morogoro Regional Commissioner's Office



Similar to morbidity, mortality is also recorded for the specific groups of underfives and overfives. Regionwise, malaria has been the leading cause of mortality followed by pneumonia, anaemia, and diarrhorrea (see Table 4.3). Morogoro Urbanrban District has largely contributed to Regional mortality contributing to 40.44 of all underfive deaths in 2005. While poisoning has been the agent causing least mortality for underfives, least mortality cases have been reported in Morogoro District.

Table 4.3: Reported causes of mortality for underfive, Morogoro region, 2005

Disease/factor	Morogoro Urban	Morogoro	Mvomero	Kilosa	Kilombero	Ulanga	TOTAL	% Total
Malaria	192	21	116	158	28	121	636	49.65
Pneumonia	127	3	43	28	10	38	249	19.44
Diarrhorea	98		1	11	1	10	121	9.45
Anaemia	82	2	13	12	8	44	161	12.57
Protein Calorie Malnutrition (PCM)	10		12				22	1.72

Tuberculosis (TB)	5				5		10	0.78
Poisoning	2						2	0.16
Acute Respiratory Infection (ARI)	2		5			9	16	1.25
HIV/AIDS				4	34		38	2.97
Typhoid					3		3	0.23
Cardio vascular					1		1	0.08
Burn					4	2	6	0.47
Intrapartum/postmotum					16		16	1.25
TOTAL	518	26	190	213	110	224	1281	100.00
% Total	40.44	2.03	14.83	16.63	8.59	17.49	100.00	

Source: Morogoro Regional Commissioner's Office

As for the category of underfives, malaria has been the leading causative agent for overfives mortality in the region for the year 2005 (see Table 4.4).

Table.4 4: Reported causes of mortality for overfives, Morogoro region, 2005

	Morogoro Urban	Morogoro	Mvomero	Kilosa	Kilombero	Ulanga	TOTAL	% total
Malaria	162	11	11	83	4827	9	5103	69.56
Pneumonia	18	1		22	1060	6	1107	15.09
Diarrhorea				12	90	2	104	1.42
Anaemia	12	2	2	38	584	3	641	8.74
Protein Calorie Malnutrition (PCM)							0	0.00
Tuberculosis (TB)	64			23			87	1.19
Poisoning							0	0.00
Acute Respiratory Infection (ARI)							0	0.00
Cardiac Failure (CF)	6						6	0.08
Diabetes	5						5	0.07
HIV/AIDS	80			49	23	50	202	2.75
Epilepsy		1					1	0.01
Hypertension			3				3	0.04
Asthma			1				1	0.01
Worms					5		5	0.07
Poisoning					1		1	0.01
Burn					70		70	0.95
TOTAL	347	15	17	227	6660	70	7336	100.00
%total	4.73	0.20	0.23	3.09	90.79	0.95	100.00	

Source: Morogoro Regional Commissioner's Office

While Malaria led with 69.59 % of all overfives deaths in the region, pneumonia, anaemia and HIV/AIDS accounted for 15.09 %, 8.74 % and 2.75 % of all overfives deaths during 2005 respectively. Malaria was witnessed as the most causative of motrality in Kilombero District leading to 4,827 deaths. HIV/AIDS has also shown as the serious killer in Kilombero district. Surprisingly, all the deaths which happened as a result of HIV / AIDS in the same district occurred in the group of pregnant women. HIV/AIDS has

therefore been the leading cause of death among pregnant women in Kilombero District. Figure 2, displays the trend for mortality in Morogoro in the years 2001 and 2005.

Voluntary testing registers have been proven to be a reliable source of HIV /AIDS infection information. During the year 2006, the study of HIV / AIDS prevalence among family blood donors for 2006 showed that there was an average of 167 blood samples which were HIV positively per district (Table 4.5). The statistics showed that for every 100 blood samples, there were seven blood samples which were HIV positive in Morogoro Region. The highest rate was observed in Ulanga (8.76 %), while the lowest rate was witnessed in Kilosa district (3.8 %).

Table 4.5: Results of family blood donor tests for HIV by district, Morogoro Region, 2000 and 2006

District	2006			2000		
	Number of blood samples	Number of samples positive for HIV	Percent positive	Number of blood samples	Number of samples positive for HIV	Percent positive
Kilosa	3074	117	3.8	2211	107	4.84
Kilombero	4383	358	8.17	2110	120	5.69
Ulanga	2134	187	8.76	1873	117	6.25
Mvomero	1082	150	8.2			
Morogoro (Urban)	2448	144	5.88	3367	276	8.20
Morogoro	744	48	6.45	1583*	79*	4.99*
	Total (14603)	Average (167.33)	Average (6.87)	Total (11144)	Average (139.8)	Average (5.99)

* = involves both Morogoro and Mvomero districts

Source: Morogoro Regional Commissioner's Office

A comparison of the situations during the two periods shows that there are more blood samples that tested HIV positive in the year 2006 compared to 2000. While the situation has remained the same in Kilosa, there is increased percent of blood tested HIV positive in Kilombero, Ulanga, and Morogoro districts. There has been a decrease in percent of blood that tested positively in Morogoro Urban, being 5.88 % in 2006 as compared to 8.20 % during 2000. The HIV prevalence rate obtained during the National HIV Indicator Survey 2003 – 2004 was 5.4 % for Morogoro region.

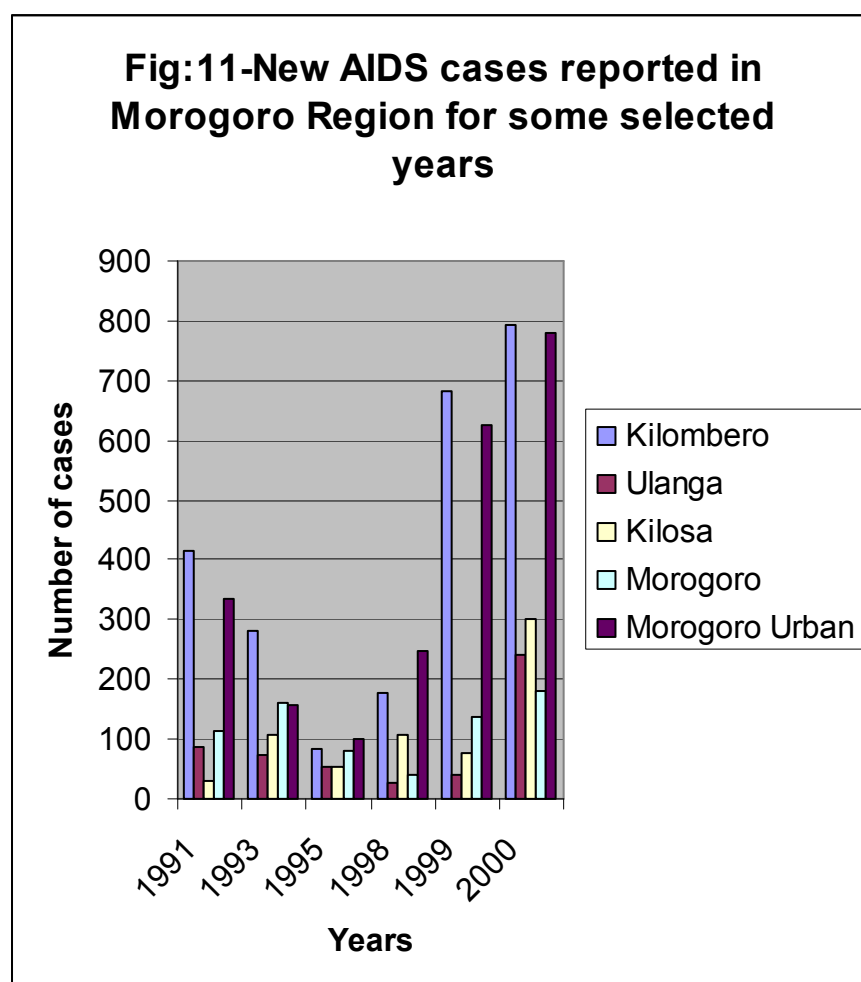
It has been proposed that apart from voluntary testing registers, the number of cases has to be analyzed and interpreted with caution considering other factors which may have influenced the magnitude of the data. However, the data collected through new AIDS cases reported for the period starting from 1991 to

2000 can show the trend of the disease in respective districts (see Table 4.6). While the highest increase for HIV new cases was registered in Kilosa, the lowest increase for HIV new cases was registered in Morogoro District.

Table 4.6: New AIDS cases reported by district, Morogoro Region, 1991 to 2000

District	Yearly number of new AIDS cases						Difference 2000 to 1991	% increase 2000 to 1991
	1991	1993	1995	1998	1999	2000		
Kilombero	415	280	84	176	684	793	378	91.08
Ulanga	86	73	53	28	39	242	156	181.40
Kilosa	30	106	54	107	78	301	271	903.33
Morogoro	114	160	79	39	138	181	67	58.77
Morogoro Urban	336	158	102	246	626	778	442	131.55
TOTAL	981	777	372	596	1565	2295	1314	133.94

Source: Morogoro Regional Commissioner's Office



4.1.2 Health facilities

4.1.2.1 Dispensaries, health centres and hospitals

The dispensary is the medical station where first aid and other routine medical treatment are given. There has been a decrease of 1.25 % for dispensaries in 2006 as compared to 1996 (Table 4.7). While government dispensaries have decreased from 240 to 237 (1.25 %), private dispensaries have been decreased by 29.73 % in Morogoro Region. While there has been no overall change in the number of dispensaries in Kilombero and Ulanga, there has been an increment of 16.67 % for dispensaries in Morogoro Municipal. The decrease of dispensaries in Morogoro district can be due to the creation of the new Mvomero district which was once part of Morogoro district. Growing number of drug stores, improvement of government owned facilities as well as other private dispensaries are suggested to be among the reasons for shrinkage of the number of private owned dispensaries.

Table 4.7: Distribution of dispensaries by ownership and by district, Morogoro Region, 1996 – 2006

District	Number 1996			Number 2000			Number 2006			% change 1996- 2006
	Public	Private	Total	Public	Private	Total	Public	Private	Total	
Kilombero	14	21	35	16	6	22	15	20	35	0
Ulanga	16	14	30	15	12	27	19	11	30	0
Kilosa	41	27	68	43	18	61	39	5	44	-35.29
Morogoro	54	23	77	73	9	82	42	11	53	-35.06
Morogoro Urban	4	26	30	4	30	34	12	23	35	16.67
Mvomero							35	8	43	
TOTAL	129	111	240	151	75	226	162	78	240	-1.25

Source: Morogoro Regional Commissioner's Office

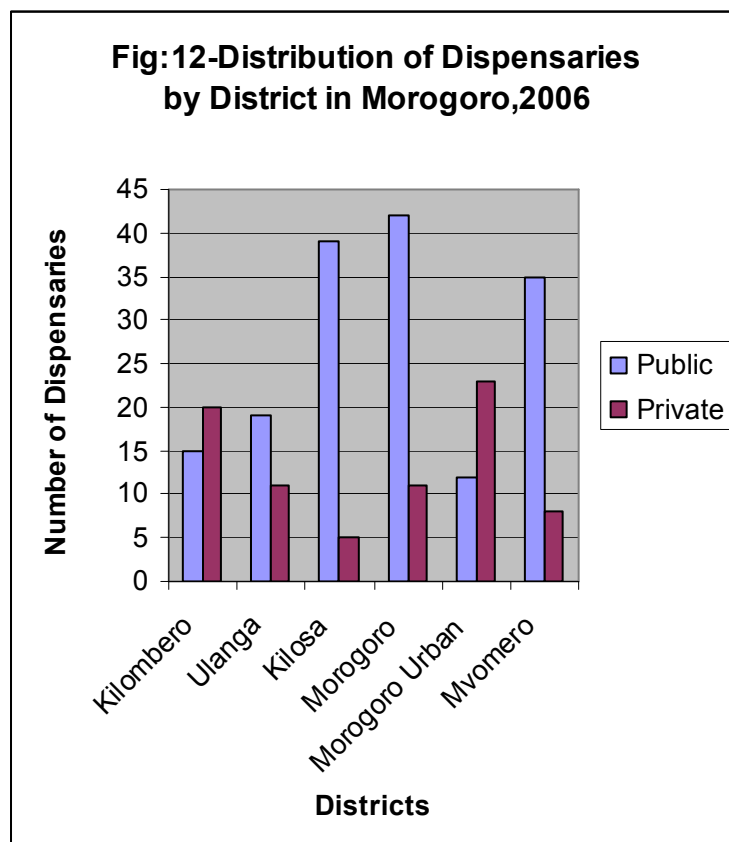


Table 4.8: Distribution of health centres by ownership and district, Morogoro Region 1996 to 2006

Source: Morogoro Regional Commissioner's Office

Unlike the case of dispensaries, there has been a total increase of 19.23 % for health Centres in Morogoro region from the year 1996 to 2006 (see Table 4.8). During the same period, the government and private health centres were increased from 22.2 % and 12.5 % respectively. While the largest increase was witnessed in Kilombero District, there was no increase in Ulanga district. Again as is the case for dispensaries, decrease in health centres in Morogoro district can be reflected in the new Mvomero district.

District	Number 1996			Number 2000			Number 2006			% change 2006 - 1996
	Public	Private	Total	Public	Private	Total	Public	Private	Total	
Kilombero	2	1	3	4	0	4	4	0	4	33.33
Ulanga	3	0	3	3	0	3	3	0	3	0.00
Kilosa	5	1	6	6	1	7	5	2	7	16.67
Morogoro	5	1	6	6	1	7	3	0	3	-50.00
Morogoro Urban	3	5	8	3	2	5	3	7	10	25.00
Mvomero							4		4	
TOTAL	18	8	26	22	4	26	22	9	31	19.23

In total, during the period between the year 1996 and 2006 there has been an overall decrease of 14.29 % in number of hospitals in Morogoro region (Table 4.9). Unfortunately to Morogoro district is that all the hospitals once belonged to it were later found to be within Mvomero district after the creation of the later. While there have been an increase of 2 more public hospitals in Morogoro Municipal during the same period, there has been a total closure of private hospitals in the district.

Table 4. 9: Distribution of hospitals by ownership and district, Morogoro Region 1996 to 2006

District	Number 1996			Number 2000			Number 2006			% change 2006 – 1996
	Public	Private	Total	Public	Private	Total	Public	Private	Total	
Kilombero	0	2	2	0	2	2	0	2	2	0
Ulanga	1	1	2	1	1	2	1	1	2	0
Kilosa	1	1	2	1	1	2	1	1	2	0
Morogoro	1	2	3	1	2	3			0	-100
Morogoro Urban	1	4	5	2	1	3	3	0	3	-40
Mvomero							1	2	3	
TOTAL	4	10	14	5	7	12	6	6	12	-14.29

Source: Morogoro Regional Commissioner's Office

Again the government has shown its pivotal role as far as health services are concerned. While there has been overall increase of 50 % there have been an overall decrease of 60 % in numbers of government and private dispensaries. Therefore comparing the situation in the period basing on the number of hospitals, there has only been a decrease of 10 %.

Local Governments, private sector, parastatals, religious organizations, several ministries, office of the Regional Administrative Secretary as well as the prison department contribute to the health facilities availability in Morogoro Region (Table 4.10). In total there were 309 health centres available to 1,960,423, estimated population of Morogoro Region by the year 2006.

Table 4.10: Distribution of Health facilities and ownership, Morogoro Region, 2006

District	Local government*	Private	Parastatal	Religious	Others**	Total	Population estimate 2006	Population /health facility	Health facility /10,000 ppn	Ranking
Kilombero	20	7	8	10	0	45	538,065	7634.22	1.31	6
Ulanga	23	1	0	11	0	35	355,219	5919.51	1.69	4
Kilosa	56	4	5	9	0	74	212,288	7253.68	1.38	5
Morogoro	35	2	2	8	6	53	280,475	5525.40	1.81	3
Morogoro Urban	8	16	3	12	10	49	278,824	5044.55	1.98	1
Mvomero	39	2	3	6	3	53	264,216	5447.08	1.84	2
TOTAL	181	32	21	56	19	309	1,929,087	6201.36	1.61	

Note, * Local Government includes Health Service Facilities and Managerial Offices, ** Others include Ministries (Home affairs, Education and Vocational training, Infrastructure and Development, Defense and National Service and Lands, Housings and Human Settlement Development), RAS and Prisons

Source: Morogoro Regional Commissioner's Office

Kilosa district, the most populated district in Morogoro region have an average of about 7254 people served by one health facility, while Ulanga, the least populated district in the region has an average of about 5,919 people served by one health facility. The situation is relatively better in Morogoro Municipal district where there is a ratio of 2 health facilities to a population of 10,000. On the other hand, there is one health facility serving the population of 10,000 in Kilombero and Kilosa. Regional wise the ratio of health facilities to 10,000 populations is 1.61. The trend for health facilities and their distribution for the period starting from 1996 to 2006 are shown in Table 4.11.

Table 4.11: Trend for health facilities by district, Morogoro region, 1996 - 2006

District	1996			2000			2006			% changes, ppn/ health facility 2006 – 1996
	Number of health facilities	Population /health facility	Health facility/10000 ppn	Number of health facilities	Population /health facility	Health facility/10000 ppn	Number of health facilities	Population /health facility	Health facility/10000 ppn	
Kilombero	40	6128	1.6	28	10008	1	45	7634.22	1.31	24.58
Ulanga	35	4641	2.2	32	5495	1.8	35	5919.51	1.69	27.55
Kilosa	76	5469	1.8	70	6504	1.5	74	7253.68	1.38	32.63
Morogoro	86	5954	1.7	92	6072	1.6	53	5525.40	1.81	-7.20
Morogoro Urban	43	3919	2.6	42	4803	2.1	49	5044.55	1.98	28.72
Mvomero							53	5447.08	1.84	
TOTAL	280	5371	1.9	264	6332	1.6	309	6201.36	1.61	15.46

Source: Morogoro Regional Commissioner's Office

As shown in Table 4.11 and with regards to the ratio health facilities/ 10,000 of population, the failure to cope with population growth in 2006 as compared to 1996 has been observed. At the region as a whole, there has been an increase of 15.46 % of the population in 2006 same it was in 1996. While the situation has been improved in Morogoro district (-7.20 %), the situation had been deteriorating in other districts.

4.1.2.2 Hospital beds and staff

During the year 2006, there have been a total of 2484 beds located in various health centers and hospitals in Morogoro region (Table 4.12).

Table 4.12: Distribution of beds and population by district, Morogoro region, 2006

District	Estimate population 2006	Health Centre beds	Hospital beds	Total Beds	Population/bed
Kilombero	355,219	58	255	313	1,135
Ulanga	212,288	80	481	561	378
Kilosa	538,065	103	251	354	1,520
Morogoro	278,824	165	253	418	667
Morogoro Urban	264,216	50	360	410	644
Mvomero	280,475	78	350	428	655
TOTAL	1,929,087	534	1950	2484	777

Source: Morogoro Regional Commissioner's Office

In total, there was an average of 777 human populations per bed. In 2000, the population per one bed was 778 for the region.

The trend of ratio of beds to prevailing population is useful as an indicator for human development. Table 4.13 shows the specific trend in selected years from the year 1987 to 2006.

Table 4.13: Trend of beds per prevailing population, Morogoro region, 1987-1990,1992,1996,2000,2006

Year	Number of beds	Population per bed	% changes of beds / population as from 1987
1987	1501	800	-
1988	1501	824	3
1989	1501	847	5.88
1990	1682	781	-2.4
1992	1682	805	0.63
1996	2088	720	-10
2000	2149	778	-2.8
2006	2484	777	-3.55

Source: Morogoro Regional Commissioner's Office

The positive sign connotes that there is an increase of population per bed. The negative sign shows that the situation is getting better since there are more beds available to the population. Though the change of population per bed is quite small, the current finding is a good sign showing that there have been deliberate efforts to cope with the growing human population.

Staffs working in health departments are necessary vehicles to deliver health services. Table 4.14 shows the profile for health staff in Morogoro region. During 2005, the region had a total of 48 doctors, most of them (23) being located in Morogoro Municipal. There is only one doctor each in Ulanga, Morogoro and Kilosa Districts.

Table 4.14: Health staff by category and districts; Morogoro region, 2005

District	Doctors* ¹	Other Clinicians* ²	Nurses	Health Officers	Pharmasists	Lab technicians	Radiographers	Administrators	Medical Attendants	Others	Total
Kilombero	5	92	29	6	2	2	3	2	84	13	238
Ulanga	1	41	58	9	1	2	2	0	158	41	313
Kilosa	13	58	127	9	1	3	1	1	198	26	437
Morogoro	1	71	51	10	0	1	0	0	108	12	254
Morogoro Urban	23	73	135	33	4	5	4	1	86	39	403
Mvomero	5	73	135	13	1	3	0	0	117	9	356
Ulanga	1	41	58	9	1	2	2	0	158	41	313
TOTAL	48	408	535	80	9	16	10	4	751	140	2001

Key : *¹ Doctors include :- Medical Officer, Medical Specialists and Dental Surgeons

*² Other Clinicians include AMOs, ADOs, Clinical Officers, Dental assistants, Dental Technicians, and Dental Therapists

*³ Nurses include General Nurses, Public Health Nurses and Nurses – Midwives

*⁴ Health Officers include those for Health Education, Vector Borne, Environmental and Food Quality specialists

*⁵ Pharmasists include Pharmasists and Pharmaceutical Technicians

*⁶ Laboratory technicians include Medical Laboratory Technologists, Laboratory Technicians and Laboratory Assistants

*⁷ Radiographers include Radiographers and Radiographers Assistants

*⁸Administrators include Health Secretaries, Personal Secretaries, Accountants, Registry assistants, and Supplies Assistants

*⁹ Medical Attendants include Medical Attendants in each department

*¹⁰ Others include Physiotherapists, Medical Record Officers, Launderers, Catering Officers, Mortuary Attendants, Medical recorders, Office Attendants, Drivers, Watchmen, General recorders and Cooks.

Source: Morogoro Regional Commissioner's Office

Comparing the number of doctors per population between the years 2006 and 2000, there are more doctors available to the population in 2006. As shown in Table 4.15, in 2005 there was a total of 48 doctors serving an estimated population of 1,929,087 making a ratio of 1 doctor to 39,932 units of population. In the year 2000 there was a total of 37 doctors serving an estimated population of 1,671,728 making a ratio of 1 doctor to 45,181 units of population.

Table 4.15: Trend of medical doctors per population ratios, Morogoro Region, 2000 and 2006

District	Estimated population 2000	Number of doctors	Population per doctor	Estimated population 2006	Number of doctors	Population per doctor	% change population / doctor 2006 to 2000
Kilosa	455,308	4	113827	538,065	13	41,290.15	-63.73
Kilombero	280,219	9	31135.44	355,219	5	68,708	120.67
Ulanga	175,852	3	58617.33	212,288	1	207,709	254.35
Mvomero	-	-		280,475	5	57,739	
Morogoro	558,623	4	139655.8	278,824	1	292,846	109.69
Morogoro Urban	201,726	17	11866.24	264,216	23	10,747.09	-9.43
TOTAL	1,671,728	37	45,181.84	1,929,087	48	39,932.19	-11.62

The overall trend for Morogoro Region shows that there are more doctors available to the population, an increment of 11.62 % as compared to the year 2000. However, the improvement is witnessed spatially and being specific in two Districts namely Kilosa and Morogoro Municipal. With an exception of Morogoro Urban and Kilosa Districts, the ratio of doctors to the population indicates the need for special attention.

4.1.2.3 Maternal and Child Health

The delivery and availability of Maternal and Child Health (MCH) are important for a healthy community. While carrying children and child bearing is a risky process, special attention to the health of the child after being born is also important for well developed and healthy individual. A child therefore requires special attention from the period of his/her birth to when he/she reaches the age of five where vulnerability is less.

Since there is a great risk during delivery, the expectant mothers need vaccination for tetanus. As shown in Table 4.16, the region managed to achieve 88.47 % of their immunization target by immunizing 67,214 out of 75,972 expectant mothers in 2005. Mvomero District is the last after managing to immunize 75.07 % of the target. Having 88.47 % of the target reached, Morogoro region has made a significant improvement from 1997 where only 49.2 % of the target was reached. During 1997, only 2,246 out of 4,567 expectant mothers were immunized.

Table 4.16: Protection rate of Antenatal Clinics (ANC) clients' women against Tetanus, Morogoro Region, 2005

District	Target	Number of pregnant women attended	Vaccinated	% attended clinic	% of ANC clients protected per target	% Coverage level
Kilombero	8390	8142	7980	97.04	95.11	98.01
Ulanga	13945	13416	11806	96.21	84.66	88.00
Kilosa	21148	20836	20494	98.52	96.91	98.36
Morogoro	11402	9337	9031	81.89	79.21	96.72
Morogoro Urban	9887	9689	9495	98.00	96.04	98.00
Mvomero	11204	11200	8408	99.96	75.04	75.07
TOTAL	75976	72620	67214	95.58	88.47	92.56

Source: Morogoro Regional Commissioner's Office

Coverage level considers achievement in vaccinating women who have been attending Ante Natal Clinics. As shown in Table 4.16, the coverage level for Morogoro Region was 92.56 % in 2005. Having 95.83 % of expectant mothers attending clinics is also a good sign towards ensuring better health to the community.

Understanding the place of delivery is a good indicator for assessing accessibility of health services. As shown in Table 4.17, 61.08 % of the births happened in health facilities while 8.79 % of all births were registered by Tradition Birth Attendants (TBA).

Table 4.17: Place of delivery by district, Morogoro region, 2005

District	Target	Birth place				
		Health facility	Trained TBA	Others	% health facility	% TBA
Kilombero	8390	5873	1536	981	70.00	18.31
Ulanga	13945	10196	1984	1765	73.12	14.23
Kilosa	21148	9517	2877	8754	45.00	13.60
Morogoro	11402	7867	135	3400	69.00	1.18
Morogoro Urban	9887	7525	14	2348	76.11	0.14
Mvomero	11204	5425	131	5648	48.42	1.17
TOTAL	75976	46403	6677	22896	61.08	8.79

Source: Morogoro Regional Commissioner's Office

Kilombero, Ulanga and Kilosa registered more births through the Tradition Birth Attendants. Morogoro Municipal has registered largest and least proportions of births through health facilities and TBAs respectively. Having large proportion attending births at health facilities and trained TBAs has been a progressive indicator. During 1996, 54 % and 2.5 % of all deliveries in Morogoro were administered in the Health facilities and trained TBA respectively. During 2005, 61.08 % and 8.79 % of all deliveries in Morogoro were administered in health facilities and trained TBAs respectively.

From birth, a new born goes through an immunization process against childhood diseases such as Tuberculosis, Diphtheria, Pertusis, Tetanus, Polio and Measles. The child at the age of nine months takes her last inoculation which is that of measles. Table 4.18 shows the coverage for immunization for children by Districts of Morogoro Region. In summary, there has been an impressive record with regard to children immunization in the region. However, some more investigation on the cause of low coverage in vaccinating OPV0 is required.

Table 4.18: Immunization coverage by district, Morogoro Region, 2005

District	BCG		OPV0		OPV3		DPTHB3		MEASLES	
	No vaccinated	% coverage	No vaccinated	% coverage	No vaccinated	% coverage	No vaccinated	% coverage	No vaccinated	% coverage
Kilombero	12254	90.10	9090	65.20	12283	88.40	12990	93.50	12365	88.70
Ulanga	8232	98.10	6160	73.40	7792	92.90	7812	93.10	7560	90.10
Kilosa	20744	98.10	10498	49.60	19887	94.00	19940	94.30	19708	93.20
Morogoro	9942	91.40	5613	49.20	9594	88.20	9577	88.10	9236	85.00
Morogoro Urban	9481	98.40	9054	91.60	9389	97.40	9389	97.40	9374	97.30
Mvomero	10934	97.60	7038	62.80	10102	90.20	10098	90.10	9972	89.00
TOTAL	71587	95.62	47453	65.30	69047	91.85	69806	92.75	68215	90.55

Source: Morogoro Regional Commissioner's Office

Comparing immunization coverage for the years 2000 and 2005 shows an improvement record for 2005. Table 4.19 shows the comparison across two years.

Table 4.19 Comparison of immunization coverage by district, Morogoro region, 2000 and 2005

District	% coverage							
	BCG		OPV3		DPT HB3		MEASLES	
	2000	2005	2000	2005	2000	2005	2000	2005
Kilombero	81	90.10	84	88.40	85	93.50	62	88.70
Ulanga	94	98.10	88	92.90	89	93.10	109	90.10
Kilosa	74	98.10	32	94.00	71	94.30	63	93.20
Morogoro	92	91.40	74	88.20	90	88.10	89	85.00
Morogoro Urban	84	98.40	77	97.40	86	97.40	83	97.30
Mvomero		97.60		90.20		90.10		89.00
TOTAL	84	95.62	66	91.85	83	92.75	79	90.55

Source: Morogoro Regional Commissioner's Office

Family planning is one of the key development aspects since it is necessary for controlling human population growth. However, it requires a social acceptance by the community involved. Campaigning for family planning has been done and women in the productive age group (15 – 49 years old) have been increasingly responding to family planning programs. Table 4.20 shows family planning coverage to women in the reproductive age group in their respective districts.

Table 4.20: Family planning program for women aged 15 – 49 years old, Morogoro region, 2005

District	Target	New Clients	% new clients
Kilombero	69723	6860	9.839
Ulanga	41951	3613	8.612
Kilosa	105739	11606	10.98
Morogoro	57010	43333	76.01
Morogoro Urban	94436	5333	5.647
Mvomero	56020	46922	83.76
TOTAL	424879	117667	27.69

Source: Morogoro Regional Commissioner's Office

While Mvomero and Morogoro have the highest turn up for new clients for family planning, Morogoro Urban has the lowest turn up for the same. However there is no straight interpretation for this since it can also mean that Morogoro Urban have reached the target in the family planning programs. Injections have been mostly used being 35.03 % of all measures taken. Following injections were pills (32.46 %), condoms (29.19 %), norplant implants (1.8 %) and loops (1.45 %).

Proper nutrition is necessary to health, growth and development of children. Monitoring of children's weight started from when the children is born and continues throughout to the age of five. The nutritional status indicators are categorized onto three standard indices which are

- a. Height for age (stunting)
- b. Weight for height (wasting) and
- c. Weight for age (underweight).

According to the Tanzanian Demographic and Health Survey 2004 – 05 preliminary reports, Morogoro Region was found to have 35.8 % of their children stunted, as compared to 1996 where the stunting rate of children was greater than 40 %. During the same survey, Morogoro Region was also found to have 2.2 % and 16.6 % of their children wasted and underweight respectively. Scrutinizing the weight for children less than one year can be used to indicate for children's nutrition status. While 0.64 % of the children were reported to be severely malnourished, 13.35 % of the same were reported to be moderately malnourished (Table 4.21).

Table 4.21: Nutrition status for children under one year old, Morogoro Region, 2005

District	Children weighed	Underweight children			
		Under 60 (severe)	60 - 80 (moderate)	% Under 60 (severe)	% 60 - 80 (moderate)
Kilombero	13945	42	235	0.30	1.69
Ulanga	8390	47	3514	0.56	41.88
Kilosa	21148	169	2961	0.80	14.00
Morogoro	11402	87	2915	0.76	25.57
Morogoro Urban	9887	12	79	0.12	0.80
Mvomero	11204	131	441	1.17	3.94
TOTAL	75976	488	10145	0.64	13.35

Source: Morogoro Regional Commissioner's Office

Scrutinizing data for moderate malnourished children showed that Ulanga, Morogoro and Kilosa District have significant proportions of malnourished children, while Morogoro Urban had the smallest proportion of malnourished children.

The levels for Infant Mortality Rates (IMR), underfive Mortality Rates (U5MR) and Maternal Mortality Rate (MMR) have been used as indicators for human development. With regards to the census of 1978, 1988 and 2002 there have been improvements in those indicators for Morogoro Region (see Table 4.22).

Table 4.22: Infant and underfive mortality rates, Tanzania, 1978, 1988 and 2002.

Region	Infant Mortality Rate				Underfive Mortality rate			
	1978 per 100,000	1988 per 100,000	2002 per 100,000	% change 1988 - 2002	1978	1988	2002	% change 1988 - 2002
Dodoma	133	132	114	-13.64	225	222	191	-13.96
Arusha	108	75	41	-45.33	179	179	58	-67.60
Kilimanjaro	76	67	46	-31.34	119	104	67	-35.58
Tanga	112	106	98	-7.55	187	176	162	-7.95
Morogoro	140	125	100	-20.00	236	211	193	-8.53
Pwani	121	113	101	-10.62	204	189	166	-12.17
DSM	108	105	79	-24.76	179	173	123	-28.90
Lindi	151	140	129	-7.86	255	136	217	59.56
Mtwara	161	138	126	-8.70	267	233	212	-9.01
Ruvuma	145	113	104	-7.96	245	188	171	-9.04
Iringa	152	130	102	-21.54	257	220	166	-24.55
Mbeya	161	124	101	-18.55	267	209	165	-21.05
Singida	137	96	82	-14.58	231	153	132	-13.73
Tabora	140	101	83	-17.82	236	166	133	-19.88
Rukwa	170	131	106	-19.08	283	221	175	-20.81
Kigoma	163	115	92	-20.00	269	192	148	-22.92
Shinyanga	150	110	92	-16.36	252	183	149	-18.58
Kagera	133	130	110	-15.38	225	219	182	-16.89
Mwanza	139	185	87	-52.97	233	192	139	-27.60
Mara	140	125	113	-9.60	236	211	188	-10.90
Manyara	-	75	69	-8.00	-	-	107	
North Unguja	132	130	103		223	220	170	
South Unguja	120	120	87	-20.77	200	200	141	-22.73
Urban/West	112	113	70	-27.50	187	188	109	-29.50
North Pemba	128	123	101	-38.05	218	206	166	-42.02
South Pemba	123	119	95	-17.89	206	200	154	-19.42
				-20.17				-23.00

Source: (URT, 2002) Infant and Maternal Mortality

The comparison of Infant Mortality Rate and Maternal Mortality Rate for the year 2002 and 2005 is shown in Table 4.23. Analysis for Underfive Mortality Rate across the Morogoro Region districts is shown in Table 4.23 as well. In case of IMR, there has been significant increase in Morogoro Urban while the situation has been almost constant in Kilosa during the two years. In case of MMR, there has

been serious increment in Kilosa District during 2005 as compared to 2001. Regional wise, there has been an improvement in both IMR and MMR in 2005 as compared to 2001.

Table 4.23: Infant, Maternal and Underfive mortality rates by districts, Morogoro region, 2001 and 2005

District	IMR /1000			MMR / 100,000			U5MR/1000
	2001	2005	% change 2001 to 2005	2001	2005	% change 2001 to 2005	2005
Kilombero	128	75	-41.4	440	404	-8.18	153
Ulanga	114	98	-14	600	390	-35.00	150
Kilosa	112	114	1.786	235	528	124.68	190
Morogoro	145	82	-43.4	977	730	-25.28	135
Morogoro Urban	105	149	41.9	482	450	-6.64	99
Mvomero		149			748		188
Regional Average	125	111	-11	586	542	-7.51	153
National Average		78			529		126

Source: Morogoro Regional Commissioner's Office

4.2 EDUCATION SECTOR DEVELOPMENT

4.2.1 Introduction

Since 1995 the education sector in Tanzania has been undergoing several reforms. The overall objectives of introducing education reforms together with other policy initiatives was to ensure growing and equitable access to high quality formal education and adult literacy through facilities expansion, efficiency gains and quality improvement, accompanied with efficient supply and use of resources. Therefore in early 1997 the Tanzania Government developed a Basic Education Master Plan (BEMP) to guide development in basic education provision.

With reference to the millennium goals and in regards to the education sector, Tanzania is obliged to be a nation whose people are ingrained with a developmental mindset and competitive spirit. These attributes are driven by education and knowledge and are critical in enabling the nation to effectively utilize knowledge in mobilizing domestic resources for assuring the provision of people's basic needs and for

attaining competitiveness in the regional and global economy. Tanzania would brace itself to attain creativity, innovativeness and a high level of quality education in order to respond to development challenges and effectively compete regionally and internationally, cognisant of the reality that competitive leadership in the 21st century will hinge on the level and quality of education and knowledge. To this effect, Tanzania should:

- Attain self reliance driven by the psychological liberation of the mindset and the people's sense of confidence in order to enable the effective determination and ownership of the development agenda with the primary objective of satisfying the basic needs of all the people - men, women and children.
- Be a nation whose people have a positive mindset and a culture which cherishes human development through hard work, professionalism, entrepreneurship, creativity, innovativeness and ingenuity and who have confidence in and high respect for all people irrespective of gender. The people must cultivate a community spirit; one which, however, is appropriately balanced with respect for individual initiative
- Be a nation with high quality of education at all levels; a nation which produces the quantity and quality of educated people sufficiently equipped with the requisite knowledge to solve the society's problems, meet the challenges of development and attain competitiveness at regional and global levels.

To ensure achievements of Millennium goals and Tanzania National vision 2025, Ministry of Education and Vocational Training through regional administration has done a lot to improve education in all regions of Tanzania. In response to the local Government reforms agenda, an action plan for transferring responsibility to local school committees has been prepared (refer local Government Reform Act of 1998). In all these levels, efforts have been made to improve both access and quality of education.

Morogoro Region education sector is structured into Pre-primary, Primary, Secondary and Tertiary education levels. This profiling will only stipulate the data for the first three levels. Statistics show that, total enrolment rate in most Morogoro districts is increasing yearly. This is associated with the introduction of several programmes including Primary Education Development Programme (PEDEP).

4.2.2 Pre-primary School Education

Pre-primary schools have been on the increase in Morogoro Region. In urban areas, most of the children enrolled in primary education have gone through pre primary education as compared to the rural areas. Most of these schools are under public ownership. Although they are still few in number, their contribution in complementing primary education is significant. The enrolment into pre-primary school is almost equal across sex of students. Table 4.24 shows the total enrolment by sex and age in Government and Non Government Pre-Primary Schools Morogoro Region 2004 – 2006

Table 4.24: Total Enrolment by sex and age in Government and Non Government Pre-Primary Schools Morogoro Region 2004 – 2006

Year	Under 5 yrs			5 Years			6 Years			Total		
	B	G	T	B	G	T	B	G	T	B	G	T
2004	149	183	332	4244	4324	8568	6883	7203	14086	11276	11710	22986
2005	127	151	278	7515	7543	15058	10211	10128	20339	17853	17822	35675
2006	369	378	747	4666	4724	9390	7729	7988	15717	12764	13090	25854
Total	645	712	1357	16425	16591	33016	24823	25319	50142	41893	42622	84515

Source: Basic Education Statistics in Tanzania (BEST), Regional Data- 2004 - 2006

The number of pupils enrolled into Pre-Primary education has been fluctuating from year to year, with an increase in each year. The increase of enrolment is also reflected in enrolment of both boys and girls.

There has been increase of the number of teachers and a decrease in the number of pupils per teacher across years. The reduced number of pupils per teacher is a good indication of improvement of quality of the education at this pre-primary level. Table 4.25 shows the number of streams, teachers by qualification and the number of pupils per teacher in Morogoro Region.

Table 4.25: Number of streams, teachers by qualification by teacher per pupil ratio Morogoro Region

Year		No of Streams	Total enrolment							
				Degree	Diploma	Grade A	Grade B/C	Others	Total teach	Pupils/teacher
2004	N/GVT	0	0	0	0	0	0	0	0	0
	GVT	765	22986	0	2	83	153	119	357	64
2005	N/GVT	18	557	0	3	12	1	5	22	25
	GVT	1244	35118	0	0	436	272	47	755	47
2006	N/GVT	14	709	2	19	10	2	3	36	20
	GVT	1021	25145	0	5	514	545	157	1221	21

Source: Basic Education Statistics in Tanzania (BEST), Regional Data; 2006

4.2.3 Primary Education

Tanzania's success in getting many more children into school is seen in many of her regions including Morogoro region. On current trends, Tanzania is in line to meet two of the MDGs by 2015 - universal primary education and gender equality in the ratio of boys to girls in primary school. Abolition of school fees in 2001 has resulted in an increase in the number of children enrolled in primary school from 4.4 million in 2000 to 8 million in 2006. About 96% of children aged 7 to 13 are now enrolled in primary school in all regions including Morogoro, and there are broadly equal numbers of boys and girls in primary school (See Table 4.26).

Table 4.26: Distribution of Primary Schools among the Population and the Villages, by District Morogoro Region, 2006

District	Estimated Population 2006	Number of Primary Schools	Average Population Per School	Number of Villages	Average Number of Schools per Village
Kilosa	538,065	207	2,593	161	1.3
Kilombero	355,219	140	2,677	81	1.7
Ulanga	212,288	89	1,551	65	1.4
Mvomero	280,475	137	2,025	101	1.4
Morogoro (R)	278,824	145	1,895	132	1.1
Morogoro (Urban)	264,216	60	4,403	275	4.5
Total	1,929,087	778	2,480	815	1.1

Source: The Regional Commissioner's Office, Morogoro, 2006

Morogoro region had 778 Primary schools in the year 2006. This is an improvement as the number of primary schools has been increasing from 658, 676, 722, and 764 for 2001, 2003, 2004 and 2005 years respectively (See Table 4.27).

Table 4.27: Trend in Average Population per Primary School, Morogoro Region, 1996,2001,2002,2003, 2006

Years	Number of Primary Schools	Estimated Population	Average Population per School
1996	630	1,504,532	2,388
2001	662	1,716,813	2,593
2002	670	1,753,362	2,616
2003	676	1,811,024	2,679
2006	778	1,929,087	2,479

Source: The Regional Commissioner's Office, Morogoro, 2006

Primary School Enrolment

Total enrolment into primary schools was 420,132 in year 2003 and 374,710 in year 2006, thus leading to an average of 233 pupils per 1000 population in the year 2003, and 199 pupils per 1000 population in the year 2006 (See Table 4.28).

Table 4.28: Total Enrolment in Public Primary School in the region by Sex and District ,2001,2006

District Name	2001			2006		
	Boys	Girls	Total	Boys	Girls	Total
Kilosa	83,507	32,790	116,297	49,119	49,125	98,244
Kilombero	20,052	19,431	39,483	38,567	37,394	75,961
Ulanga	16622	15,417	32039	21,944	20,152	42,096
Morogoro	14,306*	14,874*	29,180	31,614	28,823	59,437
Mvomero	N/A	N/A	N/A	29,362	28,682	58,044
Morogoro (U)	14,306	14,874	29,180	20,633	20,295	40,928
Total	148,793	97,386	246,179	191,239	184,471	374,710

**Contains Mvomero District*

Source: The Regional Commissioner's Office, Morogoro, 2006

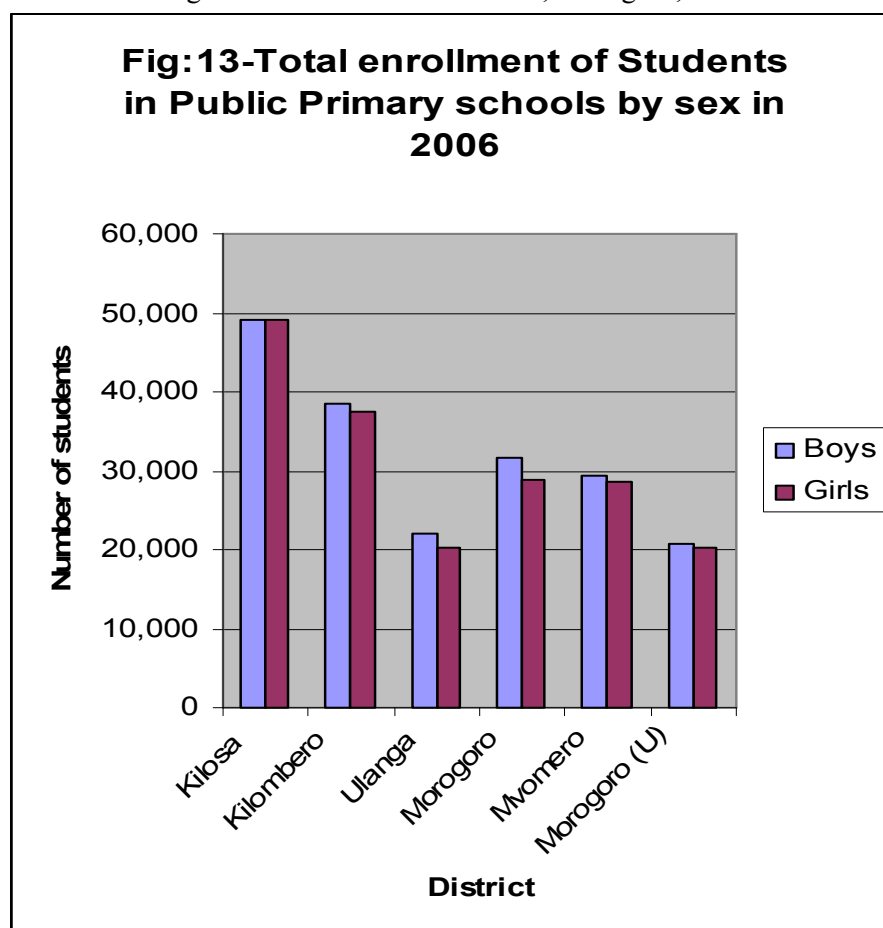


Table 4.29 shows the number of school going age children, that is, 7 to 13 years as indicated in the 2002 population and Housing Census. Knowing the population requirements is an important factor to be considered in the planning of education. Table 4.30 shows the estimated distribution of seven years old in the population, by District and Sex, Morogoro Region for the year 2002 and 2006.

Table 4.29: Distribution of 7 to 13 Year Olds by District and by Sex, Morogoro Region 2002

District	Total 2002 Population	Seven to Thirteen year Old Children			Percentage of Total Population
		Boys	Girls	Total	
Kilosa	488,191	46,219	45,520	91,739	18.8
Kilombero	321,611	28,331	28,065	56,396	17.5
Ulanga	193,280	19,148	18,562	37,800	19.6
Mvomero	259,347	24,987	24,256	49,243	19.0
Morogoro	263,920	35,953	34,466	70,419	26.0
Morogoro (Urban)	227,921	18,059	19,046	37,105	16.3
Total	1,754,270	172,697	169,915	342,612	19.5

Source: Population Census 2002

Table 4.30: Estimated Distribution of Seven year old in the population, by District and Sex, Morogoro Region 2002 and 2006

District	Total Population (2002)	Total number of 7 years olds (2002)	Number of seven year old by sex (2002)		Estimated population 2006	Number of seven year old 2006
			Boys	Girls		
Kilosa	488,191	15416	7696	7720	538,065	17083
Kilombero	321,611	9679	4,832	4847	355,219	10726
Ulanga	193,280	6297	3,138	3159	212,288	6978
Mvomero	259,347	8199	4202	3997	280,475	9086
Morogoro	263,012	8014	4145	3869	278,824	8881
Morogoro (Urban)	227,921	5766	2863	2903	264,216	6389
Total	1,753,362	53371	26,876	26495	1,929,087	59,143

Source:

2002 Population Census, Regional Profile, Morogoro

The Regional Commissioner's Office, Morogoro, 2006

During 2002 Population Census, 53,371 (3 percent) of the Morogoro region population were 7 years of age. This population contains children who are to enroll into standard one primary education. However, the actual number of pupils enrolled into STD I the same year were 63,784, this is probably due to the fact

that there are some of the children enrolled into primary school before they are 7 year or when they are over the age of 7 years (See Table 4.31).

Table 4.31: Estimated Distribution of Children of 7-13 Years in the Population, by District and Sex, Morogoro Region 2003 and 2004

District	Percent 7-13 year olds 1988	Population in 2002	Number of 7 – 13 year olds 2002	Estimated population 2006	Number of 7 – 13 year olds 2006
Kilosa	19.68	488,191	91,739	538,065	97,643
Kilombero	19.54	321,611	56,396	355,219	60,226
Ulanga	20.74	193,280	37,800	212,288	39,938
Mvomero	NA	259,347	49,243	280,475	51,914
Morogoro	19.51	263,920	49,171	278,824	51,620
Morogoro (Urban)	17.58	227,921	37,105	264,216	41,574
Total		1,754,270	321,414	1,929,087	342,915

Source: 1. 1988 Population Census, Regional Profile, Morogoro

2. 2002 Population and Housing Census, Regional Profile, Morogoro

Table 4.32 shows the number of pupils enrolled in standard one by sex in 2001 and 2006. Table 4.33 shows the total number of primary school pupils (Std One up to Seven) enrolled and its ratio to the number of population in the region by district in the year 2006.

Table 4.32: Std One Enrolment in Public Primary Schools by Sex and District, 2001 and 2006

District Name:	Year 2001			Year 2006		
	Boys	Girls	Total	Boys	Girls	Total
Kilosa	9,307	8,514	17,821	9,107	9,101	18,208
Kilombero	5,915	5,891	11,806	7,917	7,832	15,749
Ulanga	4,128	3,749	7,877	4,854	4,824	9,678
Morogoro	8,938*	7,468*	16,406	4,576	4,555	9,131
Mvomero	N/A	N/A	N/A	4,854	4,824	9,678
Morogoro (Urban)	2,616	2,617	5,233	3,389	3,343	6,732
Total	11,554	10,085	21,639	34,230	34,082	68,312

*Contains Mvomero district

Source: Morogoro region, districts Offices, 2006

Table 4.33: Distribution of Pupils Enrolled (STD I-VII) in relation to Population by District, Morogoro Region, 2006

District	Number of 7-13 years old age group per 1000 population 2002 Census	Estimated Population 2006	Estimated numbers of 13 year olds in 2006 Population	Total Enrolment of Pupils 2006	Pupils per 1000 Population	Population 13year 2002
Kilosa	188	538,065	12,257	106,435	198	11061
Kilombero	175	355,219	7,624	76,276	204	6880
Ulanga	196	212,288	5,087	45,127	212	4591
Mvomero	190	280,475	6,691	58,044	209	6038
Morogoro	267	278,824	6,937	59,473	216	6260
Morogoro (U)	163	264,216	5,504	345,319	1261	4967
Total	1179	1,929,087	44,100	690,674	354	39797

Source: Morogoro region, district Offices, 2006

Table 4.34. Distribution of Pupils by District, School and Village, Morogoro Region, 2006

District	Number of School	Number of Village	Total Number of Pupils	Average Number of Pupils per School	Average Number of Pupils per Village
Kilosa	207	161	106,435	514	661
Kilombero	140	81	76,276	544	941
Ulanga	89	65	45,127	507	694
Mvomero	137	101	58,044	423	575
Morogoro	145	134	59,437	413	443
Morogoro (Urban)	60				
Total	778	542	345,319	2,401	3,314

Table 4.34 shows the distribution of the total enrolled primary school pupils in existing schools and villages. It also shows the average number of pupils per school and villages in the Region.

Source: Morogoro Region, Districts Offices, 2006

4.2.3.1 Primary School Dropouts

Primary school dropout is a problem experienced by many Tanzanian Regions. In Morogoro Region, the main reason for most dropouts is truancy followed by pregnancy. Despite the efforts made by the government to reduce the dropout rates, still recent data show that Morogoro Region is experiencing high

rate of dropouts. Table 4.35 presents the status of primary school dropouts in Morogoro Region for the year 2006.

Table 4.35. Pupils Drop out in the region by Reason, Sex and District, Morogoro Region

District Name/ Reasons	Year 2006	
	Boys	Girls
Truancy		
Kilosa	151	116
Kilombero	182	143
Ulanga	217	275
Mvomero	34	25
Morogoro	76	62
Moro(Urban)		
Pregnancy		
Kilosa	0	28
Kilombero	0	102
Ulanga	-	123
Mvomero	-	24
Morogoro	-	48
Moro(Urban)	-	4
Death		
Kilosa	28	24
Kilombero	19	22
Ulanga	17	6
Mvomero	23	18
Morogoro	17	14
Moro(Urban)	9	13
Other		
Kilosa	7	6
Kilombero	16	8
Ulanga	24	25
Mvomero	1	-
Morogoro	3	2
Moro(Urban)	-	-

Source: Morogoro Region District's Office 2006

Table 4.36 shows the summary of dropouts and reasons in Morogoro Region over the period starting from 2001 to 2006

Table 4.36 Pupils Dropout by Sex and Reason 2001 to 2006

Year	Reason	Sex		Total
		Boys	Girls	
2001	Death	75	55	130
	Pregnancy	0	318	318
	Truancy	1186	782	1968
	Others	79	85	164
	Total	1340	1240	2580
2003	Death	81	61	142
	Pregnancy	0	227	227
	Truancy	627	482	1109
	Others	66	57	123
	Total	774	827	1601
2004	Death	117	83	200
	Pregnancy	0	293	293
	Truancy	852	529	1381
	Others	45	35	80
	Total	1014	940	1954
2005	Death	89	67	156
	Pregnancy	0	265	265
	Truancy	742	507	1249
	Others	19	23	42
	Total	850	862	1712
2006	Death	113	97	210
	Lack of school needs	22	13	35
	illness	21	25	46
	Parent/Guardian illness	9	7	16
	Pregnancy	0	390	390
	Truancy	789	631	1420
	Total	954	1163	2117

Source: Basic Education Statistics in Tanzania (BEST), Regional Data- 2001 - 2006

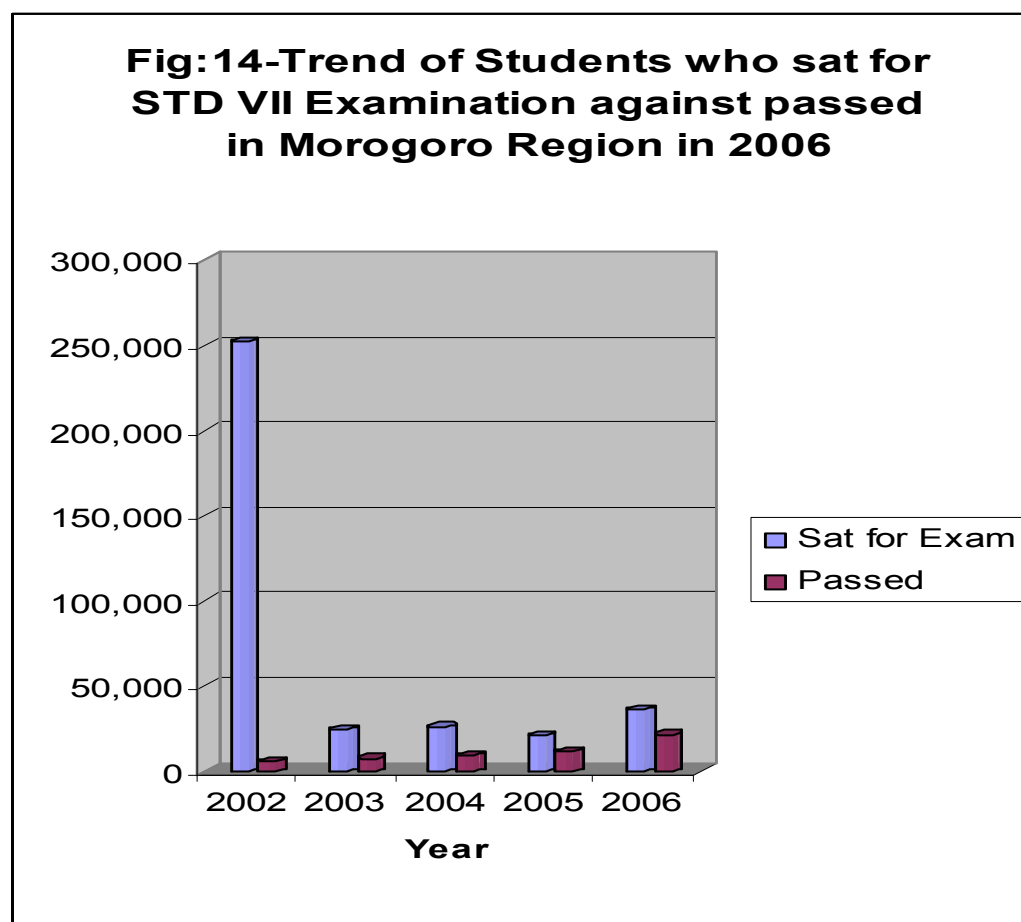
4.2.3.3 Primary School Leaving Examination

Performance in the primary school leaving examination is one of the indicators of success of the educational sector at national, regional, district and even school level. Morogoro Region performance in primary school leaving examination is relatively poor compared to other Regions. As indicated in Table 4.37, when compared to other Regions, in 2005 the region was ranked the last, where 20,959 pupils sat for the primary school leaving examination, 55.68% passed while 44.32% failed. Kilimanjaro ranked the first region as out of 32,157 pupils who sat for the examination 80.51% passed and 19.49% failed, followed by Dodoma 16,529 pupils sat for the examination, 77.80% passed and 22.20% failed.

Table 4.37. Students Set for Final Examination STD VII in Morogoro Region 2002-2006

Year	Pupil who sat for Exam	Student who passed	% pass	Region Position
2002	25,2000	5496	21.9	17/20
2003	24,264	7490	30.9	19/20
2004	25,993	9142	35.2	19/21
2005	20,959	11669	55.67	21/21
2006	36,201	21715	59.98	-

Source: Basic Education Statistics in Tanzania (BEST), Regional Data- 2002 – 2006



By the time this study was being conducted the exercise of selecting students to join form one in public secondary schools was still going on. Efforts were being made by Regional authorities to make sure that more secondary schools are built at ward level so that all students who passed the examination can get an opportunity to join secondary school education. Table 4.38 shows the number of pupils who passed examinations and the proportion of those selected to join form one in public secondary schools in the first

selection. Most of the pupils who passed the examination but not selected were eagerly waiting for Ward Level secondary schools to be completed.

Table 4.38: Number of Pupils Selected (First Selection) to Join Form One in Public Secondary Schools in Morogoro Region by District 2005

District	Passed				Selected to Join secondary School				Not Selected		
	B	G	T	%	B	G	T	%	B	G	T
Kilombero	2860	2009	4869	73.95	783	761	1544	31.0	2077	1248	3325
Kilosa	2526	2203	4729	47.1	1726	1715	3451	71.3	800	488	1288
Morogoro (U)	2061	1353	3914	75.72	446	455	921	23.5	1615	1398	2993
Morogoro	1786	1455	3241	60.59	515	503	1018	31.4	1271	952	2223
Mvomero	1389	1341	2720	51.41	653	636	1322	47.3	736	702	1398
Ulanga	1377	855	2232	62.3	345	333	678	20.6	1036	522	1554
Total	11999	9716	21715	59.98	4468	4406	8874	40.86	7531	5310	12841

Source: Basic Education Statistics in Tanzania (BEST), Regional Data; 2006

4.2.3.4 Primary School Facilities

Inadequacy in education facilities is a national issue that has received national attention. For primary school education, classrooms, school toilets, water tanks, teachers houses, desks, tables, cupboards, chairs, text books and other learning and teaching materials are highly needed as their supply is inadequate. Accordingly, the Government has called for concerted efforts among stakeholders to build more secondary schools. At community level, there is widely felt need for assistance in terms of personnel, budget allocation, infrastructure, teaching and learning materials. Morogoro Region data information at Regional is provided in the Table 4.39.

Table 4.39: Status of Primary school facilities, Morogoro Region, 2006.

Type of Buildings/ Furniture	Required	Actual	Shortage
Classrooms	8314	4655	3659
Staff houses	9621	1426	8195
Toilets	14763	6444	8319
Staffrooms	1852	1106	746
Stores	1570	357	1213
Desks	159390	99565	59825
Tables	15587	5436	10151
Chairs	17596	7595	10001
Cupboards	8503	1585	6918

Source: Basic Education Statistics in Tanzania (BEST), Regional Data; 2006

The data depicts that in every category of facilities there are serious shortfalls, notably, the number of classrooms, desks, toilets and houses for teachers. Having such shortfalls means in each facility there is overcrowding resulting into poor education services delivery.

The number of streams in primary schools has a profound effect on the level of facilities at these schools. Generally, in Tanzania Mainland, Morogoro Region is ranked 9th in terms of number of streams (9,268 streams) in government primary schools as compared to other Regions. Lindi ranks the last region by having very few streams (3816 streams) (See Table 4.40).Mwanza Region ranks the first by having 17,842 streams, followed by Mbeya.

Table 4.40: Number of Streams by Grade and Region in Govt Primary Schools, 2005

Region	NUMBER OF STREAMS								Rank
	I	II	III	IV	V	VI	VII	Total	
Mwanza	2950	2900	3104	3671	1998	1777	1352	17842	1
Mbeya	2368	2607	2271	2246	1357	1376	1383	13608	2
Shinyanga	2364	2327	2364	2477	1604	1248	887	13271	3
K'njaro	1777	1977	2182	2292	1773	1783	1402	13166	4
Iringa	2224	2162	2157	2229	1672	1477	1191	13112	5
Tanga	2098	2136	2188	2127	1389	1176	836	11950	6
Kagera	2486	2242	2084	2096	1081	908	820	11717	7
D'Slaam	1481	1522	1623	1829	1617	1211	918	10201	8
Morogoro	1758	1595	1619	1668	1148	1078	782	9628	9
Singida	913	1022	1085	1148	867	785	624	9424	10
Ruvuma	1221	1412	1445	1934	1185	918	712	8827	11
Kigoma	1480	1421	1630	1734	1041	786	445	8537	12
Dodoma	1834	1459	1356	1244	947	971	586	8397	13
Tabora	1740	1342	1337	1430	780	663	538	7830	14
Mara	1074	1158	1291	1639	938	791	655	7548	15
Rukwa	1384	1188	1167	1521	783	469	399	6891	16
Arusha	1148	1110	1153	1199	764	692	586	6652	17
Mtwara	1164	1096	1073	1069	778	782	570	6532	18
Manyara	1071	1070	1116	1108	747	494	410	6016	19
Pwani	907	945	923	1010	741	606	445	5577	20
Lindi	703	615	612	676	475	393	342	3816	21
Grand Total	34145	33396	33780	36347	23665	20344	15363	197540	

Source: Basic Education Statistics in Tanzania (BEST), Regional Data; 2006

Primary School Teachers and Teachers' Housing

Between 2001 and 2006 there was an upgrading of teachers required for primary schools. Table 4.41 shows the number teachers and their qualifications in Morogoro Region over the period of 2001 to 2006.

The same Table shows the number of teachers and qualifications have been increasing over this period. In 2001 Morogoro Region had no teacher with degree, but by 2006 the Region had 258 graduate teachers.

Table 4:41: Morogoro Region, teaching Staff by year, sex and Qualification 2001 -2006

Year	Grade B/C			Grade A			Diploma			Degree			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
2001	1616	1489	3105	1304	1426	2730	66	41	107	0	0	0	2986	2956	5942
2003	1544	1339	2883	1258	1282	2540	100	48	148	0	0	0	2902	2669	5571
2004	1487	1411	2898	1563	1881	3444	124	89	213	0	0	0	3174	3381	6555
2005	1478	1389	2867	1866	2206	4072	141	9	150	10	4	14	3485	3604	7089
2006	1407	1390	2797	2193	2926	5119	10	15	25	135	109	244	3745	4440	8185
Total	7532	7018	14550	8184	9721	17905	441	202	643	145	113	258	16292	17050	33342

Source: Basic Education Statistics in Tanzania, 2006(BEST); Regional Data

Table 4.42 shows the distribution of primary school teachers and teachers' houses by Region, Tanzania Mainland. Housing of teachers has been a serious problem all over the country. The average number of teachers per house ranges from 2 to 12 teachers per house in some Regions. Morogoro Region, with 7,089 teachers and a total number of 1,425 houses has an average of 5 teachers per house. In this respect it ranks number 13th in Tanzania Mainland.

Table 4.42: Distribution of Primary School Teachers and Teachers' House by Region, Tanzania Mainland, 2005

Region	Number of Teachers	Number of Teachers' House	Average Teachers per House	Ranking
Iringa	7720	3425	2	1
Manyara	4017	1322	3	2
Mbeya	9139	3544	3	3
Rukwa	4112	1531	3	4
Singida	4134	1316	3	5
Lindi	2921	707	4	6
Mara	6549	1569	4	7
Mtwara	4586	1055	4	8
Pwani	4238	1139	4	9
Ruvuma	6500	1731	4	10

Arusha	5997	1309	5	11
Kigoma	4876	1073	5	12
Morogoro	7089	1425	5	13
Dodoma	6437	1002	6	14
Mwanza	10754	1733	6	15
Shinyanga	8788	1590	6	16
Kagera	7566	1061	7	17
Tabora	4691	647	7	18
Tanga	7478	786	10	19
Dar es salaam	9267	749	12	20
Kilimanjaro	8171	696	12	21
Total	135013	29410	5	

Source: Basic Education Statistics in Tanzania, 2006(BEST); Regional Data

4.2.4: Secondary School Education

Primary education in Tanzania education structure is a foundation stage, and therefore it is expected that every primary school pupil after completing STD VII should be able to step further to secondary education, given determination, opportunity and resources. Each Region needs to ensure that it organizes all her resources and stakeholders to increase the number of students selected to join secondary school education each year. Table 4.47 shows the status of secondary schools in the Region.

Table 4.43: Status of Secondary Schools, Morogoro Region 2006

		Public	Private	Total
Number of Schools		80	26	106
Total Number Students	Boys	10101	3619	13720
	Girls	9846	2998	12844
	Total	19947	6617	26564
Number of Streams		400	221	621
Number of Teachers		1018	323	1341
Students per School		249	254	251
Students per Streams		50	30	43
Students per Teacher		20	20	20
Enrolment Sex Ratio				

Source: Basic Education Statistics in Tanzania, 2006(BEST); Regional Data

Morogoro Region is still lagging behind as it has only 106 secondary schools with 621 streams compared to 718 primary schools with a total of 9,628 streams for both Government and non government schools. This is an indication that Morogoro Region to a large extent depends much on other Regions' secondary schools to enrol its pupils who passé standard seven examination but do not get opportunity of securing places in the Region's secondary schools. Table 4.44 shows the number of students enrolled in Government and non-government secondary schools in the Region.

Table 4.44 Number of Schools and Streams in Secondary Schools in Morogoro Region 2005

	No. of School	Form I	Form II	Form III	Form IV	Form V	Form VI	Total
Gvt. Sec	49	120	130	53	61	25	21	410
Non Gvt.	23	41	44	35	32	12	13	177

Sec								
Total	72	161	174	88	96	37	34	587

Source: Basic Education Statistics in Tanzania, 2006(BEST); Regional Data

There are efforts being made to improve secondary school education all over the country. The efforts include improving infrastructure for secondary schools especially student's facilities. Table 4.45 shows the number of new secondary schools constructed in Morogoro Region and the number of students to be enrolled on their completion. This shows the efforts made by the Regional authorities to ensure that all pupils passing primary school leaving examination will have a chance to continue with secondary education.

Table 4.45: Construction of New Public Secondary School Infrastructure 2006

District	New schools		Student to be Enrolled	Extra Steams to existing Schools		Student to be Enroled	Total vacancies	%	Remaing students
	No	Streams		No	Steam s				
Kilombero	8	18	720	11	15	600	2864	58.8	2005
Kilosa	7	14	560	9	16	640	4651	98.4	78
Municipal	4	11	440	8	20	800	2161	55.2	1753
Morogoro (R)	9	18	720	17	7	280	2018	62.3	1223
Mvomero	7	14	560	5	5	280	2162	79.5	558
Ulanga	14	33	1320	3	3	120	2118	94.9	114
Total	49	107	4280	38	62	2728	15974	73.1	6081

Source: Morogoro Region District's Office 2006

Table 4.46 shows the total number of students enrolled in all secondary schools in the Region by sex. It shows that there is a slight difference in enrolment between boys and girls. The number of boys exceeded the number of girls which is about 10.6 % of the total enrollment.

Table 4.46: Enrolment by Sex and Grade in both Government and Non Government Secondary 2005

Level	Boys	Girls	Both
Form I	4485	3555	8040
Form II	3626	3093	6718
Form III	1887	1397	3266
Form IV	1926	1413	3339
Form V	527	551	1078
Form VI	472	448	920
Form I – IV	3748	9440	21364
Form V – VI	999	999	1998
Form I – VI	12923	10439	23362

Source: Basic Education Statistics in Tanzania, 2006(BEST); Regional Data

Higher number of qualified teachers provides room for having better outcome in the whole process of delivering education services. Table 4.47 shows the academic qualifications of teachers employed in both government and no-government secondary schools.

Table: 4. 47 Teachers Qualifications in the Secondary Schools in Morogoro Region, 2006

Teachers' Qualification	Government			Non-Government			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
BSc (Ed)	30	21	51	24	12	36	54	33	87
BSc (Gen)	7	3	10	15	11	26	22	14	36
BA (Ed)	36	16	52	34	11	45	70	27	97
BA (Gen)	2	3	5	19	1	20	21	4	25
Dip. Science	177	86	263	69	11	80	246	97	343
Dip. Arts	215	206	421	85	23	108	300	229	529
Grade A	2	0	2	6	0	6	8	0	8
Others	10	2	12	24	3	27	34	5	39
Total	479	337	816	276	72	348	755	409	1164

4.3 WATER SUPPLY AND SANITATION

4.3.1 Water Supply

The Region has various sources of water for both domestic and industrial use. The main sources found in the Region comprise of charco dams, springs, shallow wells, rain harvesting and bore holes. The main source of water that dominates almost in every district is shallow wells. Table 4.48 shows number of rural water schemes in the Region by District in 2006.

Table 4.48: Number of Rural Water Schemes in the Region by District, 2006

District Name	Charco Dams		Springs		Shallow Wells		Rainwater Harvesting		Bore holes	
	W	NW	W	NW	W	NW	W	NW	W	NW
Kilosa	9	1	4	-	39	4	8	-	61	2
Kilombero	-	28	327	99	414	150	1	-	12	-
Ulanga	-	-	1	-	343	20	4	-	1	-
Mvomero	6	-	101	-	204	66	2	-	17	-
Morogoro	9	1	12	1	239	94	2	2	12	4
Morogoro (Urban)										

Source: The Regional Commissioner's Office, Morogoro, 2006

There are various sources of drinking water in the Region. Table 4.49 shows number of households by main source of drinking water in the Region by district as captured by the 2002 Population and housing census. Morogoro Urban is having 47,149 households supplied with piped water. Also it shows that most of households in the Region depend on wells, springs, rivers and streams and water vendors.

Table 4.49 Number of Households by Main Source of Drinking Water and Size of Household, 2002

Water Source	Morogoro (R)	Morogoro (U)	Kilombero	Ulanga	Kilosa	Mvomero
Piped water	47,149	10,043	26,540	8,019	33,935	16,644
Protected Well	612	12,174	16,447	13,449	27,140	12,737
Un protected well	2,791	13,192	23,635	8,605	14,650	13,119
Protected spring	386	1,931	1,471	905	4,190	3,357
Un protected spring	153	3,143	386	716	4,941	1,305
River/Stream	2,441	16,151	5,500	5,400	19,611	11,294
Pond/Dam	1,031	761	14	-	80	34
Lake	-	-	-	-	-	-
Rain Water	-	34	7	-	6	-
Water Venders	21	27	-	3	1,550	345
Other	-	-	-	-	-	-
Total	54,582	57,457	73,999	37,097	106,101	58,836

Source: 2002 Population and Housing Census 2002.

Management of water schemes in Morogoro Region is the responsibility of the communities. Villages have water committees and village water funds. Table 4.50 shows the number of existing village water committees and water funds in the Region.

Table 4.50: Number of Village Water Committees and Funds in the Region by District in 2006

District Name	Village Water Committees	Village Water Committees' Funds (Tshs)
Kilosa	122	40,128,824
Kilombero	66	16,008,324

Ulanga	346	3,419,168
Mvomero	80	17,007,168
Morogoro	76	31,538,101
Morogoro Urban	-	-
Total	690	108,101,586.23

Source: The Regional Commissioner's Office, Morogoro, 2006

4.3.2 Sanitation

Sanitation is a very important component in ensuring human environmental health. Table 4.51 shows types of toilet facilities by households in the Region as captured by the 2002 Population and Housing Census. Toilet facility as any other household amenity can be used to measure the wealth of households. Some of the surveyed households did not have any toilet facility. The traditional pit-latrine is dominating in all districts of the Region.

Table 4.56: Total No. of Households by Toilet Facility

Type of Toilet Facility	Morogoro (Urban)	Morogoro	Kilombero	Ulanga	Kilosa	Mvomero
Flush Toilet	43,709	140	3,109	403	1,904	582
Tradition pit-latrine	171,540	55,771	63,642	34,770	95,402	55,677
Ventilated improved pit-latrine	2,544	156	4,994	408	1,014	274
Other	927	10	-	54	22	19
No Facility	1,069	1,379	2,255	1,463	7,760	2,284
Total	219,789	57,457	73,999	37,097	10,619	58,836

Source: 2002 Population census

SECTION V

OTHER DEVELOPMENT ISSUES

5.1. WOMEN DEVELOPMENT AND PROTECTION

Women are an important section of population and substantial labour force in any society. According to 2002 Population and Housing Census, women constitute about 50.2 percent of the Region's total population. Most of these women are involved in agriculture, petty businesses, and small scale projects. Together with their good intention and efforts, their contribution to the economy and opportunities to use the resources is limited in various ways including lack of access to financial and other productive resources.

Women in Morogoro Region have mobilized themselves to form various economic groups so as to improve their social and economic welfare. The Region has 1476 women economic groups with 8489

members. Out of all these groups 599 groups were able to secure loans with a total value of Tshs. 147,768,400.00 by the year 2006 (See Table 5.1).

Table 5.1: Active Women Groups in the Region District, 2006

District Name	No. of Group	Total Membership	No. of Group Loaned	Total Loaned (Tshs)
Kilosa	631	3089	284	50,468,800
Kilombero	324	2240	38	8,000,000
Ulanga	192	1515	81	26,599,600
Mvomero	45	445	22	8,000,000
Morogoro	306	1530	173	55,150,000
Morogoro Urban	23	115	23	7,550,000
Total	1476	8489	599	155,768,400

Source: The Regional Commissioner's Office, Morogoro, 2006

5.2 YOUTH ECONOMIC DEVELOPMENT

The central government has been paying attention to various age groups with different special needs based on their age. The issue of economic empowerment of youth involves many partners. District councils in Morogoro Region, wards and villages have played a significant role in making available loans for youth, training and facilitation to organize youth economic group formation. The Region has a total of 681 youth economic groups. Morogoro Urban is leading by having most groups compared to other districts. A total of 257 youth groups have managed to secure loan amounting to Tshs. 32,100,555.00 by the year 2006 (see Table 5.2).

Table 5.2: Active Youth Economic Group in the Region by District, 2006

District Name	No. of Group	Total Membership	No. of Group Loaned	Total Loaned (Tshs)	Total Loaned by NGO's (Tshs)
Kilosa	72				
Kilombero	245	1701	-	-	
Ulanga	74	850	54	7,800,000	
Mvomero	20	108	15	3,000,000	
Morogoro	310	1550	184	19,300,555	2,000,000
Morogoro Urban	32	329	4	2,000,000	
Total	681	4538	257	32,100,555	

Source: The Regional Commissioner's Office, Morogoro, 2006

5.3 COOPERATIVE DEVELOPMENT

Morogoro Region has a history of involvement in the cooperative activities. In the past few years the Region put much of her co operative efforts towards organizing her community members to be involved in

SACCOS. Table 5.3 shows the number of active SACCOS in the Region by 2006. As shown in the same Table, Mvomero District has better performance in terms of total funds of SACCOS as compared to other Districts in the Region. The District has a total of 17 SACCOS with 4,867 members and total funds amounting to Tshs. 1,217,623,215/-. However, in terms of loans provided to members, Kilombero District had the largest share. Table 5.4 shows other active cooperative groups in the Region.

Table 5.3: Active SACCOS in the Region by District, 2006

District Name	No. of SACCOS	Total Membership	Total Funds SACCOS A/C as at 31.11.2005	Total Loaned to Member (Tshs)
Kilosa	25	4,397	562,880,000	1,664,300,000
Kilombero	71	10,659	899,674,701	3,724,400,194
Ulanga	30	2,267	800,000,000	600,000,000
Mvomero	17	4,867	1,217,623,215	2,857,030,710
Morogoro Rural	14	4,232	1,127,289,077	1,600,774,439
Morogoro Urban	11	1,887	90,477,422	392,112,460
Total	168	28,309	4,607,466,993	10,838,617,803

Source: The Regional Commissioner's Office, Morogoro, 2006

Table 5.4: Other Active Cooperatives in the Region by District, 2006

District Name	Consumer Cooperatives		Service Cooperatives		Marketing Cooperatives		Others (Not SACCOS)	
	Number	Member	Number	Member	Number	Member	Number	Member
Kilosa								
Kilombero	-	-	-	-	2	88	-	-
Ulanga	-	-	2	50	15	280	-	-
Mvomero	1	103	-	-	3	412	-	-
Morogoro	-	-	1	33	3	108	-	-
Morogoro Urban	-	-	1	30	-	-	18	811

Source: The Regional Commissioner's Office, Morogoro, 2006

The Region also has various development organizations working in different parts of the region. These include NGOs, CBOs and FBOs. Most of these organizations are engaged in development projects mainly HIV/AIDS, other community development and income generating activities. Tables 5.5, 5.6 and 5.7 give more details these organisations.

Table 5.5: Active NGO's in the Region by District, 2006

District Name	No. of Organizations	No. of Beneficiaries	Types of Programmes/Actives
Kilosa	8	138,567	Health research, Forest, House construction , Child development
Kilombero	31	196,310	Child development,HIV/AIDS,Environment,Income Generation,Health Research
Ulanga	6	1,614	Orphans care, Human Rights, HIV/ AIDS, Good governance, Environmental conservation
Mvomero	23	-	Orphans care, Human Rights, HIV/ AIDS, Good governance, HI/AIDS, Environmental Conservation
Morogoro	25	-	Environmental Conesvation, Health care, Women and Youth Development

Morogoro Urbanrban	28	-	Income generating counseling + Sensitization
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Source: The Regional Commissioner's Office, Morogoro, 2006

Table 5.6: Active CBO's in the Region by District, 2006

District Name	No. of Organizations	No. of Beneficiaries	Types of Programmes/Actives
Kilosa	23	-	HIV/ AIDS Control Education
Kilombero	60	126,469	Income generating, Environment, HIV/ AIDS Education
Ulanga	8	1,186	Environment, HIV/ AIDS, Cultural Support PLI + A'S
Mvomero	34	140,000	HIV/ AIDS Orphans care & support environment, youth support good governance
Morogoro	40		Combating HIV/ AIDS ENVIRONMENT CONSERVATION
Morogoro Urbanrban	10	283,000	Counseling Extension, lateral support

Source: The Regional Commissioner's Office, Morogoro, 2006

Table 5.7: Active FBO's in the Region by District, 2006

District Name	No. of Organisation	No. of Beneficiaries	Types of Programmes/Actives
Kilosa	5	-	HIV/ AIDS Interruption
Kilombero	3	110,385	Community development, HIV/ AIDS , Income generating
Ulanga	8	13,544	Spiritual, HIV/ AIDS, Health & Water
Mvomero	2	78,262	Social welfare,HIV/AIDS,Disabled
Morogoro	12		Combating HIV/ AIDS
Morogoro Urbanrban	5	141,500	Education in faith moral support

Source: The Regional Commissioner's Office, Morogoro, 2006

5.4. HOUSING AND ASSETS OWNERSHIP

Housing and assets ownership by households are among the major development indicators in any society. The 2002 Housing and Population Census indicated that most of the houses in Morogoro Region are of temporary nature. This is shown by the fact that most of the households live in houses constructed by using temporary materials. Table 5.8 shows that most of households in the Region lived in houses roofed by temporary materials such as grass, and grass and mud. Table 5.9 shows that most households lived in houses with walls constructed by using temporary materials such as poles and mud, timber, and grass. Table 5.10 shows that only 24.3 percent of the households lived in buildings with floor constructed by permanent materials.

Table 5.8: Type of Roofing Materials of the Main Building by Households in the Region, 2002

Roofing Material	Morogoro (Urban)	Morogoro (Rural)	Kilombero	Ulanga	Kilosa	Mvomero
Iron Steels	2,832	19,188	32,458	7,969	38,490	25,625
Tiles	-	11	90	21	980	15
Concrete	-	1	7	1	6	-
Asbestos	-	92	1,119	7	1,174	73
Grass	1,940	36,316	38,513	27,398	58,686	29885
Grass/Mid	72	1,820	1,771	1,686	6,436	3187
Other	84	28	41	16	331	51
Total	4,928	57,457	73,999	37,097	10,610	58,836

Source: 2002 Population and Housing Census, Tanzania

Table 5.9: Type of Wall Material of the Main Building by Households in the Region, 2002

	Morogoro (Rural)	Morogoro (Urban)	Kilombero	Ulanga	Kilosa	Mvomero
Stones	521	531	41	47	89	82
Cement bricks	29,331	2,878	2,297	194	4,306	2,130
Sun-Dirtied bricks	9,439	8,934	8,030	2,779	35,222	20,177
Baked bricks	5,004	6,175	33,466	11,946	18,249	10,419
Poles and Mud	10,076	37,206	27,039	21,366	46,411	25,274
Timber	25	83	18	20	154	44
Grass	79	1,591	2,429	407	1,006	622
Other	107	59	679	337	665	88
Total	54,582	57,457	73,999	37,097	106,101	58,836

Source: 2002 Population and Housing Census, Tanzania

Table 5.10: Type of Floor Material of the Main Building by Households in the Region, 2002

Floor material	Morogoro (Urban)	Morogoro (Rural)	Kilombero	Ulanga	Kilosa	Mvomero
Cement	37,202	6,153	15,536	2,943	16,728	10,228
Mud	17,163	51,165	58,253	33,786	88,869	47,212
Timber	115	137	104	103	448	215
Tiles	49	-	11	10	23	6
Other	4	1	95	255	34	1,175
Total	54,582	57,457	73,999	37,097	106,101	58,836

Source: 2002 Population and Housing Census, Tanzania

Table 5.11 shows that few households owned assets such radio, bicycle, iron and electricity. Most households owned a hand-hoe which is the main tool for land cultivation.

Table 5.11: Assets Ownership by Households in the Region, 2002

Type of Assets	Morogoro (Urban)	Morogoro (Rural)	Kilombero	Ulanga	Kilosa	Mvomero
Radio	38,620	28,767	30,699	13,151	47,391	27,379
Telephone	6,083	208	523	107	540	480
Bicycle	19,062	12,661	33,687	9,663	39,070	21,591
Hand hoe	30,783	49,774	61,396	32,425	87,661	29,591
Wheel Barrow	18,645	2,994	3,539	1,114	6,992	3,076
Charcoal/El.	2,976	428	1,177	476	1,739	663
Electricity	17,860	516	4,495	381	4,624	1,977
Total	134,029	95,348	135,516	57,317	188,017	84,757

Source: 2002 Population and Housing Census, Tanzania

5.5 DEVELOPMENT PARTNERS

Morogoro Region cooperates with a number of partners in its development activities. These partners include the central government, and a number of local and foreign non-governmental organisations (NGOs). Bilateral and multilateral agencies have played a significant part in the Regions development efforts. Some of the organisations and development agencies that have contributed to the Region's development efforts include:

Area of Cooperation / Assistance	Development Partner / Organisation
Education	Central Government (Basket Fund)
	SIDA (Sweden)
	World Bank
	World Vision International (Tanzania)
	Care International
	SNV (The Netherlands)
Health	Central Government (Basket Fund)
	The Anglican Church
	The Roman Catholic Church
	Rotary International
	Sight Savers
	Germany Leprosy Relief
	UNICEF
	DANIDA (Denmark)
	JICA
	Care International
Agriculture and Natural Resources	The Central Government(Basket Fund)
	World Bank

	FAO
	CARITAS
Roads	Central Government (Basket Fund)
	The World Bank
	VAASA International (Finland)
Women and Youth Development	Central Government
	World Vision International (Tanzania)
	AFREDA

SECTION VI

POTENTIAL INVESTMENT AREAS

6.1 INTRODUCTION

Morogoro Region is endowed with abundant potential resources that can be tapped for development. The resources include good climate with double maxima rains, fertile land which is very suitable for agriculture and livestock keeping, rich in natural resources such as forests which can support economic activities such as bee-keeping, perennial rivers and streams suitable for irrigation agriculture and fishing, wildlife, game reserves and National Parks with high potential of attracting tourist and hunting activity, and minerals. The Region is also served by a number of transport modes such as roads and railways. The Region is linked to other Regions and neighbouring countries such as Kenya, Burundi, Rwanda, Zambia and Malawi by tarmac road. Its location in close proximity to Dar es Salaam City gives the Region the advantage to use the City's harbour and international airport facilities. The Region is also served by the central and Tanzania-Zambia (TAZARA) railway lines. All districts in the region are connected to the national grid of electric power supply. The multi-mode transport and communication network and reliable power supply are of great importance for industrial development in the Region.

6.2 AGRICULTURE

Morogoro Region has extensive fertile land suitable for rain and irrigation farming which is currently underutilized. The Region, also, has plenty of land suitable for irrigation but underutilized or not utilised at all. It is estimated that the total area potential for irrigation in the Region is 434,390 hectares. These are found in Kilombero River Basin (336,740 Ha.), Luwegu River Basin (26,950 Ha.), Wami River Basin (45,000 Ha.) and Great Ruaha River Basin (45,000 Ha.). To date, about 20 percent of this land is currently utilised.

Low acreage in terms of land cultivation is mainly caused by poor tools used in land cultivation. The hand-hoe is predominantly used by the majority of farmers. Also, the Region is facing the problem of pests such as army worms which destroy crops at various stages of growth. In some cases, drought has caused bad performance in some years. This calls for great efforts to be done in terms of investment in irrigation agriculture so as to avoid heavy dependence on rain agriculture.

Other efforts that should be undertaken to boost agriculture include improved extension services to small farmers, introduce micro-credit schemes to small-holder farmers so that they can afford to purchase agricultural inputs, and improve efficiency in marketing agricultural produce. This can be achieved through improved inland transportation infrastructure especially roads so that they can be passable throughout the year. Inland locked areas of great agricultural potential especially in Ulanga District can be opened up by constructing new feeder roads that can link these areas with other places in the Region.

Large scale farming for various crops which can grow well in the Region such as oilseeds and paddy should be encouraged. The traditional cash crops such as sisal, sugarcane and cotton have a great potential of attracting large scale farmers.

6.3 LIVESTOCK

Livestock keeping is another economic activity with great potential for expansion in the Region. The Regional great potential in this area lies on its possession of adequate land which can be utilised for livestock grazing. However, land use zoning should be carried out collaboratively by responsible authorities and villagers so as to avoid land use conflicts, especially between livestock keepers and farmers.

The Region is facing a problem of livestock diseases that can in one way or another hamper efforts of investing in this important economic area. Tick borne diseases such as Anaplasmosis, ECF and babesiosis are largely contributing to cattle morbidity and mortality in the Region. To respond to this problem, livestock farmers should be assisted by the government and other development practitioners to invest in livestock infrastructures as well as improving accessibility to animal health services.

The presence of tsetse flies is a big problem to livestock keeping in some areas of the Region especially in Ulanga District. The flies are responsible for causing fatal sleeping sickness diseases (trypanosomiasis). Therefore more efforts should be made to address on the problem, involving cattle immunization through prophylaxis drugs.

6.4 FORESTRY, BEE KEEPING AND FISHERIES

6.4.1 Forestry

Morogoro Region is blessed with extensive forest cover. However, the existing forest cover is under severe threat from excessive tree cutting. Forests are mainly cleared for crop farming and firewood demand. Investment in forestry can boost production of direct forest products such timber, charcoal and firewood. Indirect products such as honey and bee-wax can be enhanced through bee keeping. Furthermore, investment in forest conservation can boost wildlife, hunting and tourist activities.

6.4.2 Bee Keeping

Morogoro Region with extensive forest cover area has a great potential in bee keeping. This activity is already one of the major economic activities in the Districts of the Region including Kilosa, Ulanga and Morogoro Rural. However, the activity is handicapped by lack of modern technology in bee-keeping. Most of bee-keepers are still using traditional beehives and harvesting technology. Investment in education and use of modern technology in bee keeping to bee-keepers will boost production in this sub-sector. Likewise, introduction of micro credit schemes to bee-keepers can significantly uplift their affordability to purchase modern beehives and therefore raise productivity levels of honey and bee-wax. Another worthy investment is in honey and bee-wax processing factories which can boost the market for these products.

6.4.3 Fisheries

Endowment of perennial rivers and streams in the Region makes it famous in fishing economic activity. Already the economic activity ranks second to agriculture in some Districts of the Region. These include Kilombero, Kilosa and Ulanga. Investment in this sub-sector will greatly contribute to the economy of the Region. The government and development practitioners can assist small-holder fishermen and women to form fishing groups so as to be access micro-credit for purchasing fishing gears such as boats and out board engines instead of using the outdated canoes. Another important investment should be building and improving equipments for storing fresh fish and shades for drying. Investment in constructing fish ponds can also improve modern fish-farming and production.

6.5 WILDLIFE AND TOURISM

Morogoro Region has great wealth in wildlife. It has number of Game Reserves, National Parks and Historical sites. These include the famous Selous Game Reserve, Mikumi National Park and Udzungwa

Mountain National Park. The reserves and national parks have a great potential of providing shelter to wildlife including animals and birds for tourist attractions. The traces for colonial regimes such as churches, graves and buildings, resistance of local communities to colonial regimes (including battle fields and graves), and the chiefdoms that existed are historical sites with potential to attract tourists. However, the performance in this sector is affected by a number of factors including inadequate skilled manpower and finance capital necessary for investment.

Investment in this area include employing adequate trained personnel in wildlife management and provision of incentives to communities living in close proximity to the game reserves and national parks so that they can participate fully in protecting these resources from poachers. Another worthy investment in this sector is identification and advertisement of these natural resources so that they can attract more tourists from within the country and abroad. Furthermore, investment in hotels that can accommodate tourists is very essential in boosting the tourist sector in the Region.

6.6 EDUCATION

Currently, the Region like other Regions in Tanzania is facing a challenge of growing young population that demands education at all levels, namely, pre-primary education, primary education and secondary education. At the present the Region is campaigning to make sure that all standard seven leavers who pass their examinations continue with secondary education. Although this responsibility is being dealt with squarely by Local Government Authorities in the Region, the Government has left the doors open to private investors to chip in this sector. Private investors are greatly encouraged to invest in this sector so as to cope with the growing demand. The investments needed are building schools, hostels, teachers' training colleges and teacher's houses.

6.7 HEALTH

The growing population in all Sistracts of the Region has resulted to increased demand for health facilities. Investment needed in this sector include the establishment of dispensaries and health centres; training of health personnel; and supplying of drugs, vaccines and equipment especially by opening up medical stores and shops in both urban and rural areas.

6.8 MANUFACTURING

The Region has an attractive environment for the manufacturing sector to flourish. This includes extensive land for constructing industries; labour force, reliable infrastructure such as electricity, water and road transport. Great potential exists for industries which could utilise locally produced raw materials such as sisal, timber, fish, honey, bee-wax and a variety of crops such as oil seeds, banana, maize, vegetables, cotton and fruits.

6.9 MINING

The Region is very rich in minerals. As observed earlier, almost all districts in the Region are endowed with gemstones such ruby, rose garnet, sapphire, rhodolite, green tourmaline and amethyst and industrial minerals such as graphite. Investment in this sector includes mining and minerals processing especially gemstones. Currently there is high rate of tax avoidance by registered and unregistered small-scale miners. The Government should continue with already started efforts of educating these miners on the process of registering themselves so that they become legal miners and the importance of paying taxes.