



**THE UNITED REPUBLIC OF TANZANIA**

**KIGOMA REGION  
SOCIO-ECONOMIC PROFILE**

*Joint Publication by:*  
**THE PLANNING COMMISSION DAR ES SALAAM**  
**and**  
**REGIONAL COMMISSIONER'S OFFICE**  
**KIGOMA**

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## **FOREWORD**

1. *As we approach the 21st Century the problems facing rural areas in developing countries like Tanzania are numerous and formidable. Social and Economic services are deteriorating and proving to be unsustainable; school enrollment rates are declining; food situation is precarious; infant and maternal mortality rates continue to be high; unemployment is on the rise triggering off mass migration of youth from the rural areas into already overcrowded urban centres; in Kigoma Region, for example, land pressure is escalating and deforestation is going on at an alarming rate.*
2. *This situation has arisen because of many factors including ill - prepared rural development programmes and weak monitoring and supervision of the implementation of development programmes and sectoral strategies. The observed shortcomings in the policy formulation, project identification, design, and implementation in the developing countries is in turn attributed to lack of reliable and adequate data and information on the rural development process.*
3. *The publication of Regional Socio-economic Profiles series by the Planning Commission in collaboration with Regional Commissioner's offices should be viewed as a fruitful attempt towards finding solutions to the existing problem of data and information gap.*
4. *The Regional Profile series cover a wide range of data and information on geography, population, social economic parameters, social services, economic infrastructure and*

*productive sectors. The publications so far have proved to be of high demand and a vital source of information to many policy makers, planners, researchers, donors and functional managers.*

*The Planning Commission has found it a worthwhile effort to extend the exercise to cover even more regions. Readers are invited to make suggestions and constructive criticisms which can assist in improving the quality and effectiveness of future Profiles.*

5. *I would like to take this opportunity to acknowledge with thanks once again the financial support of the Royal Norwegian Embassy which facilitated the preparation of the Kigoma Region Socio-Economic Profile. I would also like to thank both the Planning Commission and Kigoma Regional Planning Staff who put a lot of effort into ensuring the successful completion of this task.*



***Nassoro W. Malocho (MP)***

***MINISTER OF STATE***

***PLANNING AND PARASTATAL SECTOR REFORM***

*December, 1998*



## SECTION I

### 1.0 LAND, PEOPLE AND CLIMATE

#### 1.1 Geographical Location

Kigoma region is located on the shores of Lake Tanganyika at the North - West corner of Tanzania. The region is situated between Longitudes 29. 5 and 31.5. East and Latitudes 3.5 and 6.5 South of the Equator. It shares boundaries with Burundi and Kagera region to the North, Shinyanga and Tabora regions to the East, Congo to the West and Rukwa region to the South.

#### 1.2 Land Area and Land Use

The entire region has an area of 45066 Square kilometres which is equivalent to 4.8% of the total area of Tanzania of which 8029 sq. km is water and 37,037 is land area.

The land area and land use classification is as in Table I - 1

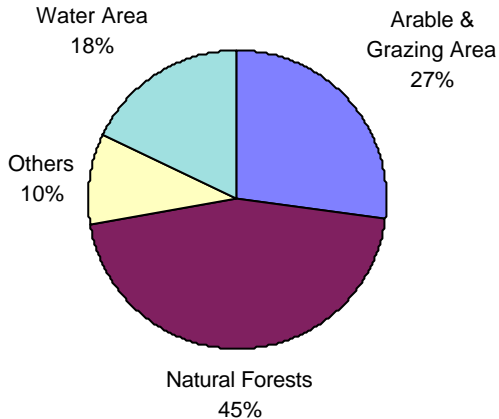
**TABLE I-1: LAND AREA AND LAND USE CLASSIFICATION, KIGOMA REGION**

Land Classification	Area Sq. Km	Percentage of total area
Arable & Grazing Area	12.222	27.1
Natural Forests	20. 371	45.2
Others	4,444	9.9
Water Area	8,029	17.8

Total Region	45,066	100.0
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Source : Regional Commissioners Office, Kigoma Region.

**Fi. 1: Distribution of Land Area and Land Use Classification, Kigoma Region**



### 1.3 Topography and Drainage

Kigoma region is a gently inclined plateau with steep hills rising very sharply from 800 metres at the level of lake Tanganyika to altitudes of 1, 750 metres to the East descending from the North and East into gently rolling hills with three major perennial rivers of Malagarasi, Luiche and Ruchugi. The first two rivers comprise the major drainage area. The descent leads to rivers valleys at 1000 metres, and swampy and flat delta area at 800 metres where the rivers join the lake.

### 1.4 Climate, Soils and Vegetation

The climate of Kigoma region is characteristically tropical with a distinct long wet rainy season beginning from late October to May with short dry spell of 2-3 weeks in January or February followed by a prolonged dry season. Annual rainfall is variable ranging from 600 mm- 1500 mm being the heaviest in highlands, intermediate in the lower slopes and low in the valley bottom and lake- off shore areas. Mean daily temperatures range between 25 C in December, January to 28 C in September. Temperature varies inversely with altitude. The soils of Kigoma region can generally be categorized as follows: Along the lake shore the soils are deep and well drained comprising the dark reddish brown fine sandy loams, and sandy loams partly stony and severely eroded. The heavy black soils are found in permanently waterlogged areas with black clayey soils which have a high proportion of sand in swamp fringes subject to seasonal waterlogging. These are highly fertile areas because of high proportion of sand and silt. However these soils are not subject to seasonal wetting and drying like the cotton soils because the water table is high. In the low relief areas the soils are dark reddish clay loams with fairly good internal drainage while the black and brown alluvial soils are mostly found in areas of high relief. The vegetation in Kigoma region comprise closed and open woodland which cover about 70% the land area, bushy grassland and swamps of various coverage.

## **1.5 Agro- Economic Zones**

The region can be divided into four (4) agro- economic zones on the basis of altitude and corresponding annual rainfall which is described as follows.

### **The Lake- Shore Zone.**

This zone lies within altitude of 800 -1000 metres with annual rainfall of 600 - 1000 mm. The Lake- shore Zone forms a narrow strip of land between Lake Tanganyika and the mountains dissected by numerous streams flowing into the lake creating in the process valleys in a few locations which support paddy farming. Cassava, maize, beans and oil palm are also grown. The main economic activity is fishing. Population is sparsely distributed with more concentration on the shores of the lake.

### **The Miombo Zone .**

The Miombo zone lies within altitude 1000 and 1200 metres with rainfall of 600 - 1000mm. The areas is generally covered with miombo woodland and is sparsely populated due to tsetsefly infestation. Economic activities include cattle rearing, hunting and honey/bees wax gathering with agriculture.

### **The Intermediate Zone:**

This zone lies between 1200 - 1500 metres above sea level with an annual rainfall of 850 mm to 1100 mm. The zone is characterized by swampy area which provide great potential for irrigation. Population in this zone developed from both organised and spontaneous resettlement mainly from the Highland. Common food crops include cassava, maize, beans and sorghum/millet while oilpalm, cotton and tobacco constitute the cash crop package.

## The Highland Zone.

This zone lies within the altitude of 1500 metres to 1750 metres with annual rainfall of 1000 - 1600 mm. The zone is divided into two main parts. In the north the zone is located above the intermediate zone and has a high population. In the south there is a separate highland area and the Mahale mountains reaching a maximum altitude of 2373 metres. This area is uninhabited and most of it has been designated a National Park. Another National Park is the Gombe stream situated North of Kigoma town, famous for tourist attraction due to the existence of the chimpanzees.

Common food crops include maize, beans and bananas with coffee in the higher wetter areas.

**TABLE I-2 SUMMARY OF AGRO- ECONOMIC ZONES - KIGOMA REGION**

Zone	Altitude range and Coverage	General Morphology	Rainfall	Dominant Soil	Main economic activity
The Highland Zone	<ul style="list-style-type: none"> <li>- Altitude range from 1500 - 1750 metres above sea level</li> <li>- The Zone is divided into two parts: The north located above Intermediate Zone. The south covering highland and the Mahale mountains</li> </ul>	-Gentle plain with moderately sloping hills and plain	1000 - 1600 mm annual rainfall	-  black and brown alluvial	<u>- Agriculture</u> Maize, beans, banana and coffee.  <u>Livestock:</u> Cattle, goats  <u>Tourism</u> National Parks
The Intermediate Zone	<ul style="list-style-type: none"> <li>- Altitude 1200 - 1500 m</li> <li>- Extension of Western plateau</li> </ul>	- Gentle Plain	850 - 1100 mm annual rainfall	dark reddish clay loams	<u>Agriculture</u> maize, beans, oil palm, cotton, hunting honey/bees wax

The Miombo Zone	- Altitude 1000 -1200 - Covers much of the East and South East		600-1000 mm annual rainfall	red soils to sandy	<u>Livestock:</u> cattle sheep goats, hunting honey/bees wax
The Lake shore Zone	- Altitude 800 -1000m - Covers a narrow strip along Lake Tanganyika, the Valley of River Luiche, the Valley of River Malagarasi and area of Kigoma/Ujiji town		600 - 1000 mm annual rainfall	dark reddish brown fine sandy loams	<u>Agriculture:</u> Paddy Cassava oil pam, maize, cotton <u>Fishing</u>

Source: Regional Commissioners Office - Kigoma

## 1.6 Administrative Units

Kigoma region was formed with Kigoma/ Ujiji town as headquarters when the former eight colonial provinces were finally split into 17 regions in 1963. Previously the region was part of the former Western Province with its headquarter at Tabora.

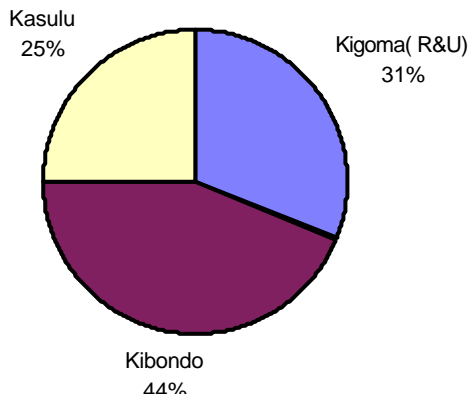
The region is divided into three administrative districts of Kigoma, Kasulu and Kibondo. As can be seen in Table I-3 in terms of land area Kibondo district is the largest district covering about 44% of the total regional land area followed by Kigoma district (31%) and Kasulu district (25%) which is the smallest. As is the case with all other regions of the mainland, the districts are further divided into smaller administrative units known as divisions, wards and finally villages. In the case of Kigoma, it is divided into 18 divisions, 81 wards and 220 villages. The number of divisions, wards and villages for each district are as presented in Table I-3.

**TABLE I-3 THE AREA AND ADMINISTRATIVE UNITS BY DISTRICT, KIGOMA REGION**

District	Total Area (Sq. Km)	Land Area (Sq. Km)	%	Number of		
				Division	Wards	Villages
Kigoma (R&U)	19,685	11,655	31	7	31	71
Kibondo	16,058	16,058	44	4	20	66
Kasulu	9,324	9,324	25	7	30	83
Region	45,066	37,037	100	18	81	220

Source: Regional Commissioner's Office, Kigoma

**Fig. 2: Distribution of Land Area (Sq. Km) and Administrative Units By District, Kigoma Region**



## 1.7 Ethnicity

The main indigenous ethnic group for Kigoma region are the Waha who are dominant in all the three districts of the region.

There are a few groups of mixtures of Nyamwezi, Sukuma, Fipa and people with origins from the neighbouring countries like Congo, Rwanda and Burundi.

## 1.8 Population Characteristics

### 1.8.1 Size, Distribution and Growth

The history of Kigoma region population size is recorded by the 1967, 1978 and 1988 population censuses as shown in Table I-4

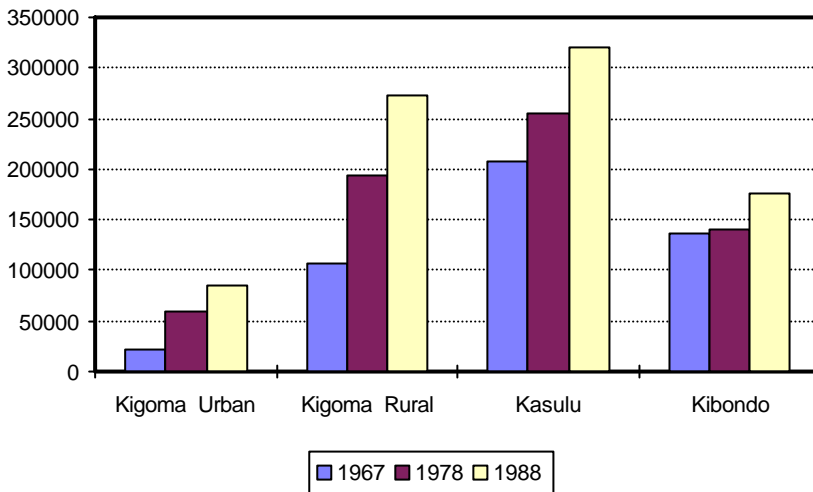
**TABLE I-4 POPULATION OF KIGOMA REGION 1967, 1978 AND 1988 CENSUSES.**

District	CENSUS YEAR			ANNUAL AVERAGE GROWTH	
	1967	1978	1988	1967/1978	1978/1988
KIGOMA URB AN	21,369	58,788	84,647	NA	3.7
KIGOMA RURAL	107,54	194,520	273,390	NA	3.5
KASULU	207,61	255,651	320, 518	NA	2.3
KIBONDO	136,91	139,991	176, 262	NA	2.3
TOTAL REGION	473,44	648,950	854, 817	2.9	2.8

Source : 1967, 1978, 1988 Population Census

**Fig. 3: Population of Kigoma Region by Districts, 1967, 1978 and 1988 Censuses.**





In 1988 the population of Kigoma region recorded a population of 854,817 almost double from 473,443 people recorded in 1967 census. It increased by 80.5 percent between 1967 and 1988. Population distribution in the region is highly uneven. Kasulu district is the heavily populated district with 34.3 by people per square kilometre while Kibondo district has the lowest population density of only 11.0 people per square kilometre as illustrated in Table I- 5

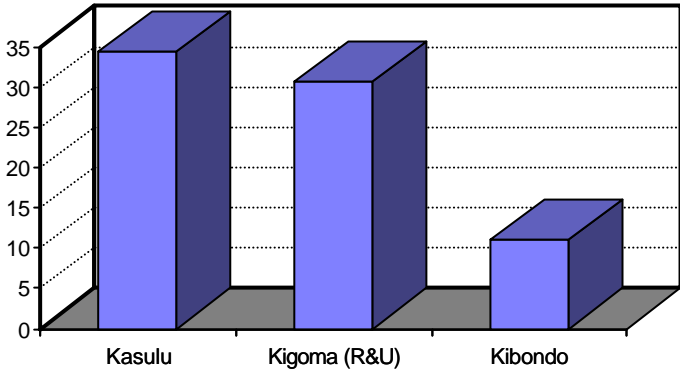
**TABLE I-5 POPULATION DISTRIBUTION AMONG DISTRICTS BY DENSITY, KIGOMA REGION 1988**

District	Land Area	Population 1988	Population Density
Kasulu	9,324	320,518	34.4
Kigoma (R&U)	11,655	358,037	30.7
Kibondo	16,058	176,262	11.0

Total Region	37,037	854, 817	23.1
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Source: Regional Commissioners Office, Kigoma Region.

**Fig. 4: Population Distribution among Districts By Density, Kigoma Region 1988**



The distribution of tsetse free areas has strongly influenced the distribution of population in the region. In Kibondo district many villages are clustered in the rolling foot hills along the Tanzania-Burundi border. In Kasulu district most of the villages are clustered along the main road from Kigoma to Kibondo or lie north of this road on mountainous areas along the International border. The same pattern of distribution occur in Kigoma district apart from isolated settlements along lake shore, the railway line and at Gombe Game Controlled Area.

If population and density of Kigoma region is matched against other regions in Tanzania mainland, the picture in Table I-6 reveal that Kigoma region with a population density of 23.1 is in the

eleventh position and is higher compared to neighbouring regions of Tabora, Shinyanga and Rukwa.

**TABLE I-6: POPULATION DISTRIBUTION BY REGIONS AND DENSITY TANZANIA MAINLAND 1988**

<b>Region</b>	<b>Land Area (Sq. Km)</b>	<b>Population</b>	<b>Population Density / Km<sup>2</sup></b>	<b>Ranking</b>
<b>KIGOMA</b>	<b>36,751</b>	<b>854,817</b>	<b>23.1</b>	<b>11</b>
Mwanza	20,095	1,878,271	93.5	1
Kilimanjaro	13,309	1,108,699	83.7	2
Dsm/Coast	33,800	1,998,865	59.1	3
Mtwara	16,710	875,977	53.2	4
Tanga	26,677	1,280,262	48.1	5
Kagera	28,456	1,313,639	46.1	6
Mara	21,760	952,616	43.7	7
Shinyanga	50,760	1,763,960	34.9	8
Dodoma	41,311	1,235,277	30.0	9
Mbeya	60,350	1,476,261	24.0	10
Iringa	56,850	1,193,074	21.3	12
Morogoro	70,799	1,222,734	17.0	13
Arusha	82,098	1,352,225	16.5	14
Singida	49,341	791,814	16.0	15
Tabora	76,151	1,036,294	14.0	16
Ruvuma	66,477	783,327	12.0	17
Rukwa	68,635	704,050	10.1	18
Lindi	67,000	646,345	9.6	19

Total	887,588	22,466,955	25.3	-
Mainland				

Table I- 4 reveals that during 1967/78 Kigoma region had a population growth of 2.9 compared 3.2 % of mainland Tanzania while in the subsequent ten years of 1978/88 the rate had gone down to 2.8 % the same as of the mainland.

**TABLE I-7: POPULATION AND POPULATION GROWTH RATES BY REGIONS 1967, 1978 AND 1988. TANZANIA MAINLAND**

Region	1967	1978	1988	Annual Growth	
	Census	Census	Census	1967-78	1978 -88
<b>Kigoma</b>	<b>473,443</b>	<b>648,941</b>	<b>854,817</b>	<b>2.9</b>	<b>2.8</b>
Dodoma	709,380	972,005	1,237,819	2.9	2.4
Arusha	610,474	926,223	1,251,675	3.8	3.8
Kilimanjaro	652,722	902,437	1,108,699	2.9	2.1
Tanga	771,060	1,037,767	1,283, 636	2.7	2.1
Morogoro	682,700	939,264	1,222,737	2.9	2.6
Pwani	428,041	516,586	638,015	1.7	2.1
D'Salaam	356,286	843,090	1,360, 850	7.8	4.8
Lindi	419,853	527,624	646,550	2.1	2.0
Mtwara	621, 293	771,818	889, 494	2.0	1.4
Ruvuma	395,447	561,575	783,327	3.2	3.4
Iringa	689,905	925,044	1,208,914	2.7	2.7
Mbeya	753,765	1,079,864	1,476,199	3.3	3.1
Singida	457,938	613,949	791,814	2.7	2.5
Tabora	502, 068	817,907	1,036,293	4.4	2.4
Rukwa	276, 091	451,897	694,974	4.5	4.3

Shinyanga	899,468	1,323,535	1,772,549	3.5	2.9
Kagera	658,712	1,009,767	1,326,183	3.9	2.7
Mwanza	1,055,883	1,443,379	1,878,271	2.8	2.6
Mara	544,125	723,827	970,942	2.6	2.9
Mainland	11,958,654	17,036,499	22,533,758	3.2	2.8

Source : Population Census 1967, 1978 and 1988

## 1.8.2 Sex, Households and Age Groups.

Distribution of the 1988 population census between sexes gives a regional average sex ratio of 91. This means for every 100 females there are 91 males or there are a lot more women compared to men. Kibondo and Kasulu districts showed the biggest disparity in a number between sexes in the region as compared to Kigoma Rural and Urban. See Table I-8.

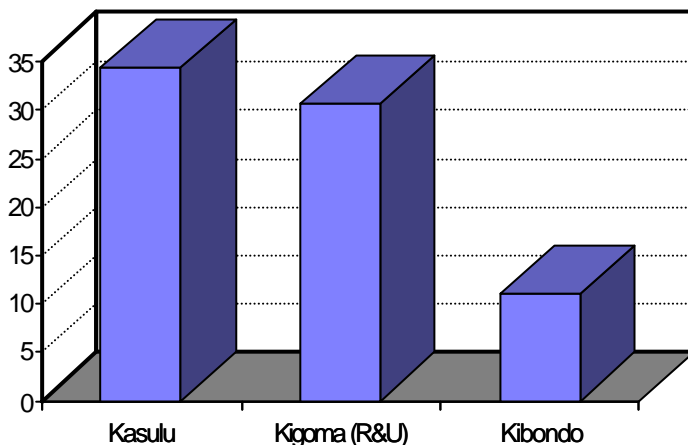
**TABLE I -8: POPULATION DISTRIBUTION BY SEXES AND DISTRICT 1988, TABORA REGION**

District	Sexes		Total	Males per female
	Males	Female		
Kasulu	149,653	170,865	320,518	88
Kibondo	81,587	94,675	176,262	86
Kigoma (R)	133,491	139,899	273,390	95
Kigoma (U)	42,056	42,591	84,647	99
Total	406,787	448,030	854,817	91

Source: Population Census Regional Profile 1988

Table I-9 shows a different situation with respect to 1978 census. While the regional average sex ratio was 91 in 1988, it was 106 in 1978 which means there were a lot more males compared to women. With regards to distribution in the districts, Kasulu and Kibondo districts showed more men than women while both Kigoma Rural and Urban showed more women than men.

**Fig. 5: Population Distribution By Sexes and District 1988, Tabora Region**

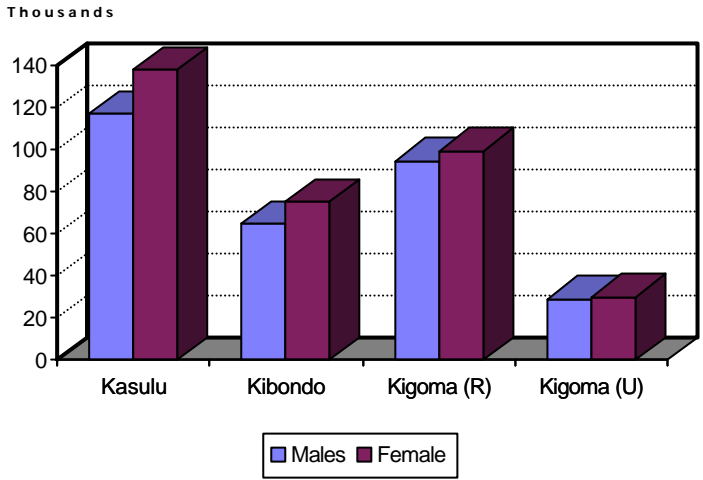


**TABLE I9 POPULATION DISTRIBUTION BY SEXS AND DISTRICT IN 1978, KIGOMA REGION**

District	Sexes		Total	Males per female
	Males	Female		
Kasulu	117,189	138,460	255,649	111
Kibondo	65,052	74,939	139,991	109
Kigoma (R)	94,929	99,553	194,482	99
Kigoma (U)	28,909	29,919	58,828	93
Total Region	306,079	342,871	648,950	106

Source: Population Census Regional Profile 1988

**Fig. 6: Population Distribution by Sexs and District In 1978, Kigoma Region**



**TABLE I- 10: POPULATION DISTRIBUTION BY SEXS IN RURAL AND URBAN AREAS 1988, KIGOMA REGION**

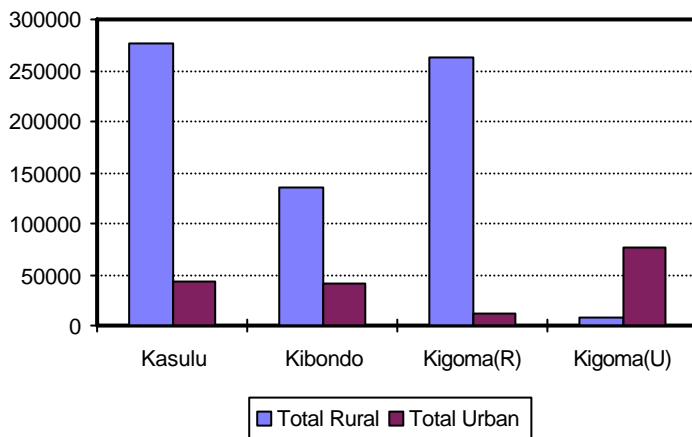
District	Rural %				Urban		
	Males	Female	Total	%	Male	Femal	Total
Kasulu	128, 793	147, 863	276,656	86.3	20,860	23,062	43,862
Kibondo	62,706	72,680	135, 386	76.86	18,	21,995	40, 876
Kigoma (R)	127,837	134, 334	262,171	95.9	5, 654	5,565	11,219
Kigoma (U)	3,745	3,847	7, 592	9.0	38,	38,744	77,055

Total	323,081	358,724	681,805	79.0	83,706	89,	173,012
R e g i o n							

Source: Population Census, Regional Profile 1988



**Fig. 7: Population Distribution by Sexs in Rural and Urban areas 1988, Kigoma Region**



According to 1988 census, Kigoma region had 147, 297 households with an average household size of 5.8. Kigoma Rural district had the highest average size at 6.4 while Kibondo district had the lowest average at 4.6 See Table I- II.

**TABLE I- II: POPULATION AND HOUSEHOLD SIZE BY DISTRICT 1988, KIGOMA REGION**

District	Total Population	Number of Households	Average Household Size
Kasulu	320, 518	52, 063	6.1
Kibondo	176, 262	37, 909	4.6
Kigoma (R)	272, 390	42,354	6.4
Kigoma (U)	84, 647	14,971	5.6
Total Region	854, 817	147, 297	5.8

Source : Population census, Regional Profile 1988

Table I-12 reveals the average household size for the urban areas to be 5.6 while that of rural area is 5.9. In general the big difference in household size may be attributed to the low level of awareness in family planning in the rural areas as compared to urban areas. But in the case of Kasulu and Kibondo districts where the average household size in urban areas is bigger than in rural areas, one may probably attribute it to the fact that there is a big migration trend from rural to urban areas.

**TABLE I-12 POPULATION AND HOUSEHOLD SIZE IN RURAL AND URBAN 1988, KIGOMA REGION**

District	Population		No of Households		Average Household Size	
	Rural	Urban	Rural	Urban	Rural	Urban
Kasulu	276, 656	43, 862	46, 421	6,642	6.1	6.6
Kibondo	135, 386	40, 876	29, 301	8,608	4.6	4.7
Kigoma (R)	262, 171	11, 219	40, 283	2,071	6.5	5.4
Kigoma (U)	7, 592	77, 055	1, 270	13, 701	6.0	5.6
Total Region	681, 805	173, 012	117, 275	31,022	5.9	5.6

Source: Population census Regional Profile 1988.

The distribution of population in age groups between 0-14 and 65 years and above which is considered to be the dependent group and age group between 15-64 which is considered to be the working force is shown in Table I- 13 for 1988 and Table I- 14 for 1978. The dependency ratio for the region had increased from 106. 5 in 1978 to 116.9 in 1988. This means that the number of dependants increased in 1988 compared to 1978. Economically this is not a healthy sign.

**TABLE I-13 POPULATION BROAD AGE GROUP AND DEPENDENCY RATIO BY DISTRICT, 1988 KIGOMA REGION**

District	Age Group			Dependency Ratio
	0-14	15-64	65+	
Kasulu	158,701	145,809	16,008	119.6
Kibondo	87,391	79,855	9,016	120.7
Kigoma (R)	137,460	127,409	8,521	114.6
Kigoma (U)	40,031	40,924	3,692	106.8
Total Region	423,583	393,997	37,237	116.9

Source: 1988 Population census, Regional Profile

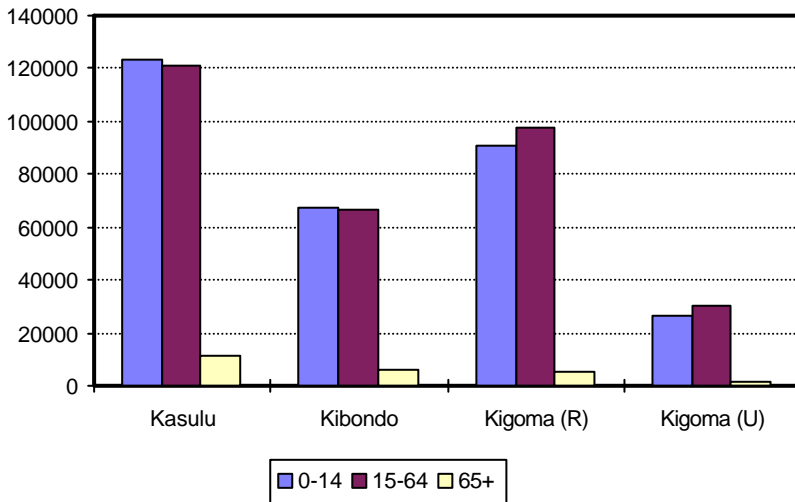
For some inexplicable reason the dependency ratios from Kigoma Rural and Kigoma Urban increased dramatically from 98.7 and 93.6 in 1978 to 114.6 and 106.8 in 1988. This means that there were more dependants than the working force in 1988. For while the working force for Kigoma Rural and Kigoma urban represented 50.3 and 51.6 in 1978, it represented 46.6 and 48.3 in 1988. For Kasulu and Kibondo districts the proportion of the dependants group show no significant difference.

**TABLE I-14: POPULATION BROAD AGE GROUP AND DEPENDENCY RATIO BY DISTRICT IN 1978, KIGOMA REGION**

District	Age Group			Dependency Ratio
	0-14	15-64	65+	
Kasulu	123,452	121,152	11,045	111.0
Kibondo	67,181	66,862	5,948	109.4
Kigoma (R)	91,186	97,861	5,435	98.7
Kigoma (U)	26,748	30,385	1,695	93.6
Total Region	308,567	316,260	24,123	106.5

Source: 1978 Population Census Regional Profile

**Fig. 7: Population Broad Age Group and Dependency Ratio by District In 1978, Kigoma Region**



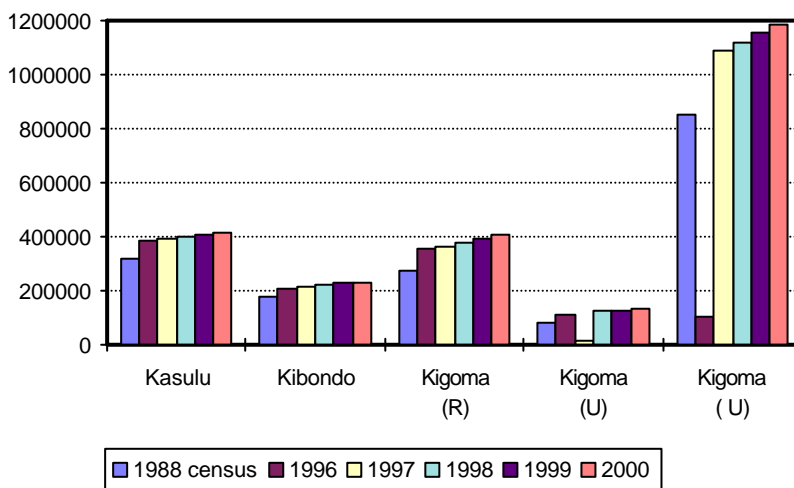
### 1.8.3 Population Projection

Based on the average annual growth rate the population estimates for Kigoma region can be projected to 1,186, 0000 people by year 2000 as shown in Table I- 15.

**TABLE I- 15 POPULATION PROJECTION BY DISTRICT, KIGOMA REGION**

District	1988 census	1996	1997	1998	1999	2000
Kasulu	320, 518	382, 486	391, 150	400,011	409, 072	418,339
Kibondo	176,262	211, 079	215, 990	221, 015	226, 157	231, 419
Kigoma (R)	273, 390	354, 017	366,004	378, 397	391,210	404, 457
Kigoma (U)	84, 647	113, 877	118, 169	122, 623	127, 245	132, 041
Kigoma ( U )	854, 817	1,061, 458	1,091,313	1,122, 047	1,153, 685	1,186, 257

**Fig. 8: Population Projection by District, Kigoma Region**



## 1.9 Migration and Employment

Migration is a form of geographical mobility involving a change of usual residence between clearly defined geographic units. Table I-

16 shows the migration status of the region in 1988. Lifetime in-Migration stood at 26, 795 while Lifetime Out - Migration was 129, 718. This gives a Net Lifetime Migration figure of 102,923. This negative net lifetime migration figure means that the region was losing people to other parts of the country and in particular to the neighbouring regions of Tabora, Shinyanga and Kagera searching for employment opportunities in tobacco and cotton farms.

**TABLE I-16 LIFETIME MIGRATION BY REGION, TANZANIA MAINLAND, 1988:**

Region	Lifetime in Migration	Lifetime Out Migration	Net lifetime Migration	Gross Migration
Kigoma	26,795	129, 718	-102,923	150,513
Mtwara	46,299	144,031	-98,689	191,287
Lindi	95,200	145,031	-49,831	240,231
Arusha	218,429	76,703	141,724	295, 130
Kilimanjaro	93,040	217,423	-124,383	310,463
Tanga	98,747	150, 915	-52, 168	249,662
Morogoro	172,393	141,956	30,437	314,349
Coast	103,804	207,716	-103,912	311,520
Dar es Salaam	651,246	150,625	500, 621	801,871
Dodoma	89,900	190, 985	-101,085	280,885
Ruvuma	66,442	81,661	-15,219	148,103
Iringa	49, 282	169, 480	-120, 198	218,762
Mbeya	160, 377	113,378	46,999	273,755
Singida	86,651	150, 531	-63,880	237,182
Tabora	241,729	175,359	66,370	417,088
Rukwa	87, 599	49, 294	38,305	136, 893
Shinyanga	288,210	281, 447	6, 763	569,657
Kagera	103,713	109, 693	-5,980	213,406
Mwanza	270,142	303,646	-33,504	573,788
Mara	75,987	115,865	-39,878	191,852

Total	3,025,983	3, 1 0 6 , 4 1 4	-80,431	6,132,39 7
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Source 1988 Population Census National Profile

According to Table I- 10 above about 681 805 people or approximately 80% live in rural areas. Therefore one would expect the economically active population of Kigoma regions to be engaged in the agricultural sector. This is revealed in Table I- 17 which show a general picture of employment status for population aged 10 years and above in 1988 census.

**TABLE I- 17: POPULATION 10 YEARS AND ABOVE BY SEX, DISTRICT AND OCCUPATION**

Sex - District	Occupation				Total
	Office Work	Agricultural Work	Industrial Work	Not Employed	
Male: Kasulu	3, 163	55, 168	1,354	32,070	91, 728
Kibondo	2, 053	29,043	572	17, 311	48, 979
Kigoma (R)	2,008	53, 270	1,741	27, 062	84, 081
Kigoma (U)	3, 142	9, 545	3,829	10, 083	26, 554
Total	10,366	147, 026	7, 496	86, 481	251, 369
Female: Kasulu	1, 224	76, 291	265	35, 381	113, 164
Kibondo	614	42, 963	122	19, 752	63, 451
Kigoma (R)	502	61, 053	388	29, 539	91, 482
Kigoma ( U)	1,133	1,1921	962	15,368	29, 384
Total	3, 473	192, 228	1, 737	100, 043	297, 481

Both Sexes:Kasulu	4, 387	131, 459	1, 619	67, 454	204, 919
Kibondo	2, 667	72, 006	694	37, 063	112, 420
Kigoma ( R)	2, 510	114, 323	2,129	56, 601	175, 563
Kigoma ( U)	4,275	21, 466	4, 791	25, 406	55, 938
Total	13,839	339, 254	9, 233	186, 524	548, 850

Source: 1988 Population Census Regional Profile - Kigoma

Note:- . Office Works: for administrative, managerial, professional, technical, clerical and sales work.

. Industry Work: craftsmen machine operators, small scale trade & labourers and other workers.

. Not employed includes " Not stated".

The breakdown of populataion employed by type of occupation reveal that about 93.6% of the population were engaged in agricultural activities while 2.6 % and 3.8% were engaged in industry and office work respectively. About 34% of the population had no employment, retired or were too old and therefore unable to work. Almost all type of occupation listed were dominated by males except in agriculture where female exceeded male by 57.8% to 42.2%.



## **SECTION II**

### **2.0 PRODUCTIVE SECTORS**

#### **2.1.0 THE REGIONAL ECONOMY**

##### **2:1.1 Introduction**

The Kigoma region economy is primarily agricultural based. About 90% of the region's population is engaged in subsistence agriculture farming apart from other activities like fishing, beekeeping and lumbering. The region is estimated to have 1,200,000 hectares of potentially cultivable land but only 280,000 hectares or 23.3 % is under cultivation.

Despite favourable and conducive climate, adoption of commercialized livestock keeping in the region is still constrained by widespread of tsetseflies infestation. Likewise abundant marine products are yet to be fully exploited by the peasants given adequate fishing gears, reliable preservation and storage facilities and accessibility to some fishing sites. Industries and trade activities are carried out at a small scale.

##### **2.1.2 Regional GDP and Per Capital GDP**

By 1967 Kigoma region with an estimated GDP of T. Shs. 0. 267 billion was considered to be one of the poorest regions in the country just slightly better off than Singida and Ruvuma regions which by then had GDP estimated at T. Shs. 0.227 billion and 0. 262 billion respectively. Notwithstanding the remarkable increase in the number of primary schools and enrolment rate; significant

rise in life expectancy and a drastic fall in the infant mortality rate discussed below, the other economic development indicators point to the fact that during the past three decades development in the region has been slow. Between the year 1980 and 1994 the regions GDP for example has not registered significant increase as Table II-1 indicates . Thus the contribution of the region to the national GDP under the period has been small averaging only 2% per year. This poor performance can be attributed to unstable production in the agriculture sector and the under developed economic infrastructures particularly roads and electricity.

**TABLE II -1 REGIONAL GDP AND PER CAIPTAL GDP AT CURRENT PRICES AND PERCENTAGE CHAGE 1980- 1994, KIGOMA REGION**

Year	GDP at Current Price Tshs. million	% Change	Per			% change	% Average contribution to national GDP
			Tshs	Exchange rate	USA Dollars		
1980	924	-	1,347	8.22	164	-	2
1981	1,100	19.0	1,560	8.35	187	15.8	2
1982	1,313	19.4	1,812	9.52	190	16.1	2
1983	1,676	27.6	2,250	12.44	181	24.2	3
1984	2,209	31.8	2,885	18.16	159	28.2	3
1985	3,120	41.2	3,963	16.50	240	37.4	3
1986	3,886	24.6	4,802	51.70	93	21.2	3
1987	6,161	58.5	7,408	83.70	88	54.3	3
1988	11,203	81.8	13,061	125.00	105	76.3	3
1989	18,228	62.7	20,664	192.00	108	58.2	4
1990	11,713	-35.7	12,911	197.00	65	-37.5	2
1991	14,604	24.7	15,654	234.00	67	21.2	2
1992	18,774	28.6	19,568	335.00	58	25.0	2
1993	24,222	29.0	24,549	480.00	51	25.6	2
1994	30,545	26.1	30,103	553.00	54	22.6	2

Source: National Accounts of Tanzania 1976 - 1994, 11th Edition, August 1995

However the regions economy from the point of view of GDP earnings showed a fluctuating but steady growth between 1980 and 1994. GDP earnings at current prices increased from T.Sh 0.924 billion in 1980 to 30. 545 billion in 1994. For all the 15 years there has been a slow positive growth with the exception of 1990 when there was a drastic negative growth of 35.7%. Drastic growth were observed in 1988 and 1989 when percentage change in growth registered 81.8 and 62.7 respectively.

Similarly the regions per capital GDP at current prices over the 15 years ( 1980 - 1994) has been increasing steadily from T. Shs. 1, 347 in 1980 to Tshs. 30, 103 in 1994. with only a drastic drop of 37.5 percent in 1990. However when these per capital annual earnings are converted into USA dollars the picture changes. In the first six years ( 1980 - 1985) the people of Kigoma region had a comparatively high purchasing power. The sudden drop of the value of T. Shilling in 1986 and onwards reduced the purchasing power and the people of Kigoma became poorer in real terms. See Table II-1. When the per capital earnings of Kigoma region in 1994 are compared to other regions in the Mainland Tanzania, Kigoma region ranks second from bottom after coast region. See Table II-2

**TABLE II-2 THE PER CAPITAL GDP OF KIGOMA REGION COMPARED TO OTHER REGIONS OF MAINLAND TANZANIA IN SELECTED YEARS**

<b>Region</b>	<b>1980</b>	<b>1985</b>	<b>1990</b>	<b>1994</b>	<b>Ranking (1994)</b>
KIGOMA	1,347	3, 963	12,911	30, 103	19
Arusha	2,709	5,736	41,131	91, 024	2
Coast	862	1,735	9,860	22,624	20
D' Salaam	10,248	17,643	94, 123	197, 107	1
Dodoma	1,048	2,511	17,779	39,604	17
Iringa	1,801	5,204	28,144	64,502	4
Kagera	1,607	3,949	21,103	50, 105	12
Kilimanjaro	2,073	2,865	24,975	55, 716	8
Lindi	988	2,336	16,350	38, 340	18
Mara	1,237	4,035	20,028	43, 748	16
Mbeya	1,838	5,911	21,074	48, 737	13
Morogoro	1,977	3,946	27,054	59,370	7
Mtwara	1,385	3,397	24,481	59, 533	6
Mwanza	1,866	5,332	21,592	48, 808	14
Rukwa	1,296	4,534	33,203	80, 669	3
Ruvuma	1,924	4,691	21,856	52,537	11
Shinyanga	1,494	3,304	23,317	52,746	10
Singida	1,362	3,619	24,750	55,644	9
Tabora	1,386	3,313	19, 993	44,984	15
Tanga	1,897	4,003	27,559	60,121	5
Mainland	2,088	4, 829	27, 792	62,138	



## **2.2.0 AGRICULTURE**

### **2.2.1 Introduction**

Agriculture is the predominant economic sector in Kigoma regions. Over 85% of the total population of the region depend on agriculture for its livelihood. The bulk of agricultural production come from smallholders who employ very little capital. The main inputs are labour and land. Although agriculture is the major sources of income for the majority of the people, the areas which is under agricultural utilization is very small compared to the area that could be reclaimed for agriculture. The region is estimated to have about 1,200,000 hectares of potentially cultivable land but only 280,000 hectares or 23% of arable land are under cultivation. When the area under crop cultivation is distributed equally to the total population ( 1998 estimates) every single person in the region will be cultivating an areas of about 0.24 hectares.

Agricultural production in Kigoma region depend mostly on natural rains for crop growing. The major crops grown include maize, beans, cassava, bananas, groundnuts, oilpalm, coffee, cotton and tobacco. In addition crops are grown in accordance with agro-ecological zones. In the Highland Zone, a wide range of crops is grown of which maize , beans and bananas are the most important. Coffee is grown in the wetter areas. This zone covers a greater part of Kasulu and Kibondo districts. The major crops grown in the Intermediate Zone are cotton, maize, cassava, beans, bananas, groundnuts,oilpalm and sweet potatoes. A range of the other vegetable crops are also grown.

There is not much production of crops in the Miombo zone. Traditionally the zone has been important for honey gathering, hunting and fishing. Cotton and tobacco growing have gained importance. Food crops include maize, sorghum cassava and beans. In the Lakeshore zone paddy relatively grow well.

## 2.2.2 Food Crops Production

The major food crops grown in the region are maize paddy, cassava, bananas, beans and sorghum.

**TABLE: II-3 PRODUCTION OF MAJOR FOOD CROPS 1990/91- 1997/98 IN KIGOMA REGION**

Crop/Year	1990/9 1	1991/9 2	1992/9 3	1993/9 4	1994/199 5	1995/9 6	1996/9 7	1997/9 8
Maize	72,920	129,652	88, 132	163, 821	136,000	139, 300	128, 520	164,62 0
Paddy	3,229	7,732	9, 458	4, 454	11,400	10,300	12, 480	22, 690
Cassava	43,600	119,800	189,00 0	69, 460	198,000	61,900	258,46 0	126,42 0
Banana	43,090	22,470	66,120	24, 963	65,000	218,03 0	206,10 0	271,96 0
Beans	17,987	15,141	44, 685	40,873	27,200	21,800	36,960	22,800
Sorghum	3,156	14, 158	7,010	6,250	6,750	7,820	9,070	3,440
Total Region	183,98 2	308, 953	404,40 5	309, 821	444,350	459, 150	651,59 1	611,93 0

Source: Regional Agricultural Office, Kigoma Region.

### Maize:

Maize is one the leading food crop with the highest per capital consumption rate in the local diet. Soils throughout the regional are generally suitable for maize growing. Maize is produced on smallholders farms. Yield per unit areas are generally poor due to low use of fertilizers, improved seeds and poor husbandry.

Production figures for the maize crop during the past seven years between 1990/91 and 1997/98 as indicated in Table II-3 show a general increase with little fluctuation probably because of changes in area and weather condition. However maize has an ever demanding market in and outside the region.

### **Paddy:**

Paddy is one of the grain in the region mostly grown in the Lakeshore zone of Kigoma district. Areas of paddy growing are therefore limited to natural depressions where soils are usually quite fertile though heavier and relatively poor drained. All cultivation e.g land preparation, transplanting, weeding is by hand as is harvesting by side. The use of chemical fertilizers, pesticides and high yielding varieties like the IRR, as is the case in many paddy growing countries, is very limited and therefore yield per unit areas is also very low. Production of paddy for the last seven years between 1990/91 and 1997/98 has steadily been increasing as shown in Table II-4

### **Cassava:**

Cassava is a drought resistant crop grown in all areas in Kigoma region. It also forms an important food crop with a substantial per capital consumption and has been treated as a "life saver" during food shortage periods. Production figures for cassava are illustrated in Table II-4

### **Banana:**

Banana is also important food crop in Kigoma region particularly in the highland zone where it is intercropped with coffee. Banana



has a ready market outside the regions but transportation is the major bottleneck. Between 1990/91 and 19978/98 production of banana has been fluctuating as shown in Table I-4

## **Sorghum**

Sorghum is another drought resistant crop grown in marginal rainfall areas. In spite of its drought resistance advantage, peasants prefer other staples like maize and cassava for food while sorghum is mostly used for beer brewing. Production figures for sorghum during the years 1990/91 to 1997/98 indicated in Table I-4 show a fluctuating trend probably due to low demand locally and nationally.

## **Legumes**

Legumes are important food crops which have traditionally been a source of protein in Kigoma region. The most popular leguminous crop is beans. Soils throughout the region are suitable for beans growing. Beans are sometimes intercropped with maize or banana and in most cases enjoy double cropping in a year. Like maize, beans have an even demanding market in outside the regions. Production of beans has been fluctuating as shown in Table I-4

### **2.2.3 Food Adequacy**

Food production in the region involves staple crops as indicated in Table I-4 including other crops like sweet potatoes, pigeon peas and vegetables. The level of production is determined by climate, soils, available inputs and level of crop husbandry. In general, however, Kigoma region cannot be said to have experienced chronic food shortage in the last few years. But the problem of food adequacy is determined by trade across the national border/inter regional boundaries which has tended to shift large

quantities of food across the border to neighbouring regions or countries. The protein energy malnutrition occurring in the region is partly caused by problems pertaining to feeding habits and low incomes.

## 2.2.4 Cash Crop Production

The main cash crops produced in Kigoma region are cotton, coffee, tobacco, oilpalm and groundnuts.

**TABLE: II-4 CASH CROP PRODUCTION IN KIGOMA REGION 1991/92-1997/98**

Crop/Year	1991/9	1992/9	1993/9	1994/1995	1995/9	1996/9	1997/9
Cotton	327	900	800	10,160	383	234	92
Coffee	754	400	1,355	448	775	561	1,051
Tobacco	51	260	180	232	325	266	898
Palm Oil	1,843	2,890	3,000	3,588	11,280	4,100	5,750
Groundnuts	2,964	3,853	2,160	4,960	4,382	7,680	8,280
Total	5,939	8,303	7,495	19,388	17,146	9,543	16,071

Source: Regional Agricultural Office, Kigoma Region.

### Cotton:

Cotton growing in Kigoma region is concentrated in the Miombo and Lake shore zones which have favourable soils and climatic

condition. Production figures for cotton between 1991/92 and 1997/98 shown in Table I-5 indicate a downward trend. Apart from the weather conditions there are other factors which contribute to the decline in cotton production. These include the lack of ready market for cotton soon after harvest; and the non use of necessary farming inputs for cotton growing such as fertilizers and insecticides which are usually very expensive for the low income farmers to afford.

## **Coffee**

Coffee growing in Kigoma region is concentrated in the wetter areas of highland zone. Coffee is usually interplanted with bananas plantains. Production of coffee as seen in Table I-5 has not been steady because of lack of seedlings for planting, lack of fertilizers and insecticide and the problems in marketing.

## **Tobacco**

Tobacco has recently gained popularity as a cash crop in Kigoma region. Tobacco growing has extended from the western portion of Tabora region to the South Eastern and other parts of Miombo woodlands due to the proximity to fuelwood. Tobacco production is dependent on clearing new land for tobacco growing, continuing supply of accessible fuel wood for tobacco curing, proper husbandry techniques and increased inputs usage. Consequently tobacco production causes rapid forest depletion. Production of tobacco as shows in table I-5 has increased to 898 tons in 1997/98 from 260 tons produced in 1992/93.

## **Oil Palm**

Oil palm crop which was introduced in Kigoma region by immigrants from neighbouring Congo and Burundi some sixty year ago is mostly grown by smallholders and the two oil palm farms owned by the prisons department at Kwitanga and Ilagala. Oil palm is grown in Kigoma and Kasulu districts which have the favourable climatic condition.

From 1991/92 to 1997/98 production has been fluctating to a declining trend as shown in Table I-5. The declining trend in palm oil production can be traced to three major factors: inappropriate harvesting method/equipment; use of inefficient and low capacity processing machinery and the use of unimproved planting materials.

### **Groundnuts:**

Groundnuts are an important traditional food cum cash crop in Kigoma region. Soils suitable for groundnuts growing are mostly found in the miombo and intermediate zones. Groundnuts are always intercropped with maize and sorghum. The non -use of fertilizers and low plant population have resulted in low yields.

Production of groundnuts from 1991/92 to 1997/98 has been fluctuating as can be observed in Table I-5.

### **2.2.5 Storage Facilities**

Kigoma regions has a total of 160 godowns with the storage capacity of 1909 tons distributed in all districts as in Table II-6. About 75% of these godowns have been rundown because of being underutilized. A few which are utilized are used to

temporarily store crops such as cotton and tobacco or farm inputs such as fertilizers and seeds before they are distributed to farmers.

**TABLE II-5 STORAGE FACILITIES BY DISTRICTS IN KIGOMA REGION 1997**

District	Number of Godowns	Storage capacity (tons)
Kasulu	31	3,630
Kibondo	36	3,630
Kigoma	93	11,830
Total Region	160	19,090

Source : Regional Agricultural Development Office, Kigoma Region

### **2.2.6 Mechanization:**

One of the problems hindering the expansion of agricultural activities in many regions in Tanzania is the low technology employed by smallholders. In Kigoma region many peasant farmers continue to use traditional farming methods and tools - the most common being the handhoes, axe and panga. There is virtually no oxenisation and tractor cultivation is less widespread. Most of the few tractors available are unserviceable.

**TABLE II-6 DISTRIBUTION OF TRACTORS BY DISTRICT, KIGOMA REGION 1997**

District	Number and Condition of Tractors		Total
	Serviceable	Unserviceable	
Kasulu	9	12	21
Kibondo	7	9	16
Kigoma	13	20	33

Total Region	29	41	70
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Source: Regional Agricultural Development Office , Kigoma

## 2:2.7 Farm Inputs

Increased yield per unit area as well as increased production of any crop depend very much on the use of inputs combined with good crop husbandry. In Kigoma region the main farm inputs used are seeds for the different crops grown, fertilizers and insecticides. The main seeds used for major seasonal crops are improved maize and cotton seeds while seedlings are for coffee and oil palm. The main fertilizers are TSP, CAN, SA, NPK and Urea. The amount of seeds and different types of fertilizers required has been more than actually supplied as shown in Table II- 8 and Table II - 9.

**TABLE II -7 TOTAL FERTILIZER REQUIREMENT AND SUPPLIED IN 1991/92 - 1997/98 - KIGOMA REGION**

Year	Requirement	Supplied (in Tons)	% Supplied
1992/93	3,650	3,211	88.0
1993/94	4,000	1,563	39.1
1994/95	4,450	1,547	34.8
1995/96	4,770	1,785	37.4
1996/97	4,397	1,804	41.0
1997/98	15, 584	2,080	13.3

Source : Regional Agricultural Development Office, Kigoma.

As can be observed in Table II-7 fertilizer supply to the region reached a record level of over 80% of the total requirement in



1992/93 but from 1993/94 the supply did not exceed 40% of the requirements and even dropped to 13.3% of the total requirement in 1997/98. Similarly improved maize seed supply averaged 14% and cotton seed supply average 46% between 1992/93 and 1997/98 as can be observed in Table II -8.

**TABLE II- 8 IMPROVED MAIZE AND COTTON SEED REQUIPMENTS AND SUPPLY IN 1992/93 - 1997/98, KIGOMA REGION**

Year	Maize			Cotton		
	Requirement t	Supplied	%	Requirements	Supplied	%
1992/93	420	22	5	300	170	57
1993/94	100	14	14	250	100	40
1994/95	100	13	13	250	230	92
1995/96	100	42	42	130	74	57
1996/97	100	25	25	120	73	61
1997/98	520	82	16	330	45	14

Source : Regional Agricultural Development Office, Kigoma Region.

## **2:2:8 Irrigation**

Irrigation potential for Kigoma region is very high although the prospects for irrigation using water reservoirs is still limited. It has been researched and confirmed that there is big irrigation potential in the valleys of Luiche and Ruchugi. It is possible to irrigate more than 18,700 hectares of various crops in these valleys but only 1230 hectare of 6.6% are being irrigated in Titye, Luiche, Bugaga and Mgoboka under the Kigoma Agricultural Irrigation

Programme. Crops under the existing irrigation system include maize, beans, tomatoes, cabbages, spinach, onions, carrots, pineapples, potatoes and lettuce. The production of these crops is mainly for domestic consumption. However an increased production of these crops could provide substantial income to the farmers.

## 2.3.0 LIVESTOCK DEVELOPMENT

### 2.3.1 Introduction.

Livestock keeping is one of the economic activity in Kigoma region. The most important types of livestock are cattle, sheep and goats. The cattle population is made up of indigeneous breed the majority being the long horned Ankole Cattle. The short horned Tanzania zebu has recently increased in number. There are a few animals of improved breed. Other livestock kept are pigs, chicken, ducks and pigeons.

### 2.3:2 Livestock population and distribution

Livestock keeping is mainly concentrated in the highland zone of Kasulu district where conditions are more favourable, particularly for cattle. This is closely followed by Kibondo district which leads in goats population.

**TABLE II-9 LIVESTOCK POPULATION AND DISTRIBUTION  
IN KIGOMA REGION 1997**

Type of Livestock	Kasulu	Kibondo	Kigoma	Total
Cattle: :Indigenous	29, 783	25, 859	12,333	77, 875
: Dairy	485	86	1,405	1,976
Sheep	22, 531	10,345	10,224	43,100
Goats	70,867	87, 871	49, 153	207, 892

Source: Regional Livestock Office, Kigoma Region

The incidence of tsetse in the region explain the distribution of livestock. Most of the cattle in Kigoma district are concentrated around Kalinzi. There are no cattle along the Lake, South of Kigoma - Kasulu road and along the railway line in Nguruka and Uvinza villages. In Kasulu district there are two main cattle centres, one in Manyovu and the other in Heru Juu/ Muyama areas. For Kibondo district livestock distribution pattern is more complicated by a large number of village having only small herd of cattle. Factors responsible for uneven distribution of cattle in Kigoma region are altitude, settlement pattern, vegetation and the presence of tsetse flies. In addition cattle diseases such as anaplosmosis and eastcoast fever are responsible for discouraging efforts to raise cattle in the region.

### **2:3.3 Livestock Infrastructure.**

Livestock infrastructure in the region include 58 cattle dips, 9 veterinary centress, 4 abbotoirs and 4 hide/skin sheds. As can be observed in Table II-19 the infrastructure availabe are adequate when compared to the number of livestock in the region. If for instance one looks at the dipping facilities the average number of cattle per dip is 1377, far below the number of cattle required per dip which is 5,000. However for a number of reasons many dips are not operational. The main reasons appear to be lack of water at or near the dip, lack of acaricides and breakdown in the dip structures.

**TABLE II-10 LIVESTOCK INFRASTRUCTURE/SERVICES IN KIGOMA REGION 1997**

District				Veterinary centres	Abattoirs	Hide/Skin Shed
	Operating	Out of order	Total			
Kasulu	9	14	23	4	4	3
Kibondo	1	18	19	3	4	3
Kigoma	3	13	16	2	5	5
Total	13	45	58	9	13	11

Source: Livestock Development Office, Kigoma Region

The livestock veterinary centres lack minimum requirement such as equipment, chemicals and reagents as well as adequate staffing. As such cannot provide necessary service to livestock and owners.

### **2.3.4 Livestock Management and Production**

Although limited in numbers, the present livestock husbandry methods in the region are extensive relying on large areas of natural grassland with pasturing on crop residues during the dry season.

The predominance of the indigeneous breed has resulted in low productivity. Apart from genetic potential, diseases, poor nutrition level and the rundown livestock infrastructure have contributed to this low productivity. Cattle are not kept primarily for slaughter but to supply milk, manure and to meet various social obligations. Kigoma region has three primary livestock markets namely Kakonko in Kibondo district, Buhigwe in Kasulu district and

Nguruka in Kigoma district where livestock is brought for sale. The long horn Ankole cattle are frequently referred to as indigestible and very rarely sold for slaughter. In view of inadequate number of livestock for slaughter in the region, livestock for slaughtering is augmented by livestock brought and transported by railways from the neighbouring regions.

**TABLE II-11 LIVESTOCK MARKETTED IN KIGOMA REGION 1990/91 TO 1996/97**

Year	Cattle		Sheep		Goats	
	Number	Value (Tsh'000)	Number	Value (Tsh'000)	Number	Value (Tsh'000 )
1990/91	3, 144	20, 436	121	726	3, 598	21,588
1991/92	3,701	33,679	78	624	3,876	31,008
1992/93	2,456	23,946	145	1,232	1,512	12,852
1993/94	2,509	26,094	162	1,458	1,913	17,217
1994/95	1,411	15, 591	90	855	1,340	1,2730
1995/96	2,028	26, 364	138	3,690	2,400	36,000
1996/97	1,697	25, 455	128	2,304	2, 163	32,445

Source: Regional Livestock Development Office, Kigoma Region.

Table II-11 shows fluctuation in the number of livestock marketted between 1990/91 and 1996/97 indicating a record drops in 19945/95. Similarly the sale of hides and skins showed a marked fluctuation between 1990/91 and 19967/97. While there was a record rise in the sale of hides in 1992/93, the sale of skins dropped sharply as indicated in Table II - 12

**TABLE II-12 HIDES AND SKINS MARKETTED IN KIGOMA REGION  
1990/91 TO 1996/97**

Year	Hides			
	Number	Value (Tsh'000)	Number	Value (Tsh'000)
1990/91	3, 144	3,930	3,719	279
1991/92	3,701	6,477	3,945	395
1992/93	11,714	23,450	285	42
1993/94	4,631	10, 420	1,322	264
1994/95	1,411	3,527	1,430	357
1995/96	2,000	9,000	2,400	720
1996/97	1,697	5,091	2,291	687

Source: Regional Livestock Development Office, Kigoma Region.

## **2:4.0 NATURAL RESOURCES**

### **2.4.1 Introduction**

Kigoma region has abundant natural resources. About 20,371 sq Km or 45.1 of the region is still covered with dense miombo woodland which covers all three district. The thick forest extend to Mpanda district in Rukwa region. The region has also a big potential for tourism. It has two national parks namely Gombe National Park and Mahale National Park both being famous for their chimpanzees. The beautiful Lake Tanganyika shore is also among the tourist attraction in the region. Besides the two national parks the region also has a game reserve at Moyowosi.

### **2.4.2 Forestry**

Kigoma region is covered with a large woodland although it lacks adequate amount of timber. Of the total forest areas of 2,037,

100 hectares 873,722 hectares are forest reserve and the remaining 1,163,378 hectares fall under open public forests. The forests have various valuable tree species such as *pterocarpus angolensis* (Mninga), *Khaya nyasica* (Mkangazi), *Azelia quanzensis* (Mkora), *Milecea-exelsa* (Mvule), *brachystegia spiciformis* (Mtundu), and *Pterocarpus* all species (Mkurungu).

There are a total of 14 forest reserves in Kigoma region covering a total of 873,722 hectares. The distribution of these district wise is as shown in Table II-13.

**TABLE II - 13 DISTRIBUTION OF FOREST RESERVES BY DISTRICT, KIGOMA REGION.**

District	Name of Reserve	Area ( Ha)	Owner
Kasulu	Mkuti F.R	37, 488	C. Govt
	North Makere F.R	78,080	C. Govt
	South Makere F.R	98, 528	C. Govt
	Marking Hill	204	C. Govt
Sub total		214, 300	
Kibondo	Mwelya F.R	396,800	C. Govt
	Buyungu F.R	111,872	L. Govt
Sub total		508,672	
Kigoma	Uvinza F. R	16,640	C. Govt
	Mkuti F. R	104, 192	C. Govt
	Ilunde F.R	6, 144	C. Govt
	Mkungwe Bay F.R	5,808	C. Govt
	Masanza F.R	5,376	C. Govt
	Lugufu F.R	8,960	C. Govt
	* Nyarubanda FR	3,584	
* Mlela FR	46		



Sub Total		150, 750	
Total		873, 722	

\* Seriously encroached and degazetted.

Source: Regional Forestry Office, Kigoma Region.

Forestry products include timber, building materials, charcoal, fuelwood honey and beeswax. Table II-14 indicate the output of forestry produce (hardwood), timber production, fuel, wood and poles between 1987 and 1991.

**TABLE II-14 OUTPUT OF FORESTRY PRODUCE BY DISTRICT AND TYPE, KIGOMA REGION**

Year	Kasulu			Kibondo			Kigoma		
	Round wood (m3)	Fuel Wood (stacked m3)	Poles Nos	Round Wood (m3)	Fuel wood stacked M3	Poles Nos	Round Wood (m3)	Fuel Wood Stacked m3)	Poles nos
1987	340	2,240	38	106	7,720	156	696	16,274	54
1988	302	2,505	27	49	394	185	499	34,110	166
1989	867	4,680	86	119	4,766	304	368	33,368	55
1990	335	5,876	138	118	2,584	195	47	11,560	25
1991	469	7,345	207	164	1,170	370	105	34,269	110

Source: Regional Natural Resources Office, 1995 Kigoma Region

Table II-14 shows that a large amount of around wood is produced in Kasulu and Kigoma rural district while fuelwood is produced more in Kigoma rural district than in the remaining districts. Kibondo seems to be famous only for the production of poles. The figures in Table II-14 do not in anyway reflect the respective district optimal production capacities. They are still below their production level and therefore people need to exploit further the forestry potential that exist in the region.



### 2.4.3 Fishery

Kigoma region has promising potential for fishing in its waters. There are plenty of fish in the lake and the river Malagarasi. Lake Tanganyika is a vast inland sea stretching for some 242 kilometers in length and average 20 kilometers width. Next to lake Baikal in Siberia, it is the second deepest lake in the world with a maximum depth of 1,435 meters. It is a fresh water lake which empties some of its water through the Lukunga river in Congo. It is fed by the Malagarasi ( Tanzania) and the Ruzizi (Burundi) rivers. The volume of the lake has been estimated to be  $19 \times 10^{12}$  cubic meters.

The lake has a catchment area of 249,000 Sq. Km (FAO 1979:1). Burundi, Tanzania, Democratic Republic of Congo and Zambia share shoreline. The territorial boundaries are not disputed and are accepted as recorded on official maps of the region. The Tanzania portion occupies 13,500 Sq. Km or about 41% of the lake surface. The upper layer of the lake is clear and the penetration of sunlight may extend to 30 meters. The shore of the lake consists of rocky hills of huge boulders piled one on top of the other. The side of the lake formed by the rift fault are precipitous and there is virtually no marginal shelf. The water is not as blue and is comparatively calmer than Lake Nyasa (also of rift fault origin). The age of the lake (millions of years), size and depth and the fact that it has been separated from other rivers and lakes for many thousand years Lake Tanganyika has many kinds of fish that are found nowhere else. The lake abounds in 214 varieties (species) of which 134 belong to the family cichlidae. The main component of the commercial catch in Lake Tanganyika is contributed by six pelagic species namely *stolothrissa tanganyicae*

(local name: dagaa) and *Limnothrissa miodon* (Lumbo) and four Lates species i.e. *Lates steppersii* (Migebuka) *L. Mariae* (sangara) *lates microlepis* (Nonzi) and *lates angustrifrons* (Gomba). Dagaa makes up more than 80% of the catch in both traditional and modern fisheries. The UND/FAO did some studies in 1976 and found out that there was a standing stock of about 2.5 million tons of fish (all species)

Currently the fishing industry of the lake falls under two categories; artisan and commercial fishery. Both categories of fishing are operated at night using light attraction methods. Artisanal/fishery is operated mainly from dug-out or planked canoes using beach seines, liftnets and scoopnets, some canoes using are powered by outboard engines whereas the rest of the canoes are operated manually. The artisanal/fishery accounts for more than 99% of the total catch providing the population with protein food as well as generating employment and income.

Fish catch figures for Kigoma region for a period of six years from 1991 to 1996 have been shown in Table II –15. However the figure might be quite far from the actual fish production due to the fact that most fish caught by artisan fishermen are for household consumption and in most cases they are not put into record.

**TABLE II-15 NUMBER OF VESSELS, FISHERMEN AND FISH CATCH, KIGOMA REGION 1991 – 1996**

Year	No. of Vessels	No. of Fishermen	Production (metric tons)	Value (T. Shs'000)
1991	1,471	4,560	26,160.3	1763,671.0
1992	1,685	4,482	27,308.0	2,299,312.0
1993	1,703	4,574	31,251.5	2,455,602.9
1994	1,827	7,644	25,799.0	5,399,147.6
1995	2,348	8,686	50,253.1	35,476,000.4
1996	1,872	6,313	40,817.6	19,270,426.8

Source: Regional Natural Resources Office (Fisheries), Kigoma Region

From 1991 to 1995 the number of vessels and fishermen increased from 1471 and 4560 to 2,348 and 8,686 respectively. This increase might have been caused by the increase of vessels and fishermen coming from the neighbouring region. Similarly fish production has gradually been increasing reaching a record level of 50 253.1 tons in 1995.

#### **2:4:4 Beekeeping**

The potential for beekeeping in Kigoma region is good because of many nectar yielding tree species in the miombo woodlands. Beekeepers in the region have more traditional beehives than modern ones. Traditional beehives have the big disadvantages of low productivity while, at the sometimes it is very difficult to conduct regular inspection for determining the level of honey that has been manufactured at any one particular period. In the year 1993/94 it was estimated that the region had 194,340

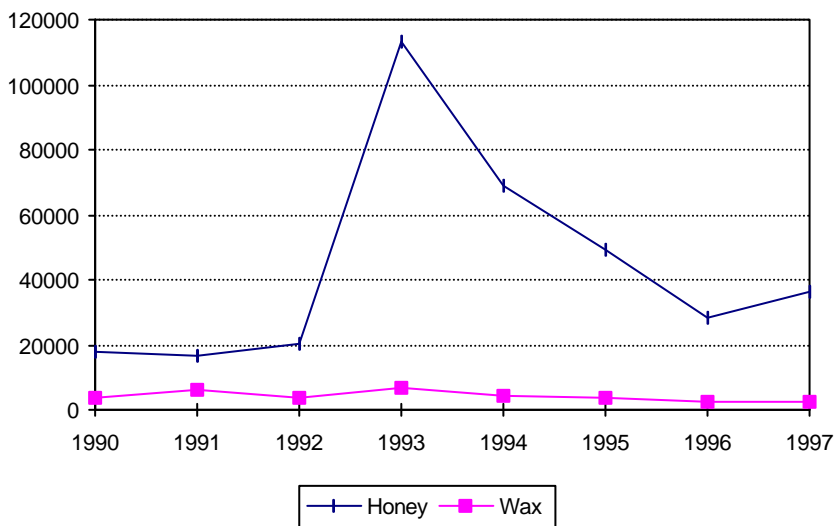
both modern and traditional beehives. Production of honey and the bees wax is as observed in Table II-16

**TABLE II- 16 BEEKEEPING PRODUCTS AND VALUE, KIGOMA REGION 1990 – 1997**

Year	Honey		Wax	
	Quantity (ilos)	Value T .Shs'000	Quantity ( kilos)	Value T.Shs'000
1990	17,616	5,284.8	3,627	1,088.1
1991	16,466	5, 763.1	6,130	2,945.5
1992	20,267	5,967.5	3,989	1,196.7
1993	113,220	28, 305.0	6, 747	3,473.5
1994	68, 961	20, 688.3	4,597	4,599.7
1995	49,267	24, 633.5	3,829	3,829.0
1996	28,362	14,181.0	2,674	2,674.0
1997	36,490	36,490.0	2,432	4,886.5

Source: Natural Resources Office, Kigoma Region

**Fig. 9: Beekeeping Products (Kilos), Kigoma Region 1990 – 1997**



It can be observed from the above Table that from 1990 production increased gradually from 17, 616 Kilos to a record level of 113, 220 kilos in 1993 then declined to 36,490 kilos in 1997.

## 2.5.0 INDUSTRY AND TRADE

Industry in Kigoma, apart from Uvinza Salt Mine, is limited to some small consumers goods production. Geographical location and poor economic infrastructure imposes a severe limitation to the establishment of large scale industries. Small scale industrial activities include carpentry, auto-repair, boat building, soap making, saw milling, palm oil and palm kernel oil extraction, printing etc. Cottage industry is operated although at a low level. It includes a number of items like knives, spears, baskets and some ornamental materials

**TABLE II- 17 DISTRIBUTION OF SMALL SCALE INDUSTRIES , KIGOMA REGION 1997**

District	No of Industrial units	% of Total
Kasulu	19	6.1
Kibondo	8	2.6
Kigoma	283	91.3
Total	310	100.0

Source:- Regional Industry & Trade office, Kigoma Region

Trade business in Kigoma region is not very big. Internal trade involves petty trading where buying and selling is common activity. External trade with neighbouring countries of Congo, Burundi and Zambia is carried out through Lake Tanganyika although most of it

is normally not captured in the official trade records. In general trade business in the rural areas is not much progressive because of low demand for commodities due to low incomes.



## SECTION III

### 3.0 SOCIAL SERVICES

### 3.1 EDUCATION

#### 3.1.1 Primary Education

##### 3.1.1.1 Primary School Enrolment

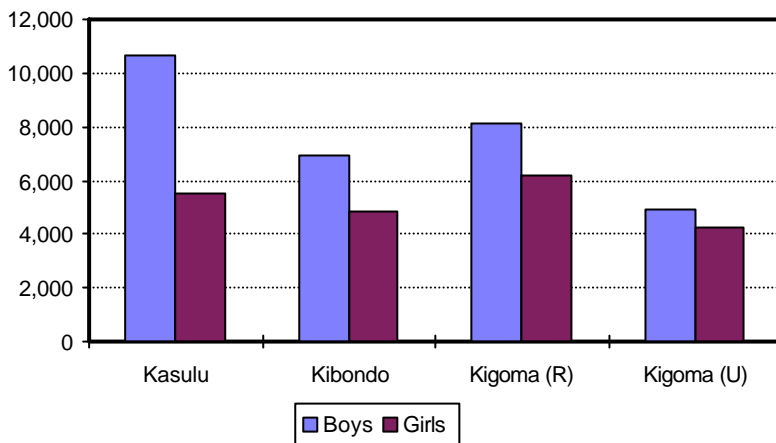
Since 1963 when Kigoma Region was established, primary education programmes have expanded tremendously. In 1963 the number of primary schools was only 87 but at the onset of Universal Primary Education in 1974 the number of primary schools had increased to 198 or 228% percent. By 1998 the number of schools has increased to 249, an increase of 126 percent compared to 1974. Consequently the number of pupils enrolled in primary schools grew significantly from 51,530 pupils in 1974 to a record of 144,672 by the end of 1998 or 281 percent.

**TABLE III – 1 EXPANSION OF PRIMARY EDUCATION IN KIGOMA REGION**

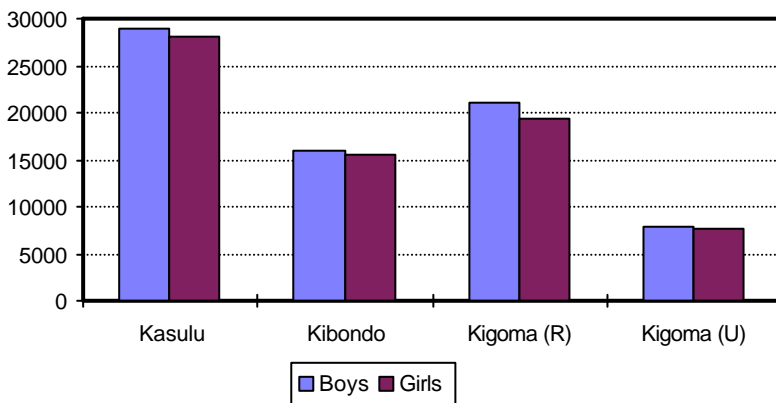
District	1974				1988			
	No. of Schools	Total Enrolment			No of Schools	Total Enrolment		
		Boys	Girls	Total		Boys	Girls	Total
Kasulu	69	10,661	5,518	16, 179	85	28,852	28, 145	56,997
Kibondo	60	6, 914	4,856	11,770	67	15, 999	15, 510	31,509
Kigoma (R)	55	8,151	6,219	14, 370	78	20,999	19, 434	40, 433
Kigoma (U)	14	4,933	4, 278	9,211	19	7, 974	7, 759	15,733
Total	198	30,659	20,871	51, 530	249	73,824	70,848	144,672

Source : Regional Education office, Kigoma Region

**Fig. 10a: Total Enrolment of Primary Education by Sex in Kigoma Region, 1974**



**Fig. 10b: Total Enrolment of Primary Education by Sex in Kigoma Region, 1974**



From Table III –1 it can be observed that the average number of pupils per school increased from 260 in 1974 to 581 by 1998 which is consistent with trends in other regions. Similarly the ratio of boys to girls enrolled in 1974 was 59.5% to 40.5 which narrowed to a ratio of 51% to 49 in 1998.

**TABLE :II -2 THE NUMBER OF STREAMS IN PRIMARY SCHOOLS BY DISTRICT, KIGOMA REGION 1998**

Streams/ District	Kasulu	Kibondo	Kigoma ( R)	Kigoma ( U)	Total
Primary I	250	131	178	59	618
II	211	132	171	64	578
III	211	134	160	61	566
IV	278	151	168	61	658
V	223	106	140	50	519
VI	245	106	119	42	512
VII	187	79	120	37	423
Total	1,605	839	1,056	374	3,874

### 3.1.1.2 Primary One Enrolment

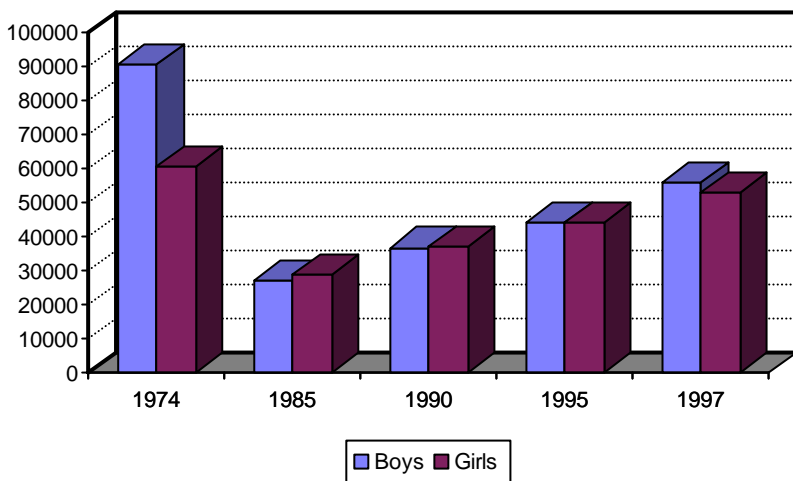
The gross enrolment rate for primary education which is simply defined as the number of children in primary one divided by the number of children in age group eligible for attending school increased from 28% to 31% recorded in 1985 and remained constant at 28% in 1990 and 1995 declined in 1997 to 23%. See table III - 3.

**TABLE III-3: GROSS ENROLMENT RATE IN PRIMARY ONE FOR SELECTED YEARS, KIGOMA REGION**

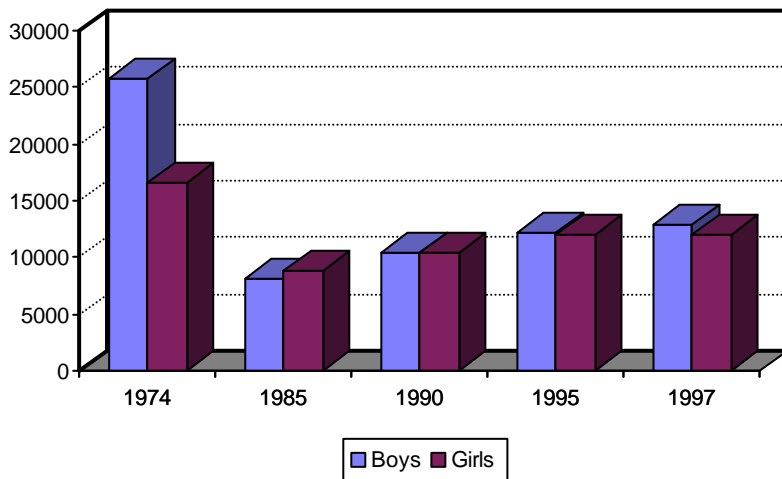
Year	Eligible Children			Enrolled			Gross Enrolment Rate
	Boys	Girls	Total	Boys	Girls	Total	
1974	90,797	60,448	151,245	25,726	16,593	42,319	28
1985	27,054	28,761	55,815	8,178	8,897	17,075	31

1990	36,767	37,032	73,799	10,390	10,371	20,761	28
1995	43,966	43,969	87,935	12,243	12,054	24,297	28
1997	55,684	52,767	108,451	12,964	12,034	24,998	23

**Fig. 11a: Eligible Children in Primary One for Selected Years, Kigoma Region**



**Fig. 11b: Enrolment Rate in Primary One for Selected Years, Kigoma Region**



Despite the poor gross enrolment, there has been empty vacancies in Standard One in relation to the number of streams. In 1997, for example, there were 618 Standard One Streams with a total

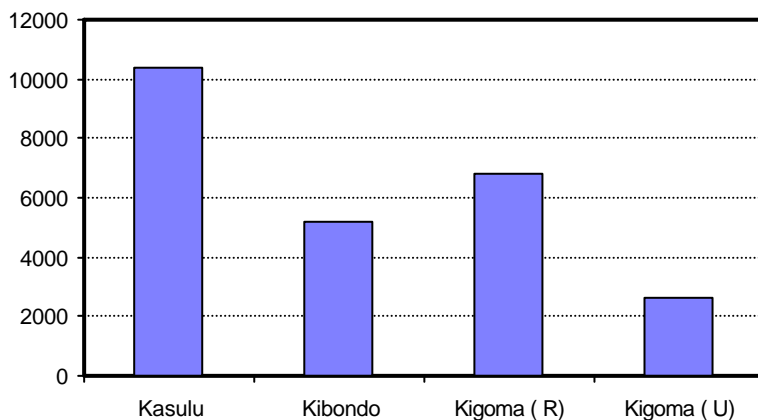
capacity of enrolling more than 27, 810 Standard one pupils but only 24, 998 pupils enrolled. The number of pupils actually enrolled was equivalent to 90% of the total required target for that year. About 10% of the capacity in 1997 was not utilised.

**TABLE III- 4 ENROLMENT IN PRIMARY ONE (STANDARD ONE) KIGOMA REGION 1997**

District	No. of Streams	Target Enrolment	Actual Enrolment	%	Number of Vacancies	Equivalent of vacancies into Streams
Kasulu	250	11,250	10,355	92	895	20
Kibondo	131	5,895	5, 199	88	696	15
Kigoma ( R)	178	8, 010	6, 828	85	1,182	26
Kigoma ( U)	59	2,655	2.616	99	39	1
Total	618	27,810	24, 998	90	2, 812	62

Source: Regional Education Office, Kigoma Region.

**Fig. 12: Actual Enrolment in Standard One by Sex, Kigoma Region 1997**



Kigoma urban district had the highest enrolment rate of 99% while Kibondo and Kigoma rural districts had the lowest enrolment rate of 88% and 85 % respectively.

### 3.1.1.3 Primary School Drop Out

As elsewhere in Tanzania school dropout is a problem in Kigoma region. This means that a number of pupils who enrolled in these primary schools drop out before they complete primary education.

**TABLE III-5 PRIMARY SCHOOL DROPOUT BY DISTRICT AND SEX, KIGOMA REGION 1997**

District	Enrolment			Drop Out			Percent
	Boys	Girls	Total	Boy	Girls	Total	
Kasulu	28,852	28,145	56,997	875	395	1,270	2.2
Kibondo	15,999	15,510	31,509	329	220	549	3.4
Kigoma ( R)	20,999	19,434	40,413	726	595	1,321	3.3
Kigoma ( U)	7,974	7,759	15,733	166	199	365	2.3
Total	73,824	70,848	144,672	2,096	1,384	3,480	2.4

Source: Regional Education Office, Kigoma Region

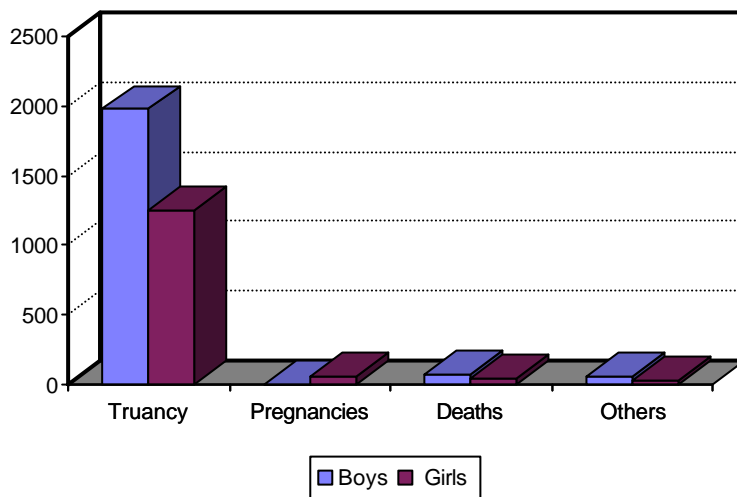
Table III-5 show that for 1997 boys accounted for 60.2 percent of all dropouts while girls were responsible for 39.8 percent

**TABLE III-6: REASONS FOR DROP OUTS BY SEX, KIGOMA REGION 1997**

Cause	Number of Drop outs			% of Total
	Boys	Girls	Total	
Truancy	1,975	1,255	3,230	92.8
Pregnancies	-	58	58	1.7
Deaths	68	40	108	3.1
Others	53	31	84	2.4
Total	2,096	1,384	3,480	100.0

Source:

**Fig. 13: Reasons for Drop Outs By Sex, Kigoma Region 1997**



According to Table III-6 above truancy accounted for 92.8 percent of all drop outs, followed by deaths 3.1 percent, pregnancies and other causes accounted for 1.7% and 2.4 respectively. The alarming dropout emanating from truancy has been attributed to the following factors:

- Lack of wareness on the value of education on the part of parents
- Low incomes which make parents unable to contribute to the cost of education
- Some parents believe that taking children to school is a waste time and manpower that could be more usefully utilized in other family activities such as fishing, lumbering, petty business and other employment.



### 3.1.1.4 Primary School Teachers

An adequate supply of teachers of required quality is one of the essential of a successful primary education system. The requirements of grade III A teachers in 1998 was 2,093 but only 1,419 teachers or 67.8% of the requirements were available. Grade III B teachers requirements were 3, 745 while there were actually 4031 teachers which makes a surplus of 286. This is illustrated in Table III- 7.

**TABLE III- 7 NUMBER OF PRIMARY SCHOOL TEACHERS BY GRADE AND DISTRICTS, KIGOMA REGION 1998**

District	Requirement			Availabil			Deficit/Excess		
	III A	III B	Total	III A	III B	Total	III A	III B	Total
Kasulu	878	1,483	2,361	514	1,628	2,142	-364	145	- 219
Kibondo	404	833	1,237	310	974	1,284	-94	141	47
Kigoma ( R )	586	992	1,578	365	992	1,357	-221	-	-221
Kigoma ( U )	225	437	662	230	437	667	+5	-	+5
Total	2,093	3,745	5, 838	1,419	4,031	5,450	-674	+286	-388

Source: Regional Education Office, Kigoma Region

The shortage of teachers in the region is very uneven among the districts for while Kasulu district has a shortage of 364 Grade IIIA teachers, Kigoma Urban has a surplus of five (5) Grade IIIA teachers and Kibondo district has a total surplus of 45 Grade IIIB teachers. On the other hand Kigoma Rural and Urban have the number of Grade IIIB teachers as per requirements. Kasulu and Kibondo districts have a surplus of 145 and 141 Grade IIIB teachers respectively. When viewed in terms of pupils per teachers the situation is not very bad. The ratio is not drastically

different between districts. As indicated in Table III-8 the regional average number of pupils per teacher for 1998 is 27.

**TABLE III-8 THE NUMBER OF PUPILS PER TEACHER BY DISTRICT KIGOMA REGION 1998**

District	Total Enrolled	Total Number of Teacher	Number of Pupils per Teacher
Kasulu	56,997	2,142	27
Kibondo	31,509	1,284	25
Kigoma ( R)	40,433	1,357	30
Kigoma ( U)	17,733	667	24
Total	144,672	5,450	27

Source : Regional Education Office Kigoma

### 3.1.1.5 Primary Education Infrastructure

Infrastructure is a key ingredient in primary education. Primary school infrastructure include classrooms, teachers houses, latrines, desks, tables, chairs and cupboards. Many primary schools in Kigoma region do not have the required building and furniture and some of the existing buildings are not according to the required standards. The requirement of classrooms for the 249 primary schools is 3073 but the actual number of classrooms available is only 1,462 having a shortage of 1,611 classrooms, equivalent to 52.4% of the requirement . See Table III- 9.

**TABLE III-9 DISTRIBUTION OF CLASSROOMS IN PRIMARY SCHOOLS BY DISTRICT, KIGOMA REGION**

District	Requirement	Number Available	Shortfall	
			Number	%
Kasulu	1,250	554	696	55.7
Kibondo	687	390	297	43.2

Kigoma ( R)	832	324	508	61.1
Kigoma ( U)	304	194	110	36.2
Total	3.073	1,462	1,611	52.4

Source: Regional Education Office

Due to this shortage of classrooms some of the available classrooms are forced to accommodate up to more than 100 pupils instead of the required number of 45 pupils. The average number per classroom in the region is 99 but the regional distribution varies from 81 in Kigoma Urban and Kibondo to 125 in Kigoma Rural.

**TABLE III- 10 NUMBER OF PUPILS PER CLASSROOM BY DISTRICT KIGOMA REGION 1998**

District	Total Enrolment	Classrooms Available	Pupils per classroom
Kasulu	56,997	554	103
Kibondo	31,509	390	81
Kigoma ( R)	41,433	324	125
Kigoma ( U)	15, 733	194	81
Total	144,672	1,462	99

Source: Regional Education Office, Kigoma Region.

Classrooms are not the only area where physical facilities are inadequate. Apart from a good situation on the availability of desks, there is an appalling shortage of permanent pit latrines as toilets for pupils, cupboards, tables and chairs as can be observed in Table III-9 and Table III - 10.

**TABLE III - 11 DISTRIBUTION OF DESKS BY DISTRICTS KIGOMA REGION**

DISTRICT	REQUIREMENTS	AVAILABLE	SHORTFALL/EXCESS
KASULU	18, 431	18,378	-53

KIBONDO	9.047	9, 213	+ 166
KIGOMA ( R)	13,950	10,163	- 3787
KIGOMA ( U)	5,219	5,240	+ 21
TOTAL	46,647	42,994	3, 653

**TABLE III- 12 THE NUMBER OF TOILETS AND FURNITURE IN PRIMARY SCHOOLS, 1998, KIGOMA REGION**

ITEMS	REQUIREMENTS	AVAILABLE	SHORTAGE	SHORTAGE %
TOILETS.	5,209	1,198	4,011	77.0
TABLES	6,013	1,040	5, 013	83.4
CHAIRS	6,562	1,430	5, 132	78.2
CUPBOARDS	2,732	507	2,209	80.2

Source : Regional Education Office, Kigoma region.

Teachers houses are also important for primary education efficiency and teacher morale. This areas is probably the one areas where very little has been done as can be observed in Table III- 13. In some cases this big shortage of teachers houses has been considered to be one of the main reasons that make teachers run away from some schools soon after reporting.

**TABLE III - 13 TEACHERS HOUSES IN PRIMARY SCHOOLS BY DISTRICTS KIGOMA REGION**

DISTRICT	REQUIREMENTS	AVAILABLE	SHORTFALL	% SHORTFALL
KASULU	1,629	379	1,250	76.7
KIBONDO	947	206	741	78.2
KIGOMA ( R)	922	152	770	83.5
KIGOMA ( U)	414	33	381	92.0
TOTAL	3, 912	770	3,142	80.3

### 3.1.2 Secondary Education

Historically Kigoma region like her neighbouring region, Rukwa, was the most underdeveloped as far as secondary education is concerned. At independence in 1961 the region had only one

secondary school namely Livingstone Secondary School started by the Missionaries.

To date (1998) the region has 17 functioning secondary schools distributed as shows in Table III-14.

**TABLE III- 14: DISTRIBUTION OF SECONDARY SCHOOL IN KIGOMA REGION BY DISTRICT, 1998**

DISTRICT	PUBLIC		PRIVATE		TOTAL
	BOARDING	DAY	BOARDING	DAY	
KASULU	4			1	5
KIBONDO	2			1	3
KIGOMA ( R)	3			1	4
KIGOMA ( U)	2			3	5
TOTAL	11			6	17

Source: Regional Education Office, Kigoma 1998

Compared to other regions like Kilimanjaro, Arusha, Iringa and Mbeya, Kigoma region is still being considered as less developed region as far as secondary education is concerned.

The number of pupils selected to join secondary school education in Kigoma region is very small compared to the big number who complete primary education every year.

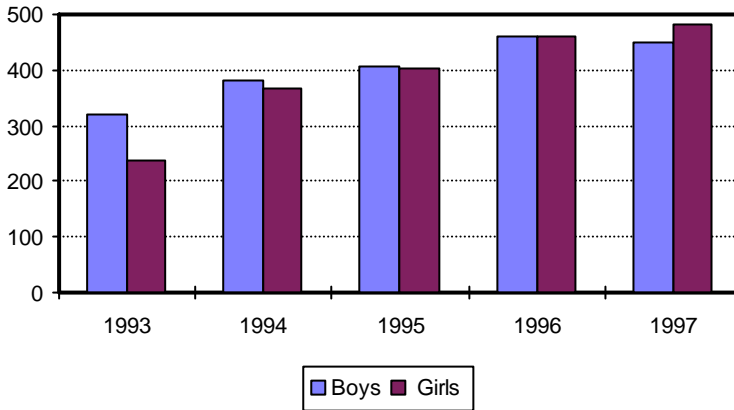
**TABLE III- 15 SELECTION FOR SECONDARY (FORM I) EDUCATION BY SEX, 1993 - 1997 KIGOMA REGION**

Year	Examinees			Selected			Percentage
	Boys	Girls	Total	Boys	Girls	Total	Selected
1993	6,087	6,713	12,800	320	239	559	4.5
1994	5,766	6,564	12,330	383	367	750	6.1
1995	5,623	6,950	12,573	408	404	812	6.5
1996	5,030	5,937	10,967	460	459	919	8.4

1997	5, 872	7,704	13, 581	449	483	932	6.8
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Source: Regional Education Office, Kigoma Region

**Fig. 14: Selected for Secondary (Form I) Education By Sex, 1993 - 1997 Kigoma Region**



Looking at Table III-15 it is revealed that number of pupils selected to join secondary education has gradually been increasing from 559 in 1993 to 932 in 1997. Although the number of girls who sat for Std VII examination exceeded that of boys from 1993 to 1997, the number of girls selected to join secondary education was lower than that of boys except in 1997.

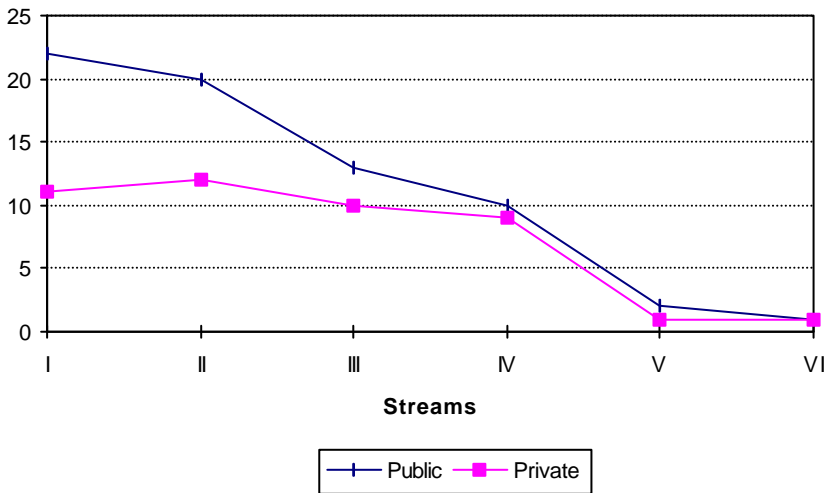
About 35.3% of secondary education schools and 39.3% of secondary education streams are private. All the 17 secondary schools have a total of 112 streams with a total enrolment of 3,569 in 1997.

**TABLE III- 16 NUMBER OF STREAMS IN SECONDARY SCHOOLS BY LEVEL AND OWNERSHIP, KIGOMA REGION**

Owneshi p	Number of Schools	Streams						
		I	II	III	IV	V	VI	Total
Public	11	22	20	13	10	2	1	68
Private	6	11	12	10	9	1	1	44
Total	17	33	32	23	19	3	2	112

Source : Regional Education Office, Kigoma Region.

**Fig. 15: Number of Streams in Secondary Schools By Level and Ownership, Kigoma Region**



The average number of pupils per stream is satisfactory . It is 31 for public secondary schools and 33 for private secondary schools.

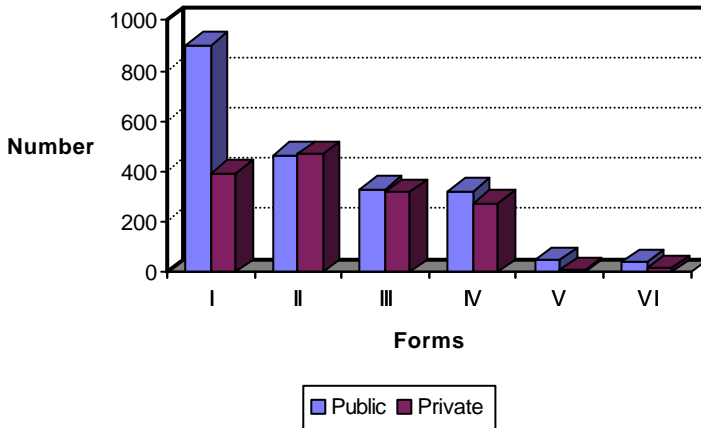


**TABLE III- 17 ENROLMENT IN SECONDARY SCHOOLS BY SEX LEVEL AND OWNERSHIP, KIGOMA REGION 1997**

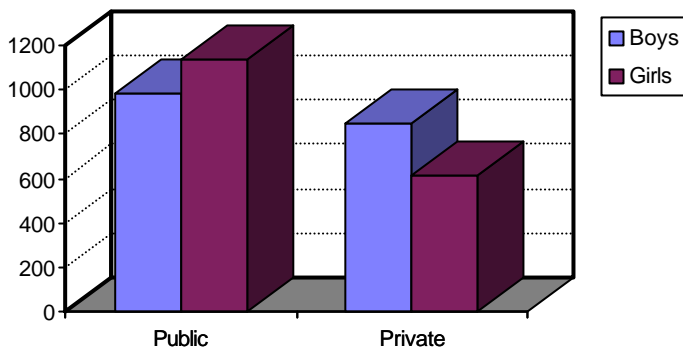
Owneshi p	Forms						Forms I- VI		
	I	II	III	IV	V	VI	Boys	Girls	Total
Public	904	464	33	32	44	36	978	1,131	2,109
Private	392	467	31	27	8	14	850	610	1,460
Total	1,296	931	64	59	52	502	1,82	1,741	3,569

Source : Regional Education Office, Kigoma Region.

**Fig. 16a: Enrolment in Secondary Schools By Ownership, Kigoma Region 1997**



**Fig. 16b: Enrolment in Secondary Schools By Ownership and Sex, Kigoma Region 1997**



### **3.1.3 Adult Education**

In the 1988 census, Kigoma region ranked 15th among 20 regions in literacy rate. Therefore there is still a lot to be done to catch up with other regions let alone eradicate illiteracy. But the region has come a long way to reach 55.1 % literacy in 1988. The rate was only 19% in 1967. See Table III- 18.

**TABLE III-18: PERCENTAGE OF LITERACY FOR POPULATION AGED 10 YEARS AND ABOVE IN KIGOMA REGIONS COMPARED TO OTHER REGIONS IN THE LAST THREE CENSUSES.**

<b>Region</b>	<b>1967 Census</b>	<b>1978 Census</b>	<b>1988 Census</b>	<b>Ranking</b>
<b>Kigoma</b>	<b>19</b>	<b>43.7</b>	<b>55.1</b>	<b>15</b>
Kilimanjaro	56	74.1	80.8	1
D'Salaam	60	73.3	80.7	1
Ruvuma	41	66.3	70.5	2
Tanga	40	60.6	66.0	4
Morogoro	37	58.6	62.8	6
Mara	35	56.4	63.9	5
Iringa	31	54.0	68.3	3
Kagera	40	52.9	59.5	8
Dodoma	24	49.5	55.5	14
Mbeya	29	49.2	61.9	7
Rukwa	-	48.5	58.6	9
Lindi	-	48.4	53.8	16
Mtwara	28	51.4	57.1	13
Singida	24	46.7	57.4	11
Mwanza	25	44.3	57.3	12
Pwani	26	44.0	51.1	17
Arusha	26	41.9	58.1	10
Tabora	27	40.5	50.5	18
Shinyanga	16	33.2	48.3	19

Source : 1988 Population Census

Like most of the regions in Tanzania the urban population tend to be more literate than the rural population in the region. Similarly

males also trend to be more literate than females. but unlike some regions the rate of literacy for rural males was higher than of urban females. See Table III- 19.

**TABLE III-19 LITERACY RATE FOR RURAL AND URBAN POPULATION OF 10 YEARS AND ABOVE IN KIGOMA REGION COMPARED TO OTHER REGION IN TANZANIA 1988 CENSES**

REGION	MALE			FEMALE		
	RURAL	URBAN	TOTAL	RURAL	URBAN	TOTAL
KIGOMA	65.1	83.1	67.4	43.1	62.7	45.5
ARUSHA	61.5	91.8	65.6	46.4	82.8	50.9
KILIMANJARO	84.5	90.3	85.5	75.7	83.6	76.9
DODOMA	61.5	85.4	64.3	45.1	73.7	48.2
TANGA	72.8	88.6	75.9	53.2	75.6	57.3
MBEYA	69.9	87.5	73.3	48.4	70.4	58.5
MARA	73.7	88.0	75.3	53.7	71.5	55.6
MOROGORO	68.8	86.4	72.9	49.5	72.0	54.6
COAST	60.1	72.2	64.0	40.1	51.8	44.9
D'SALAAM	68.4	90.0	87.9	48.0	77.7	74.6
LINDI	62.4	75.9	64.6	42.0	60.2	44.8
MTWARA	65.5	77.9	67.3	46.3	61.6	48.5
RUVUMA	77.7	87.6	78.7	61.4	75.7	63.3
IRINGA	80.1	87.4	84.9	57.2	70.4	58.5
MWANZA	63.7	83.7	67.6	43.4	66.9	47.8
KAGERA	68.0	84.4	69.0	49.7	72.4	50.9
SHINYANGA	57.9	85.9	59.9	36.2	67.7	39.3
SINGIDA	65.0	85.5	66.8	47.2	70.8	49.3
RUKWA	69.1	84.3	71.3	43.9	66.4	47.3
TABORA	50.1	85.2	60.5	36.7	67.8	41.6

Source 1988 Population censuses ( National Profile)

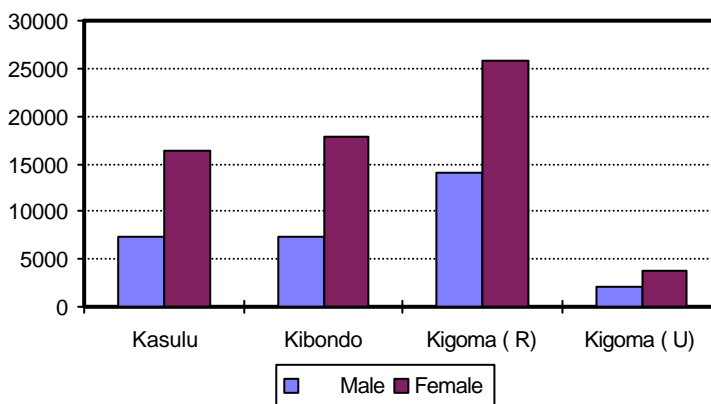
After the terminal literacy test in early 1997 about 94,723 people were still illiterate of which males were 30,909 and females were 63, 814. This means that of the regional population, 8.6% are illiterate. The highest rate of illiteracy is in Kibondo district with

11.7% and Kigoma Urban district had the best record at only 5.0% illiteracy. See Table III -20.

**TABLE III-20 PEOPLE ILLITERATE AND ILLITERACY RATE BY DISTRICT, KIGOMA REGION 1997**

District	Population Estimates 1997	Illiterates			Illiteracy Rate
		Male	Female	Total	
Kasulu	391, 150	7, 263	16 362	23,362	6.0
Kibondo	215,990	7, 391	17, 935	25, 326	11.7
Kigoma ( R)	366,004	14, 145	25, 737	39, 889	10.8
Kigoma ( U)	118, 169	2,110	3, 780	5, 890	5.0
Total	1,091, 313	30, 909	63, 814	94, 723	8.6

**Fig 17: People Illiterate by District, Kigoma Region 1997**



## 3.2 HEALTH

### 3.2.1 Introduction

The health delivery system in Kigoma region is faced by a variety of basic problems which weigh against the development of a health and productive population. Poor communication, poor water supplies, poverty, poorly run health service and malnutrition are only some of the factors which contribute towards poor health. The relative isolation of the region from the Centre (Dar es Salaam) has consequently reduced the ability of the region to deliver the required health services.

### **3.2.2 Morbidity and Mortality**

The decline in the economy nation wide in the eighties and nineties was reflected in the health sector by deterioration in the health infrastructure, severe lack of essential equipment, essential drugs and other medical supplies. In addition to financial crisis the health delivery system was constrained by understaffing and widespread lowering of morale among health workers. The impact of all these factors has been the increase in the region's morbidity and mortality from diseases.

According to regional medical records the ten most common causes of illness have been identified as shown in Table III-21.

**TABLE III-21 THE NUMBER OF REPORTED CASES OF THE TEN MOST COMMON CAUSES OF MORBIDITY AND MORALITY IN KIGOMA REGION 1997**

<b>Disease</b>	<b>Reported Number of Cases</b>	<b>% of c a s e s</b>	<b>Rankin g</b>
Malaria	484,450	47.5	1
Diarhoel Disease	191, 252	18.8	2
Eye Infections	111, 573	10.9	3
Intestinal Disease	82, 976	8.2	4
Upper respiratory tract infection	59, 979	5.9	5
Preumonia	53, 313	5.2	6
Malnutrition	11,551	1.1	7
Anaemia	9, 332	0.9	8
Skin Infection	9, 229	0.9	9
Ear Disease	6,260	0.6	10
Total	1,019, 915	100.0	

Source: Regional Medical Office Annual Health Report 1997

As Table III- 21 above indicate malaria is the number one cause in the region. Diarrhoea disease is ranked as number two followed by eye infections, intestinal diseases, upper respiratory tract infections and pneumonia as the third fourth fifth and sixth respectively.



Communicable diseases form a different class of diseases which tend to come and go but when in existence spread quickly and sometimes manage to reach epidemic proportions. In 1997 the communicable diseases which caused deaths were cholera, dysentery, meningitis and typhoid.

**TABLE III- 22: DISTRIBUTION OF DEATHS CAUSED BY COMMUNICABLE DISEASES, KIGOMA REGION 1997**

District	Cholera	- Dysenter y	Meningiti s	Typhoid	Total Deaths
Kasulu	0	27	15	9	53
Kibondo	0	0	0	0	0
Kigoma (R)	24	0	10	0	34
Kigoma (U)	20	2	3	2	27
Total Region	44	29	28	11	112

### 3.2.3 Health Infrastructure

Kigoma region has a number of health facilities located in various parts, both in the rural and urban areas. The region has 6 hospitals with a total of 1,045 beds , 15 rural health centres and 167 dispensaries.

**TABLE III- 23 DISTRIBUTION OF HEALTH FACILITIES BY DISTRICT, KIGOMA REGION 1997**

District	Hospitals	Health Centres	Dispensar- ies	Hospital Beds
Kasulu	3	5	50	403
Kibondo	1	4	43	226
Kigoma (R)	0	4	56	116

Kigoma (U)	2	2	18	300
Total Region	6	15	167	1,045

Source: Regional Medical Office Annual Health Report 1997

Of the six hospitals three (3) are public hospitals owned by the government and other three (3) are private hospitals belonging to religions organisations. All the six hospitals together have a total of 1045 beds. The three government hospitals are located at a headquarter towns of respective district namely Kigoma (Maweni), Kasulu and Kibondo. The hospital in Kigoma town (Maweni hospital) is at the sametime a regional hospital. The three private hospitals one is located in Kigoma township ( Baptist) and two in Kasulu district at Heru Juu and Kabanga missions. Distribution of these hospitals is as shown in Table III-24

**TABLE III-24 DISTRIBUTION OF HOSPITALS BY OWNERSHIP KIGOMA REGION 1997**

DISTRICT	PUBLIC	V.A	PRIVATE	TOTAL
KASULU	1	2	0	3
KIBONDO	1	0	0	1
KIGOMA (R)	0	0	0	0
KIGOMA (U)	1	1	0	2
TOTAL REGION	3	3	0	6

The average population per hospital is 181, 885 people. Kigoma rural district is the most disadvantaged district in the region having no hospital. Consequently population per hospital for both Kigoma rural and urban district of 425,088 in 1997 is the highest in the region. The comparative figures for Kasulu and Kibondo

districts are 130, 303 and 215, 990 people per hospital respectively.

**TABLE III- 25: COVERAGE OF HOSPITALS AND HOSPITAL BED BY DISTRICT, KIGOMA REGION 1997**

District	Population Estimates 1997	No. of Hospitals	No. of Beds	Population/ Hospital	Population/Bed
Kasulu	391.150	3	403	130, 303	970
Kibondo	215, 990	1	226	215,990	956
Kigoma (R)	366,004	} 2	116	} 425,088	3155
Kigoma (U)	118, 169	}	300	}	394
Total Region	1,091, 313	6	1,045	181, 885	1,044

Source: Regional Medical Office Annual Health Report 1997

Similarly the population per bed for Kigoma rural of 3,155 is the highest when compared to Kasulu, Kibondo and Kigoma urban districts with 970, 956 and 394 people per hospital bed respectively.

Twelve of the total health centres in the region are owned by the government, two by Voluntary Agencies and one is privately owned. Out of the 15 health centres 13 are located in different rural areas of the regions while two health centres are located in Kigoma township. The distribution of these centres by ownership can be seen in Table III-26

**TABLE III- 26: DISTRIBUTION AND COVERAGE OF HEALTH CENTRES, KIGOMA REGION, 1997**

DISTRICT	HEALTH CENTRES				POPULATION/ HEALTH CENTRE
	PUBLIC	V.A	PRIVATE	TOTAL	
KASULU	4	1	0	5	78, 230
KIBONDO	4	0	0	4	53,998
KIGOMA (R)	3	1	0	4	91, 501
KIGOMA (U)	1	0	1	2	59,085
TOTAL REGION	12	2	1	15	72, 754

Source: Regional Medical Office Annual Health Report 1997

On average 72, 754 people in Kigoma region are served by one health centre compared to required national average of 50,000 people. In all districts the average number of the people per health centre is above the national average. This is not satisfactory.

In Kigoma region the government owns 128 out of 167 dispensaries Voluntary Agencies own 16 dispensaries while 23 are private. All dispensaries except 18 dispensaries which are in Kigoma township are located in various rural areas. The distribution of the dispensaries by ownership and coverage can be seen in Table III- 27.

**TABLE III- 27      DISTRIBUTION AND COVERAGE OF DISPENSARIES  
KIGOMA    REGION 1997**

District	Dispensaries Ownership				Population / Dispensary
	Public	V.A	- Privat e	Total	
Kasulu	37	8	5	50	78, 230
Kibondo	40	2	1	43	5, 023
Kigoma (R)	43	4	9	56	6, 655
Kigoma (U)	8	2	8	18	6, 565
Total Region	128	16	23	167	6, 574

Source: Regional Medical Office Annual Health Report 1997

As can be observed in Table III-27 notwithstanding the effects of influx of refugees, the number of dispensaries in relation to the population in the region can be said to be within a reasonable range, that is 5,000 to about 8,000 people per dispensary compared to required national average of 10,000 people per dispensary.

Out of the existing 173 health facilities in the region about 146 or 84% of health facilities have MCH facilities. Whereas in 1997 the population per dispensary was 6,574 it was 7131 in 1978. The number of dispensaries had increased by 80% from 91 to 167. Likewise the number of people per Health centre in 1978 was 92, 707 which had improved to 72,754 as a result of an increase in the number of health centres from seven (7) in 1978 to 15 more than double in 1997.



**TABLE III-28 POPULATION RATIO PER DISPENSARY /HEALTH CENTRE BY DISTRICT 1978**

District	Population 1978	No. of Dispensaries	Population/ Dispensary	No. of Health Centre	Popula- tion/ Health Centre
Kasulu	258, 651	30	8, 521	2	127, 826
Kibondo	139, 991	29	4, 827	3	46, 664
Kigoma (R)	174, 782	27	6, 473	2	126,654
Kigoma (U)	78, 525	5	15, 705	}	
Total Region	648, 949	91	7, 131	7	92, 707

Source : Planning Commission ( Compiled Data ) 1994

### **3.2.4 Child Immunization**

There are six early childhood diseases against which immunization can be given. They are tuberculosis, pertussis, diphtheria, tetanus, polio and measles. The number one target group for such immunization consist of new born children before they reach one year. The second target group are the children between one year and five years or the underfives. The immunization of children under one year had by 1997 reached a very good coverage of 88.7 for BCG, 88.2 for DPT3 89.3 for Polio 3 and 90.0% for Measles as shown in Table III-29.



**TABLE III- 29 DISTRIBUTION OF COVERAGE BY IMMUNIZATION UNDER ONE YEAR BY DISTRICT, KIGOMA REGION 1997**

District	Target No Children	BCG		DPT 3		POLIO 3		MEASLES	
		NO	%	NO	%	NO	%	NO	%
Kasulu	14,913	14,802	99	12,929	86	13,757	92	16,758	112
Kibondo	10,024	9,011	90	9,002	90	8,494	85	8,229	82
Kigoma (R)	14,439	11,889	82	13,532	94	13,798	92	11,171	77
Kigoma (U)	4,696	3,377	72	3,391	72	3,312	70	3,526	75
Total Region	44,072	39,079	89	38,854	88	39,361	89	39,684	90

Regarding the immunization of underfives, Kibondo district seems to be performing well at 94% coverage by 1997 as compared with other district.

**TABLE III- 30 DISTRIBUTION OF COVERAGE BY IMMUNIZATION OF UNDER-FIVE CHILDREN BY DISTRICT, KIGOMA REGION**

District	Target Number	Registered		Complete Immunization	
		Number	%	Number	%
Kasulu	85,802	67,116	78	56,795	84
Kibondo	50,120	49,107	94	46,934	94
Kigoma (R)	72,194	68,385	94	57,139	84
Kigoma (U)	23,479	na	na	na	na
Total Region	231,595	184,608	79.7	160,868	87

### 3.2.5 Child Nutrition

Under the section of " Food Adequacy" Kigoma region is said to have not experienced acute food shortage except for inter regional/ interboundary trade which has tended to create imbalance in the quantities of food produced in the region. The protein energy malnutrition occurring in the region is blamed on the ignorance about feed regimes for pregnant women and young children along with general poverty. This can be observed in the weights of new born babies in Table III-31. During 1995 about 3.3% of new born weighed were severely underweight while another 12.3% were moderately underweight.

**TABLE III-31 NUTRITION STATUS OF CHILDREN AT BIRTH KIGOMA REGION COMPARED TO NEIGHBOURING REGION**

Region	Number Weighed	Children Under Nutrition Weight			%
		< 60%	60-80%	Total	
Kigoma	42,408	1,392	5, 227	6, 619	15.6
Tabora	45,006	701	2,060	2,761	6.1
Kagera	60, 417	1,002	4, 606	5, 608	9.2
Shinyanga	74, 715	559	2,244	2,803	4.0
Rukwa	33, 454	876	3,611	4,484	13.4

Source:- Health statistics Abstract 1997

Compared to the neighbouring regions Kigoma region has the highest proportion of underweight births. This level is the worst compared to the national average of 9%.

**TABLE III-32 NUTRITION STATUS OF CHILDREN AT BIRTH IN TANZANIA MAINLAND, BY REGION, 1995**

Region	Number Weighed	Children Under Nutrition			
				Total	%
		< 60%	60-80%		
Kigoma	42,408	1,392	5,227	6,619	16
Mtwara	23,127	850	4,138	4,988	22
Singida	31,254	376	1,276	1,652	5
Lindi	22,779	868	1,932	2,800	12
Ruvuma	26,630	646	2,599	3,245	12
Morogoro	51,239	1,045	3,215	4,260	8
Coast	22,934	734	2,607	3,341	15
Dar es Salaam	50,370	435	1,206	1,641	3
Iringa	45,459	847	8,083	8,930	20
Arusha	68,418	709	2,845	3,554	5
Dodoma	52,957	500	1,686	2,186	4
Kagera	60,417	1,002	4,606	5,608	9
Mbeya	84,231	1,528	10,062	11,590	14
Mara	45,944	651	1,918	2,569	6
Mwanza	89,166	1,416	4,648	6,064	7
Rukwa	33,454	876	3,611	4,487	13
Shinyanga	74,715	559	2,244	2,803	4
Tabora	45,648	431	1,734	2,165	5
Tanga	54,006	701	2,060	2,761	5
Total	968,091	15,777	66,665	82,442	9

Source: Health Statistics Abstract 1997.

### 3:2:6 Infant and Underfive Mortality

The Infant Mortality Rate (IMR) and the Under Five Mortality Rate (U5MR) are the two ultimate indicators of child survival. They are measures of the success of all those interventions which affect the health of infants and young children. Kigoma regions IMR and U5MR is reflected in Table III- 33.

**TABLE III-33 IMR AND U5MR IN TANZANIA MAINLAND BY REGIONS 1975, 1985 AND 1995**

Region	IMR			U5MR		
	1975	1985	1995	1975	1985	1995
Kigoma	163	115	81	269	192	137
Mtwara	161	138	119	267	233	202
Lindi	151	140	129	255	236	218
Ruvuma	145	113	88	245	188	143
Morogoro	140	124	96	267	209	163
Coast	121	113	105	204	189	174
Dar es Salaam	108	105	102	179	173	168
Iringa	152	130	111	257	220	189
Dodoma	133	132	130	225	222	220
Arusha	108	75	52	179	129	78
Kagera	133	130	127	225	219	212
Kilimanjaro	76	67	59	119	104	90
Mara	140	125	112	236	211	189
Mbeya	161	124	96	267	209	163
Mwanza	139	115	95	233	192	157
Rukwa	170	131	101	283	221	172
Shinyanga	150	110	81	252	183	131
Singida	137	96	67	231	157	106
Tabora	140	101	73	236	166	116
Tanga	112	106	100	187	176	166

Source: Health Statistics Abstract 1997.

Table III- 33 above show that both IMR and U5MR are showing a healthy sign of declining which is a better than average performance.

**TABLE III-34 KIGOMA REGION URBAN AND RURAL IMR AND U5MR COMPARED TO OTHER REGIONS, 1988**

Region	IMR			U5MR		
	Rural	Urban	Avera	Rural	Urban	Average
Kigoma	116	109	115	194	181	192
Mtwara	143	108	138	241	180	233
Lindi	143	121	129	241	204	236
Ruvuma	114	107	113	190	177	188
Morogoro	134	94	125	226	153	211
Coast	115	104	113	193	172	189
Dar es Salaam	121	103	105	203	169	173
Iringa	130	135	130	219	229	220
Dodoma	136	94	132	230	154	222
Arusha	76	72	75	120	114	129
Kagera	130	116	130	220	193	219
Kilimanjaro	66	73	67	102	115	104
Mara	128	101	125	216	116	211
Mbeya	128	107	124	216	177	209
Mwanza	119	97	115	200	158	192
Rukwa	134	112	131	227	186	221
Shinyanga	112	92	110	186	150	183
Singida	99	81	96	161	129	157
Tabora	101	103	101	165	169	166

Tanga	109	89	106	182	144	176
Mainland	118	114	115	197	190	193

Source: Population Census 1988.

When comparison is made in Table III-34 between Kigoma region and other regions and also between Urban and rural mortality rates, in all regions except Tabora, Kilimanjaro and Iringa regions both IMR and U5MR are higher in rural areas than in urban areas. This shows that young children in rural areas are more risky healthwise than in urban areas while the Kigoma region average for IMR and U5MR in both rural and urban is almost similar to the national average.

From Table III-35 a similar picture the urban/ rural set up appears with respect to the sex of a child. Female children in Kigoma region and in all regions except for Arusha region are less at risk from death than their male counterparts. They have a lower IMR and U5MR as a population than the male population.

**TABLE III- 35 KIGOMA REGION IMR AND USMR BY SEX AND COMPARED TO OTHER REGIONS 1988**

Region	IMR			U5MR		
	Male	Female	Average	Male	Female	Average
Kigoma	119	111	115	200	184	192
Mtwara	141	134	138	238	227	233
Lindi	140	139	140	237	235	236
Ruvuma	115	110	113	193	183	188
Morogoro	133	118	125	224	197	211
Coast	118	109	113	199	180	189

Dar es Salaam	109	100	105	181	165	173
Iringa	137	124	130	231	209	220
Arusha	79	82	75	126	131	129
Dodoma	136	127	132	230	114	222
Kagera	133	127	130	224	213	219
Mara	128	122	125	216	205	211
Kilimanjaro	67	67	67	104	104	104
Mbeya	130	118	124	220	197	209
Mwanza	122	108	115	204	178	192
Rukwa	137	125	131	232	211	221
Shinyanga	114	106	110	191	175	183
Singida	98	94	96	161	152	157
Tabora	103	99	101	169	163	166
Tanga	110	102	106	183	168	176

Source: Population Census 1988

### 3:2:7 Maternal Mortality

Death of women directly connected with child bearing is still a problem in Tanzania and in Kigoma region. Women who die during pregnancy or within 42 days of the termination of pregnancy give rise to maternal mortality. Maternal surveillance and delivery of children at a health facility reduce the risk of death to both child and the mother. Table III-36 shows how Kigoma region fares compared to other regions with respect to the place of delivery. Only 35.5% of pregnant women deliver at a health facility in Kigoma.

**TABLE III- 36 PLACE OF DELIVERY- PERCENTAGE DISTRIBUTION OF BIRTHS IN THE FIVE YEAR PRECEDING THE SURVEY, KIGOMA REGION 1996**

Region	Place of Delivery			
	Health Facility	Home	Dont know/ Missing	Total
<b>Kigoma</b>	<b>35.5</b>	<b>61.7</b>	<b>2.8</b>	<b>100.0</b>
Dodoma	41.5	57.4	1.1	100.0
Coast	51.1	44.0	4.9	100.0
Arusha	41.3	54.1	4.6	100.0
Kilimanjaro	64.3	31.1	4.6	100.0
Tanga	45.0	54.3	0.6	100.0
Morogoro	54.0	44.7	1.3	100.0
D'Salaam	85.9	12.3	1.8	100.0
Lindi	49.5	42.3	8.3	100.0
Mtwara	51.5	47.8	0.7	100.0
Ruvuma	79.8	17.8	2.4	100.0
Iringa	46.6	53.0	0.3	100.0
Mbeya	46.9	52.7	0.4	100.0
Singida	47.1	51.5	1.4	100.0
Tabora	63.3	28.7	8.0	100.0
Rukwa	45.6	53.5	0.8	100.0
Shinyanga	38.9	50.4	10.7	100.0
Kagera	29.6	67.7	2.7	100.0
Mwanza	37.6	53.8	8.6	100.0
Tanga	10.9	80.2	8.9	100.0
Mara	31.7	58.7	9.6	100.0

Source: Tanzania Demographic and Health Survey 1996.

Based on 1995 figures shown in Table III - 37 Kigoma region rank at number 2 next to Kilimanjaro although this is not consistent with the proportion of deliveries carried out at health facilities in the region.



**TABLE III-37 MATERNAL MORTALITY RATE IN TANZANIA MAINLAND BY REGIONS FOR 1992 TO 1995:**

<b>Region</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>Ranking</b>
Kigoma	144	155	105	87	2
Mtwara	264	212	161	252	10
Lindi	262	289	193	264	14
Ruvuma	225	189	186	177	8
Morogoro	289	172	190	153	6
Coast	209	111	70	187	5
Dar es Salaam	220	398	237	328	19
Iringa	311	321	276	281	18
Arusha	102	158	114	159	4
Shinyanga	143	188	199	184	9
Singida	242	171	238	207	13
Dodoma	197	214	208	266	16
Kagera	304	343	190	242	12
Kilimanjaro	126	46	107	63	1
Mara	67	59	106	124	3
Mbeya	67	361	436	264	20
Mwanza	221	186	266	207	15
Rukwa	172	294	243	267	17
Tabora	151	185	130	216	7
Tanga	255	172	220	195	11
Total	199	211	197	208	-

Source:- Health Statistics Abstract, 1997.

One way to reduce MMR is to ensure that all women of child bearing age, between 15-45 years, are immunized against tetanus. As Table III-38 shows for 1997 a total of 23.6% of this group of women had three or more vaccination rendering them nominally immune. More efforts are required particularly in Kibondo district which has attained only 14.4% of the group of women.

**TABLE III-38: TETANUS VACCINATION OF WOMEN WITHIN THE CHILD BEARING AGE GROUP, KIGOMA REGION 1997**

District	Target Women 14-15	Vaccinations							
		TT2	%	TT3	%	TT4	%	TT5	%
Kasulu	85, 802	8,540	10	6, 713	8	5,965	7	9,632	11
Kibondo	50,120	3,842	8	3,370	7	2,715	6	4,542	9
Kigoma (R)	72,194	8,372	11	5,528	8	4,576	6	5,768	8
Kigoma (U)	23,479	2,879	12	1,444	7	920	4	762	3
Total	231,595	23,633	10	17,055	7	14,180	5	20,704	9

Source:- Regional Medical Office, Annual Health Report 1997, Kigoma Region.

### 3:2.8 AIDS

The first case of AIDS in the region was discovered in 1985 and since then it has rapidly gained ground. In 1996 it had reached a cumulative total of 2280 cases or 215 people in every 100,000 were AIDS victims. See Table III- 39

**TABLE III-39 CUMMULATIVE AIDS CASES IN KIGOMA REGION AND SOME SELECTED NEIGHBOURING REGIONS 1991 - 1996**

<b>Region</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>
Kigoma	930	1,556	1,920	2,070	2,257	2,280
Tabora	1,400	1,972	2,786	3,075	3,428	3,805
Shinyanga	1,278	1,874	2,624	3,062	3,361	3,824
Kagera	4,742	5,813	6,646	7,064	7,223	7,426
Rukwa	261	496	715	777	801	882
Singida	763	1,107	1,472	1,688	1,908	2,135
Mwanza	3,041	4,207	5,349	5,731	5,974	6,365
Mbeya	6,924	9,890	11,439	12,214	12,371	12,371
Mainland	44,195	60,066	73,572	79,445	83,351	88,467

About 2.6% of the Mainlands cummulative cases in AIDS are in Kigoma region. Compared to its neighbouring regions, Kigoma region has a relatively big number of cases. Its ranking as number 15 out of the national scale shows that its situation AIDS wise is no better. However from 1992 to 1996 the rate of new cases per year has slowed down possibly because health education has been effective. But more effort is required to reduce the rate of infections.

**TABLE III- 40: RATE OF AIDS PER 100,000 POPULATION BASED ON CUMMULATIVE CASES IN SELECTED NEIGHBOUR REGIONS 1992, 1993 AND 1996**

<b>Region</b>	<b>1992</b>	<b>1993</b>	<b>1996</b>	<b>1996 Ranking in Mainland</b>
Kigoma	86	98	215	15
Tabora	106	121	299	10
Shinyanga	55	64	169	16
Kagera	280	289	444	5
Rukwa	31	37	87	19
Singida	78	85	218	14
Mwanza	118	129	274	11
Mbeya	337	353	638	2

### **3:2:9 Life Expectancy**

Life expectancy is the ultimate measure of a region health environment. Between 1978 and 1988 censuses life expectancy for Kigoma region improved from 40 years to 48 years. If viewed according to sex, the life expectancy for both males and females had improved from 40 to 47 for males and 48 to 49 for females.

**TABLE III-41 LIFE EXPECTANCY AT BIRTH BY SEX 1978 AND 1988 IN KIGOMA REGION AS COMPARED TO OTHER REGIONS OF MANILAND TANZANIA**

Regions	1978 Census			1988 census		
	Male	Female	Overall	Male	Female	Overall
<b>Kigoma</b>	<b>40</b>	<b>48</b>	<b>40</b>	<b>47</b>	<b>49</b>	<b>48</b>
Coast	50	57	50	57	58	57
D'Salaam	50	50	50	50	50	50
Dodoma	45	46	45	45	47	46
Iringa	41	45	41	44	45	45
Kagera	45	45	45	44	45	45
Kilimanjaro	58	59	58	57	62	59
Lindi	42	47	42	46	48	47
Mara	44	47	44	46	48	47
Mbeya	41	47	41	45	48	47
Morogoro	44	46	44	45	48	46
Mtwara	40	46	40	45	48	46
Mwanza	44	48	44	46	50	48
Rukwa	40	45	40	44	48	45
Ruvuma	43	49	43	48	51	49
Shinyanga	42	50	42	48	51	50
Singida	44	55	44	54	55	55
Tabora	44	53	44	53	54	53
Tanga	49	49	49	48	51	49
Mainland	44	50	44	49	51	50

Source: 1988 Population Census, Health Statistics Abstract 1994.

### 3:2:10 Tuberculosis and Leprosy

Tuberculosis and Leprosy are still alive in Kigoma region. The onset of AIDS has strengthened the spread of tuberculosis so much that it is on the increase. Leprosy on the other hand is on the decline both in the region and in the country See. Table III- 42.

**TABLE III- 42    SMEAR POSITIVE PULMONARY TB AND LEPROSY CASE DETECTION RATE PER 100,000 POPULATION IN KIGOMA AND NEIGHBOURING REGIONS 1992, 1993 AND 1994**

Region	TB Rates			Leprosy Rates	
	1992	1993	1994		
Kigoma	26	24	569	28.0	15.0
Tabora	37	33	753	17.0	12.0
Shinyanga	32	37	1,273	10.0	9.0
Kagera	36	36	1,134	9.0	4.8
Rukwa	18	24	430	10.0	10.9
Mainland	48	57	1,719	13	11

Source: Health Statistics Abstract 1996

## 3.3    WATER SUPPLY

### 3.3.1    Introduction

Water is a very essential commodity for human, animal and plant life. Provision of adequate water supplies is one of the prerequisite for improving quality of life as well as being an important input for productive activities such as agriculture and industry.

Kigoma region is generally well endowed with water for use by its population and livestock. Except for the eastern part of the region where large areas between and away from the main rivers are dry

seasonally, Kigoma region domestic water supply is more affected by poor water quality than it is by lack of water as such.

### **3.3.2 Water Sources**

There are two major group of source of water found in the region. First traditional water sources or supplies which include spring, rivers or streams, lakes and traditional wells. Second improved or modern water sources or supplies which include the piped/tap, modern or improved wells and boreholes.

Small springs and seepage are typical traditional source of water in the region. Springs of good quality water are found in the hills to the north of the main Kigoma - Kibondo road and to the North of Kibondo District. Rivers and lakes are the surface water sources for many village in the region. Lake Tanganyika is an enormous traditional water source for most of the lake shore villages.

However most of the surface water sources are always polluted . For instance local in shore pollution of Lake Tanganyika near villages is common. It is caused by uncontrolled drainage from the villages, fishing activities such as fish cleaning and normal activities such as washing directly in the lake. Ground water is available in limited quantities in the Western parts of the region.

The modern or improved water source or supplies include pumped or motorized schemes, gravity schemes, Boreholes or Deep wells and wells with handpumps or protected springs.

### 3.3.3 Rural Water Supply

The rural population in Kigoma region which is estimated to be 865,075 in 1997 is served with 3 functioning out of 39 pumping or motorized schemes, 62 functioning gravity schemes, 132 operating shallow wells or protected springs; and 57 functioning out of 69 Boreholes or deep wells. See table III- 43

**TABLE III - 43 RURAL WATER SUPPLY SCHEMES, KIGOMA REGION**

District	Kasulu			Kibondo			Kigoma			Region			%	
	F	NF	T	F	NF	T	F	NF	T	F	NF	T	F	
Pumping/ Motorized	0	15	15	1	7	8	2	14	6	3	36	39	7.7	
Gravity	28	-	28	15	-	15	19	-	19	62	-	62	100.	
Shallow wells/ protected Springs	79	-	79	45	-	45	8	-	8	132	-	132	100.	
Boreholes/ Deep wells	12	1	13	31	1	32	14	10	24	57	12	69	82.6	
Total	119	16	135	92	8	100	43	24	67	254	48	30.2	-	
Percentage	88.1	11.9	100	92.	8.	100	64.2	35.8	100	84.1	15.9	100	0	

Source : Regional Water Engineers Office, Kigoma Region

The kind of modern or improved rural water supplies are the same in all district in the region. Observation from Table III-43 show that only 7.7 % of the pumping or motorized schemes are functioning. This can be attributed to two major reasons:-

- Many of the pumping schemes are not functioning due to old age, lack of spares, repairs and regular maintenance. Some of the pumping units have been stolen.



- Shortage of fund for fuel and lack of transport has also contribute to thsi situation because technicians are unable to make regular checks on the machines and in some cases spares cannot be purchased on time.

Table III- 43 also show that all the shallow wells or protected springs and gravity schemes are operational probably because of low cost involved in operation and maintanance. But only 82.6% of the boreholes of deep wells are functioning. The 17.4% of the boreholes/deep well are not functioning probably because some of their pumping units have run out of order due to old age or pumps have not been installed to some of them.

The traditional water supplies are the most common water sources in rural areas. It is being estimated (1997) that about 48.8% of the total rural population still rely on traditional water sources for human and livestock watering while 51.2% of that population obtain water from modern or improved sources. See Table III-44.

**TABLE III-44: NUMBER OR RURAL POPULATION AND VILLAGE SERVED WITH CLEAN AND SAFE WATER 1997, KIGOMA REGION**

<b>District</b>	<b>Total Rural Population ( Est 1997)</b>	<b>Population Served</b>	<b>%Population served</b>	<b>Total Villages</b>	<b>Village served</b>	<b>% village Served</b>
Kasulu	337,562	193,005	57.2	82	31	37.8
Kibondo	165, 880	114,309	68.9	67	53	79.1
Kigoma	361,633	135,776	37.5	71	41	57.7
Total region	865,075	443,090	51.2	220	125	56.8

Source : Regional Water Engineers Office Kigoma Region.

The major problem facing the rural water supply is the sustainability of most rural water supply schemes. As a measure of sustaining their water supply schemes beneficiaries in the villages have been educated and sensitized on the importance of managing their own water supply schemes instead of waiting for the government or other agencies to run their water schemes. Consequently villages have started to form Village Water Committees in their villages and contribute towards the Villages Water Funds for the purpose of running and maintaining the village water schemes. Out of 220 villages in the region a total of 103 villages or 46.8% of all villages, have already formed Village Water Committees and started to contribute towards the Villages Water Funds.

### 3.3.4 Urban Water Supplies

Urban water supplies in Kigoma region is mainly for the urban areas which are the regional or district headquarters namely Kigoma/ Ujiji Town, Kasulu and Kibondo. Total water demand for the three mentioned urban areas is estimated at 29, 400 litres per day but the supply is only 10,777 litres per day equivalent to 36.7% of the total demand.

**TABLE III-45 DEMAND AND SUPPLY FOR URBAN AREAS, KIGOMA REGION**

District	Water Demand (litres/day)	Installed Litres/day	% Supply capacity
Kasulu	2,400	1000	41.6
Kibondo	2,000	377	18.8
Kigoma/Ujiji	25,000	9,400	37.6
Total region	29,400	10,777	36.7

Source : Regional Water Engineers Office: Kigoma Region.

Kigoma/Ujiji township population is supplied with water from the pumping system. The system pumps water from Lake Tanganyika, as a source, out to the water reservoirs where water is treated and then pumped out to distribution lines for consumption. The pumping scheme has seven (7) pumping units but only five (5) units are operational. The pumping units are electrically operated. Even the five operating units are not functioning properly due to old age and intermittent supply of electricity.

The water requirement for Kigoma/ Ujiji township is 25,000 litres per day but the pumping units capacity is only 9,400 litres per day which is equivalent to 37.6% percent of the total demand. The

undercapacity supply and the increasing water demand due to rapid expansion of the town are the major problems facing Kigoma/ Ujiji urban water supply.

Kasulu town population obtain water from the gravity system from the sources. There is no need for the pumping system. The major problem facing the supply is that of water distribution to various areas emanating from high costs of constructing the distribution system. As such only 1000 litre are supplied to Kasulu town which is equivalent to 41.6%.

Kibondo town and its population is supplied with water from the pumping scheme. Water is pumped from the boreholes and deep wells to the distribution lines ready for consumption. Major problems are the frequent breakdown of pumping machines and shortage of funds for fuel, repairs and regular maintenance. Consequently only 377 litres are supplied per day from the total demand.

### **3.3.4 Sanitation**

Sanitation in Kigoma region has mainly been traditional latrines. This situation is prevalent in both rural and urban areas. Due to constraint of domestic water supply the septic tanks (flush toilets) are rarely used in the rural areas and most of the enlightened peasants of late have embarked on the construction of VIP latrines.

According to 1988 population census results Kigoma region had 148 297 households out of which 142,284 households has access to toilet facilities equivalent to 95.9%. About 6013

households or 4.1% had no toilet facilities as indicated in Table III- 46.

**TABLE III- 46 HOUSEHOLDS WITH TOILET FACILITIES BY DISTRICT, KIGOMA REGION 1988**

District	Total Household (1988)							None	%
		Flush	%	Pit	%	Total	%		
Kasulu	53,063	550	1.0	50,329	94.9	50,879	95.9	2,184	4.2
Kibondo	37,909	240	0.6	34,687	91.5	34,927	92.1	2,982	7.9
Kigoma (R)	42,354	362	0.8	40,402	95.4	40,764	96.2	1,590	3.8
Kigoma (U)	14,971	740	4.9	13,708	91.6	14,448	96.5	523	3.5
Total	148,297	1,892	1.3	140,392	94.6	141,018	95.9	6,013	4.1

Source: 1988 Population Census, Regional Profile

Out of 141, 018 households with access to toilet facilities 110, 403 households were rural households while 30, 615 were urban households.

**TABLE III- 47 DISTRIBUTION OF RURAL AND URBAN HOUSEHOLD WITH TOILET FACILITIES BY DISTRICT, KIGOMA REGION 1988**

District	Total Household (1988)	Rural		Urban		Total	
		Households	%	Households	%	Household	%
Kasulu	53,063	45,373	85.5	5,506	10.4	50,879	95.9
Kibondo	37,909	26,374	69.6	8,553	22.6	34,927	95.4
Kigoma (R)	42,354	37,508	88.5	3,256	7.7	40,764	96.2
Kigoma (U)	14,971	1,148	7.7	13,300	88.8	14,448	96.5
Total	148,297	110,403	74.4	30,615	20.6	141,018	96.9

Source: 1988 Population Census, Regional Profile

### 3.4.2 Rural Sanitation

The total households in rural areas according to 1988 census was 117, 275 out of which 110, 403 had access to toilet facilities. This is equivalent to 94.2% of the total rural households. Kibondo

district had the lowest number of households with access to toilet facilities at 90.0% as indicates in Table III- 48.

**TABLE III- 48 HOUSEHOLDS WITH TOILET FACILITIES BY DISTRICT, KIGOMA REGION 1988**

District	Total Household (1988)	Type of Toilet						Without	%
		Flush	%	Pit	%	Total	%		
Kasulu	46,421	382	0.8	44,991	96.9	45,373	95.9	1,048	2.3
Kibondo	29,301	108	0.4	26,266	89.6	26,374	90.0	2,927	10.0
Kigoma (R)	40,283	360	0.9	37,148	92.2	37,508	93.1	2,775	6.9
Kigoma (U)	1,270	34	2.7	1,114	87.7	1,148	90.4	122	9.6
Total	117,275	884	0.8	109,519	93.4	110,403	94.2	6,872	5.9

Source: 1988 Population Census, Regional Profile

Apart from excreta disposal, sanitation generally is very poor in rural areas. This may be attributed to poor housing and dwelling conditions especially in areas where animals share the same premises with the people.

### 3.4.3 Urban Sanitation

Figures from 1988 census indicate the total households in urban areas was 31,022 but only 30, 492, households, equivalent to 98.3% had access to toilet facilities. According to Table III- 49 below all districts had satisfactory performance.

**TABLE III- 49 HOUSEHOLDS WITH TOILET FACILITIES IN URBAN AREAS BY DISTRICT, KIGOMA REGION 1988**

District	Total Household (1988)							Without	%
		Flush	%	Pit	%	Total	%		
Kasulu	6,642	168	2.5	6,403	96.4	6,571	98.9	71	1.1
Kibondo	8,608	132	1.6	8,421	97.8	8,553	99.4	55	0.6
Kigoma (R)	2,071	2	0.1	2,066	99.7	2,068	99.8	3	0.2
Kigoma (U)	13,701	706	5.2	12,594	91.9	13,300	97.1	401	2.9
Total	31,022	1,008	3.2	29,484	95.1	30,492	98.3	530	1.7

## **SECTION IV**

### **4.0 ECONOMIC INFRASTRUCTURE**

#### **4.1 Introduction**

Kigoma Region has a lot of potential for development but the underdevelopment of economic infrastructure such as poor roads, unreliable rail and air transport and inadequate supply of electricity etc, has been the most significant barrier to socio-economic development. Furthermore the geographical location of the region makes it quite remote from other centres of economic and political importance. To quote a few examples, Kigoma/Ujiji town is 1316 Km from Dar es Salaam, 830 Km from Mwanza, 1204 Km from Arusha and 1361 Km from Tanga and so on.

#### **4.2 Roads**

Kigoma Region has a total of 1781 km of established road network with 468 km of trunk roads and 592 km of regional roads under the responsibility of the Ministry of Works and 713 km under the respective district's responsibility.



**TABLE IV - 1 ROAD NETWORK IN KMs BY TYPE AND DISTRICT, KIGOMA REGION.**

Type of Road	Kasulu	Kibondo	Kigoma	Total	% of Total
Trunk Roads	197	147	124	468	26.3
Regional Roads	115	113	364	592	33.2
District Roads	355	164	194	713	40.0
Tarmac Roads	-	-	8	8	0.5
Total	667	424	690	1781	100.0

Source: Regional Engineer Works - Kigoma Region 1998.

### **Trunk Roads**

Kigoma region can easily be reached from outside by three trunk roads traversing the region namely:-

- . Mwandiga - Mwanjovu to Burundi border
- . Kanyani (Kasulu) - Rukwa region border
- . Kigoma - Kasulu - Kibondo - Nyakanazi.

The direct link with Tabora by road is made difficult by lack of bridge across Malagarasi river. The condition of these roads is as follows:

#### **Mwandiga - Manyovu (Km 60)**

This road starts from Mwandiga (Kigoma) to Manyovu. It covers a distance of 60 kms passing through an area which rises gradually with non-rocky hills and ridges intersected by wide valley. The soils show the usual variation of redish in the slopes and red clayey in the depressions. The road serves one of the most

populated area in Kigoma and Kasulu districts. It is also a link with the neighbouring country of Burundi. The road facilitates transportation of coffee, banana, beans, vegetables and fruits, as well as access to tourist attraction of Gombe National Park which is famous for Chimpanzee. The road surface is of gravel engineered.

### **Rukwa Border - Kanyani (Kasulu) Km 73**

The road covers a distance of 73 km passing through reddish clays in the ridges or black clay soil in the depressions or swampy areas. The road surface is mainly of earth and is in very poor condition. The road connects the neighbouring region of Rukwa at Uvinza and is part of the western corridor route that connects the two neighbouring countries of Zambia and Uganda. This road facilitates transportation of salt from Nyanza Salt Mines at Uvinza, timber and other crops such as tobacco, maize and beans. It also provides access to Lugufu and Uvinza ranches and to the tourist attraction and hunting areas of Katavi and Mahale National Parks and Moyovosi Game reserves.

### **Kigoma - Kasulu - Kibondo - Nyakanazi road Km 335**

The road covers a distance of 335 km passing through soil that show the usual variations of reddish brown on the slopes and black or red clayey in the depressions. The road surface is partly of engineered gravel or medium to fair standard and partly of earth. This road which traverse the region is of vital importance for the socio-economic development of the region since it passes through forestry, cash and food crops producing areas of the region. There are many access roads joining this road including those joining the refugee camps of Mtabila, Nyarugusu, Nduta and Kanembwa. Apart from connecting the headquarters of the

three districts, this road also connects the neighbouring regions of Shinyanga and Kagera at Nyakanazi.

### **The Regional and District Roads**

The regional and district roads connect district headquarters, part of the district to district headquarters or to main centres in the forestry and crop producing areas. Most of these roads have earth surface which is worn out and in poor condition. The major regional roads consist of the following roads:

#### **Kidahwe - Uvinza (73 Km)**

This road cover a distance of 73 km passing through Lugufu Ranch (and Refugee Camp) and various crops producing villages towards Uvinza. The road surface consist of earth and is in poor condition. Large portion of the road passes through swampy areas which are flooded, eroding the road to be impassable. Apart from salt at Uvinza, the road is important for tranportation of both forestry products and cash and food crops to Kigoma/Ujiji townhip.

#### **Uvinza - Malagarasi (Km 119)**

This road is supposed to be a main link connecting Kigoma and Tabora regions but is impassable due to obstruction at Malagarasi river where a bridge is required and swampy areas. This road is very important as it traverses through Ilunde and Malagarasi forests where there are forestry products. The dominant soils are the black cotton soils. The road surface layer consist of earth and is in very bad condition particularly in areas before reaching Malagarasi river.

#### **Kasili - Buhigwe (Km 65)**

The Kasili - Buhigwe road which covers 65 km passes through reddish sand or black clayey soils in the depressions or swampy areas. It commences off Kigoma - Kasulu trunk road at Kasili passing through the populous Mahembe village and Kwitanga Agricultural Prison to Buhigwe village in Kasulu district. The road is in very poor condition. This road facilitate the transportation of goods and crops to and from Kasulu, Buhigwe and villages along the road to Kigoma.

### **Kasulu - Manyovu (km 50)**

The road which covers a distance of 50 km passes through reddish - clayey - slippery soil and black clay soils in depressions. The road surface consist of earth and is currently in bad condition with poor drainage. The road facilitates transportation of banana , pineapples, and forestry products. Many feeder roads are connected to it.

### **Kakonko - Nyaronga - Nyakahura (Km 71)**

This road which commence off the Nyakanazi - Kibondo trunk road at Kakonko covers a ditance of 71 kms. It passes through an area which rises gradually with rocky hill and ridges intersected by wide valleys at Nyaronga and Nyakahura. The road which leads to the border with Burundi and Kagera region at Nyaronga and Nyakahura respectively facilitate transportation of goods and crops to and from the villages along the road to Kibondo and Nyakanazi. It also facilitates transportation of refugees.

### **Kibondo - Mabamba (Km 42)**

The road covers a distance of 42 km passing through Kibondo Airstrip to Mabamba from Kibondo. It passes through the flat plain which is abruptly bordered to the west by the neighbouring

country of Burundi. The dominant soils are the reddish clayey and the road top layer consist of partly gravel and earth with bad surface condition and in some areas before reaching Mabamba there are swampy areas which are generally impassable during the rain season.

### **Simbo - Ilagala (Km 172)**

The Simbo - Ilagala road which covers a distance of 172 km is equally important because it passes through the Ilagala Agricultural Prison and crop producing areas. The common soils are the reddish clayey soil. The road surface is partly of earth and partly gravel but in very poor condition. The obstruction at Malagarasi river where a bridge or a pantoon ferry is needed causes the road to be impassable beyond Ilagala point towards Kalya, where the road needs formation and alignment beyond this point to Kalya. (Rukwa border).

**TABLE IV- 2 ROAD DENSITY BY DISTRICT, KIGOMA REGION**

<b>District</b>	<b>Land Area (Sq Km)</b>	<b>Total Roads (Km)</b>	<b>Road Density ( Km/Sq KM)</b>	<b>Ranking</b>
Kasulu	9324	667	0.071	1
Kibondo	16058	424	0.026	3
Kigoma	11655	690	0.059	2
Total	37,037	1781	0.048	-

Source: Regional Works Engineers Office, Kigoma

Ranking the district in the order of development of roads as in Table IV - 2 Kibondo district is the lowest in the region with only 0.026 Km/Sq km of land area while Kasulu district has a well

developed road network showing high density of 0.071 Km/Sq Km.

**TABLE IV-3 DITRIBUTION OF ROAD NETWORK BY CATEGORY AND**

District	Trunk Road		Regional Roads		District Roads		Total	
	Km	%	Km	%	Km	%	Km	%
Kasulu	197	41.4	115	19.4	355	49.8	667	37.5
Kibondo	147	30.9	113	19.1	164	23.0	424	23.8
Kigoma	132	27.7	364	61.5	194	27.2	690	38.7
Total	476	100.0	592	100.0	713	100.0	1781	100.0

Source: Regional Eengineer Works - Kigoma Region

It will be observed from Table IV - 3 that road network distribution show that Kigoma district has the longest road network followed by Kasulu district while Kibondo district has the least length of roads.

### 4.3 Railways

Kigoma is approached by rail from Tabora on the Central railway line which was constructed by the Germans in 1914. The railways line which traverses the region serves nine (9) stations namely: Luiche, Kandaga, Kalenge, Kazuramimba, Lugufu, Uvinza, Ilunde, Malagarasi and Nguruka. There are regular passenger and freight services to Tabora, Dodoma and Dar es Salaam tranporting goods such as fish (mainly sardine), salt, timber, coffee, maize, beans and vegetables from Kigoma and industrial goods, agricultural inputs etc. into the region. The central line also serves the landlocked countries of Burundi, Rwanda and Democratic Republic of Congo through Kigoma port.

#### 4.4 Air Services

Kigoma region is served by one commercial airport located in Kigoma/Ujiji township. The airport has a gravel surface runway. It is capable of handling Fokker aircrafts and other small planes. There are regular services several times a week to Tabora and Dar es Salaam by Air Tanzania. There are also regular air services by UNHCR plane several times a week to Mwanza.

There are also three airstrips which are earth surfaced located in Uvinza, Kasulu and Kibondo. These airstrips are used by light, non-commercial aircrafts at irregular intervals. The airstrips are generally maintained in good condition but may become waterlogged after exceptionally heavy rains.

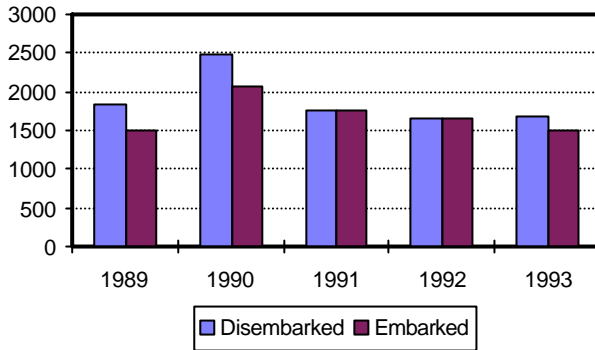
**TABLE IV-4 SCHEDULE COMMERCIAL PASSENGERS BY AIR TANZANIA HANDLED AT KIGOMA AIRPORT 1989 - 1993**

Year	Passengers		
	Disembarked	Embarked	Total
1989	1830	1512	3342
1990	2491	2065	4556
1991	1746	1746	3492
1992	1650	1662	3312
1993	1673	1493	3166

Source: Statistical Abstract 1995, Bureau of Statistics.



**Fig. 18: Schedule Commercial Passengers By Air Tanzania Handled at Kigoma Airport 1989 - 1993**



According to Table IV-4 there has been an increase in passengers handled between 1989 and 1990 but a steady decline in the number of passengers between 1990 and 1993. This may be attributed to general economic decline. Nevertheless the importance of Kigoma airport is still evident since the only other outlet from Kigoma is the Central railway line.

#### **4.5 Marine Service**

Kigoma region has a well established port along Lake Tanganyika. Lake Tanganyika provides an important communication link for Kigoma and neighbouring countries of Zambia, Burundi and Democratic Republic of Congo and Kigoma port is strategically well placed to serve as an outlet for cargo to and from these neighbouring countries.

The major sea vessels in use are the M.V. Liemba and M.V. Mwongozo. These vessels sail weekly from Kigoma port to

Bunjumbura (Burundi), Kalemie (DRC) and south along the lake to Mpulungu (Zambia) calling at major villages in between both Kigoma and Rukwa regions.

#### **4.6 Communication Facilities**

Postal service is one of the important communication facilities that exist in Kigoma region. The postal service include selling of stamps, money orders, postal orders, postage of letters and parcels and postal bank. Postal service are provided in the nine (9) full post offices located in urban and semi-urban areas of Kigoma, Ujiji, Kasulu, Kibondo, Uvinza, Mabamba, Manyovu, Mwandiga and Nguruka. These are under the management of the Tanzania Posts Corporation. There are twelve sub-post offices located in the minor towns or trading centres under the management of appointed agents.

Telephone and telefax service are offered by Tanzania Telecommunication Company using the STD exchange system installed in 1991 with the capacity of 4000 lines. Only 1218 line are under use todate equivalent to 30.4% capacity. Other service include fax, money fax, telegrams etc.

#### **4.7 Energy**

There are two main services of energy mainly used by the population of Kigoma region. Electricity and Fuelwood. Electricity is supplied by Tanzania Electricity Company and some individuals. The region uses thermal electricity generated by seven (7) diesel powered generators capable of producing about 2850 KW. Currently only 1750 KW is supplied by four (4) generators

which are operating. The other three (3) generators are not operating due to old age. Electricity requirement for Kigoma /Ujiji township is estimated at 4000 KW. Therefore the supply is equivalent to only 44% of the total demand.

Even if all the seven diesel powered generators operated at full capacity to produce 2850 KW, this would have been only 71.2% of the total electricity demand. Kibondo, Kasulu and Uvinza also depend on diesel generators owned by individuals, which, as in the case of Kigoma/Ujiji, do not meet the required electricity demand in those towns.

The use of electricity is limited mainly to domestic purposes. The inadequate supply of electricity has greatly hindered industrial development in the region.

**TABLE IV-5 HOUSEHOLDS WITH ACCESS TO ELECTRICITY SUPPLY BY DISTRICT, KIGOMA REGION 1988**

District	Households with		Total Household	% with Electricity
	Electricity	Without		
Kasulu	356	52,707	53,063	0.7
Kibondo	153	37,756	37,909	0.4
Kigoma (R)	401	41,952	42,354	0.9
Kigoma (U)	2,961	12,010	14,971	19.8
	3,872	144,425	148,297	2.6

Source: 1988 Population Census, Regional Profile

Fuelwood is the main source of energy in Kigoma region. As it is observed in Table IV - 5, only 2.6% of all households in the region had access to electricity by 1988 the highest percentage being in Kigoma/Ujiji township. It is therefore evident that more than 97% depend on fuel as a source of energy. The use of firewood in rural areas and charcoal in urban areas is the traditional way to the preparation of food, heating, lighting etc. Intensive and extensive use of fuelwood as source of energy has resulted in indiscriminate cutting of trees, particularly in tobacco production, and consequently destruction of forest cover.

Fossil fuel are also other important form of energy in that for domestic purposes kerosene is the number one source in both rural and urban areas.

## SECTION V

### 5.0 OTHER DEVELOPMENT RELATED ISSUES

#### 5.1 WOMEN AND DEVELOPMENT

Kigoma region has a very high population of women compared to men. As indicated in Table I-8 for every 100 females there are 91 males. In other words there are 52 women for every 48 men; say roughly 52:48. This is high by Tanzania standard. The average women to men ratio is 51:49 for the Mainland. This means women are even more vitally important for the economic and social welfare of Kigoma region.

According to Table I17 the proportion of females engaged in agricultural work is 56.7% compared to 43.3 of males. This means that most work in the field and at home is done by women. In agricultural work women handle most of the tilling, sowing, weeding, harvesting and marketing. These duties are in addition to searching for fuelwood, fetching water for the family, cooking food, cattle keeping and traditional role of child bearing and rearing. At the household level therefore women are exposed to leadership challenges and consequently to decision making process they cannot duck. Despite their economic importance women are more vulnerable to health risk because of gender.

Above the household level women like men have to be trained for and exposed to leadership situation right from childhood if they are to assume position of responsibility in society. Enrolment of female children for primary and secondary education are just two

such examples. During this stage equity to men in terms of opportunity is the guiding principle. See Table V - 1

**TABLE V-1 POSITION OF WOMEN TRAINING FOR LEADERSHIP, KIGOMA REGION, 1997**

District	Sex	Number	Percentage sexwise
Primary One Enrolment	Males	12,964	51.9
	Female	12,034	48.1
	Total	24,998	100.0
Selection for Form I	Male	449	48.2
	Female	483	51.8
	Total	932	100.0
Secondary Education Enrolment	Male	1,838	51.2
	Female	1,741	48.8
	Total	3,569	100.0
Adult Illiterates	Male	30,909	32.6
	Female	63,814	67.4

	Total	94,724	100.0
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Source : Calculated from Various Tables

From Table V-1 above the following facts can be deduced. Enrolment of pupils into primary one and secondary education gives almost equality opportunity. When it comes to selection into secondary schools a deliberate policy of favouring female pupils comes into play to help reduce existing imbalances. But a deliberate effort is needed to reduce the enormous rate of adult illiteracy of women to bring the literacy rate at par with than of men.

Women, especially in rural areas, if left on their own are not capable of having an impact on the issues of redressing the inequalities between men and women. There are very many gender gaps that exist between men and women. Women are overworked and use long hours to work; women have little time to rest; the majority of women lack self confidence in participation of decision making at all level e.g from family level to village level; women are exposed to early marriages; women are still valued as wealth and are supposed to be inherited like resources and other outdated dicriminatory customs. In addition to these gaps, the unequal access by women to credit, markets, training, land, basic social services, extension services, technology and employment opportunity continue to present severe constraints to their integration into development opportunities and their achievement of equitable social development.

Committed individuals, non-government organisations, the government and all others have to come forward and educate women on gender issues and concern that will create awareness environment that will encourage the formulation and implementation of policies, programmes and projects that address to their constraints. Women are being encouraged to come together in groups. Members of these groups are exposed to discussions on gender equality, equity and poverty alleviation. There are 64 women groups in Kigoma region operating in different income generating activities including service, production, trading and processing.

**TABLE V-2 WOMEN ECONOMIC GROUPS BY DISTRICT KIGOMA REGION, 1997**

<b>District</b>	<b>No. of Groups</b>	<b>Members</b>	<b>Activities</b>
Kasulu	18	91	Dairy, Poultry, afforestation
Kibondo	20	118	Brick, making, horticulture
Kigoma (R)	14	66	Piggery, Cereal selling
Kigoma (U)	12	60	dagaa selling, shops, palm oil processing etc.
Total	64	335	

## **5.2 COOPERATIVES**



Kigoma region had a total of 54 cooperative societies but of late only 34 cooperative societies are functioning. The other 20 cooperative societies have ceased to function for some reasons. Eighteen (18) societies are primary cooperative societies dealing in crops. The other sixteen ( 16) cooperative societies include savings and credit, carpentry, beekeepers, fisheries, retail shops and other services.

**TABLE V-3 TYPE, NUMBER AND MEMBERS OF COOPERATIVE SOCIETIES KIGOMA REGION 1997**

Type of Cooperative	No. of Societies	Total Members	% of total Members
Primary Societies	18	1,526	44.3
Carpentry	1	30	0.9
Beekeepers	1	103	3.0
Saving & Credit	6	344	10.0
Retail Shops	5	1,338	38.8
Fisheries	2	62	1.8
Hotels & Restaurants	1	42	1.2
Total	34	3,445	100.0

Source: Regional Cooperative Office, Kigoma Region.

Table V-3 indicate that primary cooperative societies which are rural based dealing in crops lead both in number and members compared to savings and credit societies which lead in numbers but have only 10% percent of total members and retails shops which are less in numbers but have over 38% percent of all cooperative members and members. The total number of cooperatives members correspond to only 0.4 percent of the regions population. This small number can be attributed to the fact that either many people in the region are not aware about cooperative movement or do not want to become members of cooperative societies for some reasons.

The Buha Cooperative Union which was registered in 1984 ceased to operate since 1991 due to lack of working capital, inadequate capital base, high bank interest, low production and poor management.

### **5.3 IMPACT OF REFUGEE ON THE LOCAL COMMUNITIES IN KIGOMA REGION**

The refugees influxes in Kigoma region has been persistent since 1950's but the most serious influx was reported in 1993 following the failed coup d'état in Burundi. The registered refugees were approximately 370,000 Burundi refugees in Kigoma and Kagera regions. In 1996 there was another influx from both Burundi and Democratic Republic of Congo ( the then Zaire) following political unrest in Burundi and civil strife and rebel fighting in DRC. The peace which prevailed after the overthrow of Mobutu government made it possible for voluntary repatriation under the tripartite agreement of a total of 53, 971 Congolese refugees. As of July 1998, the registered refugees were about 210,000. However, the new arrivals of refugees from Burundi and DRC entering Kigoma region is increasing every day.

The continuous influx of refugees in Kigoma region has created serious unfavourable impact on the local communities. The most serious unfavourable impact is the slippage of arms from some refugees and militants which has resulted in the rise of armed and highway robbery thus increasing social insecurity to the communities.

In transit, the refugees camp in local peasant fields cutting coffee and banana trees to provide shelter and firewood. They use local

water sources and sometimes drying them up. The use of forests, trees and natural grasses by the refugees has been very dramatic. Areas of up to 6km from camps have been cleared of most or all trees thus creating pressure on environment.

Farming households in direct contact with the refugees are affected in several ways. In some cases their banana and coffee trees have been damaged. In other cases cassava, maize and banana are stolen by the refugees. Many local households near the entry points and along the transit route host refugees feeding and providing other services. Others sell or give away food to refugees. All these transactions lead to insecure food position to local communities.

The massive relief effort increase the intensity of transportation exerting pressure on roads, ports and airports in the region. Some trunk, regional and district/rural roads which were designed and built for trucks of up to 8 tons and light traffic, now have to carry heavy load trucks of up to 40 tons or more per day. As a result there is an extensive deterioration of trunk, regional district/rural roads. Some bridges and culverts collapse. With the frequent rains, and particularly the El- nino rains, many of these roads have become impassable.

Schools on the refugee transit routes and near the entry points are used as temporary camps by the refugees resulting in damage to some of the buildings and facilities such as desks, tables and windows also being taken away. These also suffer " wear and tear".

The influx of refugees also increase the number of cases of communicable diseases such as dysentery, cholera, meningitis and AIDS in the region. Health facilities in rural areas are used while district hospitals of Kibondo, Kasulu and Kigoma continued to supply emergency medical services. Village water supplies such as wells and springs are also affected either by being over - used and drying up or being polluted.

The emergence of the refugee crisis in Kigoma region and the immediate and continuing negative impact require an urgent response of International community to participate with the Government of Tanzania in mitigating the future damage and assisting the affected local communities.

#### 5.4 NGO's Activities

Kigoma region has a total of 15 NGO's out of which 9 are locally based and 8 are foreign. All the NGO's activities are concentrated in the refugee camps but some NGO's are also involved in development activities outside the camps. See Table V-4.

**TABLE V-4 NGO'S WITH THEIR ACTIVITIES IN KIGOMA REGION**

<b>Name of NGO</b>	<b>Area Operating</b>	<b>Activities</b>
1. African Education Fund (L)	Nyarugus Camp Kasulu	Health and Nutrition
2. Christian Outreach (L)	Nyarugusu Camp Kasulu	Social Service and Education
3. CARE (F)	Nyarugusu, Mtabila, Moyovosi, Mtendeli, Kanembwa, Mkugwa and Lugufu Camps	Coordination of Environmental Protection

4.	OXFAM (L) (F)	Nyarugusu Camp	Water and Sanitation
5.	World Vision International (L)	Nyarugusu Camp	Management of Camp
6.	AFRICARE (F)	Mtabila I camp	Environmental and Crop Protection
7.	International Red Cross (F)	Mtabila I Camp	Health
8.	Southern Africa Extension Unit (L)	Mtabila I Camp	Education
9.	Federation of Red Cross Societies (F) (L)	Mtabila II Moyowosi, Lugufu Camps.	Water, Sanitation, Health and Nutrition
10.	German Development Cooperation (GTZ) (F)	Moyowosi and Lugufu Camps	Coordination of Transport for refugees & commodities
11.	Disaster Relief Agency (DRA) (F)	Nduta & Mtendeli Camps	Education & Social Services
12.	TSRS (F&L)	Nduta, Mtendeli, Mkugwa	Management of Camp, Water and Sanitation
13.	International Rescue Committee (IRC) (F)	Mtendeli, Mkugwa	Health, Nutrition and Other Social Services
14.	Rural Service Programme (RUSERP/ELCT) (F&L)	Lugufu Camp	Social service & Education.
15.	CARITAS (L)	Lugufu	Commodities & Services

Source : Office of the Regional Commissioner Kigoma.

## 5.5 DONOR FUNDED PROGRAMMES

## **Kibondo Afforestation Project**

This project funded by Denmark started in December 1996 with the objective of rehabilitating the environment degraded by refugees influx. Over 808,000 seedlings have been raised and transplanted in an area of about 192.4 hectares and 104.8 hectares have been conserved through natural re-generation.

## **Immunization Programme**

The UNICEF funded programme aimed at reducing mortality rate of under fives. Immunization is in progress for both local and refugee population.

## **Capacity Building for Medical/ Health Service**

The programme is financed by WHO for the purpose of assessing and advising on preventive and curative measures of disease outbreak.

## **Construction of Dispensaries /Staff quarters**

This project funded by the Government of Japan has the objective of rehabilitating social services affected by the influx of refugees. Construction of 6 dispensaries and 5 medical staff quarters was completed in 1997.

## **Rehabilitation of classrooms**

The project aimed at the rehabilitation of refugees affected social services has been funded by the Government of Ireland. Rehabilitation work on some classrooms has been awarded to contractors.



### **Community Based Initiative**

The programme funded by UNDP aims at poverty alleviation and commenced in September 1998.

### **Development Coordination and Microproject**

The project which started in december 1997 aims at capacity building and poverty alleviation. it is financed by UNDP.

### **STD/HIV Programme**

This programme which started in August 1998 is funded by UNDP with the objective of reducing morbidity through fight against AIDS.

## SECTION VI

### 6.0 POTENTIAL INVESTMENT AREAS

#### 6.1 Agriculture

Kigoma region which is estimated to have over 1,200,000 hectares of potentially cultivable land has a favourable climatic conditions which allow the growth of a wide variety of crops - both food and cash crops.. But the area under cultivation has been averaging 280,000 hectares equivalent to 23.3% and has not been expanding significantly. The insignificant expansion of cultivable area is attributed to inadequate application of modern agricultural method. There is therefore an urgent need to encourage investment in the use of tractors so as to expand the area and increase production.

The soils of Kigoma region have potential fertility which can support a variety of crops but soils loose fertility after several years of use. However fertilizers are not widely used in the region resulting in low yield per hectare. The use of organic fertilizers such as manure, compost and legumes particularly in highland areas, is highly recommended and emphasized in order to retain and increase soil fertility. Integration of agriculture and forestry a well as improving cropping pattern for food crops in order to increase fertility and maximize yields should be practised.

The high irrigation potential that exist in the region should be explored and exploited for increased crop production. Initially investment in small scale irrigation should be emphasized.

Stabilization of the Kigoma region economy so as to increased per capital income depends very much on the development and promotion of palm oil and coffee production. This again will depend on the planting of new and better varieties of oil palm and expansion of coffee farms. Hence investment in agricultural inputs to expand or establish new oil palm and coffee plantations will stimulate production and regional economy.

## **6.2 Livestock**

Given the livestock population in the region, serious planning and determination is needed in investing in this sector. Livestock expansion in the region needs to go hand in hand with tsetsefly control programmes so as to give access to pasture areas. The establishment of new livestock settlement areas should be looked into so as to encourage the introduction of more Tanzania short-horned zebu which, with good management system, will produce a reasonably good quantity and good quality meat much required in the region.

The climate of the region also favours growth of animals of improved breed for dairy development particularly the promotion of dairy cattle through local breeding.

## **6.3 Forestry**

Forestry products demand in the region is very high compared with what the region can supply. This includes demand for fuelwood, timber and building poles. The current situation of which woodlands are cleared for tobacco farming, wood is cut

for tobacco curing and the negative impact on forests by the influx of refugees has resulted in severe clearing of woodlands.

This fact implies that if no proper actions are taken to control this situation the region is bound to experience the most serious environmental destruction. The region is therefore faced with the challenge of finding a balance between the unplanned exploitation of forest resources and their replacement.

Management plans for forest resources in every district should be formulated to provide guidance required for planned exploitation within sustainable limits. Afforestation needs to go hand in hand with forest utilization.

#### **6.4 Beekeeping**

A great deal of beekeeping potential lies in commercial and small scale beekeeping since the region is highly endowed with miombo woodlands which make them potential for high quality honey and beeswax production. More peasant farmers should be encouraged, motivated and trained for profitable beekeeping. Steps should be taken to stimulate and encourage further the establishment of, on a sound cooperative basis, beekeeping groups which make easy the provision of extension services and financial assistance. Modern technology in production, particularly in processing should be applied while market research for the honey and beeswax products should be carried out in an effort to provide easy access to markets by the beekeeping households.

## **6.5 Fisheries**

Kigoma region has a promising potential for fishing in its waters but this potential has not been exploited adequately. Current exploitation of the fish resource is by small scale artisanal fishermen who continue to play major role in supplying fish for local consumption. Very little catch go into outside markets. Investment in fisheries is highly required in terms of modern fishing gears, processing and marketing skills. The artisanal fishermen require accessibility to credit facilities to enable them acquire suitable modern fishing gears and other facilities.

## **6.6 Industrial Development**

Industrial development is one of the sources of employment opportunities for the increasing number of unemployed youths. But in Kigoma region industrial development is hampered by geographical location of the region and poor economic infrastructure which seem to be major responsible for reluctance of outside investors to make serious investment in industrial activities. There is a big room for investment in agro- based industries, marine based as well as forest based industries.

## **6.7 Roads**

The road network in Kigoma region is of greater impact on the development of the region than the railway line. The railway line is important for interregional trade of Kigoma and central regions of Dodoma, Morogoro and D'Salaam. But trunk roads linking Kigoma to the neighbouring regions of Rukwa ( South), Kagera, Shinyanga and Tabora are more important. The construction of

Kigoma-Kasulu- Kibondo- Nyakanazi road to gravel engineered and tarmac standard would greatly open up the movement of agricultural and industrial goods to and from Kigoma. Furthermore the construction of Malagarasi bridge on the Uvinza- Malagarasi-Nguruka road between Kigoma and Tabora will greatly reduce the regions dependence on the central railway line.

The regional and district roads should progressively be upgraded from earth to gravel standard and to tarmac standard to ensure smooth and reliable transportation of goods and inputs to and from rural areas. As it is now , all earth surfaced roads are in very poor condition and impassable during the rainy season. Routine maintenance of these roads should be reviewed as a means of protecting previous investment.

## **6.8 Communication Network**

Telecommunications are vital in servicing and stimulating development. Investment in the quality and quantity of telephones and fax links is badly needed in all the district and rural centres.

## **6.9 Energy**

The supply of electricity in Kigoma region is much below the demand. Further investment is needed to boost up the supply of electricity in Kigoma /Ujiji towship to attract industries and provide enough power for water supplies and other domestic needs. Kigoma region has to be connected to the national Grid to solve the region's long term energy problem. The supply by the National Grid from Kahama/ Bukombe will enable district centres

of Kibondo and Kasulu and other centres to be supplied with electricity.

## **6.10 Health**

The health care delivery system is already open for private investment. A start has been made but the pace is very slow compared to other regions in the Mainland Tanzania. Therefore individuals, NGO's Companies and other private sector organisation are encouraged to invest in the establishment and running of health facilities in the region with the aim of increasing the coverage. In addition the training of health personnel to boost the number of trained personnel; the supply of vaccines, drugs, equipment and other medical supplies and technical assistance are important for improving the quality of medical care and so contain health problems.

The containment of AIDS and HIV infection is a task that has to be performed by every one. Health education and other preventive measures are desperately required. The supply of STD drugs at affordable prices or even the establishment of STD treatment centres in each ward under the qualified personnel could also have a positive impact on HIV infection control.

## **6.11 Education**

Investment in education sectors at all levels from pre-school education to University is now open to private sector. There is still a large number of children of school going age who are not enrolled in schools. In 1988 the gross enrolment rate in schools was 28%. The corresponding figure for 1997 is 23%. Similarly

the enrolment at secondary level is very, very low. Vocational training centres for youths are virtually non-existent. The quality of primary and secondary education is still low. Therefore there is a very large area in education for an investor to make a choice from. Assistance to existing establishments in terms of infrastructure or teaching materials is highly needed to raise the standard of education.

## **6.12 Water Supply**

Supply against demand for safe water is quite low for both urban and rural areas. It is about 51.2% for rural areas and 36.7% for urban areas. This means that there is very little hope of raising the supply of water unless new investment will be forthcoming. Shallow and deep wells fitted with hand pumps seem to be more preferable than other types like motorized pumping schemes and gravity schemes because they are less expensive, easier to maintain and more sustainable. But in areas where shallow and deep wells are not feasible investment in terms of pipes and equipment for a pumping system is badly required in order to achieve a 100% coverage.

Sanitation and sewerage is critical in urban areas because of overcrowding. There is a need of investment in the field of planned disposal of water run-off and domestic sewerage in Kigoma Ujiji township and other towns.



### **6.13 Women and Development**

In Kigoma region efforts are called for to increase awareness among women population regarding gender issues and poverty alleviation. Investment is required in terms of more women groups to reach more women. The use of income generation as a motivation tool means further and more loans and training for women.

### **6.14 Tourism and Wildlife**

Kigoma region has the tourist attraction of two national parks the Gombe and Mahale famous for chimpanzee, the wildlife rich game reserve of Moyowosi, some beaches along Lake Tanganyika and the Livingstone Memorial Monument. The famous Hilltop hotel and other hotels are available for hotel accommodation. But investment is needed in terms of transport and access roads of acceptable standard.

## ANNEX A

### KIGOMA REGION IN A NUTSHELL.

#### 1.0 GENERAL

##### 1.1 Location

On the shores of Lake Tanganyika at the North- West corner of Tanzania. Situated between Longitudes 29.5 and 31.5 East and Latitude 3 and 6.5 South of Equator.

##### 1.2 Land Frontiers

North	-	Burundi and Kagera region
East	-	Shinyanga and Tabora regions
South	-	Rukwa region
West	-	Democratic Republic of Congo

##### 1.3 Land Area

Total Area is 45,066 sq. km equivalent to 4.8% of Mainland Tanzania of which land areas is 37,037 km<sup>2</sup> equivalent to 82.2% of the total region area and 8,029 Km<sup>2</sup> is water.

##### 1.4 Climate, Soils and Vegetation

Tropical warm climate with annual mean minimum of 25<sup>0</sup> C and annual mean maximum of 28<sup>0</sup> C. Rainfall ranges from 600 mm to 1500mm being heavy in the months of October and May with a dry spell in the month of January or February.

Soils vary widely ranging from sandy loams to heavy black/darks brown soils.

Vegetation comprise closed and open woodland, bushy grassland and swamps.

## 1.5 Agro - Economic zones

Zone I: The Lake- Shore Zone lies within the altitude of 800-1000 metres ASL with annual rainfall of 600-1000mm. Dark reddish- brown fine sand loams soils. Paddy, cassava oilpalm, maize and cotton grown with fishing.

Zone II. The Miombo Zone within altitude 1000-1200 m ASL and annual rainfall of 600 - 1000mm. red to sandy soils. Economic activities:- hunting, honey and beeswax gathering and cattle rearing. Sparsely populated and high tsetsefly infestation.

Zone III. The Intermediate Zone. Altitude range from 1200-1500 m ASL and is an extension of western plateau. Annual rainfall between 850 and 1100 mm. Dark reddish clay loam soils. Crops are maize, beans oil palm, cotton and tobacco.

Zone IV. The highland Zone. Altitude ranges from 1500- 1750 metres ASL covering the highlands and Mahale Mountains. Annual rainfall is 1000 - 1600 mm. Soils are black and brown alluvial. Main activities:- agriculture with maize, banana, beans and coffee;

livestock keeping with cattle, goats and small stock;  
and tourism.

## 1.6 Administrative Units

Three administrative districts of Kasulu, Kibondo and Kigoma with Kigoma/Ujiji township.

- Divisions	-	18
- Wards	-	81
- villages	-	220

## 1.7 Population

### (a) 1988 Population Census

Total	:	854,817
Sex Ratio	:	91
Growth Rate	:	2.8
Population Density	:	23.1
Average Household	:	5.8
Dependency Ratio	:	116.9
Urbanization	:	20.2
Net Lifetime Migration :(-)		102,923

### (b) Population Projections

	1997 AD	1988 AD	2000 AD
Total	1,091,000	1,122,000	1,186,000
Density	29.5	30.3	32.0

### (c) Other Censuses

1978	Total Population	648,950
1967	Total population	473,443

## 2.0 PRODUCTIVE SECTOR

### 2.1 Agriculture

- Arable land 1,200,000 ha
- Cultivated land (average) 280,000 ha
- Uncultivated land 920,000 ha
- Food crops: Maize, beans, cassava, Sorghum, Bananas, Pulses
- Cash crops: Oilpalm, Coffee, Cotton, tobacco, groundnuts

### 2.2 Livestock: (1997)

#### Distribution:

- Cattle 79,851
- Goats 207,892
- Sheep 43, 100

#### Livestock Facilities:

Dips	58
L.V.C	9
Abattoirs	13
Hides/Skinshed	11

### 2.3 Forestry

Area under Forest reserves	873, 722 ha
No of forest reserves	14 Nos.

### 2.4 Fisheries:

- Number of vessels ( 1996) 1,872

- Number of Fishermen ( 1996) 6, 313
- Average Production ( 1991- 1996) 33, 598 tons

## 2.5 **Beekeeping:**

- Average Production Honey ( 1990- 1997) 43,830 Kgm
- Average Production Wax (1990- 1997) 4, 253 Kgm

## 3.0 **BASIC SOCIAL SERVICES**

### 3.1 **Education ( 1998)**

#### (a) Primary Education

Number of primary schools	249
Enrolment ( total) (1997)	144,672
Enrolment Rate ( 1997)	90%
Gross Enrolment Rate ( 1997)	23%
Ratio Boys to Girls	51%

#### (b) Secondary Education

Number of secondary schools	Public	11
	Private	6
	Total	17
Total Enrolment 1988	Public	2,109
	Private	1,460
	Total	3,569

### 3.2 **Health ( 1997)**

<u>Number of Hospitals</u>	Public	3
	Voluntary Agency	3
	Private	0
	Total	6

<u>Health Centres</u>	Public	12
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	Voluntary Agency	2
	Private	1
	Total	15
<u>Dispensaries</u>	Public	128
	Voluntary Agency	16
	Private	23
	Total	167

### 3.2 Water Supply

Rural Water Supplies	<u>Function</u>	<u>Not Functiong</u>	<u>Total</u>
- Pumping/ Motorized	3	36	39
- Gravity	62	-	62
- Shallow Wells/ Protected springs	132	-	132
- Boreholes/ Deep wells	57	12	69
Total	254	48	302

## 4.0 ECONOMIC INFRASTRUCTURE

### 4.1 Roads:

Trunk Roads	Km 476
Regional Roads	Km 592
District Roads	Km 713
Road Density	0. 048 Km/sq. Km.

### 4.2 Railways.

TRC: Kigoma - Nguruka - ( Tabora)

### 4.3 Air Services:

Major Airport at Kigoma  
Other Airstrips at Uvinza, Kasulu, Kibondo



#### 4.4 Marine Services:

Major Lake Vessels : M. V Liemba and MV Mwongozo

Major Port: Kigoma

Other Ports: Kalya

#### 4.5 Telecommunication

Full post offices Seven (7)

Subpost offices Twelve (12)

Telephone lines 4,000.

#### 4.6 Energy

Source of electricity: Thermal

Access to electricity ( 1988 census) 2.6% all Households

### 5.0 SOME SELECTED SOCIO- ECONOMIC INDICATORS

#### 5.1 Education ( 1997)

(a) <u>Primary:</u>	Population per school	4, 506
	Pupils per 1000 population	128
	Pupils per school	581
	Pupils per classroom	99
	Pupils per Teacher	27
	% Shortage of classrooms	52.4
	% shortage of houses	80.3
	% shortage of toilets	77.0
	% shortage of teachers	6.6

(b) <u>Secondary :</u>	Population per school	66,003
------------------------	-----------------------	--------

(c) Adult Literacy

1967	Census	19.0
1978	Census	43.7
1988	Census	55.1

**5.2 Health**

(a) Facilities

Population per hospital ( 1997)	181, 885
Population per dispensary	6, 574
Population per hospital bed	1,044
Population per facility	6,308
Facilities per 10,000 population	1.6

(b) Services

< 1 Child Immunization Coverage ( 1997)	
BCG	89%
DPT 3	88%
Polio 3	89%
Measles	90%
< 5 Child Immunization Coverage	87 %

(c) Basic Indicators

Infant Mortality Rate ( IMR)	
1975	163
1985	115
1995	81
U5 Mortality Rate ( U5MR)	
1975	269
1985	192

	1995	137
1988	Infant Mortality Rate ( IMR)	
	Rural	116
	Urban	109
	Male	119
	Female	111
1988	Under Five Mortality Rate ( U5MR)	
	Rural	194
	Urban	181
	Male	200
	Female	184

#### Maternal Mortality Rate

1992	144
1993	155
1994	105
1995	87

#### Life Expectancy

1978	Male	40
	Female	48
	Overall	40
1988	Male	47
	Female	49
	Overall	48

### 5.3 Water Supply

Population Supplied with safe water against demand (%)

#### Rural Area

Kasulu	57.2
--------	------

Kibondo	68.9
Kigoma	37.5
Region	51.2
<u>Urban Area</u>	
Kasulu	41.6
Kibondo	18.8
Kigoma/ Ujji	37.6
Region	36.7

#### 5.4 Sanitation:

Households covered with Toilet facilities (%)

Rural Area	
Kasulu	97.7
Kibondo	90.0
Kigoma (R)	93.1
Kigoma(U)	90.4
Total	93.4

Urban Area	
Kasulu	96.4
Kibondo	97.8
Kigoma (R)	99.7
Kigoma ( U)	91.9
Total	95.1

#### 5.5 Regional Economy

Regional GDP at current prices ( millions)

	<u>T. Shs</u>	<u>US \$</u>
1980	924	112.4

1985	3,120	189.1
1990	11, 713	59.4
1994	30, 545	55.2

Regional Per capital GDP	at current prices	
1980	1,347	164
1985	3,963	240
1990	12,911	65
1994	30,103	54

## 5.6 Other Issues

### (a) Women Economic / Gender Groups

No of groups:	64
No of Members:	335

### (b) Cooperatives:

Produce cooperative Societies:	18
Other cooperative societies:	16
Members of produce coops:	1,526
Members of Other coops:	1.919

## ANNEX B

### KASULU DISTRICT SUMMARY

#### 1.0 GENERAL

##### 1.1 Location: Central North - Western part of the region

Borders:- North:- Burundi  
East - Kibondo  
South: - Kigoma District  
West: - Kigoma District

##### 1.2 Land Area : 9, 324 sq. Km or 25.2% of the land area of Kigoma region.

##### 1.3 Adminisrative Units:

Division	7
Ward	30
Villages	83

##### 1.4 Population:

Total	:	320,518
Growth Rate	:	2.9
Population Density	:	34.3/km <sup>2</sup>
Dependency Ratio	:	119.6.
Urbanization	:	13.7
Average Household :		
Rural		6.1
Urban		6.1
District		6.1

(b)	<u>Population Projections</u>				
		1997 AD	1988 AD	2000 AD	Total
	Total	391,150	400,011	418,339	
	Density	41.9	42.9	44.9	32.0

(c)	Other Censuses	
1978	Total Population	207,611
1967	Total population	255,651

## 2.0 ECONOMIC ACTIVITIES

2.1 Agriculture: Food crops - Maize, cassava, beans, Banana  
Cash Crops - Coffee, Cotton, Tobacco

2.2 Livestock: Livestock Population ( 1997)

Cattle 30, 268

Goats 70, 867

Sheep 22, 531

Livestock infrastructure

Dips 23

LVC 4

Abatoirs 4

## 2.3 Natural Resources:

Forest Reserves; Number 4

Area 214,300 Ha

## 3.0 BASIC SOCIAL SERVICES

### 3.1 Health:

Hospitals	3
Rural Health Centre	5
Dispensaries	50

### 3.2 Education:

Number of primary schools	85
Enrolment ( total)	56,997
Enrolment Rate ( 1997)	92%
Number of secondary schools	5
	11

### 3.3 Water Supply

Rural Water Supplies	Function	Not Functioning	Total
- Pumping	0	15	15
- Gravity	28	0	28
- Shallow Wells/ Springs	79	0	79
- Boreholes/ Deep wells	12	1	13
Population served with clear safe water		57.2%	

## 4.0 ECONOMIC INFRASTRUCTURE

### 4.1 Roads:

Trunk Roads	Km 197
Regional Roads	Km 115
District Roads	Km 355
Road Density	0. 048 Km/Sg. Km.

4.2 Railways Transport - None

4.3 Marine services - None

4.4 Air Services - Kasulu airstrip

4.5 Energy - Access to Electricity 0.7% of all households

4.6 Telecommunication - Full Post office 3

- Sub Post Office -





## ANNEX C

### KIBONDO DISTRICT SUMMARY

#### 1.0 GENERAL

##### 1.1 Location: Northern part of the region

Borders:- North:- Kagera region and Burundi  
East - Shinyanga and Tabora regions  
South: - Kigoma District and Tabora region  
West: - Kasulu district.

##### 1.2 Land Area : 16,058 Km<sup>2</sup> or equivalent to 43.3% of total region land area.

##### 1.3 Administrative Units:

Division	4
Ward	20
Villages	66

##### 1.4 Population:

###### (a) 1988 Population Census:

Total	:	176, 262
Growth Rate	:	2.3
Population Density	:	10.9
Sex ratio	:	86
Dependency Ratio	:	120.7
% Urban population	:	23.2
Average Household		
Rural		4.6
Urban		4.7
District	4.6	



(b) Population Projections

	1997 AD	1988 AD	2000 AD
Total	215,990	221,015	231,419
Density	13.4	13.8	14.4

(c) Other Censuses

1978	Total Population	136,918
1967	Total population	139,991

## 2.0 ECONOMIC ACTIVITIES

- 2.1 Agriculture: Food crops - Maize, cassava, beans, Banana,  
Sorghum  
Cash Crops - Coffee, Cotton, Tobacco

### 2.2 Livestock: Livestock Population ( 1997)

Cattle	25,945
Goats	87,871
Sheep	10,345
Livestock infrastructure	
Dips	19
LVC	3
Abatoirs	4

### 2.3 Natural Resources:

Forest Reserves; Number	2 Nos
Area	508, 672 Ha

## 3.0 BASIC SOCIAL SERVICES

### 3.1 Health: ( 1997)

Hospitals	1
Rural Health Centres	4

Dispensaries 3

### 3.2 Education:( 1997)

Number of primary schools	67
Enrolment ( total)	31,509
Enrolment Rate ( 1997)	88%
Number of secondary schools	3

### 3.2 Water Supply

Rural Water Supplies	Function	Not Functioning	Total
- Pumping/Motorized	1	7	8
- Gravity	15	0	15
- Shallow Wells/ Springs	45	0	45
- Boreholes/ Deep wells	31	1	32

Population served with clear safe water 68.9%

## 4.0 ECONOMIC INFRASTRUCTURE

### 4.1 Roads :

Trunk Roads	Km 147
Regional Roads	Km 113
District Roads	Km 164
Total	Km 424
Road Density	0. 026 Km/sq. Km.

4.2 Railways Transport - None

4.3 Marine services - None

4.4 Air Services - Kibondo airstrip

4.5 Telecommunication - Full Post office

- Sub - Post office

4.6 Energy - Access to Electricity 0.7% of all households

## ANNEX D

### KIGOMA DISTRICT SUMMARY ( 1997)

#### 1.0 GENERAL

##### 1.1 Location: Southern part of the region

Borders:- North:- Kasulu District  
East - Tabora region  
South: - Rukwa region  
West: - Lake Tanganyika ( DRC)

##### 1.2 Land Area : 11,655 sq. Km or equivalent to 31.5% of total region land area. It also cover a large part of the water area which is 8.029 Km<sup>2</sup>

##### 1.3 Adminisrative Units:

Division	7
Ward	31
Villages	71

##### 1.4 Population:

(a) 1988 Population Census:

	Rural	Urban
Total	273,390	84,647
Growth Rate	3.5	3.7
Sex ratio	95	99
Dependency Ratio	114.6	106.8
Population Density	30.8	-
% of Urban Population	4.1	91.0
Average Household		
Rural	6.5	5.4
Urban	6.0	5.6

Overall	6.4	5.6
	Population	Projections
1997	366,004	118,169
1998	378,397	122,623

(c) Other Censuses

1967	107,545	21,369
1978	194,520	58,788

## 2.0 ECONOMIC ACTIVITIES

2.1 **Agriculture:** Food crops - Maize, Cassava, Beans, Banana, paddy  
Cash Crops - Coffee, Cotton, Tobacco, Oilpalm, groundnuts

### 2.2 **Livestock:** Livestock Population ( 1997)

Cattle	13,738
Goats	49, 153
Sheep	10, 224
Livestock infrastructure	
Dips	16
LVC	2
Abatoirs	5

### 2.3 **Natural Resources:**

Forest Reserves; Number	8 Nos
Area	150,750 Ha
Fisheries	Number of vessels (1996) 1,872
	Number of Fishermen (1996) 6,313

### **3.0 BASIC SOCIAL SERVICES**

<b>3.1 Health: (1997)</b>	Rural	Urban
Hospitals	-	2
Rural Health Centres	4	12
Dispensaries	56	18

### **3.2 Education: (1997)**

Number of primary schools	78	19
Enrolment ( total)	40,133	15, 733
Enrolment Rate	85	99
Number of secondary schools	4	5

### **3.3 Water Supply**

Rural Water Supplies	Function	Not Functioning	Total
- Pumping/Motorized	2	14	16
- Gravity	19 0	19	
- Shallow Wells/ Springs	8 0	8	
- Boreholes/ Deep wells	14	10	24
Population served with clear safe water		37.5%	

### **4.0 ECONOMIC INFRASTRUCTURE**

#### **4.1 Roads:**

Trunk Roads	Km 132
Regional Roads	Km 364
District Roads	Km 194
Road Density	0. 059 Km/Sg. Km.



## **4.2 Railways Transport**

TRC Kigoma - Nguruka to Tabora

## **4.3 Air Services**

- Kigoma Airport
- Uvinza Airtrip

## **4.4 Marine service:** Kigoma Port

## **4.5 Telecommunication:-** Full Post office 3

- Sub - Post office
- Telephone Lines

## **4.6 Energy** - Access to Electricity (1988) - Rural

0.9% of H/H

- Urban 19.8 of all H/H

## ANNEX E

### 1.0 INFORMATION ABOUT TANZANIA

#### 1.1 GENERAL

**Location:** (29<sup>o</sup>E-41<sup>o</sup>; 1<sup>o</sup>S - 12<sup>o</sup>S)

##### **Land Frontiers:**

To the North: Kenya and Uganda

To West: Burundi, Rwanda and Zaire

To South: Zambia, Malawi and Mozambique

To East: Indian Ocean

##### **AREA OF MAINLAND**

Land area 881,289 Sq.Km.

Water area (Inland) 61,495 Sq.Km.

Tanzania area 942,784 Sq.Km.

##### **TANZANIA MAINLAND AREA BY REGIONS (SQ KM)**

<b>Total</b>	<b>942,784</b>			
Arusha	84,567	Morogoro	70,799	
Coast	32,407	Mwanza	35,248	
Dodoma	41,311	Lindi	66,046	
Iringa	58,936	D'Salaam	1,393	
<b>Kigoma</b>	<b>45,066</b>	Rukwa	75,240	
Kagera	39,627	Ruvuma	66,477	
Kilimanjaro	13,309	Shinyanga	50,781	
Mara	30,150	Singida	49,341	
Mbeya	62,420	Tabora	76,151	
Mtwara		16,707	Tanga	26,808



## Population

### TOTAL POPULATION AND LIFE EXPECTANCY FOR TANZANIA - BY REGIONS, 1967, 1978, 1988, 1996:

REGION	TOTAL POPULATION				LIFE EXP. 1988	
	1967 (No.)	1978 (No.)	1988 ('000)	1996** ('000)	M Yrs	W Yrs
Dodoma	709,380	972,005	1,234.9	1,472.5	57	58
Arusha	610,474	926,223	1,348.4	1,784.0	46	51
Kilimanjaro	652,722	902,437	1,106.0	1,703.5	50	50
Tanga	771,060	1,037,767	1,307.3	1,521.8	45	47
Morogoro	682,700	939,264	1,254.0	1,519.4	44	47
Coast	428,041	516,586	636.5	740.9	44	45
Dar es Salaam	356,286	843,090	1,357.6	1,945.7	47	49
Lindi	419,853	527,624	645.0	744.8	57	62
Mtwara	621,293	771,818	887.4	976.7	46	48
Ruvuma	395,447	561,575	781.4	1,001.3	46	48
Iringa	689,905	925,044	1,206.0	1,472.9	45	48
Mbeya	753,765	1,079,864	1,472.7	1,857.0	45	48
Singida	457,938	613,949	789.9	949.4	44	48
Tabora	502,068	817,907	1,033.8	1,232.6	46	50
Rukwa	276,091	451,897	693.3	954.7	44	47
<b>Kigoma</b>	<b>473,443</b>	<b>648,941</b>	<b>857.8</b>	<b>1,047.6</b>	<b>48</b>	<b>50</b>
Shinyanga	899,468	1,323,535	1,768.6	2,194.83	48	51
Kagera	658,712	1,009,767	1,358.8	1,659.5	54	55
Mwanza	1,055,883	1,443,379	1,874.4	2,270.9	53	54
Mara	544,125	723,827	968.6	1,202.0	48	51
Tanzania Mainland	11,958,654	17,036,499	22,582.4	28,252.2	49	51
Zanzibar North	56,360	77,017	97.1	119.0	46	47
Zanzibar South	39,087	51,749	70.2	91.8	45	50
Zanzibar Urban	95,047	142,041	208.4	290.4	46	52
Pemba	72,015	106,290	137.4	172.6	46	48
Pemba	92,306	99,014	127.7	160.4	45	50
Zanzibar Is.	354,815	476,111	640.7	834.2	46	49
Tanzania United Rep.	12,313,469	17,512,610	23,223.1	29,086.4	47	50

**Note:** The projections are based on the national Population Census of 1988, and the calculated growth rates since the 1978 census.

**Source:** Bureau of Statistics.

## **Land Use**

	(Ha (millions))	Proportion(Percentage)
Small holder cultivation	4.1	5
Large scale agriculture	1.1	1
Grazing Land	35.0	39
Forest and Wood Lands	44.0	50
Other Lands	4.4	5
Total	88.6	100

## **Arable Land:**

Arable Land (Ha) 3,634,000

## **Lakes**

Victoria	34,850 sq km
Tanganyika	13,350 sq km
Nyasa	5,600 sq km
Rukwa	2,850 sq km
Eyasi	1,050 sq km
Natron	900 sq km
Manyara	320 sq km

## **Mountain summits (metres above sea level)**

Kilimanjaro	5,895
Meru	4,566

## Climate

### (a) Rainfall

Main rain season on the coast is between March and May and the second season is between October and December.

Rainfall is well distributed throughout the year but there is a peak during March and May.

#### Average maximum temperature (degrees centigrade)

	Jan.	Apr.	July	October
Dar es Salaam	31.6	30.1	28.6	31.3
Arusha	28.9	25.3	21.1	27.3
Dodoma	31.4	28.4	26.0	30.2

#### Average minimum temperature (degrees centigrade)

	Jan.	Apr.	July	October
Dar es Salaam	23.3	22.9	18.3	31.3
Arusha	12.2	16.9	12.6	27.3
Dodoma	19.2	13.5	16.2	30.2

#### Gross Domestic Product at factor cost (billion Shs.) 1992.

At current price	688.0
At constant prices	32.2
GDP growth rate at 1976 prices 1985-92	3.69%
Per capita	27,355
At current price	27,355
At constant price	1,280

## 1.2 SOCIAL SERVICES

### HEALTH FACILITIES

YEAR	HOSPITALS	RHC	DISPENSARIES
1960	98	22	975
1980	149	239	2,600
1990	173	276	3,014

### Education: Enrolment rates 1995 compared with other East Africa countries

COUNTRY	GROSS ENROLLMENT	
	PRIMARY	SECONDARY
KENYA	94	28
UGANDA	76	20
TANZANIA	67	13

### 1.3 NATIONAL PARKS

#### National Parks (area in sq km)

ARK	LOCATION AND PARTICULARS
<p><b>(i) SERENGETI NATIONAL PARK</b></p>	<p><b>LOCATION:</b> At the border of Arusha &amp; Mara Region, about 32 km from Arusha town</p> <p><b>AREA SIZE:</b> 14,763 square km. It is the largest and oldest Park in Tanzania having been established under the British Colony in 1951. It contains the greatest and most spectacular concentration of plain animals left any where in Africa.</p> <p><b>MAJOR ATTRACTIONS:</b> Wildebeest about 1.7 million, Lions 3,000. About 35 species of animals and 500 species of birds, Buffalos, Chetah, Leopards etc.</p>
<p><b>(ii) LAKE MANYARA NATIONAL PARK</b></p>	<p><b>LOCATION:</b> Some 125 Kilometres South West of Arusha town. It was officially established and gazzetted as a National Park in 1960.</p> <p><b>AREA:</b> Lake Manyara National Park covers a total area of 320 square kilometres, 230 kilometres constituting Lake Manyara itself.</p> <p><b>MAJOR ATTRACTIONS:</b> The Rift Valley edge on the West with the vast lake underneath. Natural forest with many natural rivers and springs. Tree-climbing lions, various species of animals plus about 360 species of birds, Elephants, Hippos, Leopards, Baboons etc.</p>
<p><b>(iii) TARANGIRE NATIONAL PARK</b></p>	<p><b>LOCATION:</b> South of Arusha town along the Dodoma Highway. It was established in 1970.</p> <p><b>AREA:</b> Tarangire National Park covers some 2,600 Square kilometres.</p> <p><b>MAJOR ATTRACTIONS:</b> Tree climbing pythons, zebra, kongoni, elephant, buffalo, waterbuck, gazettes and oryx.</p>



<p><b>(iv)ARUSHA NATIONAL PARK (MOMELA)</b></p>	<p><b>LOCATION:</b> The Park is located between Mount Meru and Mount Kilimanjaro. Formally Ngudoto National Park until 1967. Was commissioned as National Park in 1960.</p> <p><b>AREA:</b> The park covers some 137 square Kilometres.</p> <p><b>MAJOR ATTRACTIONS:</b> Ngurdoto Crater, Lake Momella, Mount Meru and the Natural Momela Forests. There are many species of Animals and birds. The most common being African elephant, colobus and velvet monkey, hippo, duicker and a number of bird species.</p>
<p><b>(v)KILIMANJARO NATIONAL PARK</b></p>	<p><b>LOCATION:</b> The Kilimanjaro National Park which derived its name from Mount Kilimanjaro is part and parcel of the Mountain. It was established in 1973.</p> <p><b>AREA:</b> The boundaries of the Park include the natural forest under and around the Mountain. It covers some 760 square Kilometres.</p> <p><b>MAJOR ATTRACTIONS:</b> Mount Kilimanjaro with its three peaks Shira (3,962 metres) Mawenzi and Kibo (5,149 and 5,895 metres respectively) above sea level form the largest part of the Park's attraction. There are also various species of Animals, plants and birds.</p>
<p><b>(vi)MIKUMI NATIONAL PARK</b></p>	<p><b>LOCATION:</b> It is situated some 216 km along the Dar - Zambia Highway. It was established in 1964.</p> <p><b>AREA:</b> Mikumi National Park which borders with Africa's largest Game reserve, the Selous is the third biggest National Park after Serengeti and Ruaha National Park and covers 3230 sq km.</p> <p><b>MAJOR ATTRACTIONS:</b> The plains surrounding River Mkata which are rich in flora and fauna are by themselves a wonderful scenarial. The common animals found in the park include zebra, buffalos, elephants, Hippos, lions and the Impalas.</p>

<p><b>(vii)UDZUNGWA NATIONAL PARK</b></p>	<p><b>LOCATION:</b> This Park is located South of Mikumi National Park along the Mikumi-Ifakara Highway. The Park was established in 1992.</p> <p><b>AREA:</b> The Park which derives its identity from the famous Udzungwa mountain has an area of 1990 square kilometres.</p> <p><b>MAJOR ATTRACTIONS:</b> Its unique species of Fauna and Flora which called for its declaration as a National Park. The Udzungwa Mountains and Forests are a good source of Rivers and springs, one of them being the famous Kilombero River, which constitutes the essential part of the multi-hactoral its total Kilombero Sugar Plantations. Additional attractions: Lions, Buffalos, Giraffes etc.</p>
<p><b>(viii)RUAHA NATIONAL PARK</b></p>	<p><b>LOCATION:</b> The name Ruaha, is derived from the Hehe word "Luvaha" meaning a river.</p> <p><b>AREA:</b> Park covers an area of 12,950 square kilometres, the second largest in the country. Ruaha National Park which was established in 1964 is situated some 130 km west of Iringa town.</p> <p><b>MAJOR ATTRACTIONS:</b> The Ruaha River by itself is an attraction, leave alone some hundreds of species of Flora which sorround it. Besides there are a lot of Crocodiles, Hippos, Elephants etc.</p>

<p><b>(ix) KATAVI NATIONAL PARK*</b></p>	<p><b>LOCATION:</b> It is located in Mpanda District, Rukwa Region. It was established in 1974.</p> <p><b>AREA:</b> The Katavi National Park which is about 40 kilometres South -East of Mpanda town covers an area of 2,253 square kilometres.</p> <p><b>MAJOR ATTRACTION:</b> Lakes Chala and Chada plus other springs and rivers whose waters feed into lake Rukwa constitute a unique environment. Animals in the park include zebra, sable, eland, leopard, buffalo, lion, antelops etc. Animals like, Buffalos, Elephants, Zebras and BushBucks are a good attraction to visitors.</p>
<p><b>(x)MAHALE NATIONAL PARK</b></p>	<p><b>LOCATION:</b> Located some 120 south of Kigoma town along the shores of lake Tanganyika, Mahale National Park is yet another attraction in Tanzania's Natural Heritages.</p> <p><b>AREA:</b> Mahale nation Park has about 1,613 square kilometres and was gazzetted in 1948.</p> <p><b>MAJOR ATTRACTIONS:</b>Chimpanzees are a major attraction. Also there is a good number of monkey species including red colobus monkeys. It is estimated that there are 700 Chimpanzees in Mahale and 15 species of monkeys whose habits tally with those of the Chimps.</p>
<p><b>(xi) GOMBE NATIONAL PARK</b></p>	<p><b>LOCATION:</b> Gombe National Park is situated 16 km north of Kigoma town in western Tanzania. It is a narrow strip of mountainous country bounded in the east by the eastern rift valley escarpment and by lake Tanganyika in the west</p> <p><b>AREA:</b> Covering some 52 square kilometres. National park, was commssioned in 1968.</p> <p><b>MAJOR ATTRACTIONS:</b> Ever green forests and primates. These include Chimpanzees, Baboons, blue monkey red tails and red colobus.</p>

<p><b>(xii) RUBONDO NATIONAL PARK</b></p>	<p><b>LOCATION:</b> The Park which form park of a number of archipelagos in Lake Victoria covers some 240 square Kilometres. it was established in 1977</p> <p><b>MAJOR ATTRACTIONS:</b> The Chimpanzees. But other attractions include, Hippos, Giraffes, and Elephants. the absence of man-eaters such as Lions &amp; Leopards ensures a safe walk in Rubondo Park even some fishing activities with boats under Park wardens are carried out.</p>
<p><b>(xiii) NGORONGORO</b></p>	<p><b>LOCATION:</b> It is situated west of Arusha town some 230 kms.</p> <p><b>AREA:</b> The park covers 8320 sq km</p> <p><b>MAJOR ATTRACTION:</b> Wildebeest, Lions, Buffalos, Leopards, Variety of birds species, Giraffes, elephants etc</p>