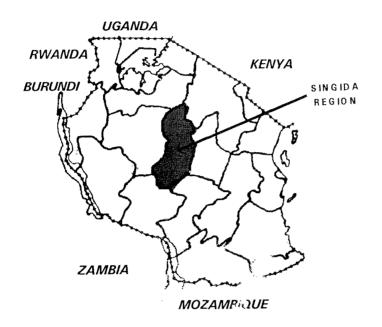


# SINGIDA REGION SOCIO-ECONOMIC PROFILE



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

# SINGIDA REGION SOCIO-ECONOMIC PROFILE

# TABLE OF CONTENTS

|   | Page |
|---|------|
| Foreword  | iv   |
| SECTION I   |      |
| 1.0 LAND, PEOPLE, CLIMATE AND AGRO-ECONOMIC ZONES-1 |      |
| 1.1 Geographical Location                           | 1    |
| 1.2 Area and Administrative Units                   |      |
| 1.3 Land Use:                                       | 2    |
| 1.4 Population:                                     | 4    |
| 1.5 Climatic Conditions:                            | 11   |
| 1.6 Topography                                      | 12   |
| 1.7 Drainage  | 12   |
| 1.8 Agro-Economic Zones:                            | 13   |
| SECTION II  |      |
| 2.0 THE REGIONAL ECONOMY                            | 20   |
| 2.1. Introduction:                                  | 20   |
| 2.2 GDP and Per Capita GDP                          | 22   |
| 2.3 Socio-Economic Conditions                       | 26   |
| 2.4 Development Prospects and Potentials            | 31   |
| SECTION III   |      |
| 3.0 SOCIAL SERVICES                                 | 39   |
| 3.1 Education Sector                                | 35   |
| 3.1.1 Introduction:                                 | 39   |
| 3.1.2 Primary School Education:                     | 39   |
| 3.1.8 Secondary Education:                          | 54   |
| 3.1.10 Adult Education:                             | 61   |
| 3.2 Water Sector                                    | +66  |
| 3.2.1 Introduction:                                 | 66   |
| 3.2.2 Rural Water Supply                            | 68   |
| 3.2.3 Status of Water Supply Schemes:               | 68   |
| 3.2.4 Urban Water Supply:                           | 73   |
| 3.2.5 Water Supply Management:                      | 75   |
| 3.2.6 Technology:                                   | 76   |
| 3.3 Health Sector:                                  | 81   |

| 3.3.1 Introduction:                             |     |
|---|-----|
| SECTION IV                                      |     |
| 4.0 ECONOMIC INFRASTRUCTURE                     | 92  |
| 4.1 Road Network                                |     |
| 4.2 General Status of the Region's Road Network | 93  |
| 4.3 Communication Network                       |     |
| 4.4 Railways                                    |     |
| 4.5 Air Transport                               |     |
| 4.6 Energy and Power                            | 95  |
| CECTION V                                       |     |
| SECTION V                                       |     |
| 5.0 PRODUCTIVE SECTOR                           |     |
| 5.1 Agriculture                                 | 97  |
| 5.2 Livestock                                   |     |
| 5.3 Natural Resources                           |     |
| 5.4 Mining And Industry                         | 157 |
| SECTION VI                                      |     |
| 6.0 OTHER RELATED DEVELOPMENT ISSUES            | 163 |
| 6.1 Local Government                            |     |
| 6.2 Women Development                           | 165 |
| 6.3 Child Development                           | 168 |
| 6.4 Youth Development                           | 170 |
| 6.5 Co-Operative Development                    | 176 |
| 6.6. Non-Governmental Organizations Activities  | 179 |
| 6.7 Donor Support in Singida Region             | 181 |

# **ANNEXES**

| ANNEX A:   | 184             |
|--|-----------------|
| Singida Region in a Nutshell:                                | 184             |
| ANNEX B:   | 188             |
| Singida Urban (Town Council                                  | 188             |
| ANNEX C:   | 192             |
| Singida District Council:                                    | 192             |
| ANNEX D:   | 197             |
| Manyoni District Council:                                    | 197             |
| ANNEX E:   | 202             |
| Iramba District Council:                                     | 202             |
| ANNEX F  | 206             |
| GENERAL INFORMATION ABOUT TANZANIA                           | 206             |
| Area of Mainland   | 206             |
| Tanzania Mainland Area by Regions (Sq Km)                    |                 |
| Population   |                 |
| Total Population and Life Expectancy For Tanzania - By Regio | ns, 1967, 1978, |
| 1988, 1996:  | 207             |
| Land Use   | 208             |
| Arable Land:   | 208             |
| Lakes  |                 |
| Mountain Summits (Metres Above Sea Level)                    |                 |
| Climate  |                 |
| Rainfall   |                 |
| Social Services  |                 |
| Health Facilities  | 210             |
| NATIONAL PARKS   | 211             |

# **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 Singida 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 illprepared 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 Singida Region Socio-Economic Profile. I would also like to thank both the Planning Commission and Singida 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

April, 1997

#### SECTION I

# 1.0 LAND, PEOPLE, CLIMATE AND AGRO-ECONOMIC ZONES

# 1.1 GEOGRAPHICAL LOCATION

Singida Region is located in central Tanzania. It lies between longitudes 33° 27′ 5″ and 35° 26′ east of Greenwich, and latitudes 3°52′ and 7° 34′ south of the Equator. Singida town is the regional headquarter and forms a vital en route transit town from Dar es Salaam to lake Victoria zone in the north west, Lake Tanganyika in the west, and Arusha in the north. Singida town is 700 kilometres from the commercial port city of Dar es Salaam, and 330 kilometres from the Capital town Dodoma. The region is boundared by Arusha Region to the north, Dodoma Region to the east, Mbeya and Iringa Regions to the south, Tabora Region to the west, and Shinyanga Region to the north-west respectively.

# 1.2 AREA AND ADMINISTRATIVE UNITS

Singida region is divided into three administrative districts with three district councils and one town council namely: Singida, Iramba, Manyoni and Singida Urban. The three districts covers an area of 49,341 square Kilometres, equivalent to about six per cent of the total land area of Tanzania Mainland. The region is subdivided into twenty one (21) divisions, eighty five (85) wards and three hundred forty six (346) villages and is represented by seven (7) electoral contituencies. Table I outlines the administrative divisions by district and land area.

Fig. 1: Distribution of area by district 1996 (Sq. Km)

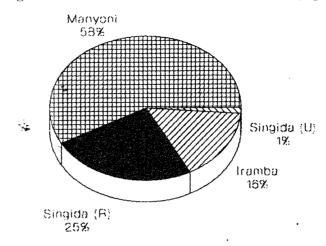


Table I: SINGIDA REGION ADMINISTRATIVE UNITS

| <b>&gt;</b> | DISTRICT    | TOTAL<br>AREA IN<br>KM. 2 | CONSTITUEN CIES | NUMBER<br>OF<br>DIVISIONS | NUMBER<br>OF<br>WARDS | NO. OF<br>VILLAG<br>ES |
|-------------|-------------|---------------------------|-----------------|---------------------------|-----------------------|------------------------|
| f           | Singida (R) | 12,164                    | 2               | 7                         | 25                    | 133                    |
| ł           | Iramba      | 7900                      | 2               | 7                         | 26                    | 118                    |
| t           | Manyoni     | 28,620                    | 2               | 5                         | 21                    | . 76                   |
| Ì           | Singida (U) | 657                       | 1               | 2                         | 13                    | - 19                   |
| Ì           | Total       | 49,341                    | 7               | 21                        | 85.                   | 346                    |

Source: Regional Commissioner's Office - Singida

# 1.3 LAND USE:

Land in Singida region is categorised into four different uses. First is arable land suitable for farming which is approximated

1,134,400 hectares or about 23 % of the total land; Out of this only about 280,000 hectares or 6% is cultivated each year for food production. Second is land suitable for grazing, this cover about 40% of the total land area (1,974,000 hectares). Third is land reserved for forests and woodland which is about 1,775,000 hectare and the fourth category is land covered by hills, rocks and water. Table II show land use distribution for each category.

Fig. 2: Land Use Distribution in Singida Region

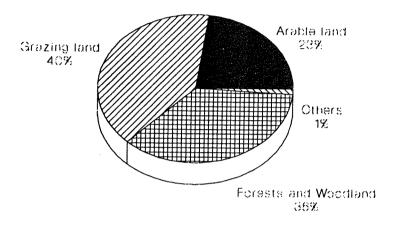


Table II: LAND USE DISTRIBUTION

| LAND USE                      | AREA IN HECTARES | %     |
|-------------------------------|------------------|-------|
| ARABLE LAND                   | 1,134,400        | 23    |
| GRAZING,                      | 1,974,700        | 40.0  |
| FORESTS & WOODLAND            | 1,775,000        | 36.0  |
| OTHERS (HILLS, WATER & ROCKS) | 80,000           | 1.0   |
| Total                         | 4,934,100        | 100.0 |
| TSE-TSE-FLY INFECTED AREA     | 2,600,000        | 53.0  |
| TSE-TSE-FLY FREE AREA         | 2,330,000        | 47.0  |

Source: Regional Commissioner's Office - Singida

#### 1.4 POPULATION:

# 1.4.1 ETHNIC GROUPS

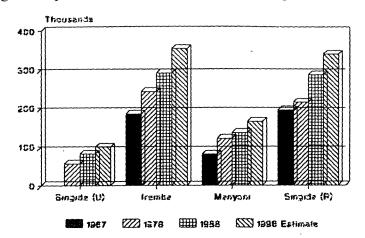
There are ten indigenous tribes in Singida Region, namely: Nyiramba, Nyaturu, Kimbu, Gogo, Isanzu, Taturu, Sukuma, Mang'ati, Barbaig and Hadzebe. The latter two have a Nilotic or Nilo-Hamitic descendancy probably having migrated into the region from Northern Africa or the Nile Valley through South Sudan or Ethiopia and Somaliland, while the other eight tribes are of Bantu origin from Ethiopia, Lake Victoria, Congo, Southern Africa and Upare mountains. However there are few mixtures of Nyamwezi and Luo from neighbouring regions like Tabora, Shinyanga and Mara and some Asians and Arabs especially in towns.

#### 1.4.2 POPULATION SIZE AND GROWTH

The population size, growth, structure and density for Singida Region for the past three decades, that is between 1967 to 1995 is as shown in tables III to VII. As table III shows, the population of the region was 791,814 according to the census of 1988. Comparable figures for the 1967 and 1978 censuses were 457,940 and 614,030 persons respectively. That means the population for the region has increased in terms of absolute numbers by 504,060 people between 1967 and 1996.

The population grew by 156,090 people between 1967 and 1978 and 177,784 between 1978 and 1988 and 170,186 between 1988 and 1996, an increase of 34 percent for the period 1967/78, 29 percent for 1978/88, and 22 per-cent for 1988/96 period. However a detailed observation of the trend in table III indicates that the inter-censal annual population growth rate declined in the region over the periods from 2.7 percent between 1967-78 and to 2.5 percent between 1978-88, and that there are differential growth rate which exist between districts. For instance between 1967 and 1978, Iramba district had the highest growth rate of 2.5 percent compared to 2.2 percent in Manyoni and 0.9 percent in Singida Rural. Singida Urban had a growth rate as high as 3.7 percent compared to 1.8 percent in Iramba, 2.8 percent in Manyoni and 2.9 percent in Singida Rural between 1978 and 1988 respectively.

Fig. 3: Population size by District, Singida Region.



**Fable III: POPULATION SIZE AND GROWTH: 1967 - 1996** 

| DISTRICTS         |            | POPUL.     | ATION      |                       | ANNUAL<br>GROWTH<br>RATE |             |  |
|-------------------|------------|------------|------------|-----------------------|--------------------------|-------------|--|
|                   | 1967       | 1978       | 1988       | 1996<br>ESTIMAT<br>ES | 1967-<br>78              | 1978-<br>88 |  |
| Singida (U)       |            | 55,892     | 80,987     | 99,000                | -                        | 3.7         |  |
| Iramba            | 183,964    | 242,003    | 290,260    | 353,000               | 2.5                      | 1.8         |  |
| Manyoni           | 80,157     | 120,403    | 135,475    | 164,000               | 2.2                      | 2.8         |  |
| Singida(R)        | 193,819    | 213,732    | 285,092    | 339,000               | 0.9                      | . 2.9       |  |
| Singida Region    | 457,940    | 614,030    | 791,814    | 962,000               | 2.7                      | 2.5         |  |
| Tanzania Mainland | 11,958,654 | 17,036,499 | 22,533,758 | 28,396,247            | 3.2                      | 2.8         |  |

Source: Population Census: 1967, 1978 and 1988.

Possible factors for these differences in growth rates are either due to internal migration, mainly rural-urban migration or dynamics in the rate of natural increase, which is an interplay of many factors including trends in fertility rate, death rate and other demographic characteristics. For instance the fertility rate for the region as shown in table IV has been changing between 1967 and 1988 from 7.5 percent in 1967, 8.7 percent in 1978 and 7.0 percent in 1988. Likewise the average household size increased from 4.1 percent in 1967 to 5.3 pecent in 1988, while the death rate (CDR) for the region somehow stabilized at 10 percent. The national average death rate was 13.5 percent in 1988.

Table IV: POPULATION GROWTH, FERTILITY, DEATH RATE AND AVERAGE HOUSE HOLD SIZE 1967-1988

| YEAR               | POPULATION | ANNUAL<br>GROWTH<br>RATE | FERTILIT<br>Y RATE | CRUDE<br>DEATH<br>RATE | AVERAGE<br>HOUSEHO<br>LD |
|--------------------|------------|--------------------------|--------------------|------------------------|--------------------------|
| 1967               | 457,940    | 3.2                      | 7.5                | -                      | 4.1                      |
| 1978               | 614,030    | 2.7                      | 8.7                | 10.3                   | 4.6                      |
| 1988               | 791,814    | 2.5                      | 7.0                | 10.6                   | 5.3                      |
| Tanzania<br>(1988) | 22,533,758 | 2.8                      | 6.7                | 13.5                   | 5.3                      |

Source:

Compiled by Planning Commission 1996.

## 1.4.3 **POPULATION STRUCTURE**:

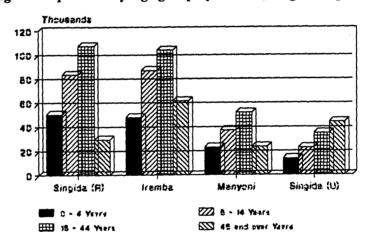
Population comparison by age groups and sex for Singida region, on the other hand, indicates that the region's population is characterized by a relatively young population. As tables V and VI portray the proportion of the population under 15 years is large (46 percent) while the proportion of population aged 15 and 64 years, the active group and core labour force, is 49 percent of the region total population.

TABLE V: POPULATION COMPARISON BY AGE GROUPS
AND DEPENDENCE RATION: 1978 - 1988

| DISTRICT       | YEAR | AGE GROUPS |         |         |        |                |                      |
|----------------|------|------------|---------|---------|--------|----------------|----------------------|
| DISTRICT       |      | 0 - 4      | 5-14    | 15-44   | 45-64  | 65 AND<br>OVER | DEPENDEN<br>CE RATIO |
| Singida (U)    | 1978 | 9491       | 14,710  | 24,169  | 5,445  | 2,076          | 88.73                |
| g(-)           | 1988 | 13,436     | 22,562  | 34,753  | 7,790  | 2,977          | 91.61                |
| Iramba         | 1978 | 43,373     | 69,940  | 82,411  | 32,343 | 13,993         | 110.94               |
| 1141104        | 1988 | 47,709     | 86,932  | 103,854 | 31,112 | 17,472         | 110,25               |
| Manyoni        | 1978 | 17,570     | 25,405  | 39,670  | 13,995 | 5,625          | 85.26                |
|                | 1988 | 22,850     | 37,083  | 51,962  | 16,023 | 7,426          | 99.08                |
| Singida (R)    | 1978 | 36,137     | 61,522  | 78,403  | 27,102 | 10,568         | 102.58               |
|                | 1988 | 50,227     | 83,309  | 107,339 | 29,499 | 14,477         | 108.09               |
| GRAND<br>TOTAL | 1978 | 106,571    | 165,577 | 224,653 | 78,885 | 32,263         | 100.29               |
|                | 1988 | 134,222    | 229,886 | 297,908 | 87,427 | 42,252         | 105.46               |

Source: Population Census: 1978 and 1988.

Fig. 4: Population by Age group by District, Singida Region.



This population structure also indicates that there was a positive population change between 1978 and 1988 census acros all age groups in the region. Furthermore, it can be noted mainly in table VI that the proportion of the population of males under 15 years is above that of females, while the proportion of the female adults aged between 15 - 64, is above that of the male adults. Likewise the proportion of the population aged 65, and over lies above 5 percent, axcept in Singida Urban where it lies below 4 percent. On the other hand, there is a relatively higher dependence ratio in Singida and Iramba districts than in other districts, meaning that a large number of people are being supported by few workers in the active group, or that the work- force is very small for the dependence ratio.

Table VI: PERCENTAGE DISTRIBUTION OF POPULATION BY SEX AND AGE GROUPS 1988

| Area           | Sex     | 0 - 14   | 15 - 64 | 65 and Over | % Total |
|----------------|---------|----------|---------|-------------|---------|
| Singida (U)    | Males   | 42.2     | 54.1    | 3.7         | 100     |
|                | Females | 41.6     | 54.9    | 3.5         | 100     |
|                | Total   | 41.9     | 54.5    | 3.6         | 100     |
| Iramba         | Males   | 48.9     | 45.0    | 6.1         | 100     |
|                | Females | 44.5     | 50.0    | 5.5         | 100     |
|                | Total   | 46.7     | 47.5    | 5.8         | 100     |
| Manyoni        | Males   | 45.7     | 48.9    | 5.4         | 100     |
| yom            | Females | 42.9     | 51.5    | 5.6         | 100     |
|                | Total   | 44.3     | 50.2    | 5.5         | 100     |
|                | Males   | 49.4     | 45.3    | 5.3         | 100     |
| Singida (R)    | F       | <u> </u> |         |             |         |
|                | Females | 44.5     | 50.7    | 4.8         | 100     |
| ·              | Total   | 47.0     | 48.0    | 5.0         | 100     |
| GRAND<br>TOTAL | Males   | 47.8     | 46.8    | 5.4         | 100     |
|                | Females | 43.8     | 51.0    | 5.2         | 100     |
|                | Total   | 45.8     | 48.9    | 5.3         | 100     |

Source: 1988 Population Census. Regional Profile Singida.

#### 2.4.4 POPULATION DENSITY

Table VII offers a comparison of population density in the region by district between 1978 and 1996, and shows that there is more concentration of people per km<sup>2</sup>. in Iramba district, Singida Rural and Singida Urban and less people in Manyoni district. However by comparing the regional population density with the national average, it is observed that there is high concentration of people in some districts such as Iramba and Singida Rural, and generally the population density for the region (19.5) is below that of the national average (30.12) and other regions of similar or less size.

140
120
100
20
20
Singide (U) Irambe Manyoni Singide (R)

Fig. 5: Population Density by District, Singida Region.

Table VII: POPULATION DENSITY BY DISTRICT 1978 - 1996

| District    | Land<br>area | Population |            |                  | Population Density |        |                 |
|-------------|--------------|------------|------------|------------------|--------------------|--------|-----------------|
|             |              | 1978       | 1988       | 1996<br>Estimate | 1978               | 1988   | 1996<br>Estimat |
| Singida (U) | 657          | 55,892     | 80,987     | 99,000           | 85.07.             | 123.30 | 150.68          |
| Iramba      | 7,900        | 242,003    | 290,260    | 353,000          | 30.63              | 36.70  | 44.68           |
| Мапуоні     | 28,620       | 102,403    | 135,475    | 164,000          | 3.58               | 4.73   | 5.73            |
| Singida (R) | 12,164       | 213,732    | 285,092    | 339,000          | 17.60              | 23.40  | 27.87           |
| Singida     | 49,341       | 614,030    | 791,814    | 962,000          | 12.40              | 16.00  | 19.50           |
| Region      |              |            |            |                  |                    |        |                 |
| Tanzania    | 942,784      | 17,036,499 | 22,533,758 | 28,396,247       | 18.07              | 23.90  | 30.12           |
| Mainland    |              |            |            | ]                |                    |        |                 |

Source: Planning Commission analysis 1996.

## 1.5 CLIMATIC CONDITIONS:

#### 1.5.1 Rainfall:

A large part of Singida region is arid, and the rainfall amount decreases from north to south of the region. The average annual rainfall ranges between 500 - 800 millimetres. The highest and more reliable rainfall is recorded in the northern part of the region where rainfall exceeds 750 milimetres in most seasons. The lowest rainfall is usually recorded in the western part of Manyoni district. Rainfall in this area is as low as 500 millimetres. The highest rainfall is usually recorded in Iramba Plateau and the north-eastern part of Iramba where it reaches 800 millimetres. In normal circumstances, rainfall usually takes place from mid-November ending in April or early May every year.

## 1.5.2 Temperature:

Temperature in the region ranges between 15°C and 30°C depending on season and altitude. The coldest period in the year is in July while the hottest period is in October and November. On the other hand, relative humidity (Rh) at noon rises from 36 percent in the driest month to 58 percent during the wet season. Evaporation is almost similar in the region and averages close to 2000 millimetres annually, being a bit higher in Singida district. It is lowest in April. During this month it goes down to 1400 millimetres. Evaporation is highest in October reaching about 2200 millimetres. Windspeed is usually highest in Singida and gets particularly high during the dry season which is between May and October.

## 1.6 TOPOGRAPHY

Singida region occupies the northern part of the central plateau. Topographically, its landscape drops east-ward to the rift valley and west-ward to the Wembere depression. A large 1.8 plateau of an average elevation of 1000 metres extends from the centre towards the south and south-west of Singida township, while in the north - west of the region, the Iramba plateau rises to an elevation of about 1,500 metres above sea level.

#### 1.7 DRAINAGE

The region has a series of valleys, depressions and river catchments which form the basis of its land drainage system and soil types. Geologically, the region consists of granited batholith rocks, peneplains, and volcanic plateaus comprising fertile clay loamy soils on top and sandy clay loams to sandy

pebbly surface materials down the catena. There are five rivers in the region which are seasonal axcept Ndurumo. The following are the rivers forming the regions drainage system:-

| River     | <u>Volume M<sup>2</sup>/Sec.</u> |
|-----------|----------------------------------|
| Ndurumo   | 0.7                              |
| Wamba     | •                                |
| Msuguluda | · <u>-</u>                       |
| Heka      | -                                |
| Mponda    | -                                |

There are also three major distinguished river catchments, namely: Ndurumo catchment discharging into Lake Kitangiri towards the north-west, Wamba/Msugulunda catchment discharging into the Wembere Swamps which are in the West of Singida region, and Maduma/Msemembo catchment discharging into the Bahi Swamps in the south east.

## **AGRO-ECONOMIC ZONES:**

The region can be divided into six Agro-Economic zones. An agro-economic zone is part of a district in which agricultural conditions are sufficiently similar to warrant the adoption of a single agricultural policy at the district level; or to form a basis for district level planning (including agriculture, water development, and integrated areal planning) or to provide a sampling frame for carrying out proper farm management studies to provide detailed information on farming systems; or to provide general information on agricultural conditions for planning and administrative purposes in the region; or to provide information to assist in the planning of the national

agricultural census. The boundaries of the zones and their main features are as detailed in table VIII.

Table VIII: AGRO-ECONOMIC ZONE OF SINGIDA REGION

|     |                    | Table VIII: AGRO-ECONOMIC ZONE OF SINGIDA REGION |                         |  |  |  |  |
|-----|--------------------|--|-------------------------|--|--|--|--|
| ZO  | LOCATION           | GENERAL  | MAIN ECONOMIC           |  |  |  |  |
| NE  |                    | CHARACTERISTIC                                   | ACTIVITY                |  |  |  |  |
| NO. |                    |  |                         |  |  |  |  |
|     |                    | Topography:                                      | Agriculture:            |  |  |  |  |
|     |                    | A flat plain area dissected                      | Cotton, maize, millet,  |  |  |  |  |
|     |                    | by many seasonal streams                         | sorghum, groundnuts,    |  |  |  |  |
|     |                    | flowing west-ward to the                         | cassava,                |  |  |  |  |
|     |                    | Wembere  | potatoes, beans and     |  |  |  |  |
|     |                    |  | Bambara-nuts are the    |  |  |  |  |
|     | The zone           | Rainfall:  | main crops grown in     |  |  |  |  |
|     | comprises flat     | 500 - 750 mm annually                            | the area.               |  |  |  |  |
|     | plains of          | 300 · 730 Hill aimtearty                         | me area.                |  |  |  |  |
|     | Wembere, Sibiti    | Soil:  | Oxenization:            |  |  |  |  |
| 1   | and Lake           |  |                         |  |  |  |  |
| 1   |                    | F  | High.                   |  |  |  |  |
|     | Kitangiri; low     | loams. Brown or reddish-                         |                         |  |  |  |  |
|     | lands of Shelui    | brown loamy sands.                               | Livestock Raising:      |  |  |  |  |
|     | Urungu Tulia and   | Deep black or dark-grey                          | Medium to High,         |  |  |  |  |
|     | Kirumi; western    | or black cracking clays                          | mainly cattle, sheep,   |  |  |  |  |
|     | part of Sepuka     | and saline in valleys and                        | goats, Donkeys and      |  |  |  |  |
|     | Ihanja, and Issuna | depressions                                      | poultry.                |  |  |  |  |
|     | and Hoya Mbuga     |  |                         |  |  |  |  |
|     | to the South.      | Vegetation:                                      | Fishing:                |  |  |  |  |
|     |                    | Woody savana dominated                           | Is also an important    |  |  |  |  |
|     |                    | by Acacia Commiphora                             | activity at lake        |  |  |  |  |
|     |                    | and Hyparrhenia-acacia                           | Kitangiri.              |  |  |  |  |
|     |                    | bushed grass land.                               | 0                       |  |  |  |  |
|     |                    | <b>D</b> -11                                     | Crop Seasons:           |  |  |  |  |
|     |                    | Population:                                      | (a) Planting:-          |  |  |  |  |
|     |                    | Very low-15 persons to                           | November, December      |  |  |  |  |
|     |                    | 29 persons per sq. km. In                        | and February.           |  |  |  |  |
|     |                    |  | 1                       |  |  |  |  |
|     |                    | some areas population                            | (b) Harvesting:- April, |  |  |  |  |
|     |                    | under 15 persons per sq.                         | May and August.         |  |  |  |  |
|     |                    | km.  |                         |  |  |  |  |

|    |                   | Topography:                  | Agriculture: Millet,    |
|----|-------------------|------------------------------|-------------------------|
|    |                   | Mainly gently undulating     | Maize, Sorghum,         |
|    |                   | plateau with isolated hills, | Cassava, Sweet          |
|    | The zone includes | rock outcrops, and           | Potatoes, Beans,        |
|    | north-eastern     | dissected by many            | Groundnuts, Castor      |
|    | Iramba, Nduguti   | streams flowing north and    | seeds, Sunflower,       |
|    | Kinyangiri and    | west. Altitude: 1800 -       | Cotton and Onion are    |
|    | part of Kirumi,   | 2000 metres above sea        | the main crops.         |
|    | Iramba plateau,   | level.                       | Oxenization:            |
|    | Kiomboi town,     |                              | High.                   |
|    | part of           | Rainfall:                    | _                       |
|    | Kinampanda,       | Varies between 650 - 800     | Livestock Raising:      |
| II | Shelui and        | mm annually.                 | Varies from low to      |
|    | Kisiriri, and     | ·                            | high. Mainly cattle,    |
|    | south-western     | <u>Soil</u> :                | goats, sheep and other  |
|    | Iramba. In the    | Deep dark-brown or           | small stocks and also   |
|    | South the         | reddish-brown loamy          | there are improved      |
|    | boundary for the  | sands to dark- grey or       | stock varities. No tse- |
|    | zone corresponds  | black cracking clay in       | tse-fly exists in the   |
|    | with that of the  | valleys and depressions.     | zone.                   |
|    | administrative    | •                            |                         |
|    | Iramba District.  | Vegetation:                  | Hunting & Honey         |
|    |                   | Mixture of Acacia            | gathering:              |
|    |                   | bushland, Hyparrhenia        | Is also an important    |
|    |                   | grassland and                | activity in the area.   |
|    | '                 | Brachystegia Julbernadia     |                         |
|    |                   | woodland.                    | Crop seasons:           |
|    |                   |                              | (a) Planting:-          |
|    |                   | Population:                  | November and            |
|    |                   | Most populated part in the   | December                |
|    |                   | region. Population varies    |                         |
|    |                   | from low to dense or high,   | (b) Harvesting:- May,   |
|    |                   | 15 to 99 persons per sq.     | June, July and          |
|    |                   | km.                          | August.                 |
|    |                   |                              |                         |

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| Ш   | The zone borders Hanang in the North-east, the rift valley escarpment and Kondoa in the east, Iramba district to the north-west, and comprises all | Topography: Mainly flat and undulating. Altitude 1800 metres above sea level. Central part tilted west-ward and broken by occasional small hills and rock crop-outs. Rivers drain slowly south ward towards Bahi Swamps.  Rainfall: Varies between 600 - 700mm. annually  Soils: Mainly deep dark-brown or deep reddish-brown loamy sands with darkgrey or black clay in valleys and depressions. | Agriculture: There is land shortage in the north and plenty of land in the east. All land is in use, mainly in central Singida.  Crops: Cotton, Onions Groundnuts, Millets, sorghum, castor seeds, cassava and potatoes.  Oxenization: Low There is considerable soil erosion  Livestock Raising: Varies from medium to high. High in the north-east and east. |
|     |  | Rainfall:   | cassava and potatoes.  |
| 111 | North-east, the rift valley escarpment and   | Varies between 600 - 700mm. annually  | There is considerable  |
| 111 | east, Iramba<br>district to the<br>north-west, and   | Mainly deep dark-brown<br>or deep reddish-brown<br>loarny sands with dark-  | Varies from medium to high. High in the  |
|     |  | Population: Varies from 15 to 29 per sq. Km. (lowest), 30 to 49 persons per sq. km. (medium) and over 100 persons per sq. km. (highest or dense)  | Crop Seasons:  (a) Planting - October November and December  (b) Harvesting - May, June and July.  |

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| IV | The zone covers the southern part of Singida district, Issuna and most of Nkungi, Northern Manyoni, northeastern part of Itigi and part of Makanda. | Topography: A predominantly flat plain area.  Rainfall: Varies between 550 - 650 mm. Very variable and unreliable  Soil: Very acidic and sandy soils. Extremely acidic grayish-brown sands. Black Cracking clays in Valleys. and depressions. The zone has considerable soil erosion  Vegetation: Mainly pseudoprosopis Fischer bush thickets (Itigi thickets) a vegetation type found in a few countries in Africa and extint else where in the world.  Population: Very low below 15 person per sq. km. | Agriculture: Discouraged by poor soil and low rain fall. Crop grown include Maize, Millet, Sorghum, Cassava, Beans Groundnuts Cotton and Bambaranuts. Oxenization: Not practiced.  Livestock Raising: Very low because of high Tse-tse-fly infestations  Honey Collection: Also an important activity in the zone.  Crop seasons (a) Planting December and Januanry (b) Harvesting - April, May, June and July. |

| V. | The zone covers the North-eastern part of Manyoni, Bahi area, Kintinku part of Muhalala and Saranda; south - eastern Manyoni, eastern part of Simbanguru Subdivision, Nkonko, Ndabula and Chikola. It boarders Dodoma in the east. | Topography: Relatively low and flat area, forms gently slopping depression draining towards Bahi Swamps. It is flat and gently undulating plain in the south with Kisingo River flowing south towards Ruaha forming its main drainage system.  Rainfall: Varies between 500 - 650 mm annually.  Soils: Vary from reddishbrown loamy sands to dark- grey and black cracking clays in the valleys and depressions.  Vegetation: Predominately Acacia Hyparrhenia bush grassland with swamp vegetation  Population: Very low from 15 to 29 persons per sq. km.; sometimes under 15 persons per sq. km. | Agriculture: Very little land is put under cultivation: Crops include: groundnuts, paddy, maize, millet, beans, sorghum, cassava, sweet potatoes, sunflower and bambaranuts.  Oxenization: Not practiced.  Livestock Rearing: Proportion of household owning Livestock is high-mainly: cattle, sheep, goats, donkey and poultry. The zone has no tse-tse-fly.  Fishing: Is an important activity around swamps  Crop Seasons: (a) Planting: December to January  (b) Harvesting: - April, May, June and July. |
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|    |  | 1   | (   |

| VI M Sc M me | ne zone includes e Western part Manyoni strict, wamagembe outhern, gandu, and ost of Nkonko b-division. | Topography: Mainly an undulating area with occasional inselbergs. Drain eastward toward Bahi swamps and westward towards the Rungwa.  Rainfall: Increases from 500 mm in the east to 700 mm in the west.  Soils: The soils are reddishloamy sands with darkgrey to black clays in valleys and depressions  Vegetation: Mainly wood area. The dominant natural vegetation is Brachystegias Terminalia wood land, Hyparrhenia- Acacia bush, grassland and Pseudoprosopis-Fischer thickets(Itigi-thickets).  Population: The most settled part is along Itigi - Mbeya | Agriculture: Shifting cultivation is common mainly in the North and South. Cultivated area is relatively very small.  Crops: Groundnuts, Maize, Millet, Sorghum, Cassava, Potatoes and Banana in the South part.  Oxenization: Not practiced.  Livestock Raising Proportion of household owning livestock is negligible due to high level of tse-tse-fly infection  Hunting, Honey and Food gathering: Are also major economic activities of the people in the zone  Crop Seasons: (a) Planting: December, January and February |
|--------------|---|--|---|
|              |   |  |   |