

**UNITED REPUBLIC OF TANZANIA**

**Rukwa Regional Administrative Secretariat and the  
World Bank Tanzania Country Office**

**GROWTH PROSPECTS FOR RUKWA  
REGION**

**Constraints and Opportunities**

**June, 2007**

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## Acronyms and Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
AMSDP	Agricultural Markets Systems Development Programme
ARI	Acute Respiratory tract Infection
ASDP	Agricultural Sector Development Programme
ATTT	Association of Tanzania Tobacco Traders
BRALLUP	Bureau of Resource Assessment and Land Use Planning
COBET	Complimentary Basic Education in Tanzania
DADP	District Agriculture Development Plan
DAFCO	Diary Farms Company
DRC	Democratic Republic of Congo
ESW	Economic Sector work
GDP	Gross Domestic Product
GIS	Geographical Information System
GVM	Gross Vehicle Mass
HIV	Human Immune-deficiency Virus
ICBAE	Integrated Community Based Adult Education
LATCU	Lake Tanganyika Tobacco Cooperative Union
LGA	Local Government Authority
MKUKUTA	Swahili Acronym for National Strategy for Growth and Reduction of Poverty
NARCO	National Ranching Company
NBS	National Bureau of Statistics
PL	Prospecting License
PML	Primary Mining License
PPL	Primary Prospecting License
PSV	Public Service Vehicle (e.g bus/coach)
RAS	Regional Administration Secretariat
RFSP	Rural Financial Services Programme
SAAFI	Sumbawanga Agricultural and Animal Feeds Industry
SACCOS	Savings and Credit Cooperative Society
SGR	Strategic Grain Reserve
TANAPA	Tanzania National Parks
TANESCO	Tanzania Electricity Supply Company
TANROADS	Tanzania National Roads Agency
TEDAP	Tanzania Energy Development and Access Project
TLU	Tropical Livestock Units
TTB	Tanzania Tourist Board

## 1. FOREWORD

This Economic and Sector Work (ESW) has been conducted as part of the World Bank's Tanzania Country Team (CT) growth cluster work program in response to the Government of Tanzania's (GoT) poverty reduction strategy (MKUKUTA). It was conceived at a Country Team retreat in January 2006. The CT growth cluster team felt that good growth is being experienced in Tanzania mainly in urban areas (Dar es Salaam in particular) and in certain sectors such as tourism and mining, but is confined to some areas of Tanzania and does not really extend to remote regions.

Rukwa region was subsequently selected as a typical region which is difficult to access but has good growth potential. Moreover, it was known that its accessibility would improve in future with the planned paving of the Tunduma to Sumbawanga road and with the improvement of some of the internal roads in Rukwa through performance based road management and maintenance contracts managed by TANROADS and financed by an IDA contract.

A first visit to Rukwa was held in August 2006 when, under the leadership of the Country Director, various members of the Country Team traveled to Rukwa and met with their sectoral counterparts in the region. In early 2007 a World Bank consultant, Mr. Abdul Awadh visited the region to collect relevant information from regional and district, public and private stakeholders and to prepare for a stakeholder's workshop planned for May 2007. In parallel, the team also worked with the National Bureau of Statistics (NBS) to prepare, based on existing GIS data, sectoral maps of the region, useful for the planning process.

The May 17 and 18, 2007 stakeholders' workshop in Sumbawanga was chaired by the Regional Commissioner Mr. Daniel Ole Njoolay and was attended by eight members of the World Bank country team and 63 regional stakeholders from both the public and the private sector. Discussions were held on the constraints and growth opportunities of the main productive sectors of Rukwa, and conclusions were drawn on the way forward to overcome these constraints and make use of the opportunities.

After the stakeholders workshop, on June 1 and 2, 2007 an investor's meeting was held in Sumbawanga with the presence of the President of the United Republic of Tanzania, Mr. Jakaya Kikwete, several members of the cabinet, other high government officials, and about 60 potential private sector investors particularly interested in the tourism, mining and agricultural sectors. The findings report of this study and the results of the workshop of May 17 and 18, 2007 served as input for the investor's meeting.

During a Bank internal meeting on May 31, 2007, it was decided that the ESW would be followed up with (i) cross-sectoral analytical work related to the logistics of the marketing of agricultural and mining products, (ii) agricultural sector analytical work related to the marketing and sustainability of agricultural products, (iii) assistance to the region for the production of investors' prospects, (iv) support to the district planning process via the RAS office by introducing GIS capacity through linkages with NSB, the provision of training and software, and (v) some further thinking as to how this work could be replicated in other regions.

## 2. INTRODUCTION

The Tanzania Country Office of the World Bank has been exploring ways in which it can be more responsive to Government in supporting the National Strategy for Growth and Alleviation of Poverty (MKUKUTA) and ensuring growth is an integral part of strategic planning. Given Tanzania's great regional variations in resource endowments, growth potential and degree of institutional development, it was proposed that a regional case study of growth prospects and constraints be undertaken in collaboration with local stakeholders in a remote region of Tanzania. Based on this, the 'growth cluster group' of the World Bank Tanzania Country Team decided to embark on Economic and Sector Work (ESW) in Rukwa region with the following objectives:

- **Enhancing knowledge** of Rukwa's resources, infrastructure and growth potential, as well as specific constraints at both regional and district level, and improve awareness of cross-sectoral synergies in advancing growth;
- **Identifying promising processes** for the formulation and implementation of local growth strategies that involve adequate stakeholders consultation, are technically sound, and provide for appropriate higher level (regional and central) input;
- **Identifying priority activities and investments, within a five year time-frame, given expected budgetary flows and local resources.** This should improve the strategic focus of regional and district growth strategies.

It is envisaged that this ESW informs the thinking and provides field exposure across all sectors of the country program that support the three main clusters of MKUKUTA<sup>1</sup>. The lessons learnt should also inform the policy dialogue with Government and assist Development Partners (DP) to advocate for allocation of resources to regions that are remote but can demonstrate potential for growth.

This ESW has been carried out in close collaboration with the Rukwa regional and district authorities and the National Bureau of Statistics (NBS). With the help of NBS different GIS data sources were merged to develop maps of the region depicting natural resource endowment, physical infrastructure, and public and private service delivery. These maps were used to facilitate stakeholder discussions within Rukwa, and to assist stakeholders to establish growth priorities by evaluating its potential in the light of likely future public and private investments.

The study aims to improve the understanding of local area development potential and constraints, and help regional, Local Government Authority (LGA), and Bank staff understand the contribution of different sectors to a more coherent growth/poverty reduction agenda in a specific regional setting.

This report contains the study findings, being a result of literature review and interviews conducted with regional and LGA officials, residents of Rukwa and representatives of institutions operating in Rukwa region. The list of people interviewed is appended as Annex 1. The findings were presented at a 'Stakeholders Workshop' that was held in Sumbawanga on May 17 and 18, 2007. The workshop assisted to disseminate information on utilization of the identified potentials and

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<sup>1</sup> Which are: (i) Growth and reduction of income poverty.(ii) Improved quality of life and social well-being and (iii) Good governance and accountability ,

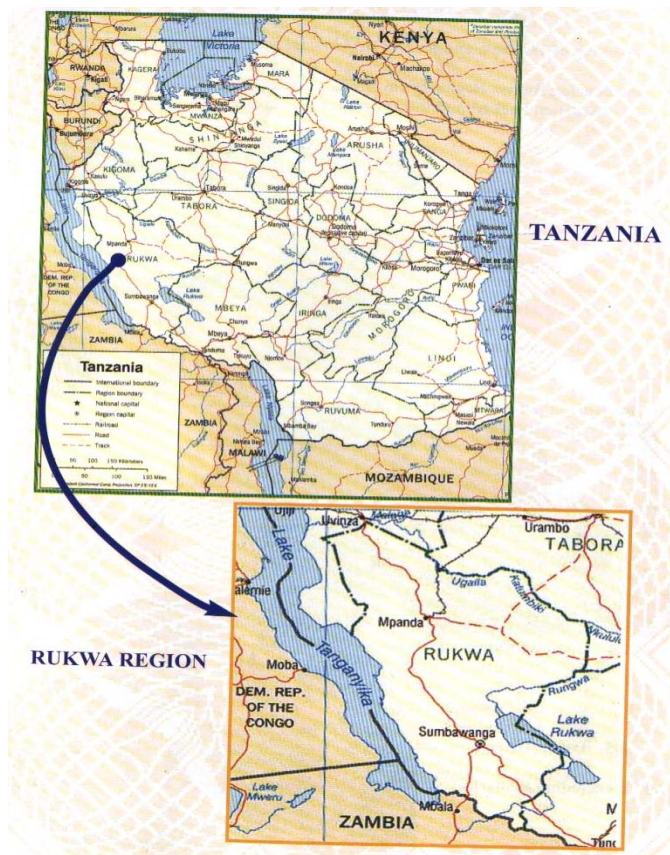
constraints to enhance the planning process and use of available resources. The workshop program and the list of participants are appended as annexes 2 and 3 respectively.

Briefly after the above workshop, on June 1 and 2, 2007 an investor's meeting was held in Sumbawanga with the presence of the President of the United Republic of Tanzania, Mr. Jakaya Kikwete, several members of the cabinet, other high government officials, and about 60 potential private sector investors particularly interested in the tourism, mining and agricultural sectors. The findings report of this study and the results of the workshop of May 17/18, 2007 served as input for the investor's meeting.

## 2.1. Background and Location

Rukwa Region came into being in 1974 when part of Mbeya and Tabora Regions were demarcated to form a new Region. The region is located in the Southwestern part of Tanzania between 05 and 90°S and 30 – 33° E. Rukwa occupies an area of 75,240km<sup>2</sup>. The region has four Local Government Authorities (LGA) namely Mpanda, Sumbawanga Urban, Sumbawanga Rural and Nkasi. The Region borders with Zambia to the Southwest, the Democratic Republic of Congo (DRC) to the West across Lake Tanganyika, Kigoma Region in the North, Tabora to the Northeast and Mbeya to the Southeast. The highest point of the region is at Malonje in the Ufipa plateau at 2461 meters above sea level and the lowest point is lake Tanganyika at 773meters above see level.

### MAP OF TANZANIA SHOWING THE LOCATION OF RUKWA REGION





## 2.2. Climate

Rukwa Region enjoys tropical climate with mean temperatures ranging between 13°C in some places for the months of June and July to 27°C in the hottest months of October to December. Rainfall has been reliable for many years. However, the region has in recent years, been receiving low rainfalls due to environmental destruction currently occurring globally and in some localized parts of Rukwa Region.

## 2.3. People and Culture

The Region had a population of 1,141,743 in 2002 and the forecast for 2007 is 1,349,749 according to the National Bureau of Statistics (NBS). The major languages spoken in this region include Kiswahili, Kifipa, Kimambwe, Kilungu, Kikonongo and Kinyamwanga. With exception of Kiswahili, the other spoken languages are vernacular (specific to a particular tribe).

The staple foods are mainly maize, rice and beans. In some parts of Lake Tanganyika and Lake Rukwa, cassava, fish and rice are the main source of food. Other food crops widely available include groundnuts, finger millet, and sweet potatoes, round potatoes, sorghum, wheat and sugarcane. Meat is easily available from the pastoral's community who traditionally keep varieties of domestic animals such as cattle, goats, chicken, pigs, rabbits and pigeons.

## 2.4. Economy and Population

GDP = 278,129 Mio TShs (2002)

Per capita GDP = 243,600 TShs (2002) – i.e. the majority of people are below the line of extreme poverty of one Dollar per day.

Average household size = 5.1

**Table 1:** Rukwa Region Administrative Distribution and Population by District

Councils	Land area (sq km)	Divisions	Wards	Villages	Population	
					2002 Census	2007 Projection <sup>2</sup>
Mpanda	45,843	7	29	87	412,683	483,526
Sumbawanga Rural	12,088	7	27	169	373,080	436,325
Nkasi	9,375	5	17	87	208,497	249,856
Sumbawanga Urban	1,329	2	13	25	147,483	179,872
<b>Total</b>	<b>68,635</b> <b>(6,863,500 Ha)</b>	<b>21</b>	<b>86</b>	<b>368</b>	<b>1,141,743</b>	<b>1,349,579</b>

## 2.5. Age Dependency Ratio

The age dependency ratio is defined as the ratio of the youths less than 15 years of age plus persons aged 65 years and above (dependants) to adults aged 15-64 years.(workforce). According to population and housing census (2002) in Rukwa Region the overall dependency ratio was 105.

<sup>2</sup> Projections by National Bureau of Statistics using a Cohort Component Method (Spectrum System), whereby three components responsible for population change, namely: mortality, fertility and migration were projected separately as well as HIV/AIDS prevalence

This means that there were 100 people in 15-64 years group supporting 105 people in age groups 0-14 and 65 and above. Age dependency ratio was high in rural areas than urban areas.

## 2.6. Ecological Zones

Rukwa region has six agro-ecological zones. The features of the zones are shown in the Table below:

**Table 2:** Agro-ecological zones of Rukwa region

Zones	Area (sq km)	General Morphology	Altitude range (m)	Dominant soil	Economic activity	Rainfall (mm)
Katumba Plain	30,000	Gentle plain	800-1200	Sandy	Agriculture: maize, cassava, beans groundnuts, tobacco and honey & beeswax	900-1000
Mwese - Mpanda ranges	3,000	Gentle plain with moderately slopping hills and plateaus	1100-1936	Ferralitic, with bands of clay sand soils.	Agriculture: Maize, beans plantains, cassava. Beekeeping.	1000-1300
Karema depression	2,800	Gentle plain	772-1200	Variable	Agriculture: Maize, Paddy, Cassava. Fishing.	900-1000
Rukwa Valley	6,500	Flat plains	810-1200	Sandy	Agric: Maize, paddy, cassava. Cattle, goats, and Fishing.	800-1000
Lake Tanganyika Shores	4,500	Steep hills with gentle plateaux and plains	772-1631	Shallow, scattered clayey lacustrines	Agriculture: maize, cassava oil palm, paddy. Fishing,	800-1200
Ufipa Plateau	11,800	Gentle plain with moderately slopping hills and plateau	1000-2461	Ferralitic	Agriculture: maize, cassava, groundnuts, millets, beans. Cattle, goats. Fishing. Mining: coal, gemstones.	800-1200

Source: BLARUP (1997)

## 3. PRODUCTIVE SECTORS

The main productive sectors in the region are agriculture (including livestock, fisheries and forestry), tourism and mining.

### 3.1. Crops

About 90% of the population in Rukwa region earns their living from agricultural activities. The area of arable land is 2,357,029 ha (34% of total area) but the area under cultivation is only 597,985 ha (appr. 25% of arable land). The largest part of the land is not accessible due to poor road infrastructure and tsetse fly infection. There are areas in the region which face land shortages manly in the Ufipa Plateau. There is very little vacant arable land within reasonable walking distance from the villages in the Sumbawanga and Nkasi districts. The crops production trend for the last five years is shown in the Table below:

**Table 3: Crop Production Trend 2001 - 2006**

<b>CROPS PRODUCTION TREND 2001 - 2006</b>										
<b>Food Crops</b>	<b>2001/2002</b>		<b>2002/2003</b>		<b>2003/2004</b>		<b>2004/2005</b>		<b>2005/2006</b>	
	<b>ha</b>	<b>tons</b>	<b>ha</b>	<b>tons</b>	<b>ha</b>	<b>tons</b>	<b>ha</b>	<b>tons</b>	<b>ha</b>	<b>tons</b>
Maize	158,851	225,450	183,451	153,442	177,074	317,307	174,567	239,059	182,259	314,379
Beans	85,507	55,597	66,062	41,927	47,378	57,530	74,812	50,805	142,521	124,684
Fingermillet	44,199	28,848	29,707	17,616	25,955	19,063	28,352	18,408	30,028	25,934
Rice	38,353	171,757	42,521	65,434	44,938	142,351	41,894	103,815	39,766	133,400
Wheat	756	992	673	564	696	558	818	688	1,326	1,954
Sorghum	17,575	18,268	10,514	10,136	9,905	11,458	19,149	18,151	15,052	17,146
Cassava	66,791	175,143	48,027	193,819	66,232	186,324	42,366	134,438	69,364	199,750
S/Potatoes	25,637	106,239	20,949	87,962	41,793	188,062	33,707	202,846	42,871	212,789
Ir/Potatoes	2,697	13,106	3,860	38,047	3,245	17,029	6,377	25,208	6,358	28,337
<b>Total</b>	<b>440,366</b>	<b>795,400</b>	<b>405,763</b>	<b>608,947</b>	<b>417,215</b>	<b>939,682</b>	<b>422,042</b>	<b>793,418</b>	<b>529,545</b>	<b>1,058,373</b>
<b>Cash crops</b>										
Sunflower	29,056	32,512	31,497	38,103	39,028	49,956	26,797	21,014	39,215	47,608
Groundnuts	23,020	19,740	17,245	4,961	17,956	13,936	11,664	6,716	13,450	8,608
Tobacco	3,498	4,794	2,469	2,469.3	3,950	4,069	4,915	4,756	5,585	7,574
Coffee	225	44	81	25.1	45	18.5	42	16.4	47	17
Cotton	10	15	2.8	0.35	0.0	0.0	-	-	-	-
Simsim	943	943	256	256	256	256	-	-	-	-
Soya	63	48	24	12	30.8	12.8	24.7	11.2	126	72
Moringa			209	33.44	0.0	0.0	-	-		
<b>Total</b>	<b>56,815</b>	<b>58,096</b>	<b>51,783</b>	<b>45,860</b>	<b>61,265.8</b>	<b>68,249.0</b>	<b>43,442.7</b>	<b>32,513.6</b>	<b>68,440</b>	<b>147,558</b>

Just like in many other regions in Tanzania Mainland, agriculture in Rukwa region is dominated by small-scale subsistence farming. Approximately 68 percent of the cultivated land is used by small-holder farmers who operate between 0.5 and 2.0 ha. Rukwa region has potential for using animal power in agricultural operations. 75% of tillage operations is done using animal power. Other operations that include weeding are done by hand hoe. The region is estimated to have 18 tractors only, and 38,254 pairs of animal draught power. This is one of the limitations for increased area for crop production to achieve food security and poverty reduction.

### **3.1.1. Outputs per Hector**

With currently practiced farming method, average yield is 1.7 to 2.0 tons per ha. With improved methods (extension services delivery and use of satisfied inputs) production could reach 5.6 tons per ha. (Sasakawa Global 2000 experience).

### **3.1.2. Markets for Crops**

#### **3.1.2.1. Food crops**

Rukwa region had in, 2005/06 a surplus of 783,500 tones of food crops, out of which 149,470 tones being maize. The Strategic Grain Reserve (SGR) bought 26,200 tons of maize at an average price of TShs 180 per kg and other buyers bought 58,500 tones of maize at prices ranging from TShs70 to 130. The prices offered by other buyers are too low to even meet the production costs.

Official figures show that a total of 8,800 tons of maize worth TShs. 880 million was exported to the neighboring countries.

A grain milling factory under the name of Energy Milling Co. Ltd is being constructed in Sumbawanga and is expected to be operational by November 2007. It will have a capacity of milling 50 tons of grains in 8 hours and will also include a rice huller with capacity of 30 tons per 8 hours. This is expected to be another market.

There has always been a market for beans and rice but farmers face problems getting markets for the other food crops such as cassava, and sweet potatoes

Problems facing the farmers in selling their produce include:

- ⌚ Few SGR buying centers
- ⌚ Low prices offered by buyers
- ⌚ Poor condition of roads, thus, making it difficult to transport their produce to markets

### **3.1.2.2. Cash crops**

The main cash crops grown in Rukwa region are tobacco, sunflower and groundnuts.

Tobacco cultivation has been increasing in Mpanda district. Some 7,800 households are involved in small-scale farming of tobacco. As seen in the table above, the amount of tobacco being harvested annually has nearly doubled in the last three years. The produce has earned the farmers very close to TShs. 5.0 billions in 2005/06. The Association Tanzania Tobacco Traders (ATTT) is promoting the production of tobacco and supplies inputs to farmers including extension services for better production and quality enhancement. Price offered to farmers is agreed by stakeholders (Tobacco Council of Tanzania)

### **3.1.2.3. Cooperative Societies**

Rukwa region has a number of cooperative societies; including one Cooperative Union (Lake Tanganyika Tobacco Cooperative Union - LATCU), 11 Primary Cooperative Societies, 12 other co-operative societies and 64 Savings and Credit Cooperative Societies (SACCOSs). Past poor performance of cooperatives contributes to low acceptability of new initiatives to form cooperative societies.

### **3.1.3. Farm Inputs**

There have been no problems recently on availability of seeds and fertilizers although there was some delays in delivering of these essential inputs due to the poor condition of the Tunduma – Sumbawanga road and other roads within the region, and also the low financial bases of the agents distributing the inputs and the farmers themselves who had experienced poor yield in the previous season.

Ongoing agricultural support programs are ASDP/DADP, AMSDP and the Rural Financial Support Program (RFSP) that assist villagers to establish savings and credit cooperative societies (SACCOSs)

### 3.1.4. Irrigation Schemes

BRALLUP reported in 1984 that Rukwa region had a large irrigation potential of 814,000 ha, out of which 68,000 ha could be classified as “very suitable for irrigation” and the remaining being “marginally suitable” (soil fertility limitations). The region has a good network of rivers most of them being perennial with fertile valleys. Other reports provide the information as shown below;

**Table 4:** Potential Areas for Irrigation by Districts

Council	S’wanga Rural	Nkasi	Mpanda	S’wanga Urban	Total
Potential area for irrigation (Ha)	53,400	4,280	99,050	1,100	157,830
Ongoing irrigation scheme coverage (Ha)	250	80	16,747	40	17,117

### 3.1.5. Environmental Protection

Efforts to ensure environmental protection in the region include:

- ⌚ Conservation of forest reserve areas using villagers (who receive education through seminars) and through provision of ‘firebreaks’ in the forests;
- ⌚ Campaign to plant trees (Panda Miti Rukwa). Specific areas are allocated by councils for planting trees
- ⌚ Encouraging villagers to plant woodlots and refrain from cutting trees in the forests reserves

‘Jatropha’ plantation is being introduced in the region to counter the environmental degradation effects and to produce bio-diesel and other products such as raw material for medicated soap. Already a total of 24,000 hectares have been planted in Mpanda district.

### 3.1.6. Challenges for Increased Crop Production in Rukwa Region

#### a) Poor road infrastructure

For a number of years, poor roads have been a major limitation for increased agricultural production and development in the region and at national level at large. To date the region has not been connected to other regions and districts through tarmac roads. There is 240 kilometers of earth road between Sumbawanga and Mpanda to a railway head of the Tanzania Railway Corporation (TRC) that connects Mpanda via Tabora to the TRC network. Most of the roads in the region are seasonal earth roads which limit transport and transportation within and to other regions.

#### b) Limited capital and access to financial services

Just like in other regions in Tanzania, many agricultural producers in Rukwa region lack capital assets necessary for agricultural production. They can hardly afford to hire additional labour and to purchase inputs and labor saving equipment such as tractors and animal drawn implements. Commercial banks and financial institutions find it risky to lend to small-holder farmers and small-scale agribusiness. They charge high lending rates, currently ranging between 25 and 40 percent. Most households can neither save nor access loans from commercial banks and financial institutions.

**c) Agro-processing and marketing of agricultural commodities**

Agricultural performance in Rukwa region, like in all other regions in Tanzania, is adversely affected by weak agro-industries, poor linkages within the marketing, processing and production chains, poor market-orientation and inadequate processing facilities leading to high levels of produce wastage. Given the high potentials in the region, investment in agro-processing such as milling and packing maize, rice and finger millet and on production of oil crops (sunflower, sesame, groundnuts and soybeans) could boost the sector in the region.

**d) Extension Services.**

The government's extension services workforce to support agriculture in Rukwa region (RAS and LGAs) totals 223 against the requirement of 448. There is a shortage of 225 workers (50.2%). The shortage of transport facilities especially motorcycles for extension services has a negative impact on their performance.

**3.1.7. Way Forward**

Promote medium to large scale production of crops, including; maize, paddy, sunflower, sesame, soybean, groundnuts, sesame, and wheat will;

- i. Encourage investment on seed production of the mentioned crops;
- ii. Invite investors in agro-processing and packing of the mentioned potential crops;
- iii. Improve marketing of agricultural produces that are found in Rukwa region;
- iv. Improve availability of agricultural inputs and farm implements (fertilisers, seeds, farming tools) for increased production: and
- v. Invest in production and processing of new and high value energy crops like jatropha.

**Opportunities**

- ③ Savings and Credit societies available
- ③ Capital of TShs.1.0 billion from the central government for the development of entrepreneurship in the region (guidelines received);
- ③ International market in Matai area;
- ③ Continuing establishment of SACCOS networks in each ward.

**Obstacles**

- ③ Limited awareness on establishing SACCOS;
- ③ Limited understanding of people in acceptance of that arrangement;
- ③ Poor system of promoting this plan due lack of working tools;
- ③ Limited capability of members of SACCOS in control of loan repayment.
- ③ Inappropriate use of existing farm implements especially in rural areas has lead to poor production of crops per hectare;
- ③ Problem of poor infrastructure
- ③ Unavailability of reliable market for food and cash crops;
- ③ Shortage of Agriculture experts to provide expertise on modern and profitable farming;
- ③ Religious believes discourage tobacco growing in some parts of Rukwa region.
- ③ Limited capability for livestock production to meet beef industry requirement; and

- ③ Poor infrastructure and communications network.

### 3.1.8. Identified Opportunities for Investments

- ☞ Large scale farming of cash and food crops
- ☞ Floriculture
- ☞ Agro processing industries
- ☞ Seed production

### 3.2. Livestock

Livestock contributes about 20% to GDP in Rukwa region. Farmers keep an average of 12 head of cattle per family. However, during the past 10 years, there has been a huge influx of agro-pastoralists from Tabora, Shinyanga, and Mwanza to the region in search of pasture for their livestock. The migrant pastoralists keep an average of 100 to 300 head of cattle per family. The current total cattle population in Rukwa region currently is estimated to be 512,722. The areas suitable for grazing in each district are shown below;

**Table 5:** Area available for grazing activities in each district

District	Area not occupied by water (ha)	Total area for agriculture (ha)	Area cultivated (ha)		Area occupied by tsetse fly (ha)		Area for grazing (ha)	
			ha	%	ha	%	ha	%
Mpanda	4,584,300	923,136	211,460	23	321,111	35	390,676	42
Nkasi	937,500	506,250	60,180	12	16,000	3	430,070	85
Sumbawanga Rural	1,708,800	838,600	189,081	23	2,952	4.0	646,567	77
Sumbawanga Urban	132,900	89,042	29,461	33	-	-	59,581	67
Total	6,863,300	2,357,028	490,182	21	339,952	14	1,536,894	65

The suitable areas for grazing, if well developed, can hold up to 727,093 head of cattle equivalent to 508,965 Tropical Livestock Units (TLUs). The livestock population in Rukwa region by type of livestock and by district is shown in the table below while the earnings received by livestock keepers during the last three years are shown in the next table;

**Table 6 - Livestock in Rukwa Region (2006)**

Council	Cattle	Goats	Sheep	Donkey	Pigs	Rabbit	Chicken	Ducks	Kanga
Mpanda	131,113	25,335	10,138	238	3,428	844	257,337	29,575	5,750
Nkasi	150,000	26,127	5,600	1,340	5,871	670	87,112	19,950	-
Sumbawanga (R)	203,827	51,166	5,957	3,395	21,296	229	187,164	11,084	1,827
Sumbawanga (M)	27,782	9,767	200	860	8,270	1,574	89,892	9,628	205
<b>Total</b>	<b>512,722</b>	<b>112,395</b>	<b>21,895</b>	<b>5,833</b>	<b>38,865</b>	<b>3,317</b>	<b>621,508</b>	<b>70,237</b>	<b>8,183</b>

**Table 7:** Earnings in TShs from Different Livestock products (2004-2006)

Animal type	2004		2005		2006		Total	
	Number	Value	Number	Value	Number	Value	Number	Value
Cattle	20,279	1,736,896,350	23,070	2,768,400,000	37,255	6,747,913,500	80,604	11,253,209,850
Goats	5,792	67,819,900	3,475	60,411,000	27,748	474,316,500	37,015	602,547,400
Sheep	135	1,789,000	94	1,296,656	409	6,798,000	638	9,883,656
Chicken	132,668	98,486,500	45,000	94,429,200	686,637	2,247,887,500	64,305	2,440,803,200
Ducks	2,316	4,632,000	2,500	6,250,000	–	–	4,816	10,882,000
<b>Total</b>	<b>161,439</b>	<b>1,909,623,750</b>	<b>74,139</b>	<b>2,930,786,856</b>	<b>752,049</b>	<b>9,476,915,500</b>	<b>987,378</b>	<b>14,317,326,106</b>
<b>Hides and Skins</b>								
Cattle	12,418	42,432,500	10,476	27,338,500	18,239	51,551,350	41,133	121,322,350
Goats	3,978	1,417,800	4,745	1,779,700	27,025	12,343,190	35,748	15,540,690
Sheep	43	57,500	32	246,400	197	73,100	272	377,000
<b>Total</b>	<b>16,439</b>	<b>43,907,800</b>	<b>15,253</b>	<b>29,364,600</b>	<b>45,461</b>	<b>63,967,640</b>	<b>77,153</b>	<b>137,240,040</b>
<b>Other Products</b>								
Milk (ltrs)	4,423,545	1,215,886,350	9,597,303	2,687,244,840	10,928,215	3,028,597,340	24,949,063	6,931,728,530
Eggs	133,331	13,130,100	359,967	36,601,900	435,763	36,532,295	925,061	86,764,295
Samli (ltrs)	6,191	4,091,500	6,557	4,233,000	4,031	4,256,000	16,779	12,580,500
<b>Total</b>		<b>1,233,107,950</b>		<b>2,729,079,740</b>		<b>3,069,385,635</b>		<b>7,030,573,325</b>

There are three ranches in the Rukwa region – Malonje ranch located in Sumbawanga Municipality and owned by DAFCO, Nkundi ranch located in Nkasi District and owned by SAAFI, and Nkalambo ranch located in Nkasi district and co-owned by NARCO and individuals.

According to 2002/2003 sample census, Rukwa region has only 1,103 improved dairy animals which is 0.27% of 399,025 dairy animals in the country. On the other hand, there are 274 improved beef animals; about 1.3% of the total 20,881 found in the country. Of the total poultry reared in the country, Rukwa region has 3.3% of goats and sheep are 2.5% and 0.9% respectively. In the production of pigs, Rukwa region ranks sixth in the country by rearing 5.2% of all the pigs reared in the country.

As demand for heifers both for dairy and beef is high, private investors are encouraged to give a hand in this area. The move to privatize small ranches to individuals or groups, capable of running them commercially, will be a challenge for others to establish more in their areas, and this will depend on the success of those who have been given the ranches. One of the most important activities that can be undertaken to accelerate production of beef and dairy animals is the production of heifers that could be sold to small-scale farmers.

Other livestock keeping methods such as ‘zero-grazing’ and ‘feedlot’ are not practiced in Rukwa region. This should be encouraged as well.



### **3.2.1. Markets for Livestock Products**

Markets for livestock products are mainly the urban centres of Rukwa region and Kasesya on the Zambian border. In the past about 80 head of cattle was slaughtered on the market day at Kasesya and meat sold to Zambia. Business men buy hides and sell the same to factories in Morogoro and Dar es Salaam.

A modern meat processing factory named Sumbawanga Agricultural and Animal Feeds Industry (SAAFI) is under construction in Sumbawanga town. It is expected to be operational by end of May 2007. When fully operational, it will have a capacity of slaughtering 150 animals per day producing 'prime cuts', carcasses and sausages. It will provide employment to about 350 people (300 at the factory and 50 people at the ranch owned by the factory). Market for the factory's products include; Dar es Salaam and Zanzibar, the tourist hotels in Bagamoyo (in Coast Region), countries bordering the region (Zambia and DRC), Burundi, Rwanda, Comoro and the Gulf countries.

Investment in small, medium, and large processing industries will increase the value of livestock products, thus, ensuring farmers with high prices for their animals. If milk and meat are processed, they can be preserved for long periods while waiting for good markets in or outside the region/country. Studies have shown that demands for livestock products will increase extensively in the coming 10 to 15 years due to the increase in urbanization.

Good markets are necessary to encourage livestock keepers sell their animals hence high off- take to avoid land degradation.

### **3.2.2. Support Services**

Infrastructure networks like cattle dips, abattoirs, hide and skin plants, livestock markets, veterinary centres, dams/charcos and clinics are among the livestock infrastructures needed for sustainable livestock development in Rukwa region. Most of the existing infrastructures networks in the region are old, not well developed, or are not sufficient. Veterinary clinics were closed down to give room for private sector which, to date, is very premature especially in these periphery areas and cannot render the services required. The region needs not less than 100 dips serve around 5,000 head of cattle. Currently, a total of 34 out 59 dips are working in Rukwa region, there is no veterinary center in the region and 3 out of 6 hides/skins are operational.

There is no single holding ground in place in the region, therefore, animals bought from primary markets are taken to slaughter houses without prior check ups and can result in spreading of livestock diseases. Investors are encouraged to invest in such market infrastructures eg. primary and secondary holding grounds, stock routes and check points.

Livestock diseases pose another threat to the development of this sector in rukwa region. Joint efforts are needed between the private sector service providers and the governments by supplying the necessary expertise with minimum facilities for effective disease diagnosis, treatment and control.

### **3.2.3. Land Issues**

Despite of their significant contribution to the development of the agricultural sector and the promotion of the economy, high cattle population against available land has been a threat to the regions' environment and social conflicts between farmers and livestock keepers in Rukwa region. This has lead to formation of local mediation fora between the two groups based on what is commonly known as *Tamko la Mtowisa* of 2000 (Mtowisa Resolution of 2000) that aimed at resolving the conflicts between pastoralists and farmers and also help to protect the environment in the region..

Deliberate efforts are needed to make livestock keepers acquire land and settle them for better production and be able to meet the need of the livestock market.

### **3.2.4. Way Forward**

Possible interventions needed are:

- To demarcate and allocate land for permanent grazing for pastoralists and agro-pastoralists.
- Improve natural pastures and produce improved pasture seeds and
- Manage noxious weeds in natural range and pastures.

More efforts are emphasized on the following:

- Demarcation and development of land for livestock production.
- Rehabilitation and maintenance of livestock support infrastructures.
- Livestock harvesting.
- Improvement in livestock breeding.
- Establish reliable inputs distribution network.
- Strategic control of epidemics.
- Promotion of commercial livestock enterprises.
- Improvement of livestock extension services, and
- Need for demand-oriented participatory research and environment conservation.

### **3.2.5. Identified Opportunities for Investments**

- ❧ Ranches for modern livestock keeping
- ❧ Establishment of 'zero grazing' and 'feedlot' farms
- ❧ Poultry farms
- ❧ Modern abattoirs
- ❧ Tanneries
- ❧ Industries for processing of livestock by-products (horns, hoofs, leather, etc.)
- ❧ Industries for animal feed

## **3.3. Fisheries**

Rukwa region is located between two lakes - Lake Tanganyika and Lake Rukwa and has two big rivers, Ugalla and Sitalike. There are other small lakes and rivers all with reliable fish population.

The variety of fish available in the region includes sardines, tilapia, Nile perch, mud fish, English fish, *Lucioperca niloticus* “*migebuka*” and various species of decorative fish species.

The fishing industry is active and there is notable fish business currently going on within and outside Rukwa region to Zambia and DRC.

Statistics show that fish produced between 1997 and 2002 in Rukwa region totaled 102,260 tons worth TShs 3.453 billion. Most of the fish is caught in Nkasi district (99%).

There are hippos and crocodiles in the region. Crocodile farming is conducted at Muze village near Lake Rukwa.

The fish industry has not been fully exploited due to lack of modern fishing equipment, storage facilities, transportation problems and poor extension service.

## Opportunities

- ③ There are many Lakes and rivers in the region

## Obstacles

- ③ Use of obsolete fishing gears;
- ③ Lack of reliable fish market;
- ③ Insufficient capital for procurement of modern fishing equipment.

### 3.3.1. Identified Opportunities for Investments

- ☞ Aquaculture (Fish Farms, fish processing, etc)
- ☞ Marketing of decorative fish
- ☞ Crocodile farming

## 3.4. Forestry

Natural forests reserves occupy about 43% of Rukwa region, much of this being situated in Mpanda district. The table shows the areas covered by forests in every district.

**Table 8:** Area covered by Forests by District

Council	Total land area (ha)	Area covered by forests reserves (ha)
Mpanda	4,584,300	2,801,169
Sumbawanga Rural	1,208,800	22,334
Nkasi	937,500	3,367
Sumbawanga Municipal	132,900	334
<b>Total</b>	<b>6,863,500</b>	<b>2,827,204</b>

Forest products are harvested from the Miombo Woodlands, which are predominant in Mpanda and Nkasi districts and where commercially valuable timber such as Mninga (*Pterocarpus*

angolensis) are found. Forest products include timber, fuel wood and charcoal, honey and beeswax. Timber finds its market locally in the region's towns but the bulk of it is exported to other regions, including; Tabora, Mwanza, Dodoma, Morogoro and Dar es Salaam.

Of the 1.5 million hectares of the plateau, over 700,000 hectares of land are completely deforested resulting in great shortage of wood for both construction and fuel. The situation forces women to travel long distances searching for fuelwood.

Efforts are being made to set aside specific areas and hills for regeneration, protect water sources and encourage Local Authorities to buy black wattle seeds for distribution and planting in the villages.

### 3.4.1. Beekeeping

Honey and beeswax have for a long time been produced by traditional beekeepers especially in Mpanda District. Reliable production data is hard to obtain in virtually all districts in the region. However, the table below provides information on the total production and value for the period of five years from 1997 to 2001.

**Table 9:** Honey and Beeswax Production (1997 – 2001)

Council	Honey		Beeswax	
	Production (Tons)	Value (TShs)	Production (Tons)	Value (TShs)
Mpanda	822	231,419,825	455	143,122,000
Nkasi	17	4,590,000	1	1,238,400
Sumbawanga Rural	0.17	645,380	0.14	98,900
Sumbawanga Municipal	-	-	-	-
<b>Region Total</b>	<b>839.17</b>	<b>236,655,205</b>	<b>456.14</b>	<b>144,459,300</b>

Tanzania honey has proved to be among the best in the world and can comfortably compete with honey from Australia, China, Mexico and Saudi Arabia if its potential can be fully tapped. The current production of honey country-wide is only about 3.5% of the production potential<sup>3</sup>. Given the good demand and market for these products, this sub-sector should be developed and improved through the introduction of modern honey/wax production.

### 3.4.2. Wildlife

The region has several game reserves and game controlled areas. There have been substantial revenues earned from local and tourist hunting in game reserved areas in the region. A total of TShs 105,558,216 was earned from hunting between 1997 and 2002. The revenue have been declining during the period under reference and so is the number of animals hunted. Reasons for decline could be poaching.

<sup>3</sup> Source: 'Trade Currents' published by Board of External Trade (July- September 2006 issue)

### 3.4.3. Identified Opportunities for Investments

- ❧ Plantations for carbon trading
- ❧ Soft wood plantations (pine)
- ❧ Modern beekeeping (honey and beeswax)
- ❧ Wattle plantations
- ❧ Wood industries (hard and soft wood)
- ❧ Plantation of jatropha for bio-fuel
- ❧ Snake farms

### 3.5. Tourism

The Government of Tanzania views tourism as a significant industry in terms of job creation, poverty alleviation, and foreign exchange earnings. Most investors are competing for the overdeveloped Northern Circuit and only a few have discovered the potentiality of the South Western Tanzania. Rukwa Region has great potential for tourism. Despite its many tourist attractions as seen in the table below, the tourism sector is still underdeveloped in Rukwa region.

**Table 10:** Tourist Attractions and Locations

S/N	Touristy Attraction	Location (district)
1	Katavi National Park	Mpanda
2	Old Bismark Fort at Kasanga	Sumbawanga Rural
3	The Kalambo falls	Sumbawanga Rural
4	Hot springs at Usevya	Mpanda
5	Lake Rukwa scenery from the Ufipa escarpment	Sumbawanga Rural / Nkasi
6	Lake Tanganyika shore	Nkasi / Mpanda
7	Red Columbus in Mbizi forest	Sumbawanga Municipality
8	Chimpanzee in Mkwamba Game reserve	Mpanda
9	Game reserves (Uwanda, Lwafi, Ugalla)	Mpanda, Nkasi
10	Game controlled areas (Msimba (Inyonga), Mlele North, Lake Kwale)	Mpanda

A tourist hotel is being constructed in Kipili area on an island called Mwandakelenge in Lake Tanganyika (Nkasi District).

Except for the Katavi National Park which is managed by Tanzania National Parks (TANAPA), information and statistics on other tourist attraction in Rukwa region are limited.

#### 3.5.1. Katavi National Park

Katavi National Park which covers 4,471 sq. km. was established in 1974 and is said to be the most undisturbed, vast natural and pristine park. It is the third largest park in the country after Serengeti and Ruaha. The main tourist activities in the park include; game viewing, short walks (escorted by armed rangers) and visit to the tamarind tree inhabited by the spirit of the legendary hunter, Katabi after whom the park is named. Efforts are now going on to promote cultural and eco-tourism in the Rukwa region.

There has been gradual increase in the number of tourists visiting the park as shown in the table below:

**Table 11:** Number of tourists visiting Katavi National Park (2001 – 2006)

Year	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07 (estimates)
No. of tourists	591	709	942	1,651	1,516	1,700 (1,592 up to Feb '07)

TANAPA has currently accommodation facilities (in form huts ‘*bandas*’ for 20 people and tourist companies establish tent camps hut in the park.. Some four sites have been identified for putting up a high class camping facilities. Construction of permanent structures as hotels is not encouraged in order to maintain nature-based tourism with low impact on environment and maintaining wilderness character of the park.

TANAPA is responsible for maintaining the roads within the park and is concerned with the poor condition of the trunk and regional roads that pass through the park. There are two airstrips also maintained by TANAPA.

A program to establish ‘Wildlife Management Areas’ which will involve villages surrounding the park has been initiated (piloted in two villages) and this is expected to be a source of income to villages. TANAPA is supporting many development programs in the region.

Marketing of the Park is being done by the Tanzania Tourist Board (TTB), TANAPA and tour operators. Efforts to promote local tourism are being considered and TANAPA intends to do this through the media and visiting institutions.

Accessibility and lack of adequate facilities to attract tourists in Rukwa region remains a challenge. Tourist industry can only be developed around these potential areas by improving communication and infrastructure around them.

Transportation problems coupled with unreliability of other necessary factors for tourism growth such as water, power, communications and financial services reduce the pace at which tourism could grow in Rukwa region.

Influx of refugees and armed bandits from neighboring conflict-prone countries like DRC, Rwanda and Burundi pose a big challenge to the peace and security of the citizens as well as development of a meaningful tourism industry, which hinges strongly on safety and security.

*(Outcome of the WB study on Identifying Solutions for Sustaining Shared Growth in Tanzania’s Tourism Industry)*

### **3.5.2. Identified Opportunities for Investments**

- ☞ Accommodation facilities in all touristy places
- ☞ Include other attractions (including eco-tourism) in the tour packages
- ☞ Tour operating companies in Rukwa region
- ☞ Banking institutions to provide more credit cards facilities
- ☞ Improve existing facilities (hotels and lodges) to standards acceptable to tourists
- ☞ Establish center for marketing of cultural products
- ☞ Professional hunting is needed.

### 3.6. Mining

Due to its geological framework, Rukwa region is endowed with abundant mineral deposits of different kinds including precious metals, base metals, gemstones, industrial minerals, and building materials. Table below shows types of minerals and the locations in Rukwa region:

**Table 12:** Minerals of Rukwa and their locations

S/N	Mineral	Location	District
1	Gold	Mkwamba, Chemchem, Uruwira, Sikitiko, Kapapa, Singililwa, Ibindi, Magomamoto, Maisope, Njiapanda, Kapanda, Mwenge, Society-Mgamba, D-Reef, Katuma, Katisunga, Kanyega, Twamba, Simbwesa and Karema.	Mpanda
2	Silver	Mkwamba, Chemchem, Mnyakaliza, Uruwira, and Nsimbo	Mpanda
3	Platinum	Mibango area located northwest of Mwese	Mpanda
4	Bismuth	Mkwamba, Chemchem, Mnyakaliza, Uruwira, and Nsimbo	Mpanda
5	Copper	Visinity of Mpanda, Karema, Singililwa, Twamba, Kasanga and Kapapa	Mpanda, Sumbawanga Rural
6	Lead	Mkwamba, Chemchem, Mnyakaliza, Uruwira, and Nsimbo	Mpanda
7	Zinc	Kasanga-Kirando areas on the Lake Tanganyika shores	Sumbawanga Rural, Nkasi
8	Chromium	Twamba Hill in the Karema area	Mpanda
9	Manganese	Manyoro (Kanyamkaa) in the Katavi National Park	Mpanda
10	Nickel	Kungwe Bay of Lake Tanganyika	Mpanda
11	Tungsten	Ibindi Njiapanda	Mpanda
12	Uranium		Mpanda
13	Niobium Metals (Tantalum & Columbium)	Sangu-Ikola area near Karema in the vicinity Lake Tanganyika Shores	Mpanda
14	Titanium and Zirconium	Mtemba and Mkwemba wards	Nkasi
15	Emerald	Mponda Village	Sumbawanga Municipal
16	Aquamarine	Mlombo a few km east of Lake Kwela	Sumbawanga Rural
17	Burma Ruby	Chala, Katuka and Kantawa	Sumbawanga Rural Sumbawanga Municipal Nkasi
18	Zircon	Nzombo located a few km north of Matala Village	Nkasi
19	Piezoelectric Quartz (Crystal Rock)	Matala Village, Karema	Sumbawanga Municipal
20	Moonstone	Mkombe area located north of Kabwe Village on the shores of Lake Tanganyika	Nkasi
21	Green Tourmaline	Kapalamsenga southeast of Karema, Chala, Swaila, Lyele, and Tambaruka in Mkwamba ward	Mpanda Nkasi
22	Garnets	Kantawa	Nkasi
23	Amethyst	Northeast of Kasu and north of Lyazumbi	Nkasi
24	Topaz	Karema on the shores of Lake Tanganyika	Mpanda
25	Coal	Muze, Namwele and Mkomolo areas	Sumbawanga Municipal Sumbawanga Rural Nkasi
26	Mica	Sibwesa	Mpanda
27	Kaolin	Along the Sumbawanga – Kasanga Road	Sumbawanga Rural
28	Limonite	Mbuga located 12 miles from Namwele Village	Sumbawanga Municipal

S/N	Mineral	Location	District
29	Nitre (Potassium Nitrate)	Ugalla River near Ugalla	Mpanda

Although sulphur is not being mentioned, there are indications of the mineral being available in Sumbawanga Municipal area.

Hard rocks and sand are plentiful for building materials.

Except for the quantity of coal which is estimated to be 18 million metric tons, there is no information on approximate quantities of other various minerals in the region.

The mineral exploration and prospecting activities that have been done in the region is very minimal. Large numbers of the mineral occurrences are still unevaluated.

### **3.6.1. Mineral Prospecting and Mining**

There are about 33 Prospecting Licenses (PLs) held by different companies in the region but only eleven PLs are working actively. There are 35 valid Primary Prospecting Licenses (PPLs) for prospecting various types of minerals in Rukwa region. Small scale mineral prospectors help a lot to discover new occurrences of minerals and sometimes result into a mineral rush.

Rukwa Region has two large scale mineral rights. They are for gold and galena. One is located at Singililwa and at Nyakaliza areas respectively in Mpanda District.

There are 215 valid Primary Mining Licenses (PML) for Small Scale Miners in Rukwa Region. They are for different types of minerals (gold, lead, gemstones, coal and building materials). Sumbawanga District has 96 PMLs, Mpanda District 98 PMLs and Nkasi District 21 PMLs. A large number of these licenses are not active due to lack of capital.

Large scale coal mining has started in Sumbawanga Rural District. A company named Upendo Group Ltd operating from Sumbawanga ventured in coal mining from 2004. It is currently extracting and supplying to consumers about 500 tons of coal per month. The firm has identified possible markets for a total of 6,000 tons per month but has not been able to supply the same due to (i) inadequate operating equipment, and (ii) poor road conditions making transportation of the coal to the markets very expensive.

### **Opportunities**

- ⌚ Presence of favorable policies/acts and regulations (The Mineral Policy (1997), Mining act (1998) and Mining Regulations (1999))
- ⌚ Mineral prospecting for small, medium and large scale investors
- ⌚ Market for equipment used for prospecting and mining
- ⌚ Markets for consumables including explosives, fuel, etc

### **Obstacles**

- ⌚ Lack of capital
- ⌚ Unreliable infrastructure
- ⌚ Lack of technology, equipment, tools and explosives
- ⌚ Lack of Environmental Management knowledge



- ⌚ Lack of knowledge about HIV/AIDS
- ⌚ Lack of information about available minerals and their prices

### 3.6.2. Identified Opportunities for Investments

- ⌘ Mineral prospecting
- ⌘ Mining
- ⌘ Supply of equipment and materials for mineral prospecting and mining
- ⌘ Establish centers for value addition of minerals
- ⌘ Mineral trading
- ⌘ Provision of Laboratory services

## 4. SOCIAL SECTORS

### 4.1. Education

#### 4.1.1. Pre Primary Education

There are 333 pre-primary school classes with 2,283 streams in Rukwa region with a total of 17,552 children (9,276 boys and 8,276 girls between 5 – 6).

#### 4.1.2. Primary Education

As per April 2007 Cluster Social Services, Rukwa region had 511 Primary Schools out of which 510 are public primary schools and one private school with a total of 188,672 children (96,327 boys and 92,143 girls aged between 7 – 9 years). There are 2,159 permanent classrooms and 2,846 teachers. This translates to one teacher to students ratio of 1:66. To meet the ideal ratio of 1:40, additional 1,859 teachers are required in Rukwa region. Table 13 shows the number of primary school classrooms, children and teachers by districts.

**Table 13:** Number of classrooms, children and teachers

Council	Classrooms and Streams		Number of Pupils			Number of Teachers					
	C/Rooms	Streams	Boys	Girls	Total	Grade B (IIB)			Grade A (IIIA)		
						M	F	T	M	F	T
Mpanda	884	2,637	51,196	48,934	10,0130	232	50	282	855	492	1,347
Nkasi	513	1,788	25,404	24,466	49,870	169	35	204	326	169	495
S'wanga (M)	482	1,069	20,928	21,162	42,090	72	104	176	222	300	522
S'wanga (R)	1,164	2,151	50,195	46,517	96,712	364	104	468	644	295	939
<b>Total</b>	<b>3,043</b>	<b>7,645</b>	<b>147,723</b>	<b>141,079</b>	<b>288,802</b>	<b>837</b>	<b>293</b>	<b>1,130</b>	<b>2,047</b>	<b>1,256</b>	<b>3,303</b>

Council	Diploma			Degree			Total			Deficit	%
	M	F	T	M	F	T	M	F	T		
Mpanda	36	5	41	-	-	-	1,123	547	1670	834	33.31
Nkasi	12	1	13	-	-	-	507	265	712	523	42.34
S'wanga (M)	11	4	15	2	-	2	307	408	715	338	32.03
S'wanga (R)	12	-	12	-	-	-	1,020	399	1,419	999	41.31
<b>Total</b>	<b>71</b>	<b>10</b>	<b>81</b>	<b>2</b>	<b>-</b>	<b>2</b>	<b>2,957</b>	<b>1,619</b>	<b>4,516</b>	<b>2,694</b>	<b>39</b>

Source: Cluster of Social Services

Academic performance in primary schools is somehow satisfactory. The rate of passing examination in standard IV in 2006 was 84.72% that is higher compared to 2005 (.89.15.%). As for standard VII, the rate increased from 49.53% in 2004, 60.68% in 2005 and 78.53% in 2006.

#### 4.1.3. Post Primary Vocational Technical Training

There are eight (8) Post Primary Vocational Technical Centres in the region offering vocational training; 3 in Mpanda, 2 in Nkasi, 2 in Sumbawanga Rural and 1 in Sumbawanga municipal. Problems facing the centres are:

- ⌚ Shortage of teachers (requirement 62, available 51)
- ⌚ Shortage of classrooms rooms
- ⌚ Outdated equipment/facilities (32 years old)

#### 4.1.4. Secondary Education

The region has a total of 75 secondary schools, among which 65 are public and 10 are privately owned. Public secondary schools have a total of 19,076 students (.11, 794. boys and 8, 286 girls) from Form I – IV. Distribution of secondary schools in each council is as seen in table 14.

**Table 14:** Total number of secondary schools in each council

COUNCIL	PUBLIC SCHOOL	NON-GOVERN.	TOTAL
Mpanda	16	4	20
Nkasi	11	-	11
Sumbawanga Municipal	14	4	18
Sumbawanga Rural	24	2	26
<b>Total</b>	<b>65</b>	<b>10</b>	<b>75</b>

Among these secondary schools, seventy of them provide ‘O’ level secondary education and the remaining five provide secondary education up to ‘A’ level. Total number of students who joined secondary education in public secondary schools increased from 1,827 in 2001 to 8,797 in 2007. Table 15 shows the trend of pupils joining secondary schools from 2001 – 2007. Efforts are directed to increase the number of secondary schools to be able to enroll all pupils who pass their primary schools exams.

**Table 15:** Number of pupils joining secondary schools (2001 – 2006)

Year	Passed			Selected to join secondary school			%
	Boys	Girls	Total	Boys	Girls	Total	
2001	2,007	1,053	<b>3,060</b>	888	939	<b>1,827</b>	89.7
2002	2,226	1,096	<b>3,322</b>	897	854	<b>1,751</b>	52.7
2003	3,551	1,997	<b>5,509</b>	1,135	1,115	<b>2,250</b>	40.84
2004	3,651	2,012	<b>5,663</b>	1,607	1,473	<b>3,080</b>	54.38
2005	4,523	2,596	<b>7,119</b>	1,914	1,758	<b>3,672</b>	51.58
2006	6,940	4,262	<b>11,202</b>	5,199	3,602	<b>8,797</b>	78.53

Source: Cluster of Social Service

#### 4.1.5. Hostels for Boys and Girls

As stated above the region has 75 secondary schools. Only 21 of these schools have hostels, many of them being below standards. Many students walk long distances of up to 9 kms daily to secondary schools. There is therefore a high demand for boarding/hostel facilities. .

#### 4.1.6. Level of Literacy:

Literacy is the ability to read and write with an understanding of a short simple statement on everyday life. According to population and housing census of 2002, there are 908,670 total number of population in five year and above age group in Rukwa Region, out of whom 479,440 or 53 % were literate. Among literates, 55 percent were males and 45 per cent females. Table 16 shows the level of literacy in each council.

**Table 16:** Level of literacy in each council

Council	Population			Literate			Literacy %		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Mpanda	161,936	169,774	<b>331,710</b>	91,327	74,401	<b>165,731</b>	56	44	<b>50</b>
Nkasi	81,565	84,130	<b>165,697</b>	46,505	36,671	<b>83,175</b>	57	44	<b>50</b>
S'wanga (M)	56,620	61,611	<b>118,230</b>	39,641	38,960	<b>78,602</b>	70	63	<b>66</b>
S'wanga (R)	142,341	150,695	<b>293,036</b>	85,384	66,549	<b>151,935</b>	60	44	<b>52</b>
<b>Rukwa Region</b>	<b>442,461</b>	<b>466,209</b>	<b>908,670</b>	<b>262,856</b>	<b>216,584</b>	<b>479,440</b>	<b>59</b>	<b>46</b>	<b>53</b>

Population – five age group and above.

The level of literacy in the region was higher among males than among females. This high level of illiteracy has also contributed to low development of the region.

There are some initiatives being taken to eradicate illiteracy.. The initiatives taken include:

- ☞ Sensitization of Communities and parents towards education and understand the basic rights to unschooled children
- ☞ Sensitization of parents having children not completing primary schools due to various reasons e.g. pregnancy, to join a program known as Complimentary Basic Education in Tanzania (COBET). .
- ☞ Mobilizing adults to join adult classes under a special programme known as Integrated Community Based Adult Education (ICBAE).

#### 4.1.7. Colleges/Universities

Rukwa region has one Teachers Training College-Sumbawanga Teachers College that produces Grade IIIA Teachers with certificates in Domestic Science.

The region has an Open University Centre which came into operation since 21<sup>st</sup> September 2000. To date, the centre has already awarded diploma and degrees to 22 candidates in different fields.

#### Opportunities:

1. Existence of enough areas for building secondary schools at ward level
2. Good number of students to join primary and secondary education

3. People who are able to join COBET education programme
4. Availability of Institute of Adult Education centre

### Obstacles

1. Limited awareness of people on education
2. Shortage of classrooms
3. Scarcity of books and various school requirements
4. Shortage of teachers of various professional especially science subjects
5. Lack of hostels for students
6. Shortage of accommodation facilities for teachers

### 4.1.8. Identified Opportunities for Investments

- ☞ Secondary schools
- ☞ Vocational training centres
- ☞ Teachers training colleges

## 4.2. Health

The Health Sector in Rukwa region is still underdeveloped and it is characterized by high rates of morbidity and mortality due to inadequate resources. Table 17 shows the number and ownership of health facilities in the region

**Table 17:** Number and ownership of health facilities (2006)

Council	Dispensaries			Health Centres			Hospitals		
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Mpanda	36	4	<b>40</b>	8	1	<b>9</b>	1	-	<b>1</b>
Nkasi	32	2	<b>34</b>	3	4	<b>7</b>	-	1	<b>1</b>
S'wanga (M)	15	2	<b>17</b>	1	1	<b>2</b>	1	1	<b>2</b>
S'wanga (R)	81	4	<b>86</b>	7	2	<b>9</b>	-	-	<b>-</b>
Rukwa Region	164	12	<b>177</b>	19	8	<b>27</b>	2	2	<b>4</b>

In consideration of the population in the region, the number of health facilities serves the population in ratios shown in Table 18.

**Table 18:** Facilities to population ratio indicators

S/N	Indicators	Ratios
1	Health centre population ratio	1:47,432
2	Dispensary population ratio	1:6,979
3	Hospital bed Per population ratio	151:2572

### 4.2.1. Common Diseases

The common diseases which cause higher morbidity and mortality rates includes: Malaria, Diarrhea, ARI, HIV/AIDS/STI, Tuberculosis, Anemia, Meningitis etc. The maternal mortality rate is 187/100,000, infant mortality rate is 87/1000, the under five mortality rate is 175/1000 and Severe malnutrition is 155 percent.

#### 4.2.2. Health Staff

The region has acute shortage of trained medical staff, attributed to stigma which existed for many years in Rukwa Region. The Doctor/Population ratio is 1:162,500 while the Nurse/Population ratio is 1:20,000 (National Average - Doctor 1:25,000 and Nurse 1:6,000). The table below shows the status of the health staff in the region

**Table 19:** Trained health staff cadre situation in Rukwa Region

S/N	Category	Available	Deficit
1.	Specialist doctors	2	8
2.	Medical doctor	5	17
3.	Dental surgeon	1	5
4.	Assistant Medical officers	11	50
5.	Clinical officers	116	390
6.	Nursing officers	58	100
7.	Nurse midwives	186	300
8.	Pharmacist	1	5
9	Medical Laboratory technician	3	20
10.	Radiographers	2	8
11.	Health officers	35	17
12	Others	440	500
	<b>Total</b>	<b>860</b>	<b>1,420</b>

The Life expectancy according to 2002 census was 55 years. However, in recent years this has been reduced to about 45 years due to HIV/AIDS pandemic. .

The health sector is seriously under funded despite the fact that it is a priority sector in the Poverty Reduction Strategy, and despite the fact that a health population is a basic ingredient of economic growth. Lack of funds, however, is not the only cause of the weak health system. Under skilled and de-motivated personnel, deficiencies in quality of care, weak and confusing management systems, lack of information provided to health consumers, and lack of access by the very poor to treatment characterizes much of the current situation.

These factors, and more, have resulted in an health care system that requires not only massive investment of funds but also a renewed commitment and vision among all actors - government, policy makers, donors, non-governmental organization, faith based organisation, health worker themselves and others to generate fundamental change.

The main sources of fund for health sector from the government and basket funds which are not adequate to support and sustain health services in Rukwa region.

Proposals for the following projects are being prepared (with estimated costs in bracket):

- (i) Malaria project (641m/-)
- (ii) Comprehensive Eye care project (250m/-)
- (iii) Infrastructure Rehabilitation (1,900m/-)
- (iv) Dental out reach programme (260m/-)

The Catholic Mission is assisting in establishment of a nursing college in Nkasi and the Government is reviving the Mpanda clinical officer's college as a way of addressing the shortage of health staff in Rukwa region.. There are, however, insufficient funds to finalize these programs.

Another initiative being promoted is establishment of a special fund by the region to be used to attract people to work in Rukwa (by paying them extra allowances to meet their basic needs).

#### 4.2.3. HIV/AIDS

HIV/AIDS infection in the region has been rising steadily since 1994. The region's number of AIDS cases diagnosed rose from 323 cases in 1995 to 807 in 2000. This represents a 150% increase for both sexes. Women cases rose by 165% while those of men rose by 136%. Districts hardest hit are Sumbawanga Municipality where the increase in male cases was 356% while those of females increased by 417%. Nkasi district was the safest by showing declined rate of 1% for both sexes (Regional Social economic profile, 2003).

#### Current Status of HIV/AIDS Care and Treatment

- Cumulative AIDS cases for the past 20 years since the first report AIDS case in 1986 amount to over 9,000
- Due to under reporting, it is estimated that only one case in five cases is reported. This means that a cumulative total of 40,000 cases are likely to have occurred up to December, 2005
- The overall prevalence HIV infection among blood donors was 18.1 percent (in 2005 a total of 3931 donated blood and out of them 713 were positive). Mpanda district with 23 percent, Nkasi district with 18 percent and Sumbawanga municipal was 10.2 percent prevalence. In 2006/07 the overall prevalence is around 9 – 10 percent
- The overall prevalence of syphilis in ANC was 5.7 percent. Nkasi District had the highest prevalence of 12.6 percent. The lowest was Mpanda district with prevalence of 3.3 percent and Sumbawanga Municipal had 4.0 percent as well as Sumbawanga districts was 8.5 percent
- In 2005 a total of 15,000 Episodes of STI were reported. The common reported STD syndromes were GDS, GUD, PID and UTI
- Major determinants of HIV/AIDS in Rukwa Region includes, wife inheritance, alcoholism, polygamy, early marriage, illiteracy, unsafe traditional healers practice, mobile population groups and poverty especially among girls and women

**Table 20:** Cumulative HIV/AIDS Cases from 1986 to 2005 by districts

S/N	DISTRICT	CASES		TOTAL
		MALE	FEMALE	
1.	Sumbawanga Municipal	1,503	1,342	2,845
2	Sumbawanga District	1,310	1,107	2,417
3	Nkasi	740	621	1,361
4	Mpanda	1,352	1,166	2,518
	<b>TOTAL</b>	4,905	4,236	9,141

### Opportunity

- Sufficient number for curative and preventive centres at Regional, divisional, Ward and village levels.

### Obstacles

- ③ Lack of funds for equipping, modernising and maintaining the health facilities;
- ③ Lack of curative and preventive experts at all levels;
- ③ Shortage of working tools such as ambulance etc.;
- ③ Shortage of accommodation for doctors at regional and district levels.

#### 4.2.4. Identified Opportunities for Investments

- ☞ Health centres
- ☞ Hospitals
- ☞ Training institutions for health profession

## 5. INFRASTRUCTURE

Rukwa region is one of the remotest regions in Tanzania, far from the commercial and administrative centers of Dar es Salaam and Dodoma respectively. Infrastructure in the region is below standards and is an impediment to growth of the region

### 5.1. Transport

Transport is an important sector in the whole process of development and poverty alleviation. Its effectiveness, appropriateness and adequacy contribute a lot to the successful implementation of socioeconomic activities. The impact of having such a transport system is lowering of domestic production cost through timely delivery, enhancing economies of scale in the production process and creating economic opportunities. The economic opportunities include ease of market access; strengthening of competition; promotion of trade, tourism and foreign investment; contribution to government revenue and generation of a large number of employment opportunities

There are four transport modes serving Rukwa region: (i) roads, (ii) railways (iii) lake, and (iv) air. The transport system has failed to meet the demand of the region and has contributed a lot to slow development of the region.

#### 5.1.1. Road Transport

Road transport is the most used mode and accounts for more than 90% of goods and passenger transport in the region. The region has a network of 4,540.kms of roads of different classes as shown in the table below.

**Table 21:** Road classes and lengths per district (km)

Council	Trunk	Regional	District	Feeder	Urban	Total
Mpanda	477.7	394.8	697.4	18.8	-	1,588.7
Sumbawanga Rural	178	560.7	190	773	-	1,701.7
Nkasi	111	259	404	159	-	933
Sumbawanga Municipal	47	-	31	152	87	317
<b>Total</b>	<b>813.7</b>	<b>1,214.5</b>	<b>1,322.4</b>	<b>1,102.8</b>	<b>87</b>	<b>4,540.4</b>

Trunk and regional roads are managed by TANROADS and the remaining network is under the LGAs.

The table below shows the road density in each district. Sumbawanga Municipality has the highest road density while Mpanda district has the lowest.

**Table 22:** Road density in the various districts:

<b>District</b>	<b>Land area (sq. km)</b>	<b>Total road length</b>	<b>Road density (km per 100 sq km)</b>
Mpanda	45,843	1,588.7	3.4
Sumbawanga Rural	12,088	1,701.7	14.1
Nkasi	9,375	933	10
Sumbawanga Municipal	1,329	317	23.9
<b>Total</b>	<b>68,635</b>	<b>4,540.4</b>	<b>6.6</b>

Mpanda district has the lowest road density because most of its area is covered by forests reserves, national park and game controlled area. The roads in the national parks and forest reserves have not been considered as they are not classified and are managed by the respective authorities..

Out of the total road network of 4,719km, only 8.5km are paved and 320 km graveled. The rest are earth roads. By April 2007, almost the whole network was in bad to poor condition. This is a result of the abnormally continuous rains which started in October 2006 and stopped around mid March 2007. However the government has allocated TShs 847 Mio to repair the damaged sections of the roads.

There are scheduled passenger buses operating along the major routes of the region namely:

- i) Sumbawanga -Tunduma – Mbeya (3 buses daily, fare TShs 12,000 for 310 kms)
- ii) Sumbawanga – Mpanda – (2 buses daily, fare TShs 9,000 for 240 kms)
- iii) Sumbawanga – Kirando
- iv) Sumbawanga – Namanyere
- v) Sumbawanga – Matai – Kasanga
- vi) Sumbawanga – Kaengesa – Mwimbi
- vii) Sumabwanga – Laela
- viii) Mpanda – Sitalike – Mamba
- ix) Mpanda – Inyonga

The bus fares of approximately TShs 38/- per kilometre are far high than those charged on good paved roads which range from TShs 20/- to 22 per kilometre.

Buses stopped operating along the Sumbawanga – Mpanda, Sumbawanga – Kasanga and Chala – Namanyere – Kirando roads around December 2006. The authority responsible for trunk roads, TANROADS, was forced to limit the weight of vehicles plying on some of the trunk roads to 10 Tons GVM to stop further deterioration of the roads. This caused significant inconvenience to travelers and the only vehicles which managed to transport people were 4WD pick-up trucks which charged three times the fare that buses were charging.



Goods transportation is also expensive. Rates range from TShs 200 to 300 per ton per kilometer depending on condition of the road. The rate on good paved roads is approximately TShs 40 per ton per kilometre

All the trunk roads, with exception of the section from Inyonga to Tabora border, are said to be passable throughout (un-seasonal). This is also the case for the regional roads except for the road from Sitalike to Kilyamatundu via Muze which is seasonal due to lack of bridges at river crossings. Many of the district and feeder road are seasonal.. The percentage of roads under the LGAs which are seasonal are: Sumbawanga (R)- 36%, Sumbawanga (M) -52%, Nkasi 66%% and Mpanda - 60%

The other notable road transport problem is lack of direct connectivity between villages/important centers located along the Lake Tanganyika shores namely Karema, Kabwe, Kirando and Kipili. At the moment, one has to travel via the Sumbawanga – Mpanda trunk road to reach the other village. However, people use small boats to travel along the coast line of the lake. However this is not safe and low cargo carrying capacity.

The source of funds for maintenance of the roads is the Road Fund. The Table 23 shows the trend of funds received by TANROADS and LGAs from the Road Fund and other sources for maintenance of the roads during the last three years. The table below illustrates the situation.

**Table 23:** Funds received by road authorities for maintenance of roads from the Roads fund (2004/05 – 2006/07)

<b>Council</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>Total</b>	<b>Kilometres under jurisdiction of authority</b>	<b>Average TShs per kilometre per year</b>
Mpanda	149,052,920	159,630,000	133,200,000	<b>441,882,920</b>	715	618,000
Nkasi	153,500,000	157,630,000	145,800,000	<b>456,930,000</b>	563	812,000
Sumbawanga (M)	185,500,000	174,630,000	164,000,000	<b>524,130,000</b>	271	1,934,000
Sumbawanga (R)	119,000,000	154,640,000	146,600,000	<b>420,240,000</b>	963	436,000
TANROADS	1,989,732,702	2,068,717,092	2,488,000,000	<b>6,546,449,794</b>	2,028	3,230,000
<b>Total</b>	<b>2,596,785,622</b>	<b>2,715,247,092</b>	<b>3,077,600,000</b>	<b>8,389,632,714</b>		

Funds that have been spent on roads development programs in the past three years are seen in the Table 24. The sources of these funds are the Road Fund (development component) and other programs with roads improvements components (such as AMSDP)

**Table 24:** Funds spent for road development works (2004/05 – 2006/07)

<b>Council</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>Total</b>
Mpanda	112,947,080	140,000,000	125,000,000	<b>377,947,080</b>
Nkasi	-	94,000,000	20,000,000	<b>114,000,000</b>
Sumbawanga Municipal	-	-	-	-
Sumbawanga Rural	-	50,000,000	45,000,000	<b>95,000,000</b>
TANROADS	427,609,900	800,100,000	1,996,000,000	<b>3,223,709,900</b>
<b>Total</b>	<b>540,556,980</b>	<b>1,084,100,000</b>	<b>2,041,000,000</b>	<b>3,318,709,900</b>

A program to improve the condition of roads in the region includes paving of sections of trunk roads and rehabilitation of a number of trunk and regional roads. The timetable for these improvements is shown on the Table 25 below:

**Table 25:** Roads to be improved in the near future

<b>Road name</b>	<b>Classification and length (km)</b>	<b>Planned improvements</b>	<b>Time scale</b>	<b>Remarks</b>
Tunduma - - Sumbawanga	Trunk - 230	Upgrading to paved standard	2008 - 2010	Funding sources still being negotiated (possibly the MCC)
Sumbawanga – Mpanda	Trunk – 230	Rehabilitation to gravel standard and continuous maintenance	2007 - 2012	IDA funding - Guaranteed maintenance for 5 years after rehabilitation
Chala – Katongoro – Kirando	Regional - 87	Rehabilitation to gravel standard and continuous maintenance	2007 - 2012	IDA funding - Guaranteed maintenance for 5 years after rehabilitation
Kipili – Katongoro	Regional - 6	Rehabilitation to gravel standard and continuous maintenance	2007 - 2012	IDA funding - Guaranteed maintenance for 5 years after rehabilitation
Ntendo – Muze	Regional - 37	Rehabilitation to gravel standard and continuous maintenance	2007 - 2012	IDA funding - Guaranteed maintenance for 5 years after rehabilitation
Muze – Kilyamatundu	Regional - 148	Upgrading to gravel standard	2008-2009	DANIDA funding
Kagwira – Karema (partly)	Regional – 75 km out of 112 km	Upgrading to gravel standard	2006/2007	NORAD funding

Other on-going activities related to roads are (i) detailed engineering design for upgrading of the Sumbawanga – Mpanda road (235 km) to paved standards and (ii) feasibility study and preliminary design for upgrading to paved standards of the roads from Sumbawanga to Kasesya and Matai to Kasanga all with a total of 151 km. and (iii) feasibility study and preliminary design for upgrading to paved standards of the Mpanda - Nyakanazi trunk road.

The region considers the Sumbawanga to Kasesya and Matai to Kasanga roads as more important as they connect the region to the main markets of its agricultural produce, Zambia and the DRC.

There is shortage of road construction and maintenance equipment in the region and this has contributed to untimely maintenance resulting to deterioration of the roads. The plant hire equipment unit in Mbeya has not been able to meet the demand of Rukwa region and it is strongly recommended to arrange for availability of the equipment in the region through equipping the TANROADS Regional Office or establishment of an independent equipment hire unit.

### **5.1.2. Railway Transport**

A railway line 210 km long provides a thrice weekly passenger and goods transport services to the northern part of the region from Mpanda to Kaliua in Tabora region. . After strengthening of the line during the last few years, the railway service is now more reliable but in most cases does not meet the demand of the users. Non-availability of sufficient wagons at critical periods when cattle and agricultural produce (maize, rice and tobacco) need to be transported to the markets has been experienced. TRC is about to be concessioned to a private operator. The concession agreement requires the operator to maintain passenger services. It remains to be seen if the quality of service

will improve. Additional goods trains are occasionally provided when there is high demand for transportation of goods.

### 5.1.3. Lake Transport

Lake transport plays a significant role in serving the people living along the shores of Lake Tanganyika and Lake Rukwa. Two commercial ships (Mwongozo and Liemba) operate on Lake Tanganyika and serve the villages/centres of Kabwe, Karema, Korongwe, Ninde, Wampembe, Kala, Ikola, Kirando, Kipili and Kasanga. With exception of Kasanga where there is a landing platform, the ships are forced to anchor some distance from the shore (about 1 to 1.5 nautical miles) and passengers are transported by small boats to the ships. Marine services link the region with neighbouring countries of Zambia, DRC and Burundi as well as to Kigoma region. Transportation within Lake Rukwa is by boats.

The Tanzania Ports Authority (TPA), responsible for the marine and lake ports, intends to conduct a Strategic Port Master Plan study which will determine the short and long term developmental requirements of all ports, i.e. sea ports and inland waterways ports. It is expected that implementation of projects identified in the Master Plan (including the ports in lake Tanganyika) will commence and be completed during the coming five years. Meanwhile, TPA intends to carry out emergency maintenance of the Kasanga port to improve its performance. Funds are being sought to improve the port facilities of the other villages/centres, priority being Kipili, Kabwe and Ikola.

### 5.1.4. Air Transport

There are three public airports and more than 10 private airstrips in Rukwa region. The public airports are located in Sumbawanga, Mpanda and Inyonga. No commercial planes are serving Rukwa region. The status of the three public airports and traffic levels during the last three years is shown below:

**Table 26:** Data on Government Airports in Rukwa region

Airport	Capacity	Aircraft movements		
		2004	2005	2006
Sumbawanga	1,300 mtrs gravel runway Can handle up to 20 Tonnes aircrafts (Fokker 50 – 45 passengers) Operational all year day time only	58	122	126
Mpanda	1,450 mtrs gravel runway Can handle up to 20 Tonnes aircrafts (Fokker 50 – 45 passengers) Operational all year day time only	206	177	191
Inyonga	850 mtrs gravel runway Can handle up to 5 Tonnes aircrafts (Cessna 406 – 11 passengers) Operational all year day time only	18	6	8

According to Tanzania Airports Authority (TAA), the airports of Sumbawanga and Mpanda can be used for commercial purposed (passengers and cargo) using the small aircrafts. However some improvements need to be done on a few areas e.g. fire fighting facilities. Precision Air intends to introduce commercial flights to Sumbawanga and Mpanda if the airports are improved to standards required.

TAA is about to launch a study for the feasibility of the improvement of Sumbawanga airport, including the preparation of bidding documents (if feasible). Such airport improvement might be financed under a future IDA credit.

Operational problems reported include:

- ⌚ Outdated fire fighting equipment at Sumbawanga airport
- ⌚ Lack of fire fighting equipment at Mpanda and Inyonga airports
- ⌚ Lack of fence around the airports encourage trespassing

Many of the privately operated airstrips are in Mpanda district. Katavi National Park has three un-seasonal airstrips within the park area.

## 5.2. Telephone Communication

There are telephone services in all urban centres in the region and in some parts of the rural areas. The table below shows the companies that provide telephone services, the type of services provided the plans for expansion of their services in the region and the problems:

**Table 27:** Telephone Services in Rukwa region

Service provider	Type of service provided	Areas covered at present	Future expansion program	Problems reported
TTCL	Landline telephone and internet	Telephone and internet services in Sumbawanga  Telephone services in Mpanda and Namanyere  Capacity – 2752 lines  2089 lines in use	By July 2007 provide mobile phone services to Sumbawanga, Mpanda and Namanyere and provide internet services to Mpanda and Namanyere  Long term plans are to rollout the TTCL Mobile services in the region and in particular opening up the rural areas with the CDMA wireless network. By Jul	- None payment of bills - Lack of electricity in most of the areas in the region
TIGO	Mobile phone	Sumbawanga Town	Within 2007 to cover Namanyere, Mpanda, Katavi National Park, Usevya/Inyonga, Kazuramimba, Katumba,  In 2008 to cover Leila, Mkima, Malonje, Kantawa, Mashete, Kiambumfipa	- Low returns expected from villages due to low income - Poor roads make servicing of facilities a problem
VODACOM	Mobile phone	Sumbawanga, Mpanda and Katumba settlement	Within 2007/08 to cover the road from Tunduma to Mpanda and Namanyere.	None
CELTEL	Mobile phone	Sumbawanga, Namanyere, Mpanda, Katavi, Milembula Mamba, Parts of Tunduma – S'wanga road	By July '07 to be on air in Katumba	?

Telephone services providers feel that:

1. People in rural areas have low purchasing power and it will be difficult to recover the investments

2. There is the knowledge gap, whereby most of the people in the rural areas are yet to know the importance of having a phone. A starting point in most of these areas is to have community tele-centres.

### **5.3. Radio and Television stations**

There are 9 Radio Stations which can be accessed in Rukwa Region. They are;-

- Radio Free Africa - RFA
- Radio CHEMCHEM,
- Radio Tanzania Dar-es-Salaam – RTD,
- PRT
- Radio One
- KISS FM,
- East Africa
- And other 2 Radios from DRC and Zambia

Television stations can be accessed via satellites by using antennas and boosters. Some of the local stations which can be accessed include TVT, ITV, SMT, Star TV, Channel 5 and EATV, Depending on the type of the antenna used, other international world wide stations such as CNN, BBC, CFI, etc may be accessed from Rukwa.

### **5.4. Energy**

Fuel wood in the form of firewood and charcoal is available in almost all parts of the region and is the most important source of energy for domestic and other activities such as brick burning, pottery and curing of tobacco. Fossil fuels are imported and distributed throughout the region by fuel suppliers for various uses including transportation and industrial activities. Fossil fuel such as kerosene is used for provision of lighting mostly in the rural areas but also in the urban areas where the same is used for cooking as well. Introduction of alternative sources of energy for the rural communities is being studied by the Ministry of Energy under its program ‘Development of Sustainable Solar Market Packages’ and could be implemented under the World Bank’s new ‘Tanzania Energy Development and Access Project (TEDAP)’. A consultant has been commissioned and has already visited some villages in Sumbawanga Rural district to assess the viability of introducing solar power in the region.

Electricity supplied by TANESCO is available in Sumbawanga and Mpanda towns only. Household Budget Survey carried out in 2002 showed that that only 4% of the region’s households use electricity supplied by TANESCO. The sources of electricity are hydropower supplied from Zambia and thermal electricity generating stations. The Zambia source is used to supply Sumbawanga Municipality while Mpanda town is served by generators. The Table 28 below shows the amount of electricity available in the two centers and the current demand:

**Table 28:** Electricity demand and supply (in MW) for Sumbawanga and Mpanda towns

Town	Demand	Supply
Sumbawanga	2.7	5.0
Mpanda	1.0	1.0

With the current developments in terms of industrial activities in the towns, demand for electricity will increase.

The Zambia electricity source does not provide stable energy supply in Rukwa region. High voltage fluctuations are experienced in Sumbawanga. This results in occasional stoppage of machineries which require stable electricity current. TANESCO is sometimes forced to ‘ration’ power supply to meet demands. Long distance from the main source (appr. 800 kms) without ‘compensators’ along the route has been identified as the main problem to the situation. Zambia Electricity Supply Company (ZESCO) have indicated to TANESCO that they are in the process of installing capacitor banks at Kasama to stabilize the line voltage Reinforcement of the transmission system in Zambia between Pensulo and Kasama is needed in order to improve the availability, reliability and quality of supply in Sumbawanga. Implementation of this project is included in the proposed Zambia – Tanzania 330 kV interconnector project from Pensulo via Kasama to Mbeya.

Studies have showed that several rivers within the region could provide the required water for hydro electric schemes. These are;

- a) Rungwa river – 20 to 50 MW
- b) Msaidia river – 20 to 35 MW
- c) Lukima river – 3 to 4 MW
- d) Nzovwe river – 2 to 3 MW
- e) Mtambo river rapids – Near Ugalla – 2.0 MW

TANESCO has in 2004/05 conducted study on Nzovwe river source to assess its potential to stabilize the power supply for Sumbawanga and revealed that power could be through synchronising the power from Nzovwe source power supply from Zambia thereby getting more and stable power for Sumbawanga municipality as well as to Nkasi District. The cost of this scheme was estimated to be USD 28.6million.

TANESCO is planning to electrify the western and north-western parts of Tanzania through a program known as ‘North–West Grid Extension Program’ which will cover parts of Mwanza, Kagera, Shinyanga, Kigoma, Mbeya and Rukwa regions. However, the program will be phased and scheduled to start from the North reaching Rukwa many years to come. However this is subject to availability of funding. Should several donors come forward to finance separate phases of the project, Sumbawanga could be connected sooner. The other study that could shed light on what needs to be done to provide reliable electricity to Rukwa is the World Bank funded Power System Master Plan.

Other electricity supply sources which need to be looked at are i) thermal electricity using coal which is available in plentiful in the region ii) use of wind power from Usevya area and iii) the Geo-thermal source from Mbeya area (long term)

## 5.5. Water

According to population and housing census (2002) 33 percent of the total private households used protected wells as the main source of drinking water. While 29 percent of the rural households used unprotected wells, 62 percent of the urban households used protected wells as their main source of drinking water. However, 26 percent of the rural households also used protected wells.

Between 1980s and 1995/96 NORAD assisted Rukwa Region in the water sector. By mid 90's the provision of water services reached 72% coverage. In the year 2004 the coverage of water services had dropped to 56% of the total population served with water and 28.8 per cent of those who are served with safe and clean water respectively due to drought. So far the region has 51 gravity projects, 1,139 bore halls and shallow wells, 9 diesel pumps, 2 hydrams and 40 protected water sources.

Rukwa Region has a total number of 368 villages and a population of over one million. Various water schemes exist in these villages but many of them do not function due to various reasons including; drying up of water sources, deterioration due to old age, lack of sufficient funds for operation and maintenance etc. At present the water supply service level in the villages is less than 50 percent. The table below illustrates further.

**Table 29:** Present Situations of Water Schemes in Rukwa Region

District	Type of water scheme	Total schemes	Functioning water schemes	Remarks
S'wanga Urban	Gravity	12	09	- Some streams have dried up
	Deep Boreholes	48	35	- O&M Problems
	Shallow wells	63	15	- Most of the wells have dried up
	Protected springs	23	-	- Drought
	Pumping schemes	1	-	
S'wanga Rural	Gravity	22	15	Some streams have dried up
	Boreholes	174	102	Break down of Some pumps
	Shallow wells	199	90	Shallow wells have dried up
	Protected springs	-	-	
	Pumping schemes	2	2	
Mpanda	Gravity	03	3	
	Boreholes	510	378	- pumps breakdown
	Shallow wells	193	115	- Some wells has dried up.
	Protected springs	1	1	- Dried up due to drought
	Pumping schemes	6	3	-
Nkasi	Gravity	09	08	- Low Production due to drought.
	Boreholes	217	156	- Break down of old pumps.
	Shallow wells	151	106	- Drying up.
	Protected springs	-	-	
	Pumping schemes	8	4	

## Opportunities

- ③ Existence of water source in various areas of the region;  
There are water sources, which can be used as gravity schemes e.g. Ikolongo springs, Rukwa hills and Msanginya group water supply, etc.
- ③ Water harvesting  
The rainfall ranges between 900 to 1,200 mm and hence it is possible to harvest rain water for domestic and agricultural purposes

## Obstacles

- ③ Limited budget for rehabilitation of existing wells and establishment of new ones;
- ③ Obsolete nature of equipment for water wells digging;
- ③ Destruction of water sources in various areas.

## 6. DEVELOPMENT PARTNERS AND NATIONAL STAKEHOLDERS ACTIVITIES

There are few activities being undertaken by development partners and other national stakeholders in the region at the moment. Table 30 shows the sectors being supported by the development partners and other national stakeholders:

**Table 30:** Development Partners / National Stakeholders Involvement

Development Partner / National Stakeholders	Sector	District
USAID	Health	All Districts
World Bank	Agriculture	All Districts
IFAD	Cooperatives, Roads	Nkasi, S'wanga Rural
UNDP	Health	Nkasi
Tanzania Commission for Aids (TACAIDS)	Health	All districts
Tanzania Social Action Fund (TASAF)	Health, Transport, Agriculture	All districts
Tanzania National Parks (TANAPA)	Education, Health, Water, Environment	Mpanda
Baraza Kuu la Waislamu Tanzania (BAKWATA)	Education, Health	All districts
Roman Catholic Church	Education, Health, Agriculture	All districts
Moravian Church	Health	Nkasi, S'wanga Rural,
Pentecostal Church		
Africare		
Association of Tanzania Tobacco Traders (ATTT)	Agriculture	Mpanda
AMREF	Health	S'wanga Rural
Seventh Days Adventist	Health	S'Wanga Municipal

## 7. RESOURCES MOBILISATION

### 7.1. Councils' and Central Government sources

The amounts of revenues availed to the councils for their operations (recurrent and development) being collections from various own sources and subsidy from the central government, with the corresponding amounts spent on development programs for the past three years are shown in the table below. There were some difficulties with obtaining data of disbursements for the full financial year. This may be due to the fact that the financial year has not been completed and more disbursements are expected in the final quarter. However it is important for financial control that councils are tracking their disbursement and expenditure according to their budget, for both recurrent and development budget. This area needs further analysis and follow-up in any future ESW.



The council-owned sources include:

- i. Property Tax
- ii. Land Rent
- iii. Produce Cess
- iv. Service levy
- v. Guest house levy
- vi. Other levies on Business activity
- vii. Licenses and Permits
- viii. Fees and charges
- ix. Fines

The table below shows the revenues for each of the councils for the last three financial years

**Table 31:** Financial resources from own sources and central government by district

Council	F/Y	Revenue, Tshs			Total	Amount spent on development programs
		Own sources	Subsidy from Central Govt	Other Sources (Donors)		
S' Wanga Municipal	2004/05	56,913,131	146,281,000	-	<b>203,194,131</b>	146,281,000
	2005/06	168,712,522	277,341,200	-	<b>446,053,722</b>	277,341,200
	2006/07	310,915,000	1,029,000,000	-	<b>1,339,915,000</b>	
S' Wanga Rural	2004/05	67,691,763	60,688,000	-	<b>128,379,763</b>	60,688,000
	2005/06	183,143,922	762,575,400	-	<b>945,719,322</b>	762,575,400
	2006/07	256,200,000	1,903,000,000	-	<b>2,159,200,000</b>	
Mpanda	2004/05	61,345,851	492,722,000	-	<b>554,067,851</b>	492,722,000
	2005/06	427,290,698	923,115,400	-	<b>1,350,406,099</b>	923,115,400
	2006/07	458,062,000	2,393,000,000	-	<b>2,851,062,000</b>	
Nkasi	2004/05	104,062,153	146,281,000	-	<b>250,343,153</b>	146,281,000
	2005/06	329,292,247	277,341,200	-	<b>606,633,447</b>	277,341,200
	2006/07	118,108,500	1,029,000,000	-	<b>1,029,000,000</b>	

## 7.2. Other Sources

Financial Institutions (Commercial Banks)

The other source of financial resources is the banks which provide credits for various activities.

The banks which are active in the region are:

- i) CRDB Bank Limited - One branch in Sumbawanga town.
- ii) National Microfinance Bank Limited (NMB)-
- iii) National Bank of Commerce (NBC) - One branch in Sumbawanga town
- iv) Tanzania Postal Bank Limited (TPBL) operating through the Tanzania Posts Corporation in all major centres in the region where there are postal services.

Information on credits provided by the four banks show that these banks have not been sufficiently used by the locals for development projects. Loans provided are of small amounts mostly for employees to purchase home appliances and other individual needs.

## 8. PLANNING PROCESS

The planning of development activities for Rukwa region start at the village level where village Governments organizes meetings with villagers to agree on priorities of the villages in line with those agreed during the ‘Opportunities and Obstacles in Development’ (O&OD) process conducted in 2003 at villages level.

The village plans are then submitted to the wards where Ward Development Committees consolidate the village development plans to come up with a ward program. According to the LGAs interviewed, the activities which cover more than one village are given higher priority.

The wards submit their plans to the councils which, review the programs and consolidate them to come up with a comprehensive District Development Plan. Once the plan is prepared it is forwarded to the RS for review and technical advice, either individually or through an Inter Council Forum. The plan then passes through the relevant committees before submission for approval by the Full Council. Once this process is completed the District Development Plan becomes a legal document and cannot be altered.

All the above processes are guided by guidelines prepared by the Prime Ministers Office – Regional and Local Government. (Guidelines for the Preparation of Medium Term Plan and Budget Framework). They define priority areas for resource allocation for each sector with the objective of pursuing the agenda of improving the lives of all Tanzanians through strategic planning and allocation of resources in a way that will result into quick wins which in turn will lead to accelerated economic growth. The guidelines also provide the ceilings of financial resources to be allocated to each sector.

The role of the Regional Secretariat is to coordinate economic and social activities for the LGAs in the Region by building capacity and supporting LGAs to implement and effectively deliver national and regional development priorities. The RS not only links the LGAs but also provides linkages within and across a number of ministries, government and private sector bodies, as well as civil society.

Shortfalls reported include;

- ⌚ While the planning processes start in September/October of each year, the guidelines are received by the councils in December or even later. This means the national priorities cannot be considered and facilitated in village participatory planning processes.
- ⌚ The O&OD process is supposed to be conducted after a cycle of three years so as to review the priorities based on the prevailing situations. This will be difficult to implement due to the high costs involved (estimated at Tshs 150 m per council)
- ⌚ The O and OD process identifies social projects, rather than projects that promote economic growth.
- ⌚ The ceilings provided by the guidelines are always on the low side and most of the development plans are shelved.

Growth is not being emphasized enough in the planning process, the Regional Secretariat have an important role to play in ensuring that there is regional vision for growth and that strategies and objectives, that highlight this potential become part of the district, ward and village planning

process. At present the sum total of district plans will not bring about the sort of interventions needed to see growth across the region.

## **9. STAKEHOLDERS' WORKSHOP**

The Stakeholders' Workshop took place from 17<sup>th</sup> to 18<sup>th</sup> May 2007 to receive and discuss findings of this study. It was designed to be a full participatory type. The study consultant presented the findings of the study by highlighting the opportunities and obstacles identified in each of the productive sectors and social sectors, and explained the status of the infrastructure in the Rukwa region. A facilitated discussion took place immediately after the presentation and the participants had opportunity to give their views, in plenary, on what had been happening in Rukwa that has contributed to poverty alleviation. They were later grouped into smaller groups and discussed issues affecting the development of the productive sectors as well as to draw an action plan to improve the situation in the region so as to be able to tap the resources and realize the growth of the region and her people. A set of questions was prepared to guide their discussions. The questions were:

1. What has been happening in the sector in the recent past that has made people earn more and improved their conditions of life?
2. What are the main markets for your produce and how dependable are they? Explain
3. What are main obstacles to increased profitability in your sector?
4. Do you think the different stakeholders work together in moving the growth agenda forward? Is the private sector (including small operators) organized, and do they participate in formulation of district and regional plans? Explain
5. To summarize,  
What are the major five potentials for growth of the sector in the region?  
What are the main five constraints that hinder growth in the region?
6. Formulate an action plan showing the activities that need to be implemented, the responsible institution, time scale and costs.

Each group presented its views/findings to the plenary and participants had another opportunity to contribute to the responses.

The outcome of the workshop (group responses on the questions above) is appended as **Annex 4**.

## **10. GIS MAPS**

A Geographic information system (GIS) is a computer system capable of capturing, storing, analyzing, and displaying geographically referenced information; that is, data identified according to location. GIS technology can be used for scientific investigations, resource management, and development planning. For example, a GIS might allow emergency planners to easily calculate emergency response times in the event of a natural disaster, or a GIS might be used to find wetlands that need protection from pollution. Also, other database information can be generated

for further analysis or use. An example would be a list of all addresses within one kilometer of a toxic spill or flood area.

GIS uses data from various sources. If the data to be used are not already in digital form, that is, in a form the computer can recognize; various techniques can capture the information. Maps can be digitized by hand-tracing with a computer mouse on the screen or on a digitizing tablet to collect the coordinates of features. Electronic scanners can also convert maps to digits. Coordinates from Global Positioning System (GPS) receivers can also be uploaded into a GIS. A critical component of a GIS is its ability to produce graphics on the screen or on paper to convey the results of analyses to the people who make decisions about resources. Wall maps and other graphics can be generated, allowing the decision makers to visualize and thereby understand the results of analyses or simulations of potential events. [Cartography](#) is the design and production of maps, or visual representations of spatial data. The vast majority of modern cartography is done with the help of computers, usually using a GIS.

The use of a GIS can encourage cooperation and communication among the organizations involved in environmental protection, planning, and resource management. The collection of data for a GIS is costly. Data collection can require very specialized computer equipment and technical expertise.

The study collected many data regarding various things such as mining, social facilities, touristy attractions etc. Most of the data collected were however, are not in a format which could be used by the GIS.

The consultant worked together with the Tanzania Bureau of Statistics (NBS) to produce GIS maps for the Rukwa region based on the available collected data. Seven maps in total were produced and these are:

- 1) Administrative Boundaries and population map
- 2) Land use
- 3) Transport Infrastructure map
- 4) Social Facilities map
- 5) Mining Potential areas map
- 6) Ecological Zones and agricultural
- 7) Touristy attractions Map

During the production of the map it was clear that some of the data collected could not be used in a correct way because they were not collected using GIS compatible methods. Some of the data were put manually and some were just estimates (like mining areas) and hence do not represent a very realistic/correct picture on the ground.

The GIS mapping exercise brought into attention the importance of finding ways to collect reliable information. With reliable information collected in a correct way, GIS maps can be a very strong tool in planning processes. All sort of information can be stored on maps and be accessed quickly, showing how things look in the ground, eg, the distribution of dispensaries and schools in relation to population, the passability of roads in relation with accessibility of various social facilities etc. This can be used to show where priority should be given when resources are scarce as it is usually the case.

The region has requested assistance in acquiring and using the GIS for their planning purposes. When GIS is acquired and capacity is built on how to use it optimally, the region can use survey tools like GPS to collect reliable data which can be used to revise the maps which have been produced and are appended as **annex 5**.

References:

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6. Water Development in Rukwa Region (November 2006)
7. The Contribution of Livestock to Regional Gross Domestic Product (GDP) and Alleviation of Poverty – By Dr. Cletus A. Karigo, Rukwa Regional Commissioners Office
8. Identifying Solutions for Sustainable Shared Growth in Tanzania’s Tourism Industry – Concept Note
9. Regional and District Population Projections for period 2003 to 2025 – By NBS (December 2006)

## Annex 1: List of People Met/Interviewed

S/N	Name	Institution/Firm	Position	Tel. Contact
1	Daniel Ole-Njolaay	RAS Rukwa	Regional Commissioner	0754 268400
2	Innocent Mwenda	RAS Rukwa	Regional Administrative Secretary	0754 383872
3	Gasper Mwembezi	RAS Rukwa	Assistant Regional secretary – Economic Planning and Management	0754 535884
4	David Kilonzo	RAS Rukwa	Technical Advisor – Economic Planning	0754 855859
5	Hamza Mvano	RAS Rukwa	Technical Advisor – Agriculture	0787 612308
6	Patrick Mwanakusha	RAS Rukwa	Technical Advisor – Natural Resources	0754 642443
7	Prosper Romano	RAS Rukwa	Technical Advisor – Local Government Financing	0755 468549
8	Clitus Karigo (Dr)	RAS Rukwa	Technical Advisor – Livestock Development	0754 305342
9	Edgar Mungaya	RAS Rukwa	Roads Engineer	0784 720122
10	Catherine Mashalla	RAS Rukwa	Education	0713 270334
11	Emmy George	RAS Rukwa	Water Engineer	0715 881770
12	F. Mtepa	RAS Rukwa	Health	0754 211102
13	M. Kibishi (Dr.)	RAS Rukwa	Health – Regional Hospital	0756 966307
14	Kevin Makundi	RAS Rukwa	Cartographer	0754 819845
15	Ephraim Ole Nguayne	Sumbawanga Municipal Council	Municipal Director	0754 597572 0764 597572
16	Amos Bigambo	Sumbawanga Municipal Council	Ag. Municipal Economist	0784 299691
17	Mussa Zugiza	Sumbawanga Rural District Council	District Executive Director	084 368407
18	Luis Chambi	Sumbawanga Rural District Council	District Economist	0754 650019
19	Felix Mchau	Sumbawanga Rural District Council	District Engineer	0754 647356
20	Lameck Mushiha	Nkasi District Council	Ag District Executive Director	0787 852181
21	Raymond Tanganika	Nkasi District Council	Ag. District Agriculture and Livestock Officer	0786 545162
22	Ludwig D Ngakoka	Nkasi District Council	District Planning Officer	0786 602662
23	Zabibu Shaaban	Nkasi District Council	Ag. District Education Officer	0784 378357
24	Lucas Mseo	Nkasi District Council	Ag. District Engineer	0786 835522
25	Wilbard Msinjili (Dr.)	Nkasi District Council	Ag. District Medical Officer	0786 037653
26	Thomas Peter	Nkasi District Council	Ag. District Water Engineer	0786 423564
27	Othman S Magehema	Mpanda District Council	Ag. District Executive Director	0755 758115 0786 073860
28	Laban Bituro	Mpanda District Council	District Education Officer	0784 470673
29	Paul Chaote (Dr.)	Mpanda District Council	District Medical Officer	0755 696855
30	RJ Butoto (Eng.)	Mpanda District Council	District Engineer	0754 867751
31	SCB Mayeye	Mpanda District Council	District Economist	0784 702293
32	JM Angasisye	Mpanda District Council	District Agriculture and Livestock Officer	0784 754915
33	Festo Katanti	Mpanda District Council	Ag District Water Engineer	0784 872278

S/N	Name	Institution/Firm	Position	Tel. Contact
34	James Nyabakari	TANROADS	Rukwa Regional Manager	0754 888867
35	Fyomagawa Yahaya	Association of Tanzania Tobacco Traders	Regional Manager - Mpanda	0784 720146
36	Pius Lobe (Eng.)	Ministry of Energy and Minerals	Ag. Zonal Mines Officer – Western Zone	0784 608067
37	Christopher Mbwiga	TANESCO	Ag. Manager – Rukwa Region	0754 072350
38	Peter Samwel Mollel	TANESCO	Mpanda District Manager	0784 902373
39	Felician Maila	TANESCO	Ag. Director of Corporate Planning	0784 902397
40	Maneno Katyega	TANESCO	Chief Research Engineer	0754 685105
41	Bengiel Msofe	TANESCO	Senior Electrification Engineer	0754 657105
42	Makala Kingu	TANESCO	Manager Rural Electrification	0784 902311
43	Gladstone Kombe	TANESCO	Chief Rural Electrification Engineer	0754 377358
44	Anthony Mahando	Lake Rukwa Water Basin Office	Water officer Sumbawanga	
45	Ernest Mpendakazi Kinunda	Tanzania Chamber of Commerce Industries and Agriculture	Chairman Mpanda Region	0754 647488
46	Khatibu Nahodha	Tanzania Railways Corporation	Mpanda Station Master	0784 826394
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**Annex 2: RUKWA GROWTH PROSPECTS - STAKEHOLDERS' WORKSHOP**  
**Liboli Centre, Sumbawanga**  
**17 – 18 May 2007**

**WORKSHOP PROGRAMME**

<b>Time</b>	<b>Event</b>	<b>Responsibility</b>
<b>Day One – 17<sup>th</sup> May 2007</b>		
0800-0830	Registration	All
0830-0900	Welcoming Note and Objective of the Workshop	Daniel Ole Njoolay Regional Commissioner – Rukwa region
	Statement by the World Bank	Dieter Schelling on behalf of World Bank Country Director
0900-1030	Presentation of the Rukwa Growth Study Findings	Abdul Awadh - Study Consultant
1030-1100	Tea/Coffee Braek	All
1100-1200	Facilitated Discussions on the Study Findings	Facilitator
1200-1300	Group Discussions on Opportunities and Constraints t	All
1300-1400	Lunch Break	All
1400-1730	Group Discussions (Cont)	All
1730	End Day One	
<b>Day Two – 18<sup>th</sup> May 2007</b>		
830-1030	Presentation of Group Work	Facilitator
1030-1100	Tea/Coffee Break	All
1100-1300	Panel Discussions on Priorities and Way Forward - District Commissioners Mpanda, Nkasi and Sumbawanga	Chairman – Rukwa Regional Commissioner
1300	Closing: - Closing remarks - Closing speech	Dieter Schelling Kwela Member of Parliament
1315	Lunch	All



**Annex 3: STUDY ON RUKWA REGION GROWTH PROSPECTS  
WORKSHOP TO DISCUSS THE POTENTIALS AND CONSTRAINTS 17<sup>TH</sup> – 18<sup>TH</sup> MAY 2007 IN SUMBAWANGA**

**LIST OF PARTICIPANTS**

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#### **Annex 4: Workshop responses - group discussion (questions 1 to 5)**

Question	Responses from groups			
	Crop and Livestock	Fisheries and Forestry	Mining	Tourism
What has been happening in the sector in the recent past that has made people earn more and improved their conditions of life?	<ul style="list-style-type: none"> <li>• SGR and opening of borders has improved access to regional markets and raised prices for farmers</li> <li>• Continued increase in use of animal traction (maksai) for cultivation</li> <li>• General improvements in living standards in past 5 years (health, education, bicycle transport, ...)</li> </ul>	Main products have been fish, timber, honey and beeswax	<ul style="list-style-type: none"> <li>③ Various small scale prospectors have been prospecting for minerals. To date, there are about 35 prospectors</li> <li>③ Various small scale miners have been mining for minerals. There are about 215 PMLs holders in Rukwa region to date</li> </ul>	<ul style="list-style-type: none"> <li>③ Tourist traffic has been rising</li> <li>③ Number of camp sites increased about 5</li> <li>③ Investment in lake Tanganyika area at Kipili shore and Mandakelenge</li> <li>③ Katavi National Park Head Quarter at Mlele</li> <li>③ Plan to improve accessibility to Kalambo falls, visibility study is taking place.</li> <li>③ TANAPA contributed to community project</li> <li>③ 5 hunting blocks in Mpanda</li> <li>③ Most potential area not yet exploited</li> </ul>
What are the main markets for your produce and how dependable are they? Explain	<ul style="list-style-type: none"> <li>• Crops: Regional neighbors (DRC, Zambia, Burundi, and Malawi), local markets within districts</li> <li>• Livestock: local markets within districts, external markets to a lesser extend (e.g. to Comoros; Middle East not at present a market but could be)</li> </ul>	<ul style="list-style-type: none"> <li>• Fish - Zambia &amp; DRC (Depend on Stability in DRC)</li> <li>• Timber - Available and reliable in - Major towns</li> <li>• Honey and Beeswax – Mainly overseas</li> </ul>	<ul style="list-style-type: none"> <li>- Miners to sell minerals to mineral Brokers</li> <li>- Miners to sell minerals to mineral Dealers</li> <li>- Brokers to sell minerals to mineral Dealers</li> <li>- Markets for minerals are dependable but prices offered to miners by Brokers and ones offered by Dealers to Brokers not dependable</li> </ul>	Europe, America local tourism.. The market is reliable but not yet fully exploited.
What are main obstacles to increased profitability in your sector?	<ul style="list-style-type: none"> <li>• Output market accessibility and price e.g. due to transport costs, poor information to farmers</li> <li>• Input market access and price, high transport costs</li> <li>• Lack of credit</li> <li>• Low productivity due under-utilization of fertilizers (poverty)</li> <li>• Limited knowledge of modern farming</li> </ul>	<ul style="list-style-type: none"> <li>③ Producers not Organized</li> <li>③ Lack of Capital</li> <li>③ Low Technology and Skills</li> <li>③ Low Law Enforcement capability</li> <li>③ Poor Infrastructure</li> <li>③ Lack of Sawmills to add value to timber</li> <li>③ Lack of fishing gear, preservation and storage facilities for fish</li> </ul>	<ul style="list-style-type: none"> <li>③ Lack of information on market's prices for minerals</li> <li>③ Lack of mining skills</li> <li>③ Lack of capital which leads to lack of mining equipments/tools, safety gears and explosives</li> <li>③ Distance to market</li> <li>③ Mainstreaming into district plans</li> </ul>	
Do you think the different stakeholders work together in moving the growth agenda forward?	<ul style="list-style-type: none"> <li>• Stakeholders participate in plans, but extent limited</li> <li>• Small private operators are there, but participation in policy and planning processes is limited due to inadequate organization (e.g. in farmer marketing associations)</li> </ul>		<ul style="list-style-type: none"> <li>- The mining sector is not full integrated in the growth agenda</li> <li>• It creates employment i.e There are about 1,000 people involved in mining business</li> <li>- They're organized but NOT active</li> <li>- They do not participate in formulation of districts and regional plans; BUT they participate indirect as community members in the development of O &amp; OD plans for their community</li> </ul>	<p>Yes!!! e.g. Private sector play role by building camp sites in Katavi National Park</p> <p>“Stakeholders” are TANAPA, LGAs, Regional Authority, Tourist, Hunters Private sector, Community</p>
What are the major five potentials for growth of the sector in the region?	<ul style="list-style-type: none"> <li>• Production increase via further increases in land area</li> <li>• New products (spices, artemisium, jatropa, organics)</li> <li>• Better prices through improved marketing</li> <li>• Value addition on existing</li> </ul>	48	<ul style="list-style-type: none"> <li>• Availability of Preliminary Information about the minerals</li> <li>• Opportunities for joint ventures with small scale miners</li> <li>• Hire of equipment and market for explosives</li> </ul>	<ul style="list-style-type: none"> <li>- Katavi National Park,</li> <li>- Old Bismark Fort at Kasanga,</li> <li>- The Kalambo falls</li> <li>- Hot spring at Usevya</li> <li>- Lake Tanganyika and lake Rukwa scenery from the Ufipa escarpment</li> </ul>

### Action plans

Activity	Implementer	Time scale	Cost	Strategy
<b>Crop and Livestock</b>				
1. Formulate transport planning and investment priorities in light of agricultural growth prospects	TANROADS and LGAs	October 2007		Close collaboration between planning staff, transport staff, and agriculture staff
2. Region and districts adopt GIS based land use planning.	LGAs with support from WB and NBS	Start October 2007		Regional and district staff to acquire software and create database
3. Villages to assign certificates to all landholders	District and Village councils with MOHL	Allocate certificates by June 2008		
4. Develop strategy to use funds under DADP new extension approach, to support formation of farmer marketing groups	LGAs	October 2007		
5. Carry out study of agricultural marketing and demand	Consultant (agriculture economist)	Completed by October 2007		
6. Develop plans under DADPs to access technology adoption grants	LGAs with RAS	Completed by October 2007		
7 Develop strategy to increase SACCOs access to farmers and farmer groups	LGAs with support from RAS and MAFC	Completed by October 2007		
<b>Fisheries and Forestry</b>				
1. Organize fishermen into cooperatives	LGA's through Cooperative Officer, NGO's, Financial Institutions	Start 2007/08	TShs 40 Mio	Funding from LGA department budgets
2. Train Fishermen on modern and sustainable fishing.	LGA through fisheries	Start 2008/09	TShs 40 Mio	Funding from LGA department

Activity	Implementer	Time scale	Cost	Strategy
	Dept, NGO's, TAFIRI			budgets
3. Plant 3 mil trees annually including Wattle and Jatropa.	LGA ,Community, CBO's , NGO's	Start Nov 2007	TShs 20 Mio	Funding from LGA department budgets
4. Promote Community based forest Management and encourage village and individual woodlots	LGAs , Communities	Start 2007/08	TShs 12 Mio	Funding from LGA department budgets and Forestry Division
5. Strengthen and expand beekeeping	LGAs and NGOs	2007/08	TShs 20 Mio	Funding from LGA department budgets plus Forestry/Beekeeping division
<b>Mining</b>				
1. Activation of Rukwa Region Miners Association (RUREMA)	Zonal Mines Officer, District councils and RUREMA leaders	By June 2007		
2. Information delivery on minerals' prices to the miners	Zonal Mines Officer	Weekly		
3. Regular training of prospectors, miners and mineral traders (small scale)	Zonal Mines Officer, VETA and LGAs	July 2007 and June 2008		
4. Support miners to access capital and equipment	Zonal Mines Officer, LGAs and DPs	It depends on the supporters		
5. Dissemination of information on the recovered minerals available for sale	Zonal Mines Officer, RUREMA and LGAs	August 2007		
<b>Tourism</b>				
1. Development of Infrastructure (roads, airports)	GoT	Immediately		Allocating resources
2. Increasing publicity	TANAPA, RAS, LGAs, T.T.B	Within 12 Months		Using media, brochure
3. Improve communication	Tanzania Communications Regulatory Authority (TACRA)	Within 12 months		By communicating with TACRA
4. Maintain Peace and Security	Gov't, Community & Political parties	Within 12 months		Good Governance
Enforce anti- pouching	TANAPA, RAS/LGAs, Communities Anti pouching Unit	Continuous process	.	Increase personnel, More facilities' Public sensitizations against pouching

## **Annex 5: Maps**



