PMO-RALG

RUFIJI DC CWIQ
Survey on Poverty, Welfare and Services in Rufiji DC

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DEFINITIONS

General

Accessible Cluster	Within a district, accessible clusters are villages located closer to the district capital, all-weather roads, and public transport.
Remote Cluster	Within a district, remote clusters are villages located farther from the district capital, all-weather roads, and public transport.
Socio-economic Group	The socio-economic group of the household is determined by the type of work of the main income earner.
Poverty Predictors	Variables that can be used to determine household consumption expenditure levels in non-expenditure surveys.
Basic Needs Poverty Line	Defined as what a household, using the food basket of the poorest 50 percent of the population, needs to consume to satisfy its basic food needs to attain 2,200 Kcal/day per adult equivalent. The share of non-food expenditures of the poorest 25 percent of households is then added. The Basic Needs Poverty Line is set at TZS 7,253 per 28 days per adult equivalent unit in 2000/1 prices; households consuming less than this are assumed to be unable to satisfy their basic food and non-food needs.

Education

Literacy Rate	The proportion of respondents aged 15 years or older, who identify themselves as being able to read and write in at least one language.
Primary School Age	7 to 13 years of age
Secondary School Age	14 to 19 years of age
Satisfaction with Education	No problems cited with school attended.

Gross Enrolment Rate	The ratio of all individuals attending school, irrespective of their age, to the population of children of school age.
Net Enrolment Rate	The ratio of children of school age currently enrolled at school to the population of children of school age.
Non-Attendance Rate	The percent of individuals of secondary school-age who had attended school at some point and was not attending school at the time of the survey.

Health

Need for Health Facilities	An individual is classed as having experienced need for a health facility if he/she had suffered from a self-diagnosed illness in the four weeks preceding the survey.
Use of Health Facilities	An individual is classed as having used a health facility if he/she had consulted a health professional in the four weeks preceding the survey.
Satisfaction with Health Facilities	No problems cited with health facility used in the four weeks preceding the survey.
Vaccinations	BCG: Anti-tuberculosis DPT: Diphtheria, Pertussis3, Tetanus OPV: Oral Polio Vaccination
Stunting	Occurs when an individual's height is substantially below the average height in his/her age-group.
Wasting	Occurs when an individual's weight is substantially below the average weight for his/her height category.
Orphan	A child is considered an orphan when he/she has lost at least one parent and is under 18 years.
Foster child	A child is considered foster if neither his/her parents reside in the household

Employment

Working Individual	An individual who had been engaged in any type of work in the 4 weeks preceding the survey.
Underemployed Individual	An individual who was ready to take on more work at the time of the survey.
Non-working Individual	An individual who had not been involved in any type of work in the 4 weeks preceding the survey.
Unemployed Individual	An individual who had not been engaged in any type of work in the 4 weeks prior to the survey but had been actively looking for it.
Economically Inactive Individual	An individual who had not been engaged in any type of work in the 4 weeks prior to the survey due to reasons unrelated to availability of work (e.g. Illness, old age, disability).
Household duties	Household tasks (cleaning, cooking, fetching firewood, water, etc.) that do not entail payment
Household worker	A household worker performs household duties but received payment.
Household as employer	A person is said to be employed by his/her household if he/she does domestic/household work for the household they live in (e.g. a housewife or a child that works on his/her parents' fields or shop). It does not include people whose main job was domestic work for other households (private sector).

Welfare

Access to Facilities	A household is considered to have access to facilities if it is located within 30 minutes of travel from the respective facilities.

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Generic Core Welfare Indicators (2006)						
	Total	*Margin of error**	*Accessible*	*Remote*	*Poor*	*Non-poor*
Household characteristics						
Dependency ratio	1.0	0.0	1.0	1.0	1.3	0.8
Head is male	82.3	3.2	79.1	86.2	87.2	79.9
Head is female	17.7	3.3	20.9	13.8	12.8	20.1
Head is monagamous	54.0	3.6	54.7	53.3	60.9	50.6
Head is polygamous	22.6	2.7	15.3	31.3	21.2	23.3
Head is not married	23.3	4.6	30.0	15.4	17.8	26.1
Household welfare						
Household economic situation compared to one year ago						
Worse now	58.3	3.3	49.8	68.3	65.1	54.9
Better now	14.9	1.8	16.7	12.8	6.7	19.0
Neighborhood crime/security situation compared to one year ago						
Worse now	18.7	1.9	18.2	19.3	20.9	17.7
Better now	34.9	3.7	25.9	45.5	34.5	35.1
Difficulty satisfying household needs						
Food	41.6	3.5	45.7	36.7	68.0	28.6
School fees	1.4	0.5	1.0	1.7	1.0	1.5
House rent	0.9	0.6	1.1	0.5	0.8	0.9
Utility bills	0.5	0.5	0.9	0.0	0.0	0.7
Health care	28.8	2.8	31.2	26.0	41.9	22.4
Agriculture						
Land owned compared to one year ago						
Less now	1.4	0.6	2.1	0.7	1.8	1.3
More now	5.1	1.5	6.0	4.1	3.9	5.7
Cattle owned compared to one year ago						
Less now	0.3	0.3	0.5	0.0	0.9	0.0
More now	0.9	0.5	0.0	2.0	2.0	0.3
Use of agricultural inputs						
Yes	24.9	3.1	24.5	25.5	28.2	23.4
Fertilizers	3.6	1.8	5.3	1.7	0.0	5.8
Improved seedlings	38.2	8.8	56.6	17.3	21.8	48.0
Fingerlings	0.0	0.0	0.0	0.0	0.0	0.0
Hooks and nets	25.1	8.1	11.3	40.8	43.3	14.3
Insecticides	55.7	6.5	58.0	53.0	49.8	59.1
Other	0.0	0.0	0.0	0.0	0.0	0.0
Household infrastructure						
Secure housing tenure	3.9	1.8	7.2	0.0	0.0	5.9
Access to water	91.5	1.8	93.1	89.6	88.2	93.1
Safe water source	44.9	7.7	52.6	35.8	43.7	45.5
Safe sanitation	2.2	1.7	4.0	0.0	0.0	3.2
Improved waste disposal	26.5	4.3	19.5	34.9	25.1	27.3
Non-wood fuel used for cooking	0.0	0.0	0.0	0.0	0.0	0.0
Ownership of IT/Telecommunications Equipment						
Fixed line phone	0.0	0.0	0.0	0.0	0.0	0.0
Mobile phone	18.8	4.9	25.4	11.0	6.8	24.7
Radio set	64.8	2.0	64.4	65.2	54.5	69.8
Television set	1.1	0.6	2.1	0.0	0.0	1.7

	Total	Margin of error*	Accessible	Remote	Poor	Non-poor
Employment						
Employer in the main job						
Civil service	1.7	0.6	2.5	0.7	0.0	2.8
Other public serve	0.0	0.0	0.0	0.0	0.0	0.0
Parastatal	0.0	0.0	0.0	0.0	0.0	0.0
NGO	0.0	0.0	0.0	0.0	0.0	0.0
Private sector formal	1.9	0.7	3.1	0.4	0.0	3.1
Private sector informal	47.6	1.2	46.3	49.1	48.5	47.0
Household	45.3	1.1	43.7	47.1	48.7	43.1
Activity in the main job						
Agriculture	64.3	3.3	58.3	71.7	67.7	62.2
Mining/quarrying	0.0	0.0	0.0	0.0	0.0	0.0
Manufacturing	0.2	0.2	0.4	0.0	0.0	0.4
Services	2.4	0.6	2.8	1.9	2.0	2.6
Employment Status in last 7 days						
Unemployed (age 15-24)	0.7	0.7	1.2	0.0	0.0	1.2
Male	1.5	1.5	2.6	0.0	0.0	2.5
Female	0.0	0.0	0.0	0.0	0.0	0.0
Unemployed (age 15 and above))	0.4	0.4	0.7	0.0	0.0	0.7
Male	0.9	0.8	1.6	0.0	0.0	1.4
Female	0.0	0.0	0.0	0.0	0.0	0.0
Underemployed (age 15 and above)	38.6	1.4	39.7	37.2	40.0	37.6
Male	49.3	2.8	49.6	48.9	50.3	48.6
Female	28.9	2.4	31.0	26.1	30.8	27.6
Education						
Adult literacy rate						
Total	61.1	3.4	63.7	57.8	51.8	67.0
Male	71.9	4.1	73.0	70.6	58.5	80.3
Female	51.1	3.2	55.6	45.4	45.8	54.6
Youth literacy rate (age 15-24)						
Total	76.5	3.6	80.2	71.9	68.6	81.9
Male	79.4	3.5	81.3	76.8	72.1	84.3
Female	73.8	4.3	79.1	67.1	65.1	79.5
Primary school						
Access to School	67.6	5.6	69.8	65.0	66.8	68.7
Primary Gross Enrollment	118.7	6.2	117.6	120.1	114.7	123.9
Male	126.1	7.0	127.1	125.1	119.9	133.7
Female	110.6	7.0	107.8	114.3	109.4	112.4
Primary Net Enrollment	79.7	3.3	83.5	75.1	79.2	80.3
Male	80.5	3.5	82.9	77.7	77.0	84.7
Female	78.8	4.0	84.0	72.1	81.4	75.2
Satisfaction	37.7	4.8	46.5	27.3	40.2	34.7
Primary completion rate	7.6	1.6	8.8	6.1	5.3	10.6

	Total	Margin of error*	Accessible	Remote	Poor	Non-poor
Secondary school						
Access to School	13.6	8.8	24.1	1.5	5.0	21.6
Secondary Gross Enrollment	10.0	2.3	15.4	3.9	6.0	13.8
Male	10.5	3.1	13.7	6.2	4.4	16.9
Female	9.5	3.1	18.0	1.3	8.5	10.2
Secondary Net Enrollment	6.7	1.8	11.2	1.5	5.3	7.9
Male	4.6	1.7	6.9	1.7	3.4	6.0
Female	9.5	3.1	18.0	1.3	8.5	10.2
Satisfaction	19.8	10.2	15.6	38.6	10.1	23.7
Secondary completion rate	0.0	0.0	0.0	0.0	0.0	0.0
Medical services						
Health access	46.5	7.4	48.6	43.9	41.0	51.0
Need	21.7	1.6	22.1	21.4	17.6	25.2
Use	25.6	1.5	26.3	24.8	22.0	28.5
Satisfaction	47.6	2.9	46.5	49.0	44.7	49.4
Consulted traditional healer	4.2	1.1	3.4	5.2	4.6	4.0
Pre-natal care	100.0	0.0	100.0	100.0	100.0	100.0
Anti-malaria measures used	83.5	1.9	83.6	83.3	79.1	85.6
Person has physical/mental challenge	0.8	0.2	0.7	1.0	1.2	0.6
Child welfare and health						
Orphanhood (children under 18)						
Both parents dead	1.2	0.5	1.6	0.6	0.2	2.2
Father only	7.5	1.2	6.9	8.2	8.2	6.7
Mother only	1.3	0.4	1.9	0.6	1.4	1.2
Fostering (children under 18)						
Both parents absent	11.9	1.6	13.2	10.4	8.9	15.2
Father only absent	22.2	2.9	28.5	14.7	23.0	21.3
Mother only absent	3.2	0.7	3.0	3.4	4.0	2.2
Children under 5						
Delivery by health professionals	69.4	4.6	75.7	61.5	62.1	75.9
Measles immunization	69.3	3.0	71.5	66.6	62.3	75.7
Fully vaccinated	41.0	3.7	50.2	29.5	31.2	49.9
Not vaccinated	8.2	1.8	7.7	8.8	8.4	8.0
Stunted	27.6	3.0	25.9	29.8	33.2	22.5
Wasted	3.5	1.1	3.1	4.0	5.7	1.3
Underweight	17.7	2.3	15.1	21.2	23.0	12.9

** 1.96 standard deviations*

1 INTRODUCTION

1.1 The Rufiji District CWIQ

This report presents district level analysis of data collected in the Rufiji District Core Welfare Indicators Survey using the Core Welfare Indicators Questionnaire instrument (CWIQ).

The survey was commissioned by the Prime Minister's Office – Regional Administration and Local Governance and implemented by EDI (Economic Development Initiatives), a Tanzanian research and consultancy company. The report is aimed at national, regional and district level policy makers, as well as the research and policy community at large.

CWIQ is an off-the-shelf survey package developed by the World Bank to produce standardised monitoring indicators of welfare. The questionnaire is purposively concise and is designed to collect information on household demographics, employment, education, health and nutrition, as well as utilisation of and satisfaction with social services. An extra section on governance and satisfaction with people in public office was added specifically for this survey.

The standardised nature of the questionnaire allows comparison between districts and regions within and across countries, as well as monitoring change in a district or region over time.

Although beyond the purpose of this report, the results of Rufiji CWIQ could also be set against those of other CWIQ surveys that have are being implemented at the time of writing in other districts in Tanzania: Bahi DC, Bariadi DC, Bukoba DC, Bukombe DC, Bunda DC, Dodoma MC, Hanang DC, Karagwe DC, Kasulu DC, Kibondo DC, Kigoma DC, Kilosa DC, Kishapu DC, Korogwe DC, Kyela DC, Ludewa DC, Makete DC, Maswa DC, Meatu DC, Kahama DC, Mbulu DC, Morogoro DC, Mpwapwa DC, Muheza DC, Musoma DC, Ngara DC, Njombe DC, Ngorongoro DC, Singida DC, Songea DC, Sumbawanga DC, Tanga MC, Temeke MC. Other African countries that have implemented nationally representative CWIQ surveys include Malawi, Ghana and Nigeria.

1.2 Sampling

The Rufiji District CWIQ was sampled to be representative at district level. Data from the 2002 Census was used to put together a list of all villages in the district. In the first stage of the sampling process villages were chosen proportional to their population size. In a second stage the sub-village (kitongoji) was chosen within the village through simple random sampling. In the selected sub-village (also referred to

Table 1.1 Variables Used to Predict Consumption Expenditure in Pwani Region

Basic Variables	*Household Assets*
Age of the household head	Ownership of a radio
Number of household members	Ownership of a bicycle
Level of education of the household head	Ownerhip of an iron
Source of income of the household head	Main material in the roof
Main activity of the household head	Main material on the walls
	Land ownership
Household Amenities	Main material in the floors
Meat consumption	Ownership of a watch
Problems satisfying food needs	Ownerhip of a motor vehicle
Number of meals per day	Ownership of a wheelbarrow
Fuel used for cooking	Ownership of a sewing machine
	Village level variables
	% of households with piped water
	% of households with a bank account

Source: HBS 2000/2001 for Pwani Region

Table 1.2 : Predicted and Observed Poverty Rates, Pwani Region, 2000/01

Predicted	Observed		
	Non-Poor	Poor	Total
Non-Poor	60.5	13.1	73.5
Poor	6.5	20.0	26.5
Total	67.0	33.0	100.0

Source: HBS 2000/01 for Pwani Region

as cluster or enumeration area in this report), all households were listed and 15 households were randomly selected. In total 450 households in 30 clusters were visited. All households were given statistical weights reflecting the number of households that they represent.

A 10-page interview was conducted in each of the sampled households by an experienced interviewer trained by EDI. The respondent was the most informed person in the household, as identified by the members of the household. A weight and height measurement was taken by the interviewers for each individual under the age of 5 (60 months) in the surveyed households.

Finally, it is important to highlight that the data entry was done by scanning the questionnaires, to minimise data entry errors and thus ensure high quality in the final dataset.

1.3 Constructed variables to disaggregate tables

The statistics in most tables in this report will be disaggregated by certain categories of individuals or households. Some of these variables have been constructed by the analysts and, in the light of their prominence in the report, deserve more explanation. This chapter discusses some of the most important of these variables: poverty status, cluster location and socio-economic group.

1.3.1 Poverty Status

The poverty status of a household is obtained by measuring its consumption expenditures and comparing it to a poverty line. It is, however, difficult, expensive and time consuming to collect reliable household consumption expenditure data. One reason for this is that consumption modules are typically very lengthy. In addition, household consumption patterns differ across districts, regions and seasons; hence multiple visits have to be made to the household for consumption data to be reliable.

However, household consumption expenditure data allows more extensive and useful analysis of patterns observed in survey data and renders survey outcomes more useful in policy determination. Because of this, the Tanzanian government has become increasingly interested in developing ways of using non-expenditure data to predict household consumption and, from this, poverty measures.

There is a core set of variables that are incorporated in the majority of surveys. These variables inform on household assets and amenities, level of education of the household head, amount of land owned by the household and others. By observing the relation between these variables and consumption expenditure of the household in an expenditure survey, a relationship can be calculated. These variables are called poverty predictors and can be used to determine household expenditure levels in non-expenditure surveys such as CWIQ. This means that, for instance, a household that is headed by an individual who has post secondary school education, with every member in a separate bedroom and that has a flush toilet is more likely to be non-poor than one where the household head has no education, a pit latrine is used and there are four people per bedroom. This is, of course, a very simplified example; however, these are some of the variables used to calculate the relationship between such information and the consumption expenditure of the household.

For the purpose of this report, the data collected in the Household Budget Survey 2000/01 (HBS) was used to select the poverty predictors and determine the quantitative relationship between these and household consumption. The five-year gap is far from ideal, but the data itself is reliable and is the most recent source of information available. Work was then done to investigate the specific characteristics of Rufiji in order to ensure that the model developed accurately represents this particular district.

Some caveats are in order when tabulating variables used as poverty predictors on poverty status. Poverty status is defined as

Table 1.3: Cluster Location

	Median Time (in minutes) to:				
	District Capital	All-Weather Road	Public Transport	Poverty Rate	Estimated Number of Households
Cluster Location					
Remote	60.0	95.0	480.0	32.1	24,675
Accessible	10.0	7.0	300.0	33.6	29,955

Source: CWIQ 2006 Rufiji DC

a weighted average of the poverty predictors; hence it should come as no surprise that poverty predictors are correlated to them. For instance, education of the household head is one of the variables included in the equation used to calculate household consumption. The relationship is set as a positive one, consequently when observing the patterns in the data this relationship may be positive by construction. Table 1.1 lists the variables that have been used to calculate predicted household consumption expenditure.

Once the consumption level of a household has been predicted, it is compared to the Basic Needs Poverty Line set by National Bureau of Statistics (NBS) on the basis of the 2000/01 HBS. The Basic Needs Poverty Line is defined by what a household, using the food basket of the poorest 50 percent of the population, needs to consume to satisfy its basic food needs to attain 2,200 Kcal/day per adult equivalent. The share of non-food expenditures of the poorest 25 percent of households is then added. With this procedure, the Basic Needs Poverty Line is set at TZS 7,253 per 28 days per adult equivalent unit in 2000/01 prices. Households consuming less than this are assumed to be unable to satisfy their basic food and non-food needs1.

The Rufiji 2006 CWIQ uses poverty predictors to classify households as poor or non-poor, i.e. to determine whether a household's monthly consumption per adult equivalent unit is below or above the Basic Needs Poverty Line. This binary approach generates two types of mistakes associated with the prediction:

1. A poor household is predicted to be non-poor
2. A non-poor household is predicted to be poor

One way of determining the accuracy of the poverty predictors is to see how many mistakes of each type the model makes. To do this the poverty predictor model is applied to the actual consumption expenditure data. Results of this exercise are presented in Table 1.2. The model wrongly predicts a non-poor household to be poor in 6.5 percent of the cases, and vice versa in 13.1 percent of the households. This gives an overall percentage of correct predictions of 80.4 percent.

When the model is applied to the CWIQ 2006 data for Rufiji DC, the share of households living in poverty is 33 percent, with a 95 percent confidence interval ranging from 27.5 to 38.3 percent However, it must be kept in mind that the aim of the model is not estimating poverty rates, but determining the characteristics of the poor population. Hence, the accuracy of the model does not hinge on the closeness between the estimated and actual poverty rate; but on the percentage of correct predictions as indicated in Table 1.2.

Expenditure surveys, such as the 2000/2001 Household Budget Survey, are much better suited for informing on poverty rates. However, such large scale surveys have insufficient number of observations to inform on district-level trends. The Rufiji CWIQ, on the other hand, is sufficiently large to allow detailed district-level analysis. The accuracy with which households can be classified by poverty status using the CWIQ gives credence to the use of predicted poverty level as a variable throughout this report.

[1] The exact procedure by which this line has been set is described in detail in the 2000/01 HBS report: National Bureau of Statistics, 2002, '*2000/2001 Tanzania Household Budget Survey*'.

Table 1.4: Socio-economic Group, Poverty Rate, and Location

	Poverty Rate	Percentage Living in Remote Clusters	Percentage Living in Accessible Clusters
Socio-Economic Group			
Employees	0.0	79.3	20.7
Self-Employed Agriculture	35.2	49.7	50.3
Self-Employed Other	31.7	64.6	35.4
Other	62.5	43.5	56.5

Source: CWIQ 2006 Rufiji DC

1.3.2 Cluster Location

Cluster Location is constructed on the basis of self-reported travel time of the household to three different locations: the nearest place to get public transport, the nearest all-weather road and the district capital. Travel time is probed for by the household's most commonly used form of transport. For each household, the average travel time is taken across these three locations. For each cluster, the median of the 15 means is calculated. All clusters are then ranked according to this median. The 15 clusters with the lowest median are labelled as accessible and the 15 clusters with the highest median are labelled as remote. Table 1.3 shows the median of each of the variables used to construct the cluster location.

Table 1.3 shows the median time to the district capital, all-weather road and public transport for remote and accessible villages. Despite the differences in time to get to these facilities, the poverty rate is similar between accessible and remote villages.

1.3.3 Socio-economic Group

The socio-economic group that a household belongs to depends on the employment of the household head. Throughout the report heads employed in the private sectors, formally or informally, as well as Government and Parastatal employees are categorised as 'Employees'. Self-employed individuals are divided into two groups, depending on whether they work in agriculture ('Self-employed agriculture') or in trade or professional sectors ('Self-employed other'). Finally, those who worked in other activities or who had not been working for the 4 weeks preceding the survey are classed as 'other'.

Table 1.4 shows that the poverty rate is highest for households whose main income earner is the 'other' socio-economic group (unemployed, inactive, unpaid or household worker), at a rate of 63 percent. In turn, poverty is lowest for households where the main income earner is an employee, at 0 percent. The rates do not vary widely between self-employed in agriculture and self-employed in non-agricultural activities, at 35 and 32 percent, respectively. In addition, the employees are the most likely to be located in remote villages, at 79 percent, whereas the 'other' socio-economic group is the most likely to be located in accessible villages, at 57 percent, followed by the self-employed in agriculture, at 50 percent.

The gender composition of the socio-economic group is shown in Table 1.5. 83 percent of households are headed by a male. The share of female-headed households is lowest for the self-employed

Table 1.5: Socio-economic Group of the Household and Gender of the Household Head

	Male	Female	Total
Socio-economic Group			
Employees	77.2	22.8	100.0
Self-Employed Agriculture	82.9	17.1	100.0
Self-Employed Other	85.3	14.7	100.0
Other	56.6	43.4	100.0
Total	82.3	17.7	100.0

Source: CWIQ 2006 Rufiji DC

in agriculture and the self-employed in non-agricultural activities at 17 and 15 percent, respectively, and highest for the 'other' socio-economic category at 43 percent.

Table 1.6 shows the breakdown of socio economic groups by main activity of the household heads. As expected, the main economic activity in the district is agriculture, to which 63 percent of the household heads are dedicated. Employees are mostly dedicated to mining, manufacturing, energy or construction, with a share of 91 percent. The self-employed in non-agricultural activities are mostly dedicated to services (86 percent). The 'other' category reports 68 percent of its household heads working in agriculture with 19 percent in other activities and 14 percent in household duties.

Table 1.6: Socio-economic Group of the Household and Main Economic Activity of the Household Head

	Agriculture	Mining Manufacturing Energy Construction	Private and Public Services	Household Duties	Other	Total
Socio-economic Group						
Employees	4.2	91.0	4.9	0.0	0.0	100.0
Self-Employed Agriculture	84.2	0.0	11.1	1.6	3.2	100.0
Self-Employed Other	13.1	0.0	85.9	1.0	0.0	100.0
Other	67.7	0.0	0.0	13.8	18.5	100.0
Total	63.1	5.0	27.5	1.7	2.7	100.0

Source: CWIQ 2006 Rufiji DC

1 Introduction

2 VILLAGE, POPULATION AND HOUSEHOLD CHARACTERISTICS

2.1 Introduction

This chapter provides an overview of the Rufiji DC households and population characteristics. The main population characteristics are presented in section two. Section three presents the main characteristics of the households, such as area of residence, poverty status, number of members, and dependency ratio. The same analysis is then conducted for the household heads in section four. An examination of orphan and foster status in the district concludes the chapter.

2.2 Main Population Characteristics

Table 2.1 shows the percent distribution of the population by cluster location and poverty status, by gender and age. Overall, the district's population is young. For instance, 8 percent of the population is 60 years old or over, whereas 45 percent is under 15 years old. The remaining 48 percent is between 15 and 59 years old. There are no strong differences by cluster location, but poor households have a higher share in the 0-14 age-group and lower share in the 15-59 age-group than non-poor households.

The dependency ratio of the district's households is shown in Table 2.2. The dependency ratio is the number of household members under 15 and over 64 years old (the dependant population) over the number of household members aged between 15 and 64 (the working age population). The result is the average number of people each adult at working age takes care of.

The mean dependency ratio is 1.0, meaning that on average one adult has to take care of 1 person. The breakdown by cluster location does not show strong differences. However, the breakdown by poverty status shows that poor households have a higher dependency rate than non-poor households, at 1.3 and 0.8 respectively.

The dependency ratio increases with the number of household members, from 0.3 for households with 1 or 2 members, to 1.3 for households with 7 or more members. The breakdown by socio-economic group of the household shows that the 'other' group has the highest dependency ratio (1.2), whereas the employees have the lowest ratio (0.5).

There appears to be no strong correlation between gender and dependency ratio of the households.

Table 2.3 shows the percent distribution of households by number of household members. The mean household size is 4.6 individuals. Households with at most two individuals only represent 19 percent of all households in the district. The figure for households with 3 or 4 members is 35 percent.

The breakdown by cluster location shows that households in accessible villages tend to be larger than households in remote villages, with means of 4.6 and 4.5

Table 2.1: Percent distribution of total population by gender and age

	Male				Female				Total			
	0-14	15-59	60+	Total	0-14	15-59	60+	Total	0-14	15-59	60+	Total
Total	23.8	22.2	4.3	50.4	20.7	25.6	3.4	49.6	44.5	47.8	7.8	100.0
Cluster Location												
Accessible	23.3	22.3	4.0	49.6	20.5	26.2	3.7	50.4	43.9	48.5	7.6	100.0
Remote	24.4	22.2	4.8	51.3	20.8	24.7	3.1	48.7	45.2	46.9	7.9	100.0
Poverty Status												
Poor	28.5	18.1	4.5	51.2	23.4	22.1	3.3	48.8	51.9	40.3	7.9	100.0
Non-poor	20.0	25.5	4.2	49.7	18.5	28.4	3.5	50.3	38.4	53.9	7.7	100.0

Source:CWIQ 2007 Rufiji DC

Table 2.2: Dependency ratio

	0-4 years	5-14 years	0-14 years	15-64 years	65+ years	Total	Dependency ratio
Total	0.8	1.2	2.0	2.3	0.2	4.6	1.0
Cluster Location							
Accessible	0.8	1.2	2.0	2.3	0.2	4.6	1.0
Remote	0.8	1.3	2.0	2.3	0.2	4.5	1.0
Poverty Status							
Poor	1.1	2.1	3.2	2.7	0.3	6.2	1.3
Non-poor	0.6	0.8	1.4	2.1	0.2	3.7	0.8
Household size							
1-2	0.0	0.0	0.0	1.2	0.3	1.6	0.3
3-4	0.7	0.6	1.3	2.0	0.2	3.5	0.8
5-6	1.0	1.6	2.6	2.7	0.2	5.5	1.0
7+	1.4	2.9	4.4	3.5	0.3	8.1	1.3
Socio-economic Group							
Employee	0.6	0.8	1.4	3.0	0.1	4.4	0.5
Self-employed - agric	0.8	1.3	2.1	2.2	0.2	4.6	1.0
Self-employed - other	1.0	1.1	2.0	2.3	0.2	4.5	0.9
Other	0.5	1.4	1.9	2.4	0.8	5.1	1.2
Gender of Household Head							
Male	0.8	1.3	2.1	2.4	0.2	4.8	1.0
Female	0.6	0.9	1.5	1.8	0.3	3.6	1.0

Source:CWIQ 2007 Rufiji DC

Table 2.3: Percent distribution of households by number of household members

	1-2 persons	3-4 persons	5-6 persons	7+ persons	Total	household size
Total	18.8	35.4	26.0	19.7	100.0	4.6
Cluster Location						
Accessible	19.0	35.7	24.3	21.0	100.0	4.6
Remote	18.7	35.1	28.0	18.2	100.0	4.5
Poverty Status						
Poor	3.3	19.8	30.3	46.6	100.0	6.2
Non-poor	26.5	43.0	23.9	6.5	100.0	3.7
Socio-economic Group						
Employee	14.9	50.8	14.6	19.7	100.0	4.4
Self-employed - agric	18.8	33.0	28.5	19.7	100.0	4.6
Self-employed - other	18.1	39.7	23.4	18.7	100.0	4.5
Other	34.0	22.6	13.9	29.6	100.0	5.1
Gender of Household Head						
Male	15.8	34.7	27.5	22.0	100.0	4.8
Female	33.0	38.6	19.1	9.3	100.0	3.6

Source:CWIQ 2007 Rufiji DC

members, respectively. The difference by poverty status is more pronounced, with poor households reporting a mean household size of 6.2 members, and non-poor households reporting 3.7 members on average.

Regarding socio-economic groups, the employees have the lowest mean household size, at 4.4, while the 'other' socio-economic group has the highest at 5.1 members. Finally, households headed by males are larger than female-headed households: the former have 4.8 members in average, whereas the latter have 3.6 members.

2.3 Main Household Characteristics

Table 2.4 shows the percent distribution of total population by relationship to the head of household.

No particular trends emerge when analysing by cluster location. However, the analysis by poverty status shows that the share of 'child' is higher in poor households, whereas non-poor households report higher shares of 'head' and 'spouse'.

When analysing by age-groups, it is clear that the category 'other relatives' is mostly comprised by children under 19 years old. This highlights the importance of the analysis of fostering and orphan status. After the age of 30, most of the population is either head of their own household or

Table 2.4: Percent distribution of total population by relationship to head of household

	Head	Spouse	Child	Parents	Other relative	Not related	Total
Total	21.9	17.1	43.4	1.2	15.0	1.3	100.0
Cluster Location							
Accessible	21.8	15.2	42.2	1.8	16.6	2.3	100.0
Remote	22.1	19.3	44.9	0.5	13.0	0.2	100.0
Poverty Status							
Poor	16.0	13.7	49.2	1.6	17.7	1.8	100.0
Non-poor	26.8	19.8	38.8	0.9	12.8	0.9	100.0
Age							
0- 9	0.0	0.0	80.1	0.0	18.2	1.7	100.0
10-19	0.2	3.9	63.6	0.0	30.1	2.3	100.0
20-29	28.1	43.8	17.6	0.0	9.1	1.5	100.0
30-39	47.1	42.7	6.7	0.0	3.4	0.0	100.0
40-49	57.9	36.7	3.2	0.0	2.3	0.0	100.0
50-59	63.3	27.3	0.9	3.9	4.5	0.0	100.0
60 and above	64.0	15.2	0.0	13.2	6.5	1.1	100.0
Gender							
Male	35.8	0.4	46.8	0.4	15.3	1.3	100.0
Female	7.8	34.0	40.1	2.1	14.7	1.3	100.0

Source:CWIQ 2007 Rufiji DC

Table 2.5: Percent distribution of the total population age 12 an above by marital status

	Never married	Married monog	Married polyg	Informal, loose union	Divorced	Separated	Widowed	Total
Total	32.9	38.8	16.1	0.8	1.0	5.7	4.8	100.0
Cluster Location								
Accessible	34.8	39.4	10.4	0.6	1.4	7.9	5.5	100.0
Remote	30.6	38.0	23.0	1.0	0.5	3.0	3.9	100.0
Poverty Status								
Poor	39.9	35.7	12.1	0.9	1.4	4.8	5.2	100.0
Non-poor	27.9	41.0	18.9	0.7	0.7	6.3	4.5	100.0
Age								
12-14	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
15-19	91.3	8.4	0.0	0.0	0.0	0.4	0.0	100.0
20-24	39.6	50.9	5.6	0.0	0.0	3.3	0.6	100.0
25-29	13.4	61.9	13.7	0.8	2.3	7.9	0.0	100.0
30-39	6.0	60.8	21.1	0.6	2.3	6.6	2.5	100.0
40-49	1.8	52.0	28.3	1.7	0.6	13.5	2.1	100.0
50-59	0.8	39.6	37.3	2.5	0.7	8.0	11.0	100.0
60 and above	0.4	36.2	28.5	1.1	1.6	7.3	25.0	100.0
Gender								
Male	40.4	39.7	15.9	0.8	0.3	1.5	1.4	100.0
Female	25.8	37.9	16.2	0.7	1.7	9.6	8.1	100.0

Source:CWIQ 2007 Rufiji DC

Table 2.6: Percent distribution of the total population age 5 and above by socio-economic group

	Employee	Self-employed Agriculture	Self-employed Other	Other	Total
Total	1.9	24.0	9.1	65.1	100.0
Cluster Location					
Accessible	2.9	22.1	10.8	64.2	100.0
Remote	0.7	26.2	7.0	66.1	100.0
Poverty Status					
Poor	0.0	21.1	6.7	72.2	100.0
Non-poor	3.4	26.3	11.0	59.3	100.0
Age					
5- 9	0.0	0.0	0.0	100.0	100.0
10-14	0.0	0.0	0.0	100.0	100.0
15-19	0.0	5.0	5.9	89.1	100.0
20-29	1.2	20.1	23.3	55.4	100.0
30-39	4.4	42.3	17.5	35.7	100.0
40-49	6.0	53.7	11.1	29.2	100.0
50-59	5.4	62.2	6.3	26.1	100.0
60 and above	2.0	56.9	6.7	34.4	100.0
Gender					
Male	2.4	31.5	13.4	52.7	100.0
Female	1.4	16.4	4.6	77.6	100.0

Source:CWIQ 2007 Rufiji DC

spouse to the head of the household.

The gender breakdown shows that males are more likely to be household heads than females, with shares of 36 and 9 percent, respectively. In turn, females are more likely to be spouses to the household head than males, at rates of 34 and less than 1 percent, respectively.

Table 2.5 shows the percent distribution of the population age 12 and above by marital status. Overall, 33 percent of the population has never been married. In addition, 39 percent is married and monogamous, and 16 percent is married and polygamous. 6 percent of the population is 'unofficially' separated, 5 percent is widowed, informal unions and divorced constitute 1 percent each.

The breakdown by cluster location reveals that households from remote villages report a higher share in a polygamous marriage than their counterparts. Further breakdown by poverty status shows that members of poor households are more likely to have never been married, whereas members of non-poor households are more likely to be in a monogamous marriage.

The age breakdown shows that the 'polygamous-married' category peaks for the 50-59 group, at 37 percent. For the population after 25 years old, married-monogamous is the most common category. 'Separated' and 'widowed' show higher shares for the older cohorts. 'Never married' also shows correlation with age, decreasing rapidly as the population gets older.

Around 40 percent of the men have never been married, but for women the figure is only 26 percent. While 8 percent of women are widowed and 10 percent separated, the shares for males are 1 and 2 percent, respectively.

Table 2.6 shows the percent distribution of the population age 5 and above by socio-economic group. Overall, 24 percent of the population is self-employed in agriculture, with 65 percent in other activities. No strong differences are observed between accessible and remote villages. The breakdown by poverty status shows that non-poor households have a higher share in the 'self-employed agriculture' category than poor households, while the latter report a higher share of 'other' (unemployed, inactive unpaid, or household workers) than the former.

Table 2.7: Percent distribution of the total population age 5 and above by highest level of education

	None	Nursery school	Some primary	Completed primary	Some secondary	Completed secondary	Post secondary	Total
Total	39.9	1.6	29.7	22.2	2.5	0.0	4.1	100.0
Cluster Location								
Accessible	36.7	1.7	30.9	22.7	3.5	0.0	4.5	100.0
Remote	43.6	1.6	28.4	21.5	1.2	0.0	3.7	100.0
Poverty Status								
Poor	46.5	1.6	33.3	17.0	0.8	0.0	0.8	100.0
Non-poor	34.5	1.6	26.9	26.4	3.8	0.0	6.8	100.0
Age								
5- 9	78.1	7.5	14.4	0.0	0.0	0.0	0.0	100.0
10-14	11.1	1.5	87.1	0.3	0.0	0.0	0.0	100.0
15-19	14.5	0.0	51.5	29.8	4.1	0.0	0.0	100.0
20-29	34.8	0.0	12.3	41.5	8.1	0.0	3.4	100.0
30-39	29.4	0.0	17.4	44.4	3.5	0.0	5.3	100.0
40-49	27.5	0.0	15.3	49.1	0.0	0.0	8.1	100.0
50-59	48.9	0.0	22.4	14.1	2.0	0.0	12.6	100.0
60 and above	67.6	0.0	15.9	3.0	0.0	0.0	13.5	100.0
Gender								
Male	34.7	1.3	33.8	22.0	3.3	0.0	4.8	100.0
Female	45.1	1.9	25.6	22.4	1.6	0.0	3.4	100.0

Source:CWIQ 2007 Rufiji DC

Table 2.8: Percent distribution of heads of household by marital status

	Never married	Married monogamous	Married polygamous	Informal, loose union	Divorced Separated Widowed	Total
Total	4.5	54.0	22.6	1.1	17.8	100.0
Cluster Location						
Accessible	6.5	54.7	15.3	0.9	22.7	100.0
Remote	2.1	53.3	31.3	1.4	12.0	100.0
Poverty Status						
Poor	2.2	60.9	21.2	1.6	14.0	100.0
Non-poor	5.6	50.6	23.3	0.8	19.7	100.0
Age						
15-19	100.0	0.0	0.0	0.0	0.0	100.0
20-29	14.0	64.9	5.7	0.0	15.4	100.0
30-39	6.6	66.3	14.2	1.3	11.6	100.0
40-49	0.0	51.6	23.0	1.8	23.6	100.0
50-59	0.0	46.5	34.4	1.4	17.7	100.0
60 and above	0.6	40.2	36.6	0.9	21.7	100.0
Gender						
Male	3.3	65.3	26.6	0.6	4.2	100.0
Female	10.0	1.3	4.1	3.5	81.1	100.0

Source:CWIQ 2007 Rufiji DC

The analysis by age-groups is particularly interesting. The share of employees peaks at 6 percent for the 40-49 cohort. The share for self-employed other is higher for the population in the 20-29 age-group, at around 23 percent. The share of self-employed in agriculture tends to increase with age, peaking at 62 percent for the 50-59 cohort. On the contrary, the category 'other' tends to decrease with age, showing a sharp decrease between 15-19 and 20-29, from 89 to 55 percent, then decreases steadily until 26 percent for the 50-59 cohort.

The gender breakdown shows that males are more likely to be self-employed (whether in agriculture or non-agricultural activities) than women. In turn, females are more likely to be in the 'other'

Table 2.9: Percent distribution of heads of household by socio-economic group

	Employed	Self-employed Agriculture	Self-employed Other	Other	Total
Total	6.2	67.7	23.3	2.8	100.0
Cluster Location					
Accessible	9.3	60.4	26.9	3.3	100.0
Remote	2.5	76.3	19.1	2.1	100.0
Poverty Status					
Poor	0.0	72.3	22.4	5.3	100.0
Non-poor	9.2	65.4	23.8	1.6	100.0
Age					
15-19	0.0	100.0	0.0	0.0	100.0
20-29	1.2	49.9	48.8	0.0	100.0
30-39	8.3	61.0	30.7	0.0	100.0
40-49	10.0	72.5	13.6	3.9	100.0
50-59	8.5	79.3	11.0	1.3	100.0
60 and above	3.1	76.3	12.4	8.1	100.0
Gender					
Male	5.8	68.1	24.2	1.9	100.0
Female	8.0	65.7	19.4	6.9	100.0

Source:CWIQ 2007 Rufiji DC

category, with a share of 78 percent against 53 percent of males.

Table 2.7 shows the percent distribution of the population aged 5 and above by highest level of education. Roughly 40 percent of the population has no education, 30 percent has some primary, and 22 percent has completed primary. The remaining levels have shares of at most 4 percent each.

The breakdown by cluster location shows that households from remote villages report a higher share of population with no education than households from accessible villages at 44 and 37 percent respectively. Both report similar shares for the remaining levels of education.

The age breakdown shows that 78 percent of the children between 5 and 9 years old have no formal education, but 91 percent of the children in the 10-14 age-group have some or complete primary. Rates of no education are lowest for the population in the 15-19 cohort (15 percent) and higher for the older groups. In the groups between 20 and 39 years old, the most common is complete primary.

The gender breakdown shows that females have a higher share of uneducated population than males: 45 against 35 percent, but at the same time similar shares with complete primary. The share of males reporting some primary is higher than that of females (34 and 26 percent, respectively).

2.4 Main Characteristics of the Heads of Household

Table 2.8 shows the percent distribution of household heads by marital status. Overall, 54 percent of the household heads is married and monogamous, 18 percent is divorced, separated or widowed, 23 percent married and polygamous, 5 percent has never been married and a further 1 percent lives in an informal union.

The breakdown by cluster location shows that remote villages report a higher share of married polygamous than accessible villages at 31 and 15 percent respectively. In turn, the latter report a higher share in widowed, divorced or separated than the former at 23 and 12 percent respectively.

Regarding poverty status, heads of non-poor households are more likely to be single (never married, divorced, separated or widowed), while heads of poor households are more likely to be in a monogamous marriage.

The breakdown by age-group shows that the ‘married-monogamous’ category decreases with age, as ‘married-

Table 2.10: Percent distribution of heads of household by highest level of education

	None	Some primary	Completed primary	Some secondary	Completed secondary	Post secondary	Total
Total	31.2	19.1	35.5	2.9	0.0	11.3	100.0
Cluster Location							
Accessible	30.1	20.6	33.9	4.0	0.0	11.4	100.0
Remote	32.4	17.4	37.5	1.6	0.0	11.2	100.0
Poverty Status							
Poor	49.2	14.9	31.7	1.4	0.0	2.8	100.0
Non-poor	22.3	21.2	37.4	3.7	0.0	15.4	100.0
Age							
15-19	100.0	0.0	0.0	0.0	0.0	0.0	100.0
20-29	28.0	14.3	45.2	4.2	0.0	8.3	100.0
30-39	19.9	16.6	50.3	6.9	0.0	6.3	100.0
40-49	17.8	13.9	59.7	0.0	0.0	8.6	100.0
50-59	35.0	27.7	17.6	3.1	0.0	16.6	100.0
60 and above	53.5	24.2	4.7	0.0	0.0	17.6	100.0
Gender							
Male	28.0	21.0	36.6	3.5	0.0	10.9	100.0
Female	45.7	10.5	30.7	0.0	0.0	13.1	100.0

Source:CWIQ 2007 Rufiji DC

polygamous' and 'divorced, separated or widowed' increase.

Most female household heads are divorced, separated or widowed (81 percent), whereas for males, this category roughly represents 4 percent. Most male household heads are married, monogamous or polygamous (65 and 27 percent, respectively). In addition, females are more likely to have never been married than males at 10 and 3 percent respectively.

Table 2.9 shows the percent distribution of household heads by socio-economic group. It is worth remembering that the socio-economic group of the household is determined by the type of employment of the main income earner of the household, who is not always the household head. As expected, the great majority of the district's household heads belongs to the 'self-employed agriculture' category, with a share of 68 percent. The self-employed in non-agricultural activities represent 23 percent of the household heads, the 'other' category (unemployed, inactive and household workers) represents 3 percent, and the employees are a further 6 percent.

The analysis by cluster location shows that the share of household heads self-employed in agriculture in remote villages is higher than in accessible villages, at 76 and 60 percent, respectively. In accessible villages, household heads are more likely to be in the 'self-employed other' group than heads of households in remote villages, with shares of 27 and 19 percent, respectively.

Heads of poor households belong to the 'self-employed agriculture' group more frequently than non-poor households. On the other hand, the heads of non-poor households belong to the 'employee' group more often than the heads of poor households.

The breakdown by age of the household head shows interesting insights. For all age-groups, 'self-employed agriculture' is the most important category, representing at least 3 out of 5 household heads in each age-group. The 'employee' category peaks at 10 percent for the 40-49 age-group. The 'self-employed other'category is lower for the 50-59 and 60+ cohorts. The 'other' category gains importance in the 60+ age-group, with a share of 8 percent, as it includes the economically inactive population.

The breakdown by gender of the household head shows that in male-headed households, the main income earner is more likely to be self-employed in non-agricultural activities than in female-headed households. In the latter, the main income earner is more likely to be in the 'other' category than in the former.

Table 2.10 shows the percent distribution of the heads of household by highest level

Table 2.11 - Orphan status of children under 18 years old

	Children who lost mother only	Children who lost father only	Children who lost both father & mother
Total	1.3	7.5	1.2
Cluster Location			
Accessible	1.9	6.9	1.6
Remote	0.6	8.2	0.6
Poverty Status			
Poor	1.4	8.2	0.2
Non-poor	1.2	6.7	2.2
Age			
0-4	0.2	2.3	0.2
5-9	1.2	5.0	0.0
10-14	2.3	14.8	2.8
15-17	2.6	14.2	3.4
Gender			
Male	1.6	7.3	1.6
Female	1.0	7.6	0.6

Source:CWIQ 2007 Rufiji DC

of education. Overall, around 14 percent of the household heads have any education after primary. 31 percent of the household heads have no education, 19 percent have some primary and 36 percent have complete primary.

The breakdown by cluster location shows no strong correlation with education level of the household heads. However, poverty status is strongly correlated with the education of the household heads. This should be no surprise, since education of the household head is one of the poverty predictors used to define poverty status. However, the difference is still important: household heads from poor households are more likely to have no education than heads from non-poor households, whereas the latter are more likely to have complete primary or post secondary studies than the former.

The age breakdown shows that 54 percent of household heads aged 60 or over has no education, and a further 24 percent just some primary. Complete primary represents almost 60 percent for the 40-49 age-group; but only 18 percent in the 50-59 cohort, and 5 percent of the 60+ cohort. In the latter groups, 'post secondary' gains importance.

The analysis by gender shows that female household heads are more likely to have no education than males, with rates of 46 and 28 percent, respectively. Males report a higher share with some primary than females. Furthermore, 37 percent of the male household heads have complete primary, against 31 percent of females.

2.5 Orphan and Foster Status

Table 2.11 shows the percent distribution of children under 18 years old who have lost at least one parent. Overall, about 1 percent of children under 18 lost both parents, a further1 percent lost only their mother and 8 percent lost only their father. This amounts to 10 percent of all children under 18 who lost at least one parent at the time of the survey.

The age breakdown shows that orphan status is correlated with age: as can be expected older children are more likely to be orphans than younger children. Around 20 percent of the children between 15 and 17 years lost at least one parent, and 14 of the children in that age-group lost their father. There does not seem to be a gender trend in orphan status.

The percent distribution of children under 18 years old by foster status is shown in Table 2.12. A child is defined as living in a nuclear household when both parents live in the household and as living in a non-nuclear household when at least one parent is absent from the household. Note that this makes it a variable defined at the level of the child, rather than the household (a household may be nuclear with respect to one child, but not with respect to another). The table shows that 37 percent of children under 18 were living in non-nuclear households at the time of the survey.

Children from accessible villages are more likely to live in non-nuclear households than children from remote villages, at 45 and 29 percent, respectively. In turn, 15 percent of children from non-poor households live without parents, while the share for poor households is 9 percent.

The analysis by age-groups shows that the share of children living in non-nuclear households increases with age, but is lower and relatively constant for children living with their father only.

There appears to be no strong correlation between gender and foster status.

Table 2.12 - Foster status of children under 18 years old

	Children living with mother only	Children living with father only	Children living with no parents	Children living in non-nuclear households
Total	22.2	3.2	11.9	37.3
Cluster Location				
Accessible	28.5	3.0	13.2	44.7
Remote	14.7	3.4	10.4	28.5
Poverty Status				
Poor	23.0	4.0	8.9	35.9
Non-poor	21.3	2.2	15.2	38.8
Age				
0-4	21.2	1.1	1.6	24.0
5-9	21.7	4.6	10.5	36.9
10-14	23.1	3.5	22.0	48.6
15-17	24.3	4.6	24.9	53.8
Gender				
Male	21.1	2.5	12.0	35.5
Female	23.5	4.0	11.8	39.3

Source:CWIQ 2007 Rufiji DC

2 Village, population and household characteristics

3 EDUCATION

This chapter examines selected education indicators in Rufiji district. These include literacy rate, access to schools, satisfaction rate, dissatisfaction rate and enrolment.

The first section presents an overview on selected education indicators. The second section provides information on dissatisfaction and non-attendance along with the reasons behind them. School enrolment and drop-out rates are presented in the fourth section. These give a picture on the enrolment patterns according to the age of pupils. The final section of the chapter gives information on adult and youth literacy status within the district.

3.1 Overview of the Education indicators

3.1.1 Literacy

Table 3.1 shows the main education indicators for the district. Literacy is defined as the ability to read and write in any language, as reported by the respondent. Individuals who are able to read but cannot write are considered illiterate. The adult literacy rate[1] is 61 percent. Literacy rates differ between accessible and remote villages at 64 and 58 percent respectively.
There is a large difference in literacy rate among individuals living in poor and non-poor households. Whereas the literacy rate among non-poor households stands at 67 percent, the individuals in poor households have a literacy rate of 52 percent.

The breakdown by socio-economic group of the household shows that literacy rates are higher among the employees (92 percent) than those in the remaining categories.

The gender breakdown shows an important literacy rate gap between men and women. The literacy rate among men is 21 percentage points higher than that of women at 72 percent and 51 percent respectively.

Orphan status and foster status are not strongly correlated to adult literacy rate.

3.1.2 Primary School Access, Enrolment and Satisfaction

Access

Primary school access rate is defined as the proportion of primary school-age children (7 to 13 years) reporting to live within 30 minutes of the nearest primary school. Over two-thirds (68 percent) of primary school-age children live within 30 minutes of a primary school. Primary school access is higher in accessible villages than in remote villages at 70 and 65 percent respectively.

The breakdown by socio-economic group shows that children leaving in households belonging to the ‘employee’ or ‘other’ categories have higher access rates to primary schools than children from the remaining socio-economic groups.

The breakdown by gender of the household head shows that the primary school access rate is higher among children from female-headed households than among children from male-headed households at 71 and 64 percent respectively.

Non-orphaned children have a higher access rate to primary schools than orphaned children, at 68 and 63 percent, respectively. However, the converse is observed for fostered children: 72 percent of fostered children have access to primary schools, whereas the rate for non-fostered children is 67 percent. There appears to be no strong correlation between poverty status and access to primary school.

[1] The Adult literacy rate is defined for the population aged 15 and over.

Table 3.1: Education indicators

		Primary				Secondary			
	Adult Literacy rate	access	gross enrollment	net enrollment	satisfaction	access	gross enrollment	net enrollment	satisfaction
Total	61.1	67.6	118.7	79.7	37.7	5.4	10.0	6.7	19.8
Cluster Location									
Accessible	63.7	69.8	117.6	83.5	46.5	9.6	15.4	11.2	15.6
Remote	57.8	65.0	120.1	75.1	27.3	0.6	3.9	1.5	38.6
Poverty Status									
Poor	51.8	66.8	114.7	79.2	40.2	4.2	6.0	5.3	10.1
Non-poor	67.0	68.7	123.9	80.3	34.7	6.6	13.8	7.9	23.7
Socio-economic Group									
Employee	91.6	96.1	119.7	80.9	20.5	0.0	18.4	18.4	53.2
Self-employed - agriculture	57.4	62.9	118.9	77.3	38.7	0.5	8.1	4.5	19.3
Self-employed - other	62.7	83.5	117.8	85.1	32.7	26.6	10.2	7.7	0.0
Other	54.5	29.6	119.4	93.4	70.6	0.0	27.9	13.0	0.0
Gender									
Male	71.9	71.4	126.1	80.5	35.5	5.1	10.5	4.6	19.7
Female	51.1	63.5	110.6	78.8	40.4	5.9	9.5	9.5	19.9
Orphan status									
Orphaned	87.7	63.3	129.5	81.6	37.3	1.8	2.7	2.7	25.8
Not-orphaned	86.8	68.4	113.9	79.5	38.2	4.6	6.8	6.8	21.2
Foster status									
Fostered	90.3	71.8	130.5	93.0	12.3	2.8	10.8	10.8	0.0
Not-fostered	85.6	67.3	111.8	76.5	42.9	4.2	5.7	5.7	28.8

Source:CWIQ 2007 Rufiji DC

1. Literacy is defined for persons age 15 and above.
2. Primary school:
   Access is defined for children of primary school age (7-13) in households less than 30 minutes from a primary school.
   Enrollment (gross) is defined for all persons currently in primary school (Kindergarden, Grade 1 to Grade 8) regardless of age.
   Enrollment (net) is defined for children of primary school age (7-13) currently in primary school (Kindergarden, Grade 1 to Grade 8).
   Satisfaction is defined for all persons currently in primary school who cited no problems with school.
3. Secondary school:
   Access is defined for children of secondary school age (14-19) in households less than 30 minutes from a secondary school.
   Enrollment (gross) is defined for all persons currently in secondary school (Form 1 to Form 5) regardless of age.
   Enrollment (net) is defined for children of secondary school age (14-19) currently in secondary school (Form 1 to Form 5).
   Satisfaction is defined for all persons currently in secondary school who cited no problems with school.

Enrolment

The two main measures of enrolment, the Gross Enrolment Rate (GER) and the Net Enrolment Rate (NER) are analysed in this section. GER is defined as the ratio of all individuals attending school, irrespective of their age, to the population of school-age children. If there is a large proportion of non-school-age individuals attending school, the GER may exceed 100 percent. Primary school GER informs on the ratio of all individuals in primary school to the population of individuals of primary school-age (7 to 13 years) in the district.

NER is defined as the ratio of school-age children enrolled at school to the population of school-age children. Therefore, primary school NER is the ratio of children between the ages of 7 and 13 years in primary school to the population of children in this age-group in the district.

The NER provides more information for analysis than the GER. While trends in the actual participation of school-age children in formal education are in part captured by the NER, the GER, at best provides a broad indication of general participation in education and of the capacity of the schools. The GER gives no precise information regarding the proportions of individuals of school and non-school-ages at school, nor does it convey any information on the capacity of the schools in terms of quality of education provided.

Table 3.2: Percentage of students currently enrolled in school by reasons for dissatisfaction

		Reasons for dissatisfaction							
	Percent dissatisfied	Books/ supplies	Poor Teaching	Lack of teachers	Teachers absent	Lack of space	Facilties in bad condition	High fees	Other
Total	62.0	61.5	18.5	70.3	2.7	17.4	40.6	1.6	4.9
Cluster Location									
Accessible	54.8	58.1	11.6	60.4	3.3	25.5	35.7	2.6	9.9
Remote	71.2	64.9	25.3	80.1	2.2	9.4	45.5	0.6	0.0
Poverty Status									
Poor	59.5	62.8	20.2	68.4	1.4	18.1	26.5	1.5	4.3
Non-poor	64.6	60.3	16.7	72.2	4.0	16.8	54.8	1.8	5.6
Socio-economic Group									
Employee	65.2	77.3	24.6	74.9	2.9	46.1	63.4	3.4	0.0
Self-employed - agriculture	61.2	58.8	17.7	71.7	2.2	18.8	39.3	2.0	4.0
Self-employed - other	67.3	60.2	20.1	64.9	4.6	5.0	37.6	0.0	9.9
Other	39.4	100.0	3.8	67.2	0.0	3.8	32.1	0.0	0.0
Gender									
Male	63.6	62.8	18.4	69.1	2.6	18.3	44.9	1.1	4.2
Female	59.8	59.8	18.5	72.0	2.9	16.3	34.7	2.4	5.9
Type of school									
Primary	62.3	60.2	18.6	70.0	2.9	17.2	39.0	0.0	5.2
Government	62.5	60.2	18.6	70.0	2.9	17.2	39.0	0.0	5.2
Private	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Secondary	80.2	74.7	16.5	83.9	0.0	7.3	60.3	24.5	3.3
Government	83.5	74.7	16.5	83.9	0.0	7.3	60.3	24.5	3.3
Private	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	34.3	72.8	17.2	44.4	3.6	52.0	46.1	0.0	0.0
Government	48.0	72.8	17.2	44.4	3.6	52.0	46.1	0.0	0.0
Private	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source:CWIQ 2007 Rufiji DC

1. Base for column 1 is enrolled students. For columns 2 to 9, dissatisfied students

The primary school GER was 119 percent at the time of the survey. This figure indicates that all individuals who were at primary school constitute 119 percent of all children of primary school-age in the district. The NER further shows that 80 percent of all primary school-age children were attending school. Households from accessible villages report a higher NER for primary school than households from remote villages at 84 and 75 percent respectively. Both show similar rates of primary school GER. Primary school NER does not vary much by poverty status but GER does, the GER for non-poor households is higher than that of poor households at 124 and 115 percent respectively.

GER is highest among people living in households belonging to the 'employee' socio-economic group, whereas NER is highest for households in the 'other' socio-economic group Households self-employed in non-agricultural activities display relatively lower rates for both GER and NER than the remaining socio-economic groups.

Furthermore, the gender breakdown shows that males have higher GER and NER than females.

The breakdown by orphan status shows higher GER for orphaned children than non-orphaned children. Both report similar rates of NER. In addition, fostered children have higher GER and NER than non-fostered children. However, the small sample size in the in the orphan and foster categories (see chapter 2) must be kept in mind.

Satisfaction

The satisfaction rate informs on proportion of primary school pupils who cited no problems with their schools. Information

on satisfaction was obtained by asking respondents to identify problems they faced with their schools.

38 percent of all primary school pupils were satisfied with the schools they were attending. Pupils living in poor households and those in accessible villages reported being satisfied with the primary school they were attending more frequently than their respective counterparts.

The breakdown by socio-economic group of the households shows that households in the 'other' category have a higher rate of satisfaction with their primary schools than the remaining socio-economic categories.

3.1.3 Secondary school Access, Enrolment and Satisfaction

Access

Secondary school access rate is defined as the proportion of secondary school-age children (14 to 19 years) reporting to live within 30 minutes of the nearest secondary school.

Less than a tenth (5 percent) of all pupils in secondary school live within 30 minutes of travel to the nearest secondary school. The difference in access to secondary school between people living in accessible and remote villages is noticeable at 10 and 1 percent respectively.

The breakdown by socio-economic status of the household shows that, while 27 percent of students in the 'self-employed other' and 1 percent from the 'self-employed agriculture' categories report having access to secondary schools, the shares for households in the remaining categories were virtually null.

Other selected households characteristics such as gender, poverty status, orphan and foster status are not strongly correlated to secondary school accessibility.

Enrolment

As explained before, Gross Enrolment Rate (GER) is defined as the ratio of all individuals attending school, irrespective of their age, to the population of school-age children while the Net Enrolment Rate (NER) is defined as the ratio of school-age children enrolled at school to the population of school-age children. The secondary school-age is between 14 and

Table 3.3: Percentage of children 6-17 years who ever attended school by reason not currently attending

		Reasons not currently attending										
	Percent not attending	Completed school	Distance	Cost	Work	Illness	Pregnancy	Got married	Useless/ uninteresting	Failed exam	Awaits admission	Dismissed
Total	12.2	17.6	1.3	19.9	28.5	2.8	0.0	21.2	10.6	39.2	13.0	1.7
Cluster Location												
Accessible	12.9	11.9	0.0	24.7	35.1	2.8	0.0	15.9	12.2	46.5	9.1	2.8
Remote	11.2	25.9	3.2	12.9	18.9	2.8	0.0	29.1	8.3	28.5	18.7	0.0
Poverty Status												
Poor	6.4	13.0	0.0	6.2	20.9	10.5	0.0	0.0	23.4	28.5	20.1	6.2
Non-poor	18.1	19.3	1.8	24.9	31.3	0.0	0.0	29.0	6.0	43.1	10.4	0.0
Socio-economic Group												
Employee	28.7	28.0	0.0	53.3	44.2	0.0	0.0	0.0	0.0	37.5	0.0	0.0
Self-employed - agric	10.9	12.3	2.1	7.6	27.1	4.6	0.0	20.6	16.6	33.4	21.1	0.0
Self-employed - other	10.9	17.5	0.0	29.6	20.4	0.0	0.0	47.9	0.0	65.2	0.0	9.2
Other	7.4	79.1	0.0	0.0	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0
Gender												
Male	12.1	15.1	2.3	20.8	34.2	5.1	0.0	0.0	16.2	42.3	13.2	0.0
Female	12.2	20.5	0.0	18.8	21.7	0.0	0.0	46.9	3.8	35.4	12.7	3.7
Age												
7-13	0.8	0.0	0.0	0.0	23.6	76.4	0.0	0.0	23.6	0.0	0.0	0.0
14-19	28.3	18.3	1.3	20.7	28.7	0.0	0.0	22.0	10.1	40.7	13.5	1.7

Source:CWIQ 2007 Rufiji DC

1. Base for column 1 is school-age children. For columns 2 to 13, not enrolled school children

Table 3.4: Primary school enrollment and drop out rates by gender

	Net enrollment rates			Drop out rates		
	Male	Female	Total	Male	Female	Total
Total	80.5	78.8	79.7	0.5	0.0	0.3
7	56.4	58.7	57.5	0.0	0.0	0.0
8	72.2	68.3	70.4	0.0	0.0	0.0
9	84.0	74.7	79.2	0.0	0.0	0.0
10	82.6	93.5	88.0	0.0	0.0	0.0
11	97.9	86.3	93.3	0.0	0.0	0.0
12	87.3	90.2	88.6	3.3	0.0	1.8
13	96.8	94.7	95.7	0.0	0.0	0.0

Source:CWIQ 2007 Rufiji DC

1. Base for table is primary school-age population (age 7-13)

19 years old.

The GER and NER at secondary school are very low compared to primary school level. Overall, GER and NER were around 17 percent. There is a wide difference in the secondary school NER between households located in accessible and remote villages at 11 and 2 percent respectively. Similarly, the secondary school GER is 11 percentage points higher in accessible villages than that of remote villages at 15 and 4 percent respectively. The breakdown by poverty status shows a similar trend with non-poor resembling accessible villages.

The breakdown by socio-economic group of the household shows that the employees and those in the 'other' category have highest NER and GER, whereas the 'self-employed agriculture' category shows lower enrolment rates than the remaining socio-economic categories. Furthermore, while NER for females is 10 percent, the share for males is 5 percent. Both show similar rates of GER at around 10 percent each.

Although there seem to be no differences by orphan status, the difference between fostered and non-fostered children is evident, at 11 and 6 percent, respectively.

Satisfaction

80 percent of the total population enrolled in secondary school is dissatisfied with their schools. Only 20 percent of this population is satisfied with the secondary schools they attend. This satisfaction rate is lower than in primary schools (38 percent). The satisfaction rate is significantly higher among people living in households located in remote villages than that of people living in accessible villages at 39 and 16 percent respectively.

The breakdown by socio-economic groups shows that people living in households where the main income earner is an employee report a higher satisfaction rate (53 percent) than the rest of socio-economic groups.

Furthermore, 26 percent of orphaned children reported to be satisfied with primary school compared to 21 percent of orphaned children. On the other hand, 29 percent of fostered children reported to be satisfied with primary school compared to 0 percent of non-fostered children. Finally, gender is not strongly correlated to children's satisfaction to secondary school.

3.2 Dissatisfaction

One of the aims of the survey is to inform on perceptions of quality of services received among individuals for whom these are provided. To obtain this information, primary and secondary school students who were not satisfied with the schools they were attending at the time of the survey were asked to provide reasons for their dissatisfaction. Complaints regarding lack of books and other resources were allocated into the 'Books/Supplies' category, while those relating to quality of teaching and teacher shortages were grouped into the 'Teaching' category. The 'Facilities' category incorporates complaints regarding overcrowding and bad condition of facilities. The results are shown in Table 3.2.

Overall, 62 percent of students who were enrolled in either primary or secondary school reported dissatisfaction with the

Table 3.5: Secondary school enrollment and drop out rates by gender

	Net enrollment rates			Drop out rates		
	Male	Female	Total	Male	Female	Total
Total	4.6	9.5	6.7	8.3	5.6	7.1
14	0.0	0.0	0.0	2.8	0.0	1.7
15	3.5	12.8	8.5	4.8	1.2	2.9
16	2.0	4.7	3.0	12.4	20.4	15.4
17	5.2	36.4	17.3	12.1	0.0	7.4
18	0.0	5.9	3.1	6.9	6.1	6.5
19	18.0	0.0	11.9	8.4	0.0	5.6

Source:CWIQ 2007 Rufiji DC

1. Base for table is the secondary school-age population (age 14-19)

schools they were attending. Over two-thirds of the dissatisfied individuals (70 percent) reported lack of teachers as the cause of their dissatisfaction. In addition, 62 percent reported dissatisfaction with their schools because of lack of books and supplies, while 41 percent reported dissatisfaction with their schools due to facilities being in bad conditions. Furthermore, 19 percent reported dissatisfaction with their schools due to poor teaching, whereas 17 percent reported lack of space.

The dissatisfaction rate for people living remote villages is about 16 percentage points higher than that of those living in accessible villages. Dissatisfaction rate among non-poor households is higher than that among poor households at 65 and 60 percent respectively. Further breakdown of the data shows that while 60 percent of people living in remote villages reported dissatisfaction due to lack of teachers, the share for those living in accessible villages is 80 percent. It is also observed that 26 percent of people living in accessible villages reported dissatisfaction due to lack of space compared to 9 percent of people living in remote villages.

The breakdown by socio-economic groups shows that the dissatisfaction rate among households belonging to the 'self-employed other' category is the highest (67 percent). At the same time, the 'other' category reported the lowest dissatisfaction rate (39 percent). Gender breakdown shows that 45 percent of males reported dissatisfaction due to bad conditions of facilities compared to 53 percent of females

Those attending primary school report to be most dissatisfied by the lack of teachers (70 percent) followed by lack of books or supplies (60 percent). Similarly those attending secondary schools report dissatisfaction due to lack of teachers (84 percent) followed by lack of textbooks and supplies (75 percent) and bad condition of facilities (60 percent).

3.3 Non-attendance

Table 3.3 shows the percentage of school-age individuals (7 to 19 years) that were not attending school and the reasons for not attending. The non-attendance rate is defined as the proportion of school-age individuals who previously participated in formal education and had stopped attending school by the time of the survey.

The district has about 12 percent of 7 to 19 year olds who were not attending school. Around 18 percent of the non-attending population did not attend because they had completed standard seven, O-level or A-level. 11 percent of respondents reported that school was useless or uninteresting and 20 percent were not attending due to cost. While 29 percent were not attending school due work and 21 percent got married, 39 percent of the respondents reported non-attendance because they failed standard four, seven or form four exams. None of the respondents reported non-attendance due to pregnancy or distance to schools.

Children from non-poor households have higher rates of non-attendance than children from poor households at 18 and 6 percent respectively. Furthermore, while 25 percent of those living in accessible villages were not attending school due to cost, and 45 percent because they failed examinations, the shares for children in remote villages were 13 and 29 percent respectively.

Furthermore, 29 percent of children from households where the main income earner belongs to the 'employee' category do not attend school compared to 7 percent of those from households belonging to the 'other' category. Further breakdown of the data shows that, while 53 percent of households where the main income earner belongs to the 'employee' category was not attending because of cost, the share for those from the 'other' category is virtually null.

Nearly all the primary school-aged children attend school, as their non-attendance rate is only 1 percent. On the other hand, about three quarters (72 percent) of secondary school-aged individuals attend school. Around 41 percent of secondary school-aged individuals not attending secondary school report having failed exams; while 22 percent got married and a further 21 percent reported cost as the cause for their non-attendance.

Table 3.6 - Adult literacy rates by gender (persons age 15 and above)

	Male	Female	Total
Total	71.9	51.1	61.1
15-19 years	81.2	83.3	82.1
20-29 years	78.0	57.4	65.1
30-39 years	70.4	56.4	62.6
40-49 years	79.7	55.5	67.2
50-59 years	67.2	20.1	45.0
60+ years	51.3	5.0	30.9
Accessible	73.0	55.6	63.7
15-19 years	84.2	85.4	84.7
20-29 years	81.7	64.6	70.6
30-39 years	66.1	64.0	65.0
40-49 years	81.7	59.0	69.5
50-59 years	71.8	18.9	45.3
60+ years	46.7	6.3	27.4
Remote	70.6	45.4	57.8
15-19 years	76.9	80.9	78.8
20-29 years	73.4	45.9	57.1
30-39 years	75.6	48.4	59.9
40-49 years	77.5	50.5	64.4
50-59 years	63.2	21.3	44.6
60+ years	55.8	3.0	34.9

Source:CWIQ 2007 Rufiji DC

1. Base is population age 15+

3.4 Enrolment and Drop-out rates

This section takes a closer look at the primary and secondary school enrolment and drop-out rates. Rather than looking at primary or secondary school-aged children as a whole, data will be categorized by age and gender. Drop-out rates are calculated by dividing the number of children who left school in the current year by the total number of children enrolled this year plus those that dropped out (children who left school / (enrolled children + children who dropped out).

Primary school

Table 3.4 shows primary school net enrolment and drop-out rates. The drop-out rates at primary level are generally very low. Therefore, only enrolment rates will be analysed.

Overall, 80 percent of primary school-aged children were enrolled at the time of the survey. Out of those in primary school-age (7 to 13 years), 79 percent of girls and 81 percent of boys were enrolled. The required age at which children should start standard one is 7 years. However, data on primary school enrolment shows that at the time of the survey only 58 percent of all seven year olds were enrolled. Children are most likely to be in school by age of 12, where the NER is at 96 percent.

Secondary School

Table 3.5 shows secondary net enrolment patterns by age. Secondary school enrolment rates are much lower than those at primary level. Only 7 percent of secondary school-aged children was enrolled compared to 80 percent in primary school. For a person following a normal school curriculum, i.e. started standard one at age 7, he/she is expected to start form one at age 14. From this table we see that NER increases gradually with age. The biggest difference in enrolment rates is observed between age 16 and 17. Over one third (36 percent) of 17 year olds reported to be enrolled at the time of the survey. It is also noticeable that the rate of boys enrolled in secondary school at the age of 15 years was lower than that of girls enrolled in secondary school at the same age at 4 and 13 percent respectively. Virtually no children were enrolled in secondary school at the age of 14 years in this district.

Secondary school drop-out rates among secondary school-age individuals (14 to 19 years) are higher compared to those of

primary school. 7 percent of children of secondary school-age students had dropped out in the year prior to the survey. In general, the highest drop-out rate is observed among 16 year olds at 15 percent. The highest drop-out rates among males are at ages 16 and 17 while female drop out rate is highest at age of 16.

3.5 Literacy

Literacy is defined as the ability to read and write in at least one language. Those who can read but not write were counted as illiterate. The data on literacy was solely obtained by asking the respondent if he/she was able to read and write. Besides this information, no further tests on their ability to read or write were taken. Furthermore, questions that helped determine adult literacy was only asked for individuals aged 15 or older.

Adult Literacy

Overall, 61 percent of the population aged 15 and above in the district are literate. The difference in literacy rates among men and women is about 22 percentage points at 72 and 51 percent respectively. Individuals aged between 15 and 19 years have the highest literacy rate (82 percent) while only 31 percent of those who are above 60 years know how to read and write. There are significant gender differences in literacy, being larger for the older cohorts.

The literacy rate in accessible villages is about 6 percentage points higher than in remote villages at 64 and 58 percent respectively. The literacy rate for the 15-19 age-group in remote villages is 79 percent, whereas for accessible villages the rate is 85 percent. Furthermore, in accessible villages the literacy rate of men is 17 percentage points higher than that of women. In remote villages, the difference increases to 26 percentage points. On the contrary, while the literacy rate of women in accessible villages is about 11 percentage points higher than that of women in remote villages, the difference in literacy rates between men in accessible and remote villages is virtually null. Finally, there is a significant difference in literacy rates among men and women above 60 years in both cluster locations. In both cases, the literacy rates of men over 60 years is above 40 percentage points higher than that of women.

Youth Literacy

Table 3.7 shows literacy rates among the youth by age, gender and residential location. Youth literacy rate is calculated for all persons between 15 and 24 years old. The literacy rate for this group is 77 percent, but the gender difference is important. While the literacy rate for men is 79 percent, the rate for women is 74 percent.

Analysis by age-groups shows that, for both genders 15 to 17 year olds have the highest literacy rate at 87 percent. Youth literacy rate in accessible villages is 8 percentage points higher than that of youth in remote villages at 80 and 72 percent respectively.

Table 3.7 - Youth literacy rates by gender (persons age 15-24 years)

	Male	Female	Total
Total	79.4	73.8	76.5
15-17 years	86.4	87.5	86.9
18-20 years	74.9	72.7	73.9
21-22 years	51.7	70.7	64.5
23-24 years	100.0	46.5	62.7
Accessible	81.3	79.1	80.2
15-17 years	85.1	88.5	86.5
18-20 years	87.2	80.4	83.9
21-22 years	47.5	82.9	70.8
23-24 years	100.0	34.6	55.0
Remote	76.8	67.1	71.9
15-17 years	88.3	86.3	87.4
18-20 years	62.7	63.1	62.9
21-22 years	63.1	44.6	50.0
23-24 years	100.0	55.2	68.4

Source:CWIQ 2007 Rufiji DC

1. Base is population aged 15-24

4 HEALTH

This chapter examines health indicators for the population in Rufiji DC. First, selected health indicators are examined for the whole population. The second section analyses the reasons for dissatisfaction with health services. Section three shows the reasons for not consulting a health provider. This section is followed by analysis of the ill population by specific type of illness. A subgroup of those who had consulted a health provider is then taken from the ill population. In section five, this group is disaggregated by the type of health provider used. Section six presents an analysis of child deliveries. The chapter concludes with an analysis of child nutrition indicators.

4.1. Health Indicators

Throughout this report, a household is said to have access to medical services if it is located within 30 minutes travel from the nearest health facility. Judgment of the time it takes to travel to the facility as well as what is classed as a health facility is left to the discretion of the respondent. In second place, an individual is classed as having experienced need for medical assistance if he/she reports incidence of illness in the 4 weeks preceding the survey. It must be noted that need is based on self-reported occurrence of illness, rather than a diagnosis by a health professional. Thirdly, the rate of health

Table 4.1 - Health Indicators

	Medical Services			
	Access	Need	Use	Satisfaction
Total	46.5	21.7	25.6	47.6
Cluster Location				
Accessible	48.6	22.1	26.3	46.5
Remote	43.9	21.4	24.8	49.0
Poverty Status				
Poor	41.0	17.6	22.0	44.7
Non-poor	51.0	25.2	28.5	49.4
Socio-economic group				
Employee	69.5	15.8	17.2	60.3
Self-employed - agriculture	36.7	22.0	25.7	42.5
Self-employed - other	71.3	21.6	27.1	61.6
Other	32.0	28.9	29.1	34.4
Gender				
Male	46.4	21.4	24.0	51.3
Female	46.6	22.1	27.2	44.3
Age				
0-4	46.4	33.6	57.5	40.8
5-9	42.7	16.7	16.5	34.9
10-14	42.3	12.9	13.4	37.4
15-19	50.9	9.5	9.5	57.7
20-29	50.6	17.0	18.3	67.9
30-39	53.4	19.1	18.8	53.3
40-49	40.0	20.4	20.0	44.7
50-59	60.5	28.2	28.2	69.3
60+	44.7	35.2	31.5	58.2

Source:CWIQ 2007 Rufiji DC

1. Access is defined for persons in households less than 30 minutes from a health facility.
2. Need is defined for persons sick or injured in the four week period preceding the survey.
3. Use is defined for persons who consulted a health practitioner in the four week period preceding the survey.
4. Satisfaction is defined for persons who consulted a health practitioner in the four week period preceding the survey and who cited no problems.
5. Base is total population. For satisfaction, base is population that used medical services.

Table 4.2 - Percentage of persons who consulted a health provider in the 4 weeks preceding the survey and were not satisfied, and the reasons for dissatisfaction.

		Reasons for dissatisfaction						
	Percent dissatisfied	Facilities not clean	Long wait	No trained professionals	Cost	No drugs available	Treatment unsuccessful	Other
Total	52.4	29.8	53.4	16.3	17.3	54.5	8.7	0.3
Cluster Location								
Accessible	53.5	22.6	53.6	12.4	18.7	56.2	7.1	0.6
Remote	51.0	39.3	53.3	21.6	15.3	52.2	10.7	0.0
Poverty Status								
Poor	55.3	20.6	63.3	7.8	14.4	45.8	7.9	0.0
Non-poor	50.6	36.2	46.6	22.2	19.2	60.5	9.2	0.6
Socio-economic group								
Employee	39.7	29.8	51.4	48.2	27.0	43.6	7.7	0.0
Self-employed - agric	57.5	27.5	51.8	17.9	16.6	52.4	9.9	0.5
Self-employed - other	38.4	42.5	54.8	5.6	20.5	61.2	5.1	0.0
Other	65.6	16.9	77.0	11.1	8.8	70.2	2.2	0.0
Gender								
Male	48.7	29.5	52.1	14.7	23.3	52.5	6.6	0.8
Female	55.7	30.1	54.5	17.6	12.5	56.0	10.2	0.0
Type of provider								
Public hospital	62.3	36.1	62.3	18.6	4.7	67.1	6.0	0.4
Private hospital	64.7	4.1	21.9	7.9	70.3	3.7	22.1	0.0
Religous hospital	44.6	0.0	38.0	0.0	70.9	0.0	0.0	0.0
Village health worker	66.7	50.0	50.0	100.0	0.0	0.0	0.0	0.0
Private Doctor/Dentist	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pharmacist	15.8	0.0	0.0	0.0	65.9	0.0	34.1	0.0
Trad. Healer	34.6	0.0	0.0	0.0	100.0	0.0	7.1	0.0
Other	34.5	0.0	0.0	0.0	0.0	0.0	100.0	0.0

Source:CWIQ 2007 Rufiji DC

1. For column 1, the base is population that used medical services. For the rest, the base is the dissatisfied population.

facility use is defined as the proportion of individuals who had consulted a health service provider in the 4 weeks preceding the survey regardless of their health status. Finally, the rate of satisfaction with health services is represented by the proportion of people who had consulted a health provider in the 4 weeks preceding the survey and cited no problems with the service received.

Table 4.1 shows indicators regarding medical services by cluster location, poverty status, socio-economic status, gender and age. Overall, 47 percent of the population have access to medical services, 22 percent reported having needed them, and 26 percent reported having used medical services. Conversely, 53 percent of the households in the district do not have access to medical services. Finally, 48 percent of those who used medical services reported being satisfied with them.

As would be expected, household in accessible villages report a higher access rate to medical services than households in remote villages. Both show similar proportions of need, use and satisfaction with medical services.

The breakdown by poverty status shows that non-poor households report higher access, need and use rates (51, 25 and 29 percent) than poor households (41, 18 and 22 percent, respectively) with almost similar satisfaction rates.

Regarding socio-economic status, the 'self-employed other' group reports the highest rate of access at 71 percent, the same group reports lowest rates of need and use at 16 and 17 percent respectively. The 'other' category reports the lowest rate of access at 32 percent. At the same time, the same group (other) reports the highest rates in use and need of medical services at 29 percent each.

There are no gender differences in access. Females report a higher use rate than males, whereas the latter report a higher

satisfaction rate than the former at 51 and 44 percent respectively.

Access does not vary widely by age-groups, but the rate of need does. It starts at 34 percent for children under 5 years old, reduces to around 10 percent for the population aged between 5 and 19 years old, and then starts going up again, peaking at 35 percent for the 60+ age-group. The rate of use follows a similar trend: it starts decreasing with age but then increases for the older cohorts. Satisfaction is highest for the 50-59 age-group at 69 percent and lowest for the 5-9 age-group at 35 percent.

4.2 Reasons for Dissatisfaction

Table 4.2 shows the percentage of population who consulted a health provider in the 4 weeks preceding the survey and were not satisfied. Overall, over a half (52 percent) users of healthcare facilities is dissatisfied, mostly because of drugs unavailability and long waits at 55 and 53 percent respectively. Surprisingly, lack of success in the treatment was reported just by 9 percent of the users. It should be noticed that this does not imply that treatments were successful in 91 percent of the cases, but that in 91 percent of the cases the result of the treatment was not a cause for dissatisfaction.

The analysis by cluster location shows that households in remote villages are more commonly dissatisfied by the facilities being not clean (39 percent, against 23 percent for households in accessible villages). In addition, 22 percent of households in remote villages report lack of trained professionals more often (22 percent, against 12 percent of the households in accessible villages).

The breakdown by poverty status shows that non-poor households report higher shares of 'no trained professionals', 'no

Table 4.3: Percentage of persons who did not consult a health provider in the 4 weeks preceding the survey and the reasons for not consulting

	Percent not consulting	Reasons for not consulting				
		No need	Cost	Distance	No confidence	Other
Total	74.4	98.3	0.6	0.9	0.1	0.2
Cluster Location						
Accessible	73.7	98.5	0.1	1.2	0.2	0.0
Remote	75.2	98.0	1.2	0.4	0.0	0.3
Poverty Status						
Poor	78.0	97.9	0.5	1.4	0.0	0.2
Non-poor	71.5	98.6	0.7	0.4	0.2	0.1
Socio-economic group						
Employee	82.8	100.0	0.0	0.0	0.0	0.0
Self-employed - agriculture	74.3	97.9	0.9	0.9	0.1	0.1
Self-employed - other	72.9	99.7	0.0	0.0	0.0	0.3
Other	70.9	92.2	0.0	7.8	0.0	0.0
Gender						
Male	76.0	98.1	0.5	1.2	0.0	0.2
Female	72.8	98.5	0.7	0.5	0.2	0.1
Type of sickness/injury						
Fever/malaria	1.1	0.0	100.0	0.0	0.0	0.0
Diarrhea/abdominal pains	2.5	0.0	100.0	0.0	0.0	0.0
Pain in back, limbs or joints	7.4	0.0	78.3	21.7	0.0	0.0
Coughing/breathing difficulty	1.8	0.0	0.0	100.0	0.0	0.0
Skin problems	5.4	0.0	0.0	0.0	0.0	100.0
Ear, nose, throat	0.0	0.0	0.0	0.0	0.0	0.0
Eye	17.5	0.0	44.4	55.6	0.0	0.0
Dental	57.0	0.0	48.0	52.0	0.0	0.0
Accident	15.1	0.0	100.0	0.0	0.0	0.0
Other	10.4	0.0	100.0	0.0	0.0	0.0

Source:CWIQ 2007 Rufiji DC

1. For column 1, the base is total population. For columns 2 to 6, population that not consulted medical services.

Table 4.4: Percentage of population sick or injured in the 4 weeks preceding the survey, and of those sick or injured the percentage by type of sickness/injury, gender and age

	Sick or injured	Fever or malaria	Diarrhea/ abdominal pain	Pain in back, limbs or joints	Coughing/ breathing difficulty	Skin problem	Ear, nose, throat,	Eye	Dental	Accident	Other
Total	21.7	57.3	11.2	14.4	13.5	3.7	2.2	5.1	1.3	1.6	5.5
Male Total	21.4	61.2	8.8	10.3	17.5	4.5	3.0	5.6	0.7	1.2	5.0
0-4	37.4	64.6	8.5	0.0	19.0	9.3	1.1	3.7	0.0	1.4	3.1
5-9	16.0	67.3	6.0	7.7	10.8	9.5	2.8	3.7	0.0	0.0	1.9
10-14	16.9	85.8	0.0	0.0	21.1	0.0	14.5	3.9	0.0	0.0	7.9
15-29	12.8	53.1	10.7	1.0	34.5	0.0	4.4	0.0	3.4	0.0	0.0
30-49	18.3	69.0	7.9	16.6	9.5	3.2	2.2	5.4	1.7	1.7	3.4
50-64	23.9	44.8	9.4	11.1	19.8	0.0	0.0	10.4	0.0	5.0	7.0
65+	36.2	32.6	20.7	57.9	5.0	0.0	0.0	18.7	0.0	0.0	18.7
Female Total	22.1	53.5	13.5	18.4	9.5	2.9	1.5	4.6	1.9	2.0	6.0
0-4	29.8	70.9	10.9	0.0	14.7	6.1	4.3	4.9	0.0	0.0	2.5
5-9	17.6	69.2	4.2	11.4	5.7	0.0	4.2	5.5	0.0	8.2	7.7
10-14	8.1	73.5	0.0	13.0	19.0	7.6	0.0	0.0	0.0	0.0	0.0
15-29	15.5	54.5	16.9	19.6	7.0	4.5	0.0	0.0	3.8	0.7	5.3
30-49	21.8	55.6	19.1	7.4	12.6	0.0	0.0	1.6	6.2	5.0	5.2
50-64	38.1	25.9	24.2	32.2	7.1	3.1	0.0	6.3	0.0	0.0	12.1
65+	50.5	19.4	4.5	69.9	0.0	0.0	0.0	16.0	0.0	0.0	9.5

Source:CWIQ 2007 Rufiji DC

1. Percentage by type of sickness/injury may add to more than 100% because respondents may report multiple categories.

2. Base is population sick.

drug available' and 'facilities not clean' more often than non-poor households. The latter reports a higher share of 'long wait' than the former as a reason for dissatisfaction.

The 'self-employed other' is the socio-economic group with the lowest dissatisfaction rate. Furthermore, 2 out of 5 users report dissatisfaction by cost, and 1 in 2 by the long wait. The remaining socio-economic groups report the long wait more often, with drugs not available as second reason.

The gender breakdown shows that females report a higher dissatisfaction rate than males, at 56 and 49 percent, respectively. In addition, males report cost of consulting a health provider more often than females at 23 and 13 percent respectively.

Regarding health providers, the main cause of dissatisfaction in public hospitals is the long wait, whereas in private and religious hospitals, as well as in pharmacists, the cost of healthcare. Virtually all households who consulted traditional healers in the 4 weeks preceding the survey were dissatisfied due to cost of healthcare.

4.3 Reasons for Not Consulting When Ill

The distribution of the population who did not consult a health provider in the four weeks preceding the survey is shown in Table 4.3. The table shows that overall, 74 percent of the population did not consult a health provider, typically because there was no need (98 percent of the cases).

Neither cluster location nor poverty status seems to be correlated with the reasons for not consulting but poor households report a higher share not consulting than non-poor households at 78 and 72 percent respectively. The breakdown by socio-economic groups shows that the employees, 100 percent of the people who did not consult health facilities had no need to do so, whereas in 'other' category the share was 92 percent. The other reason was distance (for 8 percent of the households in the 'other' group).

The gender breakdown shows no strong correlation with households not consulting a healthcare provider and the reasons for not consulting.

The split-up by type of illness shows that for most infirmities, fever (including

malaria) diarrhoea, pain, and coughing, the main cause for not consulting a health practitioner is cost. It is worth noticing the relatively low percentage of people not receiving attention (1 percent) for fever or malaria.

4.4 Type of Illness

Table 4.4 shows the percentage of population sick or injured in the 4 weeks preceding the survey. Overall, fever or malaria is the most common sickness, affecting almost 57 percent of the total population. In turn, pain in back, joints and limbs or coughing and breathing difficulties come in second and third place, at 14 percent of the population each. Diarrhoea or abdominal pain affected 11 percent of the ill population, whereas other illnesses had minor shares.

The gender breakdown reveals that females report to be affected more by diarrhoea or abdominal pains and pains in the back, limbs or joints, whereas males are affected more by fever or malaria. There are no sharp differences between males and females for the remainder of the sicknesses or injuries.

The age breakdown shows that the share of sick or injured population is highest for the youngest and oldest cohorts. The share of ill population affected by malaria comes down with age but other problems emerge. For both genders the share of population affected by pains in back, limbs or joints tend to increase with age peaking in the 65+ cohort at 58 and 70 percent for males and females

Table 4.5: Percent distribution of health consultations in past 4 weeks by type of health provider consulted

	Public hospital	Private hospital	Religious hospital	Village health worker	Private doctor, dentist	Pharmacistch emist	Traditional healer	Other	Total
Total	67.9	5.8	3.7	0.6	0.0	17.5	4.2	0.4	100.0
Cluster Location									
Accessible	66.7	6.4	4.2	0.0	0.0	18.8	3.4	0.5	100.0
Remote	69.4	5.0	3.0	1.3	0.0	15.9	5.2	0.2	100.0
Poverty Status									
Poor	68.1	6.2	3.3	1.0	0.0	16.5	4.6	0.3	100.0
Non-poor	67.7	5.5	3.9	0.3	0.0	18.1	4.0	0.5	100.0
Socio-economic group									
Employee	62.9	15.4	18.4	0.0	0.0	0.0	3.3	0.0	100.0
Self-employed - agric	67.4	6.6	3.0	0.9	0.0	17.9	3.6	0.6	100.0
Self-employed - other	68.6	2.6	3.6	0.0	0.0	18.9	6.4	0.0	100.0
Other	78.4	0.0	0.0	0.0	0.0	20.2	1.5	0.0	100.0

Source:CWIQ 2007 Rufiji DC

1. Base is population who consulted a health provider

Table 4.6: Percentage of women aged 12-49 who had a live birth in the year preceding the survey by age of the mother and the percentage of those births where the mother received pre-natal care

	12-14 yrs	15-19 yrs	20-24 yrs	25-29 yrs	30-39 yrs	40+ yrs	Total	Pre-natal care
Total	0.0	11.4	23.4	31.4	22.8	6.7	17.5	100.0
Cluster Location								
Accessible	0.0	10.0	19.7	26.9	26.6	7.7	17.0	100.0
Remote	0.0	12.9	29.1	38.9	18.7	5.3	18.1	100.0
Poverty Status								
Poor	0.0	13.5	31.1	38.3	35.8	12.8	22.1	100.0
Non-poor	0.0	9.8	19.2	28.6	11.8	2.2	14.1	100.0
Socio-economic group								
Employee	0.0	0.0	0.0	55.3	5.8	0.0	5.6	100.0
Self-employed - agric	0.0	10.9	29.5	36.6	20.3	8.2	17.9	100.0
Self-employed - other	0.0	20.4	17.2	21.9	34.5	0.0	19.8	100.0
Other	0.0	0.0	50.0	0.0	35.8	0.0	20.8	100.0

Source:CWIQ 2007 Rufiji DC

1. Base is females aged 12 or older.

respectively.

4.5 Health Provider

Table 4.5 shows the percent distribution of health consultations in the 4 weeks preceding the survey. Overall, 68 percent of the consultations were made in a public hospital, 18 percent to a pharmacist or chemist, 6 percent in a private hospital, and 4 percent in a religious hospital or to traditional healers.

The breakdown cluster location and poverty status shows no strong correlation with healthcare provider. The breakdown by socio-economic group shows that households in the 'other' category report a higher share going to public hospitals than the remaining categories. While 20 percent of households in the 'other' category make their consultations to pharmacist or chemists the share for households in the employee category is virtually null. In turn, the employees report higher shares of households consulting healthcare provider in religious and private hospitals than the remaining socio-economic categories.

4.6. Child Deliveries

Table 4.6 shows the percentage of women aged 12 to 49 who had a live birth in the year preceding the survey. Overall, 18 percent of women in this age-group gave birth in the past year. No girls aged 14 or under gave birth in the district. Around 11 percent of the females aged between 15 and 19 years gave birth. The rate peaks at 31 percent for the 25-29 age-group, and then goes down to 7 percent for the group aged 40 to 49. Virtually all pregnant women who gave birth a year preceding the survey received prenatal care.

The breakdown by cluster location shows that households in remote villages show higher rates for women who had a live birth between 15 and 29 years old, whereas households in accessible villages show higher rates for the 30-49 cohorts.

The analysis by poverty status reveals that 22 percent of women from poor households had a live birth in the year preceding the survey, higher than the share for non-poor, at 14 percent. Furthermore, in poor households, 1 out of 3 women between 20 and 39 years old had a child in the 12 months preceding the survey.

The breakdown by socio-economic status shows that the highest rates correspond to the 'other' category at 21 percent, whereas the employees show the lowest share, of just 6 percent overall. In contrast, the employees report the highest share of females who gave live birth a year preceding the survey in the 25-29 age-group than the remaining socio-economic groups. It is worth noting that 8 percent of the women in the 'self-employed agriculture' category gave birth in the 40+ cohort, whereas the shares for the remaining socio-economic groups were virtually null.

Table 4.7: Percentage distribution of births in the five years preceding the survey by place of birth

	Hospital	Health centre	Dispensary	Health post	At home	Other	Total
Total	33.7	3.4	29.6	0.0	32.7	0.6	100.0
Cluster Location							
Accessible	42.0	5.4	27.4	0.0	24.5	0.7	100.0
Remote	23.3	0.9	32.4	0.0	42.9	0.6	100.0
Poverty Status							
Poor	29.4	0.6	31.7	0.0	37.8	0.6	100.0
Non-poor	37.5	5.9	27.7	0.0	28.1	0.7	100.0
Socio-economic group							
Employee	88.8	0.0	6.7	0.0	4.5	0.0	100.0
Self-employed - agriculture	24.7	4.4	27.3	0.0	42.6	1.0	100.0
Self-employed - other	45.4	1.9	35.5	0.0	17.2	0.0	100.0
Other	20.4	0.0	79.6	0.0	0.0	0.0	100.0

Source:CWIQ 2007 Rufiji DC

1. Base is children under 5 years old.

Table 4.8: Percentage distribution of births in the five years preceding the survey by person who assisited in delivery of child

	Doctor Nurse	Midwife	Trained T.B.A.	T.B.A.	Other Self	Don't know	Total	Delivery by health prof.
Total	5.1	63.2	1.0	8.2	22.1	0.3	100.0	69.4
Cluster Location								
Accessible	4.6	70.6	0.5	5.7	18.2	0.5	100.0	75.7
Remote	5.8	53.9	1.8	11.4	27.1	0.0	100.0	61.5
Poverty Status								
Poor	4.7	56.5	1.0	8.2	29.1	0.5	100.0	62.1
Non-poor	5.5	69.3	1.1	8.2	15.9	0.0	100.0	75.9
Socio-economic group								
Employee	0.0	95.5	0.0	4.5	0.0	0.0	100.0	95.5
Self-employed - agriculture	4.2	53.8	1.6	9.3	30.6	0.4	100.0	59.6
Self-employed - other	8.4	76.9	0.0	6.8	7.9	0.0	100.0	85.3
Other	0.0	100.0	0.0	0.0	0.0	0.0	100.0	100.0

Source:CWIQ 2007 Rufiji DC

1. Base is children under 5 years old.

Table 4.7 shows the percentage distribution of births in the five years preceding the survey. Roughly, 34 percent of births in the 5 years preceding the survey took place in a hospital, and 33 percent at home, 30 percent at a dispensary. The ordering remains across cluster location, poverty status, and socio-economic group of the household head.

While households in accessible villages had a higher share of births in hospitals, households in remote villages had births at home and in dispensaries. A similar trend is evident when analysing by poverty status with non-poor households resembling households in accessible villages.

The split-up by socio-economic group of the household shows that hospitals and dispensaries are the most common place for deliveries for all the socio-economic groups. In addition, the 'self-employed agriculture' and the 'self-employed other' report higher rates of deliveries at home with shares of 43 and 17 percent, respectively. While dispensaries represent 80 percent of deliveries for females in the 'other' category the share for the employees is only 7 percent.

Table 4.8 shows the percentage distribution of births in the five years preceding the survey by person who assisted in the delivery of the child. Overall, 3 out of 5 deliveries were attended by a health professional, mostly midwives (63 percent of births). Traditional birth assistants (TBA) and doctors or nurses accounted for 8 and 5 percent, respectively.

The analysis by cluster location and poverty status show similar results. In accessible villages and in non-poor households the shares of deliveries attended by health professionals are higher than their respective counterparts. TBAs deliveries were reported more frequently in remote villages, whereas midwives were reported more frequently in accessible villages. Both report similar rates of deliveries attended by a nurse or doctor, and unassisted deliveries.

The breakdown by socio-economic group shows that households in the 'other' category report a higher share of deliveries attended by professionals than the remaining socio-economic categories. In turn, the self-employed in non-agricultural activities show the lowest share of deliveries attended by a doctor or nurse, and the highest for midwives.

The breakdown by socio-economic group shows that the 'other' category report the highest share of deliveries attended by professionals (100 percent), followed by the 'employee' (96 percent), the 'self-employed other' (85 percent) and the 'self-employed agriculture' category (60 percent). The same trend is observed for deliveries attended by midwives. The self-employed agriculture report the highest rates of deliveries attended by TBAs at 9 percent and unassisted deliveries at 31 percent.

4.7 Child Nutrition

Two standards of physical measurement of growth that describe the nutritional status of a child are presented in this chapter:

- Height-for-age (stunting)
- Weight-for-height (wasting)

The level of malnutrition in a population is determined by comparing the weight and height measurements within the population of interest to those of a well nourished population. Children are considered malnourished if their weight and/or height measurements fall outside the distribution of weight and height measurements of the well nourished population. The reference population used, as recommended by the World Health Organisation (WHO), is that of the United States National Centre for Health Statistics (NCHS).

Height-for-age is a measure of linear growth. A child who is below minus two standard deviations from the median of the reference population is considered to be too short for his/her age – stunted. Stunting is a consequence of long term malnutrition; it is indicative of long term inadequacy of nutrient intake, and is commonly associated with poor economic conditions and chronic or repeated infections.

Weight-for-height is a measure of body mass in relation to body height and is an indicator of immediate nutritional status. A child who is below minus two standard deviations from the median of the reference population is classed as too thin

Table 4.9: Nutritional status indicators and program participation rates

	Nutritional status indicators		Program participation		
	Stunted	Wasted	Nutrition	Weigh-in	Vaccinated
Total	27.6	3.5	45.2	98.2	90.9
Cluster Location					
Accessible	25.9	3.1	48.7	97.3	90.7
Remote	29.8	4.0	40.8	99.4	91.2
Poverty Status					
Poor	33.2	5.7	42.9	96.2	89.8
Non-poor	22.5	1.3	47.3	100.0	92.0
Socio-economic Group					
Employee	13.5	0.0	55.7	100.0	85.5
Self-employed - agriculture	27.0	3.7	43.5	97.7	89.6
Self-employed - other	31.5	2.8	47.1	98.9	94.2
Other	26.6	24.0	49.6	100.0	100.0
Gender and age in completed years					
Male	26.7	3.4	43.6	97.7	91.1
0	20.8	0.0	28.3	92.0	92.0
1	41.6	1.7	42.4	100.0	100.0
2	15.0	2.9	52.0	100.0	90.6
3	36.6	3.7	47.7	93.2	80.9
4	20.2	9.7	44.6	100.0	84.6
Female	28.5	3.6	46.8	98.7	90.8
0	31.2	4.8	45.2	95.9	92.9
1	24.9	0.0	41.4	100.0	90.6
2	27.5	3.9	62.2	100.0	90.6
3	26.8	4.5	45.1	100.0	90.6
4	33.4	6.4	47.1	100.0	86.7
Orphan status					
Orphaned	9.3	0.0	54.9	84.5	76.8
Not-orphaned	28.1	3.6	44.5	98.6	91.2
Foster status					
Fostered	41.6	0.0	27.2	100.0	43.9
Not-fostered	27.2	3.5	45.2	98.2	91.5

Source:CWIQ 2007 Rufiji DC

1. Base of Table is total number of children under 5.

Table 4.10: Percent Distribution of Children Vaccinated by Type of Vaccination Received

	Measles	BCG	DPT1	DPT2	DPT3	OPV0	OPV1	OPV2	OPV3	Vitamin A
Total	69.3	95.6	92.5	84.9	80.2	63.9	92.6	85.1	80.4	59.0
Cluster Location										
Accessible	71.5	96.2	91.5	85.5	82.2	74.6	92.1	85.9	82.6	63.4
Remote	66.6	94.8	93.8	84.2	77.7	50.5	93.2	84.2	77.5	53.5
Poverty Status										
Poor	62.3	94.3	90.9	81.5	77.0	54.5	91.1	81.9	77.5	52.2
Non-poor	75.7	96.7	94.0	88.0	83.1	72.4	94.0	88.0	83.0	65.1
Socio-economic group										
Employed	100.0	100.0	100.0	100.0	100.0	93.3	100.0	100.0	100.0	88.8
Self-employed - agric	69.1	94.9	91.7	84.8	80.7	58.1	91.9	85.1	80.6	56.5
Self-employed - other	67.0	98.5	94.9	84.1	77.9	72.5	94.9	84.1	78.5	61.2
Other	30.7	60.7	60.7	60.7	46.1	60.7	60.7	60.7	46.1	35.0
Gender and age in completed years										
Male	75.0	94.3	93.7	87.1	83.4	61.4	93.7	87.1	82.7	64.2
0	27.0	77.6	73.1	48.8	38.9	37.7	73.1	48.8	36.4	24.8
1	80.0	96.9	97.5	88.9	85.0	62.1	97.5	88.9	85.0	58.2
2	85.1	100.0	100.0	100.0	96.6	74.9	100.0	100.0	95.9	71.8
3	90.0	93.2	93.2	93.2	93.2	63.4	93.2	93.2	93.2	90.0
4	91.7	100.0	100.0	100.0	100.0	61.5	100.0	100.0	100.0	84.6
Female	63.6	96.8	91.3	82.7	77.0	66.4	91.5	83.1	78.0	53.8
0	21.2	94.9	78.7	63.6	53.5	65.9	77.0	63.6	53.5	14.3
1	68.7	96.1	95.2	80.1	75.1	72.1	95.2	81.7	78.9	55.4
2	87.2	95.6	94.5	94.5	91.5	56.8	100.0	94.5	91.5	63.1
3	94.0	100.0	100.0	100.0	100.0	59.1	100.0	100.0	100.0	94.0
4	94.3	100.0	100.0	100.0	94.3	74.8	100.0	100.0	94.3	87.0

Source:CWIQ 2007 Rufiji DC

1. Base of table is total number of children under 5.

for his/her height – a condition called wasting. Wasting is an immediate indicator of acute malnutrition and reflects insufficiency in tissue and fat mass compared to the amount expected according to the child's height. Wasting occurs as a result of inadequate intake of nutrients immediately preceding the survey. Therefore, wasting is not necessarily the result of insufficient food intake, but could also be, for instance, the result of recent severe illness. Occurrence of wasting may be subject to seasonal variations.

Another measurement commonly used is weight-for-age. A child who is below minus two standard deviations from the median of the reference population is considered to be underweight. However, a child may be underweight because he/she is stunted, wasted or both. Interpretation of this indicator is complex and inconclusive; for this reason it was not incorporated into this report.

Overall, 4 percent of all the children are wasted, and 28 percent are stunted. About a half (45 percent) of the children participate in nutrition programs, 98 percent participate in weigh-in programs, and 91 percent in vaccination programs.

Cluster location and poverty status are correlated with nutrition status and program participation. As would have been expected, accessible villages report a higher share of children participating in nutrition program (49 percent) than remote villages (41 percent). Poor households show 6 percent of wasted children and 33 percent of stunted children, whereas the figures for non-poor households are 1 and 23 percent respectively.

Regarding socio-economic status, households in the 'other' category show the highest rate for wasted children, at 24 percent, whereas households from the 'self-employed other' category show the highest rate of stunted children, at 32 percent. Children from households where the main income earner is an employee

Table 4.11: Percent Distribution of Children Vaccinated by Source of Information

	Health Card	Other	Total
Total	92.2	7.8	100.0
Cluster Location			
Accessible	92.2	7.8	100.0
Remote	92.1	7.9	100.0
Poverty Status			
Poor	90.7	9.3	100.0
Non-poor	93.4	6.6	100.0
Socio-economic group			
Employed	100.0	0.0	100.0
Self-employed - agriculture	90.6	9.4	100.0
Self-employed - other	94.0	6.0	100.0
Other	100.0	0.0	100.0
Gender and age in completed years			
Male	93.3	6.7	100.0
0	68.7	31.3	100.0
1	92.5	7.5	100.0
2	100.0	0.0	100.0
3	100.0	0.0	100.0
4	100.0	0.0	100.0
Female	91.1	8.9	100.0
0	74.5	25.5	100.0
1	99.1	0.9	100.0
2	94.5	5.5	100.0
3	100.0	0.0	100.0
4	100.0	0.0	100.0

Source:CWIQ 2007 Rufiji DC

1. Base of table is total number of children under 5 vaccinated.

shows the lowest rates of wasted and stunted, at 0 and 14 percent, respectively. The gender and age breakdown shows no strong correlation with nutritional status and program participation.

The breakdown by orphan status shows important differences between orphaned and non-orphaned children. A child is considered orphan if he/she is under 18 years old and has lost at least one parent. Orphaned children show systematically lower rates of stunting and wasting than non-orphaned children, as well as lower participation in weigh-ins and lower rates of vaccinations than non-orphaned children. In turn the latter report a higher share participating in nutrition program than the former at 55 and 45 percent respectively.

A child is considered fostered when at least one of his/her parents does not leave at home. The split-up by foster status reveals that fostered children are more likely to be stunted than non-fostered children at 45 and 27 percent respectively. In turn, non-fostered children participate in weigh-ins or receive vaccinations more frequently than fostered children.

Table 4.10 shows the percent distribution of children vaccinated by type of vaccination received. Overall, 69 percent of children under 5 years old have vaccination against measles, 96 against BCG, and roughly between 80 and 96 percent received vaccinations against DPT and OPV except OPV0 at 64 percent. Finally, 59 percent of the children in the district receive vitamin A supplements.

The shares of vaccinated children tend to be higher in accessible villages than in remote villages. The widest difference is observed in OPV0 vaccination whereby, accessible villages report a share of 75 percent against 51 percent for remote villages. Similarly there are no sharp differences between poor and non-poor households in the distribution of vaccinated children by type of vaccination received, except for measles and OPV0 with non-poor households reporting a share of 76 and 72 percent against 62 and 55 percent of poor households respectively.

The breakdown by socio-economic group shows that vaccination rates in most cases are highest for children from the 'employee' category, and lowest for children from the 'other' category.

The gender breakdown shows that boys have higher vaccination rates against measles than girls (75 against 64 percent). While boys report higher rate of vitamin A supplements girls report a higher rate of OPV0 vaccination. The age breakdown shows a trend in which the share of children receiving vaccinations tends to increase with age to 100 percent at the age of 4 years in most of vaccination types except for OPV0 which shows an increase to a peak at age 2 years and decrease after that.

Table 4.11 shows the percent distribution of children vaccinated by source of information. Overall, the information for 92 percent of the vaccinated children was supported by a vaccination cards.

There is no difference by cluster location or poverty status. The main difference by socio-economic group is that virtually all vaccinated children from the 'employee' and the 'other' categories had vaccination

cards, whereas in the remaining categories the shares was less than 95 percent each.

Furthermore, virtually all children aged 1 and above had vaccination cards. Children between 0 and 11 months had vaccination cards in 75 and 69 percent of the cases, for females and males, respectively.

5 EMPLOYMENT

This chapter examines employment indicators for the population of Rufiji DC. The first section analyses the employment status of the adult population. The second section of the chapter focuses on the working adults, with a special focus on the underemployed population. Trends examined include type of employment, employment sector and employer of the working adults. In the third section, the economically inactive subgroups of the adult population are examined. Next, household activities are studied. Analysis of child labour concludes this chapter.

5.1 Employment Status of Total Adult Population

The adult population of the district is categorised into two main groups: working and non-working. The working population includes all adults who had engaged in any type of work in the 4 weeks preceding the survey. Within the working population, a distinction is made between those employed to capacity and those who are underemployed. The underemployed are those individuals who report willingness to take on additional work. This category reflects the population that is not working as much as they want, so they reflect surplus in the labour supply.

The non-working population consists of individuals who had not engaged in any type of work in the 4 weeks preceding the survey. This group is further subdivided into those who are unemployed and those who are economically inactive. While the economically inactive are individuals who had not engaged in any work in the 4 weeks preceding the survey due to illness, disability, age or school, unemployed individuals are those who were not working due to lack of employment opportunities but were actively looking for a job.

5.1.1 Work Status

Table 5.1 shows that 59 percent of the adult population is employed and 37 percent underemployed. Unemployment is virtually 0 percent and the inactivity rate is 4 percent. There are no clear differences by cluster location. In turn, poor households show a higher employment rate than non-poor households. For both genders, underemployment peaks for the

Table 5.1 - Percentage distribution of the population by work status (age 15 and above)

	Working			Not working			
	Employed	Under emp.	Total	Unemploy.	Inactive	Total	Total
Total	58.6	37.0	95.6	0.4	4.0	4.4	100.0
Cluster Location							
Accessible	57.2	38.0	95.2	0.7	4.0	4.8	100.0
Remote	60.3	35.7	96.1	0.0	3.9	3.9	100.0
Poverty Status							
Poor	57.4	38.3	95.7	0.0	4.3	4.3	100.0
Non-poor	59.3	36.2	95.5	0.6	3.8	4.5	100.0
Gender and age							
Male	47.5	46.9	94.5	0.8	4.7	5.5	100.0
15-29	65.3	27.3	92.6	1.0	6.4	7.4	100.0
30-49	35.4	64.2	99.6	0.0	0.4	0.4	100.0
50-64	29.8	64.2	94.1	2.4	3.5	5.9	100.0
65+	44.9	41.7	86.6	0.0	13.4	13.4	100.0
Female	68.7	27.9	96.6	0.0	3.4	3.4	100.0
15-29	75.5	22.1	97.6	0.0	2.4	2.4	100.0
30-49	60.1	38.4	98.4	0.0	1.6	1.6	100.0
50-64	71.3	26.4	97.7	0.0	2.3	2.3	100.0
65+	64.3	17.5	81.8	0.0	18.2	18.2	100.0

Source:CWIQ 2007 Rufiji DC

1. Underemployed includes persons who sought to increase earnings in the seven days preceding the survey.
2. Unemployed includes persons who did not work in the four week period preceding the survey and who looked for work in the same period. The inactive population, primarily students and retired persons, is not included in unemployment.

Table 5.2 - Principal labour force indicators (persons age 15 and above)

	Total population			Heads of household		
	Active population	Unemployment rate	Underemploy-ment rate	Active population	Unemploy-ment rate	Underemploy-ment rate
Total	96.0	0.4	38.6	97.9	0.5	61.3
Cluster Location						
Accessible	96.0	0.7	39.7	97.7	0.9	63.8
Remote	96.1	0.0	37.2	98.2	0.0	58.3
Poverty Status						
Poor	95.7	0.0	40.0	97.4	0.0	63.4
Non-poor	96.2	0.7	37.6	98.2	0.7	60.2
Gender and age						
Male	95.3	0.9	49.3	98.0	0.6	63.3
15-29	93.6	1.1	29.2	100.0	0.0	60.3
30-49	99.6	0.0	64.4	99.6	0.0	66.6
50-64	96.5	2.5	66.6	96.4	2.5	67.0
65+	86.6	0.0	48.1	92.9	0.0	48.6
Female	96.6	0.0	28.9	97.7	0.0	51.8
15-29	97.6	0.0	22.6	100.0	0.0	76.7
30-49	98.4	0.0	39.0	100.0	0.0	55.3
50-64	97.7	0.0	27.1	95.0	0.0	33.0
65+	81.8	0.0	21.3	93.7	0.0	38.3

Source:CWIQ 2007 Rufiji DC

1. Underemployed includes persons who sought to increase earnings in the seven days preceding the survey.
2. Unemployed includes persons who did not work in the four week period preceding the survey and who looked for work in the same period. The inactive population, primarily students and retired persons, is not included.

Table 5.3 - Percentage distribution of the population by work status (age 15-24)

	Active population				Active		
	Employed	Under emp.	Working	Unemployed	Total	Inactive	Total
Total	79.0	14.9	93.9	0.7	94.5	5.5	100.0
Cluster Location							
Accessible	79.2	14.6	93.8	1.2	95.0	5.0	100.0
Remote	78.8	15.2	94.0	0.0	94.0	6.0	100.0
Poverty Status							
Poor	80.8	14.9	95.7	0.0	95.7	4.3	100.0
Non-poor	77.8	14.8	92.6	1.1	93.7	6.3	100.0
Gender and age							
Male	73.7	17.0	90.7	1.3	92.1	7.9	100.0
15-16	93.0	4.6	97.6	0.0	97.6	2.4	100.0
17-19	76.8	17.2	94.0	0.0	94.0	6.0	100.0
20-21	58.4	23.4	81.7	8.1	89.8	10.2	100.0
22-23	37.2	39.2	76.3	0.0	76.3	23.7	100.0
Female	84.2	12.7	96.9	0.0	96.9	3.1	100.0
15-16	90.7	7.1	97.8	0.0	97.8	2.2	100.0
17-19	83.0	7.7	90.8	0.0	90.8	9.2	100.0
20-21	88.3	11.0	99.3	0.0	99.3	0.7	100.0
22-23	75.0	25.0	100.0	0.0	100.0	0.0	100.0

Source:CWIQ 2007 Rufiji DC

1. Underemployed includes persons who sought to increase earnings in the seven days preceding the survey.
2. Unemployed includes persons who did not work in the four week period preceding the survey and who looked for work in the same period. The inactive population, primarily students and retired persons, is not included.

cohort aged between 30 and 49 years. The adult population that was not working in the 4 weeks preceding the survey was

mostly inactive, rather than unemployed. This means that most of them were students, sick people, etc. rather than people looking for work and ready for it. As would be expected, the share of inactive population is higher in the 65+ cohort.

5.1.2 Employment of Household Heads

Table 5.2 shows the principal labour force indicators for the adult population compared to the household heads. Activity rates are similar for total population and household heads, but underemployment is higher among the latter. The rate of underemployment is higher in accessible villages and poor households, for the total population as well as for household heads.

The gender breakdown shows that in the general population males are more likely to be underemployed than females, with rates of 49 and 29 percent, respectively. A similar difference is observed for the household heads.

The breakdown by age-groups shows that among females, underemployment decreases with age of the household head. The trend is less clear for males.

5.1.3 Youth Employment

Table 5.3 shows the distribution of the youth (ages 15 to 24) by work status. The ctivity rate of this group is similar to the overall population. However, underemployment is lower: 15 percent of workers are underemployed, as opposed to 39 percent of workers for the whole adult population.

The breakdown by poverty status and cluster location did not show strong correlation with households' distribution by work status.

The gender breakdown shows that the underemployment rate among the male youth is higher than that for the female youth. It can be seen that underemployment is remarkably higher in the 22-23 age-group.

5.2 Working population

Table 5.4 shows that the vast majority of the working population is formed by self-employed in agriculture at 37 percent, or in other activities (inactive, unemployed, unpaid workers, domestic workers) at 46 percent. 14 percent is self-employed in non-agricultural activities and employees only account for 3 percent of the working population. The population self-employed in agriculture is higher in remote villages than in accessible villages at 41 and 33

Table 5.4 - Percentage distribution of the working population by employment status

	Employee	Self-employed Agriculture	Self-employed Other	Other	Total
Total	2.9	36.8	14.1	46.1	100.0
Cluster Location					
Accessible	4.5	33.4	16.6	45.5	100.0
Remote	1.0	41.0	11.0	47.0	100.0
Poverty Status					
Poor	0.0	37.3	11.8	50.9	100.0
Non-poor	4.8	36.6	15.5	43.1	100.0
Gender and age					
Male	3.9	51.6	22.3	22.2	100.0
15-29	0.5	20.1	25.1	54.3	100.0
30-49	6.4	65.5	27.7	0.4	100.0
50-64	8.3	79.4	10.5	1.9	100.0
65+	1.5	84.9	12.1	1.5	100.0
Female	2.1	23.6	6.8	67.6	100.0
15-29	1.0	10.1	10.5	78.5	100.0
30-49	4.0	31.1	4.4	60.4	100.0
50-64	1.7	44.2	1.7	52.4	100.0
65+	0.0	34.7	4.2	61.2	100.0

Source:CWIQ 2007 Rufiji DC

1. Base is working population aged 15+

Table 5.5 - Percentage distribution of the working population by employer

	State/NGO/ Other	Private	Household	Total
Total	1.8	52.1	46.1	100.0
Cluster Location				
Accessible	2.6	52.2	45.2	100.0
Remote	0.9	51.9	47.2	100.0
Poverty Status				
Poor	0.0	48.8	51.2	100.0
Non-poor	3.0	54.2	42.8	100.0
Gender and age				
Male	2.5	75.3	22.2	100.0
15-29	0.1	45.6	54.3	100.0
30-49	3.2	96.4	0.4	100.0
50-64	8.3	89.8	1.9	100.0
65+	0.0	98.5	1.5	100.0
Female	1.2	31.3	67.5	100.0
15-29	0.0	21.7	78.3	100.0
30-49	2.8	36.8	60.4	100.0
50-64	1.7	45.9	52.4	100.0
65+	0.0	38.8	61.2	100.0

Source:CWIQ 2007 Rufiji DC

1. Base is working population aged 15+

Table 5.6 - Percentage distribution of the working population by activity

	Agriculture	Mining/manuf/ energy/constr	Pub & priv services	Domestic duties	Other	Total
Total	72.9	0.7	10.1	9.6	6.6	100.0
Cluster Location						
Accessible	67.6	1.2	13.5	10.8	6.9	100.0
Remote	79.5	0.2	6.0	8.1	6.3	100.0
Poverty Status						
Poor	77.8	0.0	5.0	9.8	7.4	100.0
Non-poor	69.8	1.2	13.4	9.5	6.1	100.0
Gender and age						
Male	64.1	1.6	12.6	9.3	12.4	100.0
15-29	50.4	0.8	13.1	22.4	13.4	100.0
30-49	65.5	3.7	14.3	0.4	16.1	100.0
50-64	80.4	0.0	10.7	0.9	8.0	100.0
65+	87.9	0.0	7.9	1.1	3.1	100.0
Female	80.8	0.0	7.9	9.9	1.4	100.0
15-29	72.6	0.0	11.3	15.0	1.2	100.0
30-49	86.6	0.0	7.4	5.0	1.1	100.0
50-64	93.8	0.0	1.7	2.9	1.7	100.0
65+	80.9	0.0	0.0	15.0	4.2	100.0

Source:CWIQ 2007 Rufiji DC

1. Base is working population aged 15+

percent respectively. Furthermore poor households report a higher share in other activities than non-poor households at 51 and 43 percent respectively.

The gender breakdown shows that a higher share of males is self-employed in agriculture or in non-agricultural activities, while females report a higher share in 'other' activities. The cut down by age-groups shows that the share of employees peaks for males in the 50-64 cohort (8 percent), the self-employed in agriculture for the 65+ males (85 percent), the 'self-employed other' for 30-49 males (28 percent) and 'other' for 15-29 females (61 percent).

The percentage distribution of the working population by employer is analysed in Table 5.5. The table shows that the private sector (formal or informal) employs 52 percent of the working population, which combined with individuals who work for their own households represent up to 98 percent of the working population.

The breakdown by povestatus shows that poor households report a higher share of the working population working for the household and a lower share working for a private employer than non-poor households. There appears to be no strong correlation between cluster location and the distribution of the working population by employer.

Males report a higher share working for a private employer, while females report a higher share working for the household. Most males work for a private employer, except in the 15-29 cohort, where 54 percent of them work in the household. The share of females working in the private sector tends to increase with age, but is always lower than the respective shares of males. At the same time, the share of females working for the household decreases with age.

Table 5.6 shows the percentage distribution of the working population by main activity. The categories are agriculture; mining, manufacturing, energy and construction; services (transport, trade, private and public services); domestic duties; and other. Overall, agriculture and domestic duties together account for 80 percent of the working population. 73 percent of the population is engaged in agriculture, and 7 percent in domestic duties.

The split-up by remoteness of the village and poverty status of the household shows that accessible villages and non-poor households report lower shares working in agriculture and higher shares working in services than their respective counterparts.

Table 5.7 - Percentage distribution of the working population by employment status, sex and activity

	Employee		Self-employed Agriculture		Self-employed Other		Other		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture	3.6	0.0	100.0	100.0	0.0	0.0	53.8	84.1	63.7	80.5
Mining & non-primary	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	1.5	0.0
Services	77.8	100.0	0.0	0.0	40.9	79.3	1.8	0.7	12.2	7.8
Domestic duties	0.0	0.0	0.0	0.0	0.5	0.0	43.6	15.2	10.5	10.3
Other	18.7	0.0	0.0	0.0	51.6	20.7	0.8	0.0	12.1	1.4

Source:CWIQ 2007 Rufiji DC

1. Base is working population aged 15+

Table 5.8 - Percentage distribution of the working population by employer, sex and activity

	Government		Private		Household		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture	0.0	0.0	70.6	74.8	55.8	84.7	65.5	80.6
Mining & non-primary	0.0	0.0	1.6	0.0	0.0	0.0	1.2	0.0
Services	86.5	100.0	12.0	19.4	2.8	1.4	11.6	8.2
Domestic duties	0.0	0.0	0.7	1.8	39.5	13.6	9.7	9.8
Other	13.5	0.0	15.1	4.0	1.8	0.3	12.0	1.4

Source:CWIQ 2007 Rufiji DC

1. Base is working population aged 15+

The gender breakdown shows that the most common activities for females are agriculture and household duties, accounting for 91 percent of the working population. These are the main activities for men as well, but they are less concentrated, with 27 percent in other activities.

The breakdown by age-groups shows that, for both genders, younger cohorts have higher shares dedicated to household duties. The share of males in agriculture is around 64 percent, whereas for females the share is 81 percent. In turn, the share of females dedicated to agriculture is lower for the youngest and the oldest cohorts, where the shares dedicated to domestic duties are higher.

Table 5.7 shows the percentage distribution of the working population by employment status, gender and activity. Overall, around 64 percent of the male labour force is in agriculture, whereas the share for females is 81 percent. Domestic duties have the second highest shares for females at 10 percent, whereas for males services and other activities rank the second with shares of 12 percent each.

For both genders, virtually all the employees work in services. The self-employed in non-agricultural activities work also mostly in services, with shares of 41 percent for males and 79 percent for females. The female population in the 'other' group is concentrated in agriculture at 84 percent, whereas males in this category are split between agriculture and domestic duties (54 and 44 percent, respectively).

The percentage distribution of the working population by employer, gender, and activity is shown in Table 5.8. The working population employed by the government is mostly dedicated to services. The labour force working for private employers (whether formal or informal) is concentrated in agriculture. Among the individuals who were employed by the household, the main activity was agriculture (55 percent of males, 85 percent of females), but domestic duties also reports important shares (40 percent of males, 14 percent of females in this category).

5.3 Underemployed Population

The percentage distribution of the underemployed population by employment status is shown in Table 5.9. Overall, 58 percent of the underemployed population are self-employed in

Table 5.9- Percentage distribution of the underemployed population by employment status

	Employee	Self-employed Agriculture	Self-employed Other	Other	Total
Total	3.6	58.3	18.7	19.4	100.0
Cluster Location					
Accessible	5.3	54.9	19.9	20.0	100.0
Remote	1.5	62.8	17.1	18.6	100.0
Poverty Status					
Poor	0.0	61.3	13.6	25.1	100.0
Non-poor	6.1	56.3	22.1	15.6	100.0
Gender and age					
Male	6.0	68.9	22.3	2.8	100.0
15-29	1.2	44.8	42.1	11.9	100.0
30-49	7.7	73.5	18.9	0.0	100.0
50-64	8.8	79.1	12.1	0.0	100.0
65+	3.1	82.6	14.3	0.0	100.0
Female	0.0	42.1	13.0	45.0	100.0
15-29	0.0	22.1	27.8	50.1	100.0
30-49	0.0	55.0	5.5	39.5	100.0
50-64	0.0	45.7	0.0	54.3	100.0
65+	0.0	51.1	10.8	38.1	100.0

Source:CWIQ 2007 Rufiji DC

1. Base is underemployed population aged 15+

Table 5.10 - Percentage distribution of the underemployed population by employer

	State/NGO/Other	Private	Household	Total
Total	2.6	78.4	19.0	100.0
Cluster Location				
Accessible	3.7	77.0	19.3	100.0
Remote	1.1	80.2	18.6	100.0
Poverty Status				
Poor	0.0	74.9	25.1	100.0
Non-poor	4.3	80.8	14.9	100.0
Gender and age				
Male	4.2	93.0	2.8	100.0
15-29	0.0	88.1	11.9	100.0
30-49	4.9	95.1	0.0	100.0
50-64	8.8	91.2	0.0	100.0
65+	0.0	100.0	0.0	100.0
Female	0.0	56.0	44.0	100.0
15-29	0.0	52.6	47.4	100.0
30-49	0.0	60.5	39.5	100.0
50-64	0.0	45.7	54.3	100.0
65+	0.0	61.9	38.1	100.0

Source:CWIQ 2007 Rufiji DC

1. Base is underemployed population aged 15+

agriculture, 19 percent self-employed in other activities, a further 19 percent are in 'other' activities and 4 percent are formed by employees. Even though self-employed in agriculture are 37 percent of the working population, they represent almost 58 percent of the underemployed.

The breakdown by cluster location shows that the underemployed population in remote villages is composed by a higher share of the self-employed in agriculture than the underemployed population from accessible villages. The breakdown by poverty status shows that poor households report a higher share self-employed in agriculture, while non-poor households report a higher share being self-employed in non-agricultural activities.

The gender breakdown shows that in the underemployed population, females are more likely than males to be in 'other' activities. In turn, males are more likely to be self-employed, either in agriculture on in non-agricultural activities, than females.

For males, the share of employees peaks at 8 percent in the 50-64 cohort. The share self-employed in agriculture tends to increase with age from 45 percent for the 15-29 cohort to 83 percent for the 65+ cohort. The 'self-employed other' group shows a higher share in the 15-29 cohort, and the 'other' group shows positive rates only in the 15-29 age-group. In the case of females, the share self-employed in agriculture tends to increase with age, and the share in 'other' activities is highest in the 15-29 age-group at(50 percent).

Table 5.10 shows the percentage distribution of the underemployed population by employer. Overall, the underemployed population mostly works for a private employer at 78 percent and in second place for the household at 19 percent. The State, NGOs, and other types of employer only account for 3 percent of the underemployed population.

The breakdown by cluster location shows no strong correlation with the distribution of the underemployed population by employer.

The breakdown by poverty status shows that poor households report a higher share of underemployed population working for the household, while non-poor households report higher shares in the remaining types of employers.

The gender breakdown shows that underemployed males are strongly concentrated in private employers at 93 percent. In turn, underemployed females are almost evenly split between private employers and household, with shares of 56 and 44 percent respectively.

Table 5.11 - Percentage distribution of the underemployed population by activity

	Agriculture	Mining/manuf/ energy/constr	Public & private services	Domestic duties	Other	Total
Total	76.9	0.2	13.3	0.5	9.1	100.0
Cluster Location						
Accessible	74.5	0.3	16.8	0.7	7.7	100.0
Remote	80.1	0.0	8.8	0.3	10.8	100.0
Poverty Status						
Poor	86.1	0.0	4.4	0.3	9.3	100.0
Non-poor	70.7	0.3	19.4	0.7	9.0	100.0
Gender and age						
Male	71.0	0.3	14.4	0.5	13.8	100.0
15-29	52.8	0.0	21.4	2.2	23.6	100.0
30-49	73.5	0.6	12.8	0.0	13.1	100.0
50-64	79.1	0.0	11.6	0.0	9.3	100.0
65+	85.7	0.0	11.1	0.0	3.3	100.0
Female	86.0	0.0	11.7	0.5	1.8	100.0
15-29	69.2	0.0	28.0	1.4	1.4	100.0
30-49	94.5	0.0	3.8	0.0	1.7	100.0
50-64	100.0	0.0	0.0	0.0	0.0	100.0
65+	89.2	0.0	0.0	0.0	10.8	100.0

Source:CWIQ 2007 Rufiji DC

1. Base is underemployed population aged 15+

The age breakdown shows that underemployed males report positive shares working for the household only in the 15-29 cohort. Underemployed females report higher shares working for the household than males across all age groups.

The percentage distribution of the underemployed population by main economic activity is presented in Table 5.11. Overall, 77 percent of the underemployed workers are dedicated to agriculture, and 13 percent to services, with the remaining activities reporting shares less than 10 percent each.

Remote villages and poor households report higher shares in agriculture and lower shares in services than their respective counterparts.

The gender breakdown shows that underemployed women have a higher share dedicated to agriculture than underemployed males, who have a higher share in other activities. The age breakdown shows that the share of underemployed males dedicated to agriculture increases with age, while the share in services decreases. A similar trend is observed for females.
Table 5.11

5.4 Unemployed and Inactive Population

Unemployment refers to a person who is actively looking for a job and is ready to work. If the individual is not working but is not looking for a job or is not ready to work, he or she is part of the inactive population. For instance, a full-time student, an ill individual or a retired person are not unemployed, because they either are not looking for a job (the student and the retired), or are not able to work (the ill person). Table 5.12 shows the main causes for unemployment. None of the respondents in the district was classified as unemployed.

Table 5.13 shows the main causes of economic inactivity. Overall, infirmity is the main cause for inactivity (51 percent), followed by being a student (34 percent) and being too old (13 percent each).

The breakdown by cluster location shows that being a student is a more common cause for economic inactivity in accessible clusters than in remote clusters. In turn, being sick is more common in the latter.

The breakdown by poverty status shows that being a student is a more common cause for economic inactivity among non-poor households than in poor households. Being too old and being sick were

Table 5.12 - Percentage distribution of the unemployed population by reason

	No work available	Seasonal inactivity	Student	HH/Family duties	Age: too old	Age: too young	Infirmity	Retired	Other	Total
Total	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
Cluster Location										
Accessible	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
Remote	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Poverty Status										
Poor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non-poor	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
Gender and age										
Male	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
15-29	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
30-49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50-64	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
65+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15-29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30-49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50-64	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source:CWIQ 2007 Rufiji DC

1. Base is unemployed population aged 15+

Table 5.13 - Percentage distribution of the economically inactive population by reason

	No work available	Seasonal inactivity	Student	HH/Family duties	Age: too old	Age: too young	Infirmity	Retired	Other	Total
Total	0.0	0.0	33.5	0.0	12.9	0.0	50.7	0.0	2.9	100.0
Cluster Location										
Accessible	0.0	0.0	36.5	0.0	12.6	0.0	45.7	0.0	5.3	100.0
Remote	0.0	0.0	29.7	0.0	13.2	0.0	57.1	0.0	0.0	100.0
Poverty Status										
Poor	0.0	0.0	15.4	0.0	15.4	0.0	69.1	0.0	0.0	100.0
Non-poor	0.0	0.0	46.4	0.0	11.0	0.0	37.5	0.0	5.0	100.0
Gender and age										
Male	0.0	0.0	39.4	0.0	16.4	0.0	39.0	0.0	5.2	100.0
15-29	0.0	0.0	71.2	0.0	0.0	0.0	19.4	0.0	9.4	100.0
30-49	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0
50-64	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0
65+	0.0	0.0	0.0	0.0	56.4	0.0	43.6	0.0	0.0	100.0
Female	0.0	0.0	25.9	0.0	8.3	0.0	65.8	0.0	0.0	100.0
15-29	0.0	0.0	80.5	0.0	0.0	0.0	19.5	0.0	0.0	100.0
30-49	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0
50-64	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0
65+	0.0	0.0	0.0	0.0	19.2	0.0	80.8	0.0	0.0	100.0

Source:CWIQ 2007 Rufiji DC

1. Base is inactive population aged 15+

reported by higher shares of the inactive population in poor households.

The gender breakdown shows that males report being a student or being too old more frequently than females, who in turn report infirmity more often. For both genders, being a student and being too old are concentrated in specific age-groups: the youngest (15-29) and the oldest (65+) cohorts.

5.5 Household Tasks

Table 5.14 shows the activities normally undertaken in the household by its members. First the population aged 15 and above is analysed. The most common

Table 5.14 - Activities normally undertaken in the household (age 15 and over)

	Fetching water	Fetching firewood	Cleaning toilet	Cooking	Care of children	Care or elderly/sick
Total	66.6	62.6	59.5	59.2	73.8	95.7
Cluster Location						
Accessible	67.0	58.3	66.4	61.9	73.1	94.9
Remote	66.1	67.9	51.0	55.8	74.6	96.7
Poverty Status						
Poor	62.6	66.7	53.7	56.8	78.8	95.3
Non-poor	69.2	60.0	63.2	60.7	70.6	95.9
Gender and age						
Male	39.2	40.2	35.4	18.9	66.3	94.2
15-29	59.5	48.8	46.0	27.2	55.3	93.6
30-49	29.9	37.6	29.7	16.1	79.5	97.2
50-64	22.0	29.1	24.7	8.2	75.7	96.5
65+	16.4	32.8	29.5	12.2	52.5	83.1
Female	91.7	83.1	81.5	96.1	80.7	97.1
15-29	99.1	84.2	86.2	99.2	82.7	99.6
30-49	95.6	87.9	84.2	98.2	88.5	98.5
50-64	85.5	90.2	78.0	96.2	75.2	95.3
65+	43.6	45.0	49.7	69.5	44.3	79.8

Source:CWIQ 2007 Rufiji DC

Table 5.15- Activities normally undertaken in the household (age 5 to 14)

	Fetching water	Fetching firewood	Cleaning toilet	Cooking	Care of children	Care or elderly/sick
Total	76.1	49.9	26.1	25.4	57.8	82.2
Cluster Location						
Accessible	74.2	47.3	26.2	26.7	55.8	79.3
Remote	78.3	52.8	26.1	23.8	60.1	85.5
Poverty Status						
Poor	73.6	52.9	24.2	22.9	56.9	81.6
Non-poor	79.4	45.8	28.7	28.6	59.0	83.1
Gender and age						
Male	69.5	44.0	20.1	9.8	54.5	79.8
5-9	53.9	26.6	8.6	4.0	56.1	70.8
10-14	85.6	61.9	32.0	15.7	52.8	89.2
Female	84.4	57.3	33.8	45.1	62.0	85.2
5-9	69.3	32.9	11.5	14.3	60.6	74.6
10-14	98.8	80.6	55.1	74.5	63.4	95.3
Orphan status						
Orphaned	92.0	66.2	26.9	35.1	52.3	81.2
Not-orphaned	73.8	47.6	25.9	24.1	59.0	82.2
Foster status						
Fostered	91.6	73.1	44.3	38.3	42.4	82.6
Not-fostered	72.4	45.7	23.3	22.8	61.0	81.8

Source:CWIQ 2007 Rufiji DC

activities for the population aged 15 and above are taking care of the sick, elderly, and children. All the activities are undertaken by more than 50 percent of the members.

Remote villages report higher shares of population fetching firewood than accessible villages. In turn, the latter report higher shares cleaning the toilet and cooking than the former.

The breakdown by poverty status shows that non-poor households report higher shares of population fetching water and cleaning the toilet, while poor households report higher shares taking care of

Table 5.16- Child labour (age 5 to 14)

		Main activity			Employer	
	Working	Agriculture	Household	Other	Private	Household
Total	49.5	15.3	83.7	1.0	1.0	99.0
Cluster Location						
Accessible	48.3	13.0	86.7	0.4	0.4	99.6
Remote	51.0	17.9	80.5	1.6	1.6	98.4
Poverty Status						
Poor	53.7	18.7	80.3	1.0	1.0	99.0
Non-poor	44.9	10.9	88.2	0.9	0.9	99.1
Gender and age						
Male	50.8	16.5	82.1	1.4	1.4	98.6
5-9	33.8	4.9	92.2	2.8	2.8	97.2
10-14	97.7	27.6	72.4	0.0	0.0	100.0
Female	48.0	13.9	85.7	0.4	0.4	99.6
5-9	30.6	1.3	97.8	0.9	0.9	99.1
10-14	100.0	25.4	74.6	0.0	0.0	100.0
Orphan status						
Orphaned	83.1	14.8	84.0	1.2	1.2	98.8
Not-orphaned	46.4	15.4	83.7	0.9	0.9	99.1
Foster status						
Fostered	82.2	22.2	77.8	0.0	0.0	100.0
Not-fostered	45.5	14.0	84.8	1.2	1.2	98.8

Source:CWIQ 2007 Rufiji DC

children and fetching firewood than the former.

The most important differences are shown in the gender and age-breakdown. Females report remarkably higher shares in all the activities, with rates fluctuating between 81 and 97 percent. The shares for males range from 35 to 66 percent, except for taking care of the sick and elderly (94 percent). The analysis by age-groups shows that for males the shares decrease with age in all activities. In the case of females the shares show sharp decreases in the oldest cohort.

5.6 Child Labour

Table 5.15 shows that the most common activity for children between 5 and 14 years old is fetching water. It is interesting to notice that the share of children fetching water is higher than that for the rest of the population. Children from remote villages report higher shares in most activities than children from accessible villages, the exceptions being taking care of sick or elderly and cooking. Children from non-poor households, in turn, report similar or higher rates than children from poor households.

The gender breakdown shows that girls report similar or higher rates than boys for all household activities. The analysis by age-groups shows that the 10-14 cohorts for both genders have higher rates than the youngest children, for all household tasks.

The breakdown by orphan status shows that orphaned children are more likely to undertake most of the activities than non-orphaned children. Similarly, fostered children are more likely to undertake most of the household tasks under analysis than non-fostered children.

The main descriptive statistics for child labour are presented in Table 5.16. The most important result of the table is that 50 percent of the children are economically active. Their main economic activity is mostly household duties at 84 percent.

The share of working children is higher in poor and remote households than their respective counterparts. In turn non-poor households and households in accessible clusters report higher shares working in household activities than their respective counterparts.

The gender breakdown shows that girls are more likely to work in household duties than boys, while the latter are more likely to be involved in other activities (services, mining, manufacturing, etc.). However, the main difference is given by the age breakdown. Roughly one third of children in the 5-9 cohort were part of the

working population, whereas virtually all the children in the 10-14 cohort were working at the time of the survey. Virtually all the children were working for the household employer at the time of the survey.

The breakdown by orphan and foster status shows stark differences. Orphaned children are more likely to be working than non-orphaned children, at rates of 83 and 46 percent, respectively. Similarly, fostered children are more likely to be working than non-fostered children, at rates of 82 and 46 percent, respectively. Fostered children are more likely to work in agriculture than non-fostered children, who in turn report higher shares in the remaining categories.

5 Employment

6 PERCEPTIONS ON WELFARE AND CHANGES WITHIN COMMUNITIES

This chapter presents the perceptions on welfare status and changes in Rufiji district. The first section shows perceptions of changes in the economic situation both of the communities and of the households. Section two summarises self-reported difficulties in satisfying a set of household needs. In section three asset ownership and occupancy status, as well as occupancy documentation are analysed. Section four gives information related to agriculture: use of agricultural inputs, landholding, and cattle ownership. Section five shows perceptions of crime and security in the community. Section six shows the main income contributor to the household. A brief analysis of ownership of selected household items concludes the chapter.

6.1 Economic Situation

The analysis of this section is based solely on the perception of the interviewees. The main respondent for this part of the questionnaire was the household head. In cases where the household head was not able to respond i.e. was travelling, sick or had little information on the household's daily practices, then the best-informed household member responded. The respondents were asked to comment on whether the situation had changed for the better/worse or remained the same compared to the year prior to the survey.

6.1.1 Perception of Change in the Economic Situation of the Community

Table 6.1 shows the percent distribution of households by the perception of the economic situation of the community compared to the year before the survey. Results show that 19 percent of all households in the district reported a positive change in the economic situation of their community. 28 percent of the population reported observing no changes in their community's economic situation. 47 percent of all households reported community economic condition to have deteriorated and a further 6 percent responded ' I don't know'.

Cluster location and poverty status of the household show some correlation with the perceived economic change. 59 percent of the households in remote villages reports deterioration in their community's economic situation compared to 37 percent of those living in accessible villages. Likewise, while 55 percent of poor households reports deterioration in their community's economic situation, the share for non-poor households is 42 percent.

The percentage of households with seven or more members who reported worsening of their community's economic situation is higher than that of households with one or two members at 51 and 42 percent respectively. Furthermore, there is a difference of 13 percentage points between households owning no land and those owning six or more hectares of land who reported deterioration in their community's economic situation at 43 and 56 percent respectively. Similarly, the percentage of households owning no livestock who reported worsening conditions in their community's economic situation is lower than that of households owning both small and large livestock at 46 and 74 percent respectively.

While 32 percent of households whose main income earner is an employee reported positive change in their community's economic situation, the share for households whose main income earner is self-employed in non-agricultural activities is 16 percent. Furthermore, 29 percent of households where the household head is widowed, separated or divorced reported an improvement in the economic conditions of their communities whereas the share for households where the head has a loose union is virtually null.

It is also observed that the percentage of households where the head has no education and reported deterioration in their community's economic conditions is 16 percentage points lower than that of households where the head has secondary education or more, at 45 and 63 percent

Table 6.1: Percent distribution of households by the perception of the economic situation of the community compared to the year before the survey

	Much Worse	Worse	Same	Better	Much Better	Don't Know	Total
Total	21.3	25.5	28.2	19.2	0.0	5.9	100.0
Cluster Location							
Accessible	16.8	20.1	35.7	19.6	0.0	7.8	100.0
Remote	26.6	31.9	19.2	18.6	0.0	3.7	100.0
Poverty Status							
Poor	23.2	31.8	25.0	15.1	0.0	4.9	100.0
Non-poor	20.3	22.4	29.7	21.1	0.0	6.5	100.0
Household size							
1-2	17.7	23.7	31.5	18.4	0.0	8.7	100.0
3-4	17.3	23.4	32.2	20.0	0.0	7.0	100.0
5-6	27.0	28.3	23.1	17.9	0.0	3.7	100.0
7+	24.1	27.2	24.4	20.1	0.0	4.3	100.0
Area of land owned by the household							
None	23.6	20.0	27.7	18.4	0.0	10.4	100.0
< 1 ha	17.3	27.5	41.9	7.0	0.0	6.3	100.0
1-1.99 ha	12.6	30.3	32.6	20.3	0.0	4.2	100.0
2-3.99 ha	21.9	23.7	28.7	19.8	0.0	5.9	100.0
4-5.99 ha	27.9	27.5	21.2	21.4	0.0	2.0	100.0
6+ ha	22.4	25.1	27.3	15.9	0.0	9.3	100.0
Type of livestock owned by the household							
None	20.6	25.1	29.0	19.3	0.0	6.1	100.0
Small only	21.4	41.0	16.3	16.5	0.0	4.9	100.0
Large only	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Both	74.2	0.0	0.0	25.8	0.0	0.0	100.0
Socio-economic Group							
Employee	28.4	13.8	26.0	31.8	0.0	0.0	100.0
Self-employed - agriculture	21.1	27.3	27.4	19.0	0.0	5.3	100.0
Self-employed - other	21.0	25.6	29.9	16.1	0.0	7.4	100.0
Other	12.2	6.8	36.4	21.6	0.0	23.1	100.0
Gender of the head of household							
Male	22.3	26.9	28.2	16.8	0.0	5.9	100.0
Female	16.4	19.0	28.1	30.2	0.0	6.3	100.0
Marital status of the head of household							
Single	12.9	12.5	47.2	27.5	0.0	0.0	100.0
Monogamous	20.7	26.8	29.8	17.6	0.0	5.2	100.0
Polygamous	26.6	34.9	19.1	14.5	0.0	4.9	100.0
Loose union	60.4	0.0	20.6	0.0	0.0	19.0	100.0
Widow/div/sep	15.9	14.4	30.5	29.0	0.0	10.2	100.0
Education level of the head of household							
None	20.0	24.9	26.5	18.1	0.0	10.4	100.0
Primary	21.3	22.2	31.8	21.3	0.0	3.4	100.0
Secondary +	23.9	39.1	17.8	13.3	0.0	6.0	100.0

respectively. Likewise, while 49 percent of male-headed households report deterioration in the economic conditions of their communities, the share for female-headed households is 35 percent.

6.1.2 Perception of Change in the Economic Situation of the Household

Table 6.2 shows the percent distribution of households by the perception of their economic situation compared to the year before the survey. 15 percent of the households reported an improvement in their economic conditions, while 27 percent reported same conditions and 58 percent of all households reported deterioration of their economic conditions compared to the year preceding the survey.

Table 6.2: Percent distribution of households by the perception of the economic situation of the household compared to the year before the survey

	Much Worse	Worse	Same	Better	Much Better	Don't Know	Total
Total	26.9	31.3	26.8	14.8	0.2	0.0	100.0
Cluster Location							
Accessible	23.9	26.0	33.4	16.7	0.0	0.0	100.0
Remote	30.6	37.7	18.9	12.5	0.3	0.0	100.0
Poverty Status							
Poor	34.2	30.9	28.2	6.7	0.0	0.0	100.0
Non-poor	23.4	31.5	26.1	18.8	0.2	0.0	100.0
Household size							
1-2	27.0	30.6	26.6	15.7	0.0	0.0	100.0
3-4	26.8	28.0	29.5	15.3	0.4	0.0	100.0
5-6	25.7	35.8	22.6	15.9	0.0	0.0	100.0
7+	28.8	32.1	27.6	11.5	0.0	0.0	100.0
Area of land owned by the household							
None	33.4	16.5	39.3	10.8	0.0	0.0	100.0
< 1 ha	28.0	65.7	6.3	0.0	0.0	0.0	100.0
1-1.99 ha	26.6	28.3	29.6	15.6	0.0	0.0	100.0
2-3.99 ha	29.9	34.7	23.0	12.4	0.0	0.0	100.0
4-5.99 ha	22.3	35.2	23.6	17.9	0.9	0.0	100.0
6+ ha	20.3	29.2	29.1	21.4	0.0	0.0	100.0
Type of livestock owned by the household							
None	26.9	31.7	27.1	14.1	0.2	0.0	100.0
Small only	29.6	25.4	11.1	33.8	0.0	0.0	100.0
Large only	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Both	0.0	28.8	71.2	0.0	0.0	0.0	100.0
Socio-economic Group							
Employee	13.5	10.1	59.8	14.0	2.5	0.0	100.0
Self-employed - agriculture	29.4	34.9	23.2	12.5	0.0	0.0	100.0
Self-employed - other	22.1	29.5	26.1	22.3	0.0	0.0	100.0
Other	37.8	6.8	46.9	8.5	0.0	0.0	100.0
Gender of the head of household							
Male	25.8	32.6	25.8	15.6	0.2	0.0	100.0
Female	32.1	25.6	31.5	10.8	0.0	0.0	100.0
Marital status of the head of household							
Single	17.6	14.3	46.3	21.7	0.0	0.0	100.0
Monogamous	23.6	30.7	27.8	17.5	0.3	0.0	100.0
Polygamous	27.3	40.6	20.3	11.7	0.0	0.0	100.0
Loose union	31.4	20.6	29.0	19.0	0.0	0.0	100.0
Widow/div/sep	38.6	26.2	26.8	8.3	0.0	0.0	100.0
Education level of the head of household							
None	39.3	25.1	26.0	9.6	0.0	0.0	100.0
Primary	21.5	35.7	27.9	14.6	0.3	0.0	100.0
Secondary +	20.8	28.2	24.2	26.8	0.0	0.0	100.0

Source:CWIQ 2007 Rufiji DC

While 50 percent of those living in remote villages reported deterioration of the household's economic situation, the share for accessible villages was 69 percent. Similarly, 65 percent of poor households reported deterioration of the household's economic situation compared to 55 percent of non-poor households.

The percentage of households with five or six members who reported deterioration in the economic conditions of their households is higher than that of households with one or two members at 62 and 58 percent respectively. Furthermore, while 33 percent of households owning no land report much worse economic conditions of their households, the share for households owning six or more hectares of land is 20 percent. Disaggregation of the data further shows that, while 34 percent of households owning small livestock reported improvement of their households' economic condition the share for households owning large livestock and those owning both small and large livestock were virtually null.

The percentage of households in the employee category who reported an improvement in their households' economic conditions is twice as high as that of households whose main income earner is in the 'other' category at 17 and 8 percent respectively. Furthermore, while 68 percent of households where the head is in a polygamous marriage reported deterioration in their household's economic conditions, the share for households whose head is single was 32 percent. 32 percent of female-headed households report much worse economic conditions compared to 26 percent of male-headed households. Similarly, the percentage of households reporting much worse economic conditions is higher for households where the head has no education than households where the head has secondary education or more at 39 and 21 percent respectively.

Table 6.3: Percent distribution of households by the difficulty in satisfying the food needs of the household during the year before the survey

	Never	Seldom	Often	Always	Total
Total	25.6	32.9	28.7	12.9	100.0
Cluster Location					
Accessible	23.5	30.9	28.1	17.6	100.0
Remote	28.1	35.3	29.3	7.3	100.0
Poverty Status					
Poor	9.6	22.4	48.8	19.2	100.0
Non-poor	33.4	38.0	18.8	9.8	100.0
Household size					
1-2	21.7	38.2	22.8	17.3	100.0
3-4	32.1	31.0	27.3	9.6	100.0
5-6	20.9	34.6	29.5	15.0	100.0
7+	23.8	28.8	35.5	11.9	100.0
Area of land owned by the household					
None	29.1	42.2	21.4	7.3	100.0
< 1 ha	0.0	33.1	60.6	6.3	100.0
1-1.99 ha	29.2	24.6	31.6	14.6	100.0
2-3.99 ha	22.9	32.6	29.8	14.7	100.0
4-5.99 ha	24.2	36.5	26.4	12.9	100.0
6+ ha	30.2	32.6	25.5	11.7	100.0
Type of livestock owned by the household					
None	24.8	33.2	28.4	13.6	100.0
Small only	43.6	29.2	27.2	0.0	100.0
Large only	0.0	0.0	100.0	0.0	100.0
Both	28.8	22.7	48.5	0.0	100.0
Socio-economic Group					
Employee	77.4	17.0	5.6	0.0	100.0
Self-employed - agriculture	20.5	32.9	31.6	15.0	100.0
Self-employed - other	28.5	39.0	23.9	8.6	100.0
Other	8.0	17.1	48.0	26.9	100.0
Gender of the head of household					
Male	26.2	33.7	27.5	12.6	100.0
Female	22.7	29.0	34.2	14.1	100.0
Marital status of the head of household					
Single	35.2	19.6	28.8	16.4	100.0
Monogamous	27.8	34.2	28.6	9.4	100.0
Polygamous	25.2	35.6	25.9	13.3	100.0
Loose union	0.0	39.6	47.1	13.3	100.0
Widow/div/sep	18.4	28.4	31.3	21.9	100.0
Education level of the head of household					
None	14.8	27.6	39.8	17.8	100.0
Primary	29.1	33.2	25.8	11.9	100.0
Secondary +	35.6	43.3	15.3	5.9	100.0

Source:CWIQ 2007 Rufiji DC

6.2 Self-reported Difficulties in Satisfying Household Needs

This section analyses the difficulties households faced in satisfying household needs during the year prior to the survey. These household needs are such as food, school fees, house rent, utility bills and healthcare. For each household, the respondent was asked to say whether they never, seldom, often or always experience difficulties in satisfying the specified household need.

6.2.1 Food Needs

Table 6.3 shows the percent distribution of households by the difficulty in satisfying

the food needs of the household during the year before the survey. Overall, 59 percent of the district's households never/seldom experience food shortages while the remaining population experience food shortages frequently (often/always). While 55 percent of households in accessible villages had never/seldom experienced food shortages, the share for households in remote villages is 63 percent.

61 percent of households owning less than 1 hectare of land experienced problems satisfying food needs more often compared to 26 percent of households owning six or more hectares of land. Furthermore, while 48 percent of households with seven or more members frequently experienced food shortages, the share for households with one or two members is 40 percent. There is also some correlation between livestock ownership and satisfying food needs. While 100 percent of households owning large livestock frequently experienced food shortages, the share for households owning small livestock only is 27 percent.

The socio-economic group of the household also shows some correlation with the household's ability to satisfy its food needs. While 75 percent of households belonging to the 'other' socio-economic group reported frequent problems satisfying food needs, the share for households whose main income earner is an employee is only 6 percent. Furthermore, 35 percent of households where the head is single never experienced food shortages, whereas the share for households whose head has a loose union is virtually null.

The breakdown by gender of the household head shows that female-headed households reported having food shortages more frequently than male-headed households as 48 percent of female-headed households experienced frequent food shortages compared to 41 percent of male-headed households. Likewise, while 58 percent of households where the head has no education experienced food shortages frequently, the share for households where the head has secondary education or more is 21 percent.

6.2.2 Paying School Fees

Table 6.4 shows the percentage distribution of households by the difficulty in paying school fees during the year before the survey. At the time of the survey, 97 percent of the households in the district reported that they never had problems paying school fees. It is worth noting that children in primary state schools do not pay fees. While children in secondary state schools do pay fees, the secondary school enrolment rates are very low (for more details, see chapter 3).

Poverty status and cluster location do not

Table 6.4: Percent distribution of households by the difficulty in paying school fees during the year before the survey

	Never	Seldom	Often	Always	Total
Total	97.0	1.6	1.4	0.0	100.0
Cluster Location					
Accessible	97.3	1.7	1.0	0.0	100.0
Remote	96.7	1.5	1.7	0.0	100.0
Poverty Status					
Poor	97.0	2.0	1.0	0.0	100.0
Non-poor	97.1	1.4	1.5	0.0	100.0
Household size					
1-2	100.0	0.0	0.0	0.0	100.0
3-4	97.3	1.5	1.2	0.0	100.0
5-6	97.6	1.0	1.4	0.0	100.0
7+	93.1	4.1	2.8	0.0	100.0
Area of land owned by the household					
None	100.0	0.0	0.0	0.0	100.0
< 1 ha	100.0	0.0	0.0	0.0	100.0
1-1.99 ha	100.0	0.0	0.0	0.0	100.0
2-3.99 ha	96.3	1.5	2.2	0.0	100.0
4-5.99 ha	98.1	0.9	1.0	0.0	100.0
6+ ha	90.7	6.3	2.9	0.0	100.0
Type of livestock owned by the household					
None	97.0	1.5	1.4	0.0	100.0
Small only	96.0	4.0	0.0	0.0	100.0
Large only	100.0	0.0	0.0	0.0	100.0
Both	100.0	0.0	0.0	0.0	100.0
Socio-economic Group					
Employee	89.7	7.5	2.8	0.0	100.0
Self-employed - agriculture	97.3	1.0	1.7	0.0	100.0
Self-employed - other	98.9	1.1	0.0	0.0	100.0
Other	91.5	8.5	0.0	0.0	100.0
Gender of the head of household					
Male	96.9	1.7	1.4	0.0	100.0
Female	97.6	1.3	1.0	0.0	100.0
Marital status of the head of household					
Single	100.0	0.0	0.0	0.0	100.0
Monogamous	96.2	1.7	2.2	0.0	100.0
Polygamous	97.9	2.1	0.0	0.0	100.0
Loose union	100.0	0.0	0.0	0.0	100.0
Widow/div/sep	97.7	1.3	1.0	0.0	100.0
Education level of the head of household					
None	98.7	0.8	0.5	0.0	100.0
Primary	97.4	1.5	1.2	0.0	100.0
Secondary +	92.2	4.0	3.9	0.0	100.0

Source:CWIQ 2007 Rufiji DC

Table 6.5: Percent distribution of households by the difficulty in paying house rent during the year before the survey

	Never	Seldom	Often	Always	Total
Total	98.6	0.5	0.9	0.0	100.0
Cluster Location					
Accessible	98.0	0.9	1.1	0.0	100.0
Remote	99.5	0.0	0.5	0.0	100.0
Poverty Status					
Poor	99.2	0.0	0.8	0.0	100.0
Non-poor	98.3	0.7	0.9	0.0	100.0
Household size					
1-2	97.0	0.0	3.0	0.0	100.0
3-4	98.4	1.4	0.2	0.0	100.0
5-6	99.0	0.0	1.0	0.0	100.0
7+	100.0	0.0	0.0	0.0	100.0
Area of land owned by the household					
None	89.0	4.2	6.8	0.0	100.0
< 1 ha	100.0	0.0	0.0	0.0	100.0
1-1.99 ha	100.0	0.0	0.0	0.0	100.0
2-3.99 ha	99.8	0.0	0.2	0.0	100.0
4-5.99 ha	100.0	0.0	0.0	0.0	100.0
6+ ha	100.0	0.0	0.0	0.0	100.0
Type of livestock owned by the household					
None	98.6	0.5	0.9	0.0	100.0
Small only	100.0	0.0	0.0	0.0	100.0
Large only	100.0	0.0	0.0	0.0	100.0
Both	100.0	0.0	0.0	0.0	100.0
Socio-economic Group					
Employee	100.0	0.0	0.0	0.0	100.0
Self-employed - agriculture	98.8	0.0	1.2	0.0	100.0
Self-employed - other	97.6	2.1	0.3	0.0	100.0
Other	100.0	0.0	0.0	0.0	100.0
Gender of the head of household					
Male	99.3	0.0	0.7	0.0	100.0
Female	95.4	2.8	1.8	0.0	100.0
Marital status of the head of household					
Single	87.5	0.0	12.5	0.0	100.0
Monogamous	100.0	0.0	0.0	0.0	100.0
Polygamous	100.0	0.0	0.0	0.0	100.0
Loose union	100.0	0.0	0.0	0.0	100.0
Widow/div/sep	95.5	2.8	1.7	0.0	100.0
Education level of the head of household					
None	97.4	1.6	1.0	0.0	100.0
Primary	99.0	0.0	1.0	0.0	100.0
Secondary +	100.0	0.0	0.0	0.0	100.0

Source:CWIQ 2007 Rufiji DC

show strong correlation with the ability to pay school fees. However, smaller households find problems paying school fees less frequently than larger households. While 100 percent of households with one or two members never had problems paying school fees, the share for households with seven or more members is 93 percent.

Furthermore, 6 percent of households with six or more hectares of land often experienced problems paying school fees, whereas the shares for households owning less than two hectares of land were virtually null.

Disaggregation of the data further shows that 99 percent of households whose main income earner is self-employed in non-

agricultural activities never had problems paying school fees compared to 90 percent of the employees. In addition, 99 percent of households where the head has no education never had problems paying school fees compared to 92 percent of households where the head has secondary education or more.

Other selected households characteristics such as livestock ownership, gender and marital status of the household head are not strongly correlated to households' ability to pay school fees.

6.2.3 Paying House Rent

Table 6.5 shows the percent distribution of households by the difficulty in paying house rent during the year before the survey. Almost all (99 percent) households in the district reported that they never had problems paying house rent. However, it is noticeable that while 13 percent of households where the head is single had problems paying house rent more often, the shares for households where the head is 'monogamous' 'polygamous' or has a loose union are virtually null. It is also observed that 7 percent of households owning no land reported that they seldom had problems paying house rent. Other household characteristics such as cluster location, poverty status, household size, livestock ownership, education level and gender of the household head do not show strong correlation with the ability to pay house rent.

6.2.4 Paying Utility Bills

Table 6.6 shows the percent distribution of households by the difficulty in paying utility bills during the year before the survey. The outcome on household's ability to pay utility bills is almost similar to those of paying house rent. Nearly all (98 percent) households in the district do not face problems paying utility bills. However, it is observed that 7 percent of households where the household head is single and 11 percent of employees households claim having problems paying utility bills seldom. Likewise, 7 percent of households owning no land reported having problems paying utility bills seldom. Other selected household characteristics such as cluster location, poverty status, household size, livestock ownership, education level and gender of the household head do not show strong correlation with the ability to pay utility bills.

Table 6.6: Percent distribution of households by the difficulty in paying utility bills during the year before the survey

	Never	Seldom	Often	Always	Total
Total	97.5	2.0	0.5	0.0	100.0
Cluster Location					
Accessible	95.4	3.7	0.9	0.0	100.0
Remote	100.0	0.0	0.0	0.0	100.0
Poverty Status					
Poor	97.5	2.5	0.0	0.0	100.0
Non-poor	97.5	1.8	0.7	0.0	100.0
Household size					
1-2	98.2	1.8	0.0	0.0	100.0
3-4	97.6	2.4	0.0	0.0	100.0
5-6	98.1	0.0	1.9	0.0	100.0
7+	95.8	4.2	0.0	0.0	100.0
Area of land owned by the household					
None	92.9	7.1	0.0	0.0	100.0
< 1 ha	100.0	0.0	0.0	0.0	100.0
1-1.99 ha	95.7	1.8	2.5	0.0	100.0
2-3.99 ha	98.6	1.4	0.0	0.0	100.0
4-5.99 ha	98.0	2.0	0.0	0.0	100.0
6+ ha	100.0	0.0	0.0	0.0	100.0
Type of livestock owned by the household					
None	97.9	2.1	0.0	0.0	100.0
Small only	87.8	0.0	12.2	0.0	100.0
Large only	100.0	0.0	0.0	0.0	100.0
Both	100.0	0.0	0.0	0.0	100.0
Socio-economic Group					
Employee	88.9	11.1	0.0	0.0	100.0
Self-employed - agriculture	98.8	1.2	0.0	0.0	100.0
Self-employed - other	95.8	2.1	2.1	0.0	100.0
Other	100.0	0.0	0.0	0.0	100.0
Gender of the head of household					
Male	98.0	1.4	0.6	0.0	100.0
Female	95.3	4.7	0.0	0.0	100.0
Marital status of the head of household					
Single	92.3	7.7	0.0	0.0	100.0
Monogamous	96.9	2.2	0.9	0.0	100.0
Polygamous	100.0	0.0	0.0	0.0	100.0
Loose union	100.0	0.0	0.0	0.0	100.0
Widow/div/sep	97.2	2.8	0.0	0.0	100.0
Education level of the head of household					
None	97.3	2.7	0.0	0.0	100.0
Primary	98.5	1.5	0.0	0.0	100.0
Secondary +	94.1	2.4	3.5	0.0	100.0

Source:CWIQ 2007 Rufiji DC

6.2.5 Paying for Healthcare

Table 6.7 shows the percent distribution of households by the difficulty in paying for healthcare during the year before the survey. 71

percent of the households reported that they never/seldom experienced problems paying for healthcare in the year prior to the survey. Disaggregation of the data further shows that while 74 percent of households located in remote villages never/seldom experienced problems paying for healthcare, the share for households located in accessible villages is 69 percent. A similar trend is evident when analysing by cluster location with non-poor households resembling households from accessible villages.

35 percent of households with seven or more members reported often/always having problems paying for healthcare compared to 29 percent of households with one or two members. Similarly, while 27 percent of households owning six or more hectares of land often/always experienced problems paying for healthcare, the share for households owning no land is only 22 percent.

Virtually all (100 percent) households owning large livestock never had problems paying for health care compared to 41 percent of those owning no livestock. Similarly, while the majority (62 percent) of households whose main income earner is an employee never had problems paying for healthcare, the share for households belonging to the 'other' socio-economic group is 24 percent. Likewise, while 44 percent of households where the household head is in a polygamous marriage never had problems paying for healthcare the share for households where the head has a loose union was virtually null.

35 percent of female-headed households seldom experienced problems paying for healthcare, while the share for male-headed households is 29 percent. On the other hand, 35 percent of household heads with no education often/always had problems paying for healthcare compared to 16 percent of household heads with secondary education or more.

Table 6.7: Percent distribution of households by the difficulty in paying for health care during the year before the survey

	Never	Seldom	Often	Always	Total
Total	41.1	30.1	19.0	9.8	100.0
Cluster Location					
Accessible	34.5	34.3	19.7	11.6	100.0
Remote	49.0	25.0	18.2	7.7	100.0
Poverty Status					
Poor	30.4	27.7	28.1	13.9	100.0
Non-poor	46.4	31.2	14.6	7.8	100.0
Household size					
1-2	39.5	31.8	16.9	11.8	100.0
3-4	46.5	30.3	15.3	7.8	100.0
5-6	38.6	29.3	23.1	9.0	100.0
7+	36.3	28.9	22.3	12.5	100.0
Area of land owned by the household					
None	41.6	36.1	20.4	1.9	100.0
< 1 ha	7.0	37.1	43.8	12.1	100.0
1-1.99 ha	41.2	34.4	15.6	8.8	100.0
2-3.99 ha	41.6	28.5	16.9	13.0	100.0
4-5.99 ha	38.9	26.9	26.3	7.9	100.0
6+ ha	47.4	25.8	15.0	11.8	100.0
Type of livestock owned by the household					
None	41.0	30.1	18.8	10.1	100.0
Small only	36.9	27.9	30.1	5.1	100.0
Large only	100.0	0.0	0.0	0.0	100.0
Both	54.6	45.4	0.0	0.0	100.0
Socio-economic Group					
Employee	61.9	27.5	6.5	4.2	100.0
Self-employed - agriculture	39.5	27.3	20.6	12.6	100.0
Self-employed - other	42.4	40.1	14.4	3.2	100.0
Other	23.5	18.3	47.8	10.4	100.0
Gender of the head of household					
Male	41.5	29.0	19.4	10.1	100.0
Female	39.2	35.2	17.4	8.2	100.0
Marital status of the head of household					
Single	41.2	21.5	19.6	17.6	100.0
Monogamous	42.6	29.3	17.9	10.2	100.0
Polygamous	43.5	27.7	21.4	7.4	100.0
Loose union	0.0	75.8	0.0	24.2	100.0
Widow/div/sep	36.2	34.6	20.3	8.8	100.0
Education level of the head of household					
None	34.9	30.1	22.7	12.4	100.0
Primary	43.8	27.6	19.2	9.4	100.0
Secondary +	44.5	39.5	10.3	5.7	100.0

Source:CWIQ 2007 Rufiji DC

6.3. Assets and Household Occupancy Status

This section discusses ownership of selected assets and household occupancy status. These assets are as houses, land, livestock, vehicles, motorcycles, bicycles

and wheelbarrows. This section will also provide detailed information on asset ownership by household characteristics. Household occupancy status describes the type of arrangement the household has in terms of their current dwelling. Respondents were asked whether they own, rent, live free or temporarily live in their current dwelling, and if they held any documentation to support the occupancy status. Besides the respondent's testimony, the survey did not use any further methods to verify this information.

6.3.1 Asset Ownership

Table 6.8 shows the percent distribution of households owning a selected group of assets. Overall, 79 percent of the district's households own their dwellings while 88 percent own some land. While 43 percent of all households own a bicycle, the share for households owning a motorcycle is 1 percent.

Table 6.9 shows the percent distribution of households by occupancy status. 91 percent of households located in remote villages own their dwellings compared to 69 percent of households located in accessible villages. Disaggregation of the data shows that 86 percent of households with five or more members own their dwellings compared to 73 percent of households with one to four members. Furthermore, while 68 percent of households whose main income earner belongs to the 'other' socio-economic group own their dwellings, the share for households whose main income earner is an employee is 48 percent. Disaggregation of the data further shows that while 83 percent of male-headed households own their dwellings, the share for female-headed households is 59 percent. It is also observed that 50 percent of male-headed households own a bicycle compared to only 10 percent of female-headed households. Likewise, 54 percent of households with seven or more members own a bicycle compared to 28 percent of households with one or two members. Finally, 62 percent of households whose head is an employee own a bicycle compared to 33 percent of those whose head is self-employed in non-agricultural activities

6.3.2 Occupancy Documentation

The percent distribution of households by type of occupancy documentation is shown in Table 6.10. Most residents in the district do not have any documentation to

Table 6.8: Percentage of households owning certain assets

			Livestock				Motor-		Wheel
	Home	Land	Small	Large	Both	Vehicle	cycle	Bicycle	barrow
Total	79.0	88.2	4.0	0.2	0.9	0.5	1.0	42.5	2.4
Cluster Location									
Accessible	68.8	85.5	3.5	0.0	0.0	0.9	1.5	43.1	3.5
Remote	91.2	91.4	4.6	0.5	1.9	0.0	0.2	41.9	1.0
Poverty Status									
Poor	86.3	91.0	3.7	0.0	2.0	0.0	0.0	40.4	0.0
Non-poor	75.5	86.8	4.2	0.3	0.3	0.7	1.4	43.6	3.5
Household size									
1-2	72.8	81.7	1.6	0.0	0.0	0.0	0.0	27.8	1.3
3-4	73.2	84.8	3.1	0.6	0.6	0.0	0.3	36.1	4.6
5-6	86.1	92.8	6.8	0.0	0.8	1.9	3.2	53.0	1.8
7+	86.1	94.5	4.4	0.0	2.3	0.0	0.0	54.2	0.0
Socio-economic Group									
Employee	48.3	70.1	6.2	0.0	0.0	0.0	5.6	61.8	13.6
Self-employed - agriculture	87.3	94.2	3.3	0.0	1.3	0.0	0.2	44.3	1.5
Self-employed - other	64.6	77.5	6.0	1.0	0.0	2.1	2.1	32.8	2.1
Other	67.8	73.9	0.0	0.0	0.0	0.0	0.0	36.7	0.0
Gender of the head of household									
Male	83.2	91.1	4.4	0.3	0.5	0.6	1.2	49.6	2.3
Female	59.4	74.8	2.4	0.0	2.4	0.0	0.0	9.6	2.6

Source:CWIQ 2007 Rufiji DC

Table 6.9: Percent distribution of households by occupancy status

	Own	Rent	Free	Other	Total
Total	79.0	10.2	8.8	2.0	100.0
Cluster Location					
Accessible	68.8	17.5	11.2	2.5	100.0
Remote	91.2	1.5	6.0	1.4	100.0
Poverty Status					
Poor	86.3	4.8	6.9	2.0	100.0
Non-poor	75.5	12.8	9.8	2.0	100.0
Household size					
1-2	72.8	14.5	9.7	3.0	100.0
3-4	73.2	13.4	10.6	2.8	100.0
5-6	86.1	6.8	6.2	0.9	100.0
7+	86.1	4.5	8.4	1.0	100.0
Socio-economic Group					
Employee	48.3	25.3	26.3	0.0	100.0
Self-employed - agriculture	87.3	4.4	5.8	2.5	100.0
Self-employed - other	64.6	24.0	10.2	1.3	100.0
Other	67.8	0.0	32.2	0.0	100.0
Gender of the head of household					
Male	83.2	8.5	6.4	1.8	100.0
Female	59.4	17.9	20.1	2.6	100.0

Source:CWIQ 2007 Rufiji DC

Table 6.10: Percent distribution of households by type of occupancy documentation

	Title deed	Renting contract	Payment receipt	Other document	No document	Total	Secure tenure
Total	0.7	2.8	0.5	12.7	83.4	100.0	3.9
Cluster Location							
Accessible	1.2	5.1	0.9	20.6	72.1	100.0	7.2
Remote	0.0	0.0	0.0	3.2	96.8	100.0	0.0
Poverty Status							
Poor	0.0	0.0	0.0	13.2	86.8	100.0	0.0
Non-poor	1.0	4.2	0.7	12.4	81.7	100.0	5.9
Household size							
1-2	0.8	0.0	0.0	10.7	88.5	100.0	0.8
3-4	0.0	5.5	1.0	11.3	82.3	100.0	6.5
5-6	1.9	3.2	0.0	15.9	79.0	100.0	5.1
7+	0.0	0.0	0.7	12.8	86.4	100.0	0.7
Socio-economic Group							
Employee	0.0	14.5	7.9	16.8	60.8	100.0	22.4
Self-employed - agric	0.0	0.0	0.0	14.1	85.9	100.0	0.0
Self-employed - other	2.8	8.1	0.0	7.9	81.3	100.0	10.9
Other	0.0	0.0	0.0	8.2	91.8	100.0	0.0
Gender of the head of household							
Male	0.8	2.8	0.6	9.7	86.1	100.0	4.2
Female	0.0	2.8	0.0	26.3	70.9	100.0	2.8

Source:CWIQ 2007 Rufiji DC

verify their occupancy status. Only 5 percent of the households possess formal occupancy documentation, which include a title deed, renting contract or payment receipt. 83 percent of households in this district have no documentation at all.

6.4 Agriculture

The analysis in this section focuses on the distribution of households by use of certain agricultural inputs, land ownership and cattle ownership.

Table 6.11: Percentage of households using agricultural inputs and and the percentage using certain inputs

	% of hhs using	Fertilizer	Improved seedling	Fingerlings	Hooks and nets	Insecticides	Other
Total	24.9	3.6	38.2	0.0	25.1	55.7	0.0
Cluster Location							
Accessible	24.5	5.3	56.6	0.0	11.3	58.0	0.0
Remote	25.5	1.7	17.3	0.0	40.8	53.0	0.0
Poverty Status							
Poor	28.2	0.0	21.8	0.0	43.3	49.8	0.0
Non-poor	23.4	5.8	48.0	0.0	14.3	59.1	0.0
Household size							
1-2	15.2	0.0	46.7	0.0	16.6	57.3	0.0
3-4	23.4	0.0	41.6	0.0	22.4	63.4	0.0
5-6	30.5	9.4	43.0	0.0	25.7	48.5	0.0
7+	29.7	2.7	22.9	0.0	32.1	53.6	0.0
Socio-economic Group							
Employee	33.8	24.0	51.1	0.0	0.0	75.0	0.0
Self-employed - agriculture	23.1	2.6	33.9	0.0	19.8	65.0	0.0
Self-employed - other	31.0	0.0	43.9	0.0	43.8	29.8	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gender of the head of household							
Male	29.1	3.8	38.6	0.0	24.7	55.5	0.0
Female	5.5	0.0	29.7	0.0	35.0	58.8	0.0

Source:CWIQ 2007 Rufiji DC

1. Base for column 1 is all households. For columns 2 to 7 is households using agricultural inputs

Table 6.12: Percentage distribution of households using agricultural inputs by the main source of the inputs

	Open market	Government	Donor agency	Coop.	Other	Total
Total	88.3	8.0	0.9	2.0	0.8	100.0
Cluster Location						
Accessible	83.3	11.3	1.7	3.7	0.0	100.0
Remote	94.1	4.2	0.0	0.0	1.7	100.0
Poverty Status						
Poor	87.0	8.0	2.5	2.5	0.0	100.0
Non-poor	89.1	8.0	0.0	1.7	1.3	100.0
Household size						
1-2	93.9	6.1	0.0	0.0	0.0	100.0
3-4	80.8	14.7	0.0	4.5	0.0	100.0
5-6	88.5	7.5	0.0	1.5	2.5	100.0
7+	96.1	0.0	3.9	0.0	0.0	100.0
Socio-economic Group						
Employee	83.6	16.4	0.0	0.0	0.0	100.0
Self-employed - agriculture	85.0	10.5	0.0	3.2	1.3	100.0
Self-employed - other	96.8	0.0	3.2	0.0	0.0	100.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
Gender of the head of household						
Male	88.8	8.3	0.0	2.1	0.8	100.0
Female	76.5	0.0	23.5	0.0	0.0	100.0

Source:CWIQ 2007 Rufiji DC

1. Base is households using agricultural inputs

Table 6.13: Percent distribution of households by the area (in ha) of land owned by the household

	None	< 1 ha	1-1.99	2-3.99	4-5.99	6+ ha	Total
Total	11.8	2.3	19.4	35.1	17.0	14.3	100.0
Cluster Location							
Accessible	14.5	0.9	19.6	34.0	14.7	16.3	100.0
Remote	8.6	4.0	19.2	36.4	19.8	12.0	100.0
Poverty Status							
Poor	9.0	2.6	14.9	42.7	20.0	10.8	100.0
Non-poor	13.2	2.2	21.7	31.4	15.5	16.1	100.0
Household size							
1-2	18.3	6.9	23.8	24.0	12.4	14.6	100.0
3-4	15.2	2.1	24.4	32.3	14.0	12.0	100.0
5-6	7.2	0.0	17.1	38.7	18.4	18.6	100.0
7+	5.5	1.3	9.5	46.2	24.9	12.7	100.0
Socio-economic Group							
Employee	29.9	0.0	16.9	19.9	9.7	23.6	100.0
Self-employed - agriculture	5.8	1.2	16.9	38.3	19.8	17.9	100.0
Self-employed - other	22.5	4.7	29.8	31.3	8.4	3.2	100.0
Other	26.1	13.4	0.0	22.7	37.8	0.0	100.0
Gender of the head of household							
Male	8.9	1.3	17.5	36.5	18.8	17.0	100.0
Female	25.2	7.0	28.6	28.5	8.5	2.2	100.0

Source:CWIQ 2007 Rufiji DC

4.1 Agricultural Inputs

The survey collected information on agricultural practices. Data includes information regarding usage of farm inputs and the main source from which the farmers got the inputs. Table 6.11 shows the percent distribution of households using certain inputs. This information is complimented by Table 6.12, which shows the main source of agricultural inputs.

25 percent of all farmers apply agricultural inputs to their farms and the majority (66 percent) of those who use farm inputs apply insecticides. The percentage of households located in accessible villages using improved seedlings is higher than that of households located in remote villages, at 58 and 17 percent respectively. A similar trend is observed when analysing by poverty status, with non-poor households resembling households from accessible villages.

Disaggregation of the data further shows that as the number of household members increases, the usage of agricultural inputs also increases from 15 percent for households with one or two members to around 30 percent for households with five or more members. Furthermore, while 34 percent of households where the main income earner is an employee use agricultural inputs, the share for households belonging to the 'other' socio-economic group is virtually null. Likewise, the use of agricultural inputs in male-headed households is higher than in female-headed households at 29 and 6 percent respectively.

Most households that use agricultural inputs obtain them by purchasing them from an open market (88 percent). While 2 percent of the households get their inputs from cooperatives, 1 percent obtain them either from government or donor agencies.

The data also shows that the percentage of households located in remote villages who purchase agricultural inputs at an open market is higher than that of households located in accessible villages at 94 and 83 percent respectively. Likewise, the percentage of households with seven or more members who purchase agricultural inputs at an open market is 15 percentage points higher than that of households with three or four members, at 96 and 81 percent respectively.

Table 6.14: Percent distribution of households by the number of cattle owned by the household

	None	1	2-10	11-20	21-50	50+	Total
Total	98.9	0.0	1.1	0.0	0.0	0.0	100.0
Cluster Location							
Accessible	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Remote	97.6	0.0	2.4	0.0	0.0	0.0	100.0
Poverty Status							
Poor	98.0	0.0	2.0	0.0	0.0	0.0	100.0
Non-poor	99.4	0.0	0.6	0.0	0.0	0.0	100.0
Household size							
1-2	100.0	0.0	0.0	0.0	0.0	0.0	100.0
3-4	98.7	0.0	1.3	0.0	0.0	0.0	100.0
5-6	99.2	0.0	0.8	0.0	0.0	0.0	100.0
7+	97.7	0.0	2.3	0.0	0.0	0.0	100.0
Socio-economic Group							
Employee	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Self-employed - agriculture	98.7	0.0	1.3	0.0	0.0	0.0	100.0
Self-employed - other	99.0	0.0	1.0	0.0	0.0	0.0	100.0
Other	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Gender of the head of household							
Male	99.2	0.0	0.8	0.0	0.0	0.0	100.0
Female	97.6	0.0	2.4	0.0	0.0	0.0	100.0

Source:CWIQ 2007 Rufiji DC

While 97 percent of households where the main income earner is self-employed in non-agricultural activities purchase their agricultural inputs at an open market, the share of households belonging to the 'other' socio-economic group is virtually null. Furthermore, 89 percent of male-headed households purchase their agricultural inputs at an open market compared to 77 percent of female-headed households. On the other hand, while 24 percent of female-headed households obtain agricultural inputs from donor agencies, the share for male-headed households is virtually null.

6.4.2 Landholding

Table 6.13 shows the percent distribution of households by the area of land owned. Around 33 percent of households own less than two acres of land (including 12 percent of landless households). 35 percent own between two and four acres and 31 percent own four or more acres.
Landless households are more common in accessible villages and households owning large portions of land are more common in remote villages.

Regarding household size, while 18 percent of households with one or two members are landless, the share for households with seven or more members is 6 percent. In contrast, larger households seem to own larger landholdings more frequently than households with less members.

While households where the main income earner is an employee reported the highest share of landless households (30 percent), the share for households where the main income earner is self-employed in non-agricultural activities is 7 percent. Finally, male-headed households have larger landholdings (4 or more acres) compared to female-headed households at 36 and 11 percent respectively.

6.4.3 Cattle Ownership

Table 6.14 shows the percent distribution of households by the number of cattle owned. Almost all (99 percent) of households owns no cattle at all, and only 1 percent owns between 2 and 10 heads of cattle.

6.5 Perception of Crime and Security in the Community

This section gives an overview of how the district residents perceive the current crime and security situation compared to

Table 6.15: Percent distribution of households by the perception of the crime and security situation of the community compared to the year before the survey

	Much Worse	Worse	Same	Better	Much Better	Don't Know	Total
Total	3.9	14.9	44.2	28.4	6.5	2.2	100.0
Cluster Location							
Accessible	5.0	13.2	52.7	24.0	2.0	3.2	100.0
Remote	2.5	16.8	34.1	33.6	11.8	1.1	100.0
Poverty Status							
Poor	1.6	19.3	42.1	24.8	9.7	2.5	100.0
Non-poor	5.0	12.7	45.2	30.2	4.9	2.1	100.0
Household size							
1-2	3.4	5.9	53.8	29.5	2.2	5.2	100.0
3-4	1.3	15.0	44.5	33.1	6.1	0.0	100.0
5-6	7.9	19.3	38.8	20.2	10.4	3.4	100.0
7+	3.7	17.4	41.5	29.6	6.0	1.9	100.0
Area of land owned by the household							
None	4.7	4.5	57.9	27.2	4.1	1.7	100.0
< 1 ha	0.0	17.3	37.5	38.3	0.0	7.0	100.0
1-1.99 ha	4.0	13.6	43.9	31.5	6.3	0.6	100.0
2-3.99 ha	3.1	15.0	43.9	27.0	6.8	4.2	100.0
4-5.99 ha	5.2	12.8	42.0	32.0	6.3	1.7	100.0
6+ ha	4.0	26.9	37.3	22.6	9.1	0.0	100.0
Type of livestock owned by the household							
None	3.6	14.3	45.3	27.9	6.6	2.4	100.0
Small only	12.2	21.4	18.6	42.8	4.9	0.0	100.0
Large only	0.0	0.0	100.0	0.0	0.0	0.0	100.0
Both	0.0	54.6	22.7	22.7	0.0	0.0	100.0
Socio-economic Group							
Employee	0.0	12.8	50.6	36.6	0.0	0.0	100.0
Self-employed - agricultu	4.4	15.9	41.6	26.6	9.6	1.9	100.0
Self-employed - other	3.5	12.7	47.6	33.8	0.0	2.5	100.0
Other	2.2	13.0	63.9	7.4	0.0	13.5	100.0
Gender of the head of household							
Male	3.8	16.3	42.5	28.8	7.0	1.5	100.0
Female	4.0	8.3	51.8	26.4	3.8	5.7	100.0
Marital status of the head of household							
Single	0.0	4.8	65.2	26.8	0.0	3.2	100.0
Monogamous	4.6	14.5	40.9	29.5	8.5	2.0	100.0
Polygamous	2.6	22.4	42.4	26.5	5.4	0.7	100.0
Loose union	0.0	10.9	32.2	38.8	18.1	0.0	100.0
Widow/div/sep	4.4	9.3	51.8	27.1	2.7	4.8	100.0
Education level of the head of household							
None	3.0	13.1	47.6	21.6	9.4	5.3	100.0
Primary	3.8	15.2	41.0	32.8	6.1	1.1	100.0
Secondary +	5.9	17.5	48.8	26.2	1.6	0.0	100.0

Source:CWIQ 2007 Rufiji DC

the year preceding the survey. Respondents were asked to categorise the current crime and security situation as the same, better or worse than the previous year. Results are shown in Table 6.15

35 percent of all households reported it was improving, 44 percent said it was the same while 19 percent reported it was deteriorating. The percentage of households located in remote villages who reported the current crime and security situation as improving is higher than that of households located in accessible villages at 46 and 26 percent respectively. In addition, 30 percent of non-poor households reported better conditions of the current crime and security situation compared to 25 percent of poor households.

Table 6.16: Percentage distribution of households by principal contributor to household income

	Principal contributor of income				
	Head	Spouse	Child	Other	Total
Total	91.6	3.4	2.1	2.9	100.0
Cluster Location					
Accessible	90.5	3.4	3.2	3.0	100.0
Remote	92.9	3.5	0.7	2.9	100.0
Poverty Status					
Poor	85.3	7.6	4.8	2.3	100.0
Non-poor	94.7	1.3	0.7	3.2	100.0
Household size					
1-2	89.6	0.0	0.0	10.4	100.0
3-4	95.5	1.1	1.3	2.2	100.0
5-6	94.5	3.7	1.8	0.0	100.0
7+	82.7	10.4	5.8	1.0	100.0
Socio-economic Group					
Employee	94.9	5.1	0.0	0.0	100.0
Self-employed - agric	93.8	3.0	0.5	2.7	100.0
Self-employed - other	94.5	0.7	4.8	0.0	100.0
Other	7.1	30.8	22.4	39.7	100.0
Gender of the head of household					
Male	93.2	3.9	1.6	1.3	100.0
Female	84.4	1.1	4.1	10.5	100.0

Source:CWIQ 2007 Rufiji DC

While 21 percent of households with seven or more members reported worsening conditions of the current crime and security situation, the share for households with one or two members is 9 percent. Similarly, 31 percent of households owning six or more hectares of land reported the current crime and security situation as deteriorating compared to 10 percent of landless households. While 55 percent of households owning both small and large livestock reported deterioration in the current crime and security situation, the share for households owning large livestock only is virtually null.

Furthermore, 36 percent of male-headed households reported the current crime and security situation as improving compared to 30 percent of female-headed households. In addition, while 65 percent of households where the household head is single reported observing no changes in the current crime and security situation, the share for households where the head is widowed, divorced or separated is virtually null. On the other hand, while 37 percent of households where the main income earner belongs to the 'employee' category reported positive change in the current crime and security situation, the share of households where the main income earner is in the 'other' category is 7 percent. Lastly, the percentage of households where the head has no education and reported deterioration of the current crime and security situation is lower than that of household heads with secondary education or more, at 16 and 24 percent respectively.

6.6 Household Income Contributions

Table 6.16 shows the percent distribution of households by main contributor to household income. The survey includes information on household income contributions by listing all the income contributors in the households and then identifying the household member who contributes the largest portion. For the great majority (92 percent) of households the head is the main contributor.

95 percent of non-poor households reported the household head as the main income contributor compared to 85 percent of poor households.

While 6 percent of households with seven or more members reported 'child' as the main income contributor, the share for households with one or two members is virtually null. Furthermore, only 7 percent of households belonging to the 'other'

Table 6.17: Percentage of households owning selected household items

	Electric iron	Refrigerator	Sewing machine	Modern stove	Mattress or bed	Watch or clock	Radio	Televison	Fixed line phone	Mobile phone
Total	19.8	0.9	4.3	6.2	74.0	37.5	64.8	1.1	0.0	18.8
Cluster Location										
Accessible	24.0	1.7	4.8	11.0	81.2	40.8	64.4	2.1	0.0	25.4
Remote	14.8	0.0	3.7	0.5	65.6	33.7	65.2	0.0	0.0	11.0
Poverty Status										
Poor	11.5	0.0	1.3	0.5	63.3	16.3	54.5	0.0	0.0	6.8
Non-poor	23.9	1.4	5.8	9.0	79.3	48.0	69.8	1.7	0.0	24.7
Household size										
1-2	13.4	0.8	6.3	5.9	68.4	33.9	55.0	0.8	0.0	25.3
3-4	17.8	0.0	3.5	5.6	78.2	37.3	62.3	0.6	0.0	16.7
5-6	25.6	2.9	3.6	9.9	71.7	41.0	70.6	2.9	0.0	19.4
7+	21.9	0.0	4.8	2.7	74.9	36.8	70.9	0.0	0.0	15.4
Socio-economic Group										
Employee	56.9	0.0	24.3	24.7	100.0	84.5	85.4	3.7	0.0	70.5
Self-employed - agric	14.7	0.0	2.9	2.0	68.1	31.3	62.1	0.0	0.0	9.8
Self-employed - other	26.4	3.9	3.5	14.2	86.2	46.0	71.9	3.9	0.0	32.3
Other	8.2	0.0	0.0	0.0	57.9	14.7	24.1	0.0	0.0	8.2
Gender of the head of household										
Male	19.6	1.1	5.2	5.2	75.0	39.2	69.5	1.4	0.0	19.0
Female	21.1	0.0	0.0	10.9	69.7	30.0	42.7	0.0	0.0	17.9

Source:CWIQ 2007 Rufiji DC

category reported the head as the main income contributor, whereas the shares for the remaining categories were around 94 percent each.

The breakdown by gender of the household head shows that 93 percent of male-headed households reported the 'head' as the main income contributor compared to 84 percent of female-headed households. There appears to be no strong correlation between cluster location and the main income contributor.

6.7 Other Household Items

Table 6.17 shows the percentage distribution of households owning selected household items. 74 percent of households own at least one mattress or bed, 65 percent own a radio, 38 percent own a watch or clock and 20 percent own an electric iron. Although no household own a fixed line phone, 20 percent own a mobile phone and a further 6 percent own a modern stove. Households in accessible villages have higher rates of ownership in almost every selected item than their counterparts.

The breakdown by household size shows that the shares of ownership tend to be larger for larger households and for households headed by males. In addition, the employees and self-employed in non-agricultural activities show higher rates of ownership in most of the selected household items than the other socio-economic groups.

7 HOUSEHOLD AMENITIES

This chapter analyses the main amenities of the households in Rufiji DC. The first section presents the main materials used to construct the dwelling, and the type of housing unit the household lives in. Section two reports the main source of drinking water and main type of toilet. In section three, the fuel used by the household is analysed, both for cooking and lighting. Section four reports the distance of the households to facilities as source of drinking water, schools, and food markets. In section five the anti-malaria measures taken by households are analysed.

7.1 Housing Materials and Type of Housing Unit

Table 7.1 shows the distribution of households according to the main material used in the roof of the house. Overall, 75 percent of households have thatch as their main roof material and 25 percent have iron sheets.

The breakdown by cluster location shows that households in remote villages are more likely to use thatch than households in accessible villages. In turn, households in accessible villages tend to use iron sheets more often. Similarly, poor households tend to use thatch more often, and non-poor households use iron sheets than their counterparts.

The breakdown by household size shows that bigger households tend to use thatch, and that smaller households are more likely to use iron sheets for their roofs more often than bigger households. The split-up by socio-economic group shows that the 'self-employed agriculture' is the category with highest share of households using thatch for the roof (at 84 percent), and that employees are the group with the lowest use of thatch (71 percent). In turn the latter report a higher share of households using iron sheets than the remaining socio-economic categories.

The breakdown by gender of the household head shows that female-headed households use iron sheets more often than male-headed households, whereas the latter use thatch more frequently than the former at 79 and 58 percent, respectively.

Table 7.2 shows the distribution of households by type of material used in the

Table 7.1: Percent distribution of households by material used for roof of the house

	Mud	Thatch	Wood	Iron Sheets	Cement/ concrete	Roofing tiles	Asbestos	Other	Total
Total	0.2	75.0	0.0	24.9	0.0	0.0	0.0	0.0	100.0
Cluster Location									
Accessible	0.0	66.0	0.0	34.0	0.0	0.0	0.0	0.0	100.0
Remote	0.4	85.5	0.0	14.1	0.0	0.0	0.0	0.0	100.0
Poverty Status									
Poor	0.0	84.2	0.0	15.8	0.0	0.0	0.0	0.0	100.0
Non-poor	0.3	70.4	0.0	29.3	0.0	0.0	0.0	0.0	100.0
Household size									
1-2	0.0	72.9	0.0	27.1	0.0	0.0	0.0	0.0	100.0
3-4	0.0	72.6	0.0	27.4	0.0	0.0	0.0	0.0	100.0
5-6	0.6	77.5	0.0	21.8	0.0	0.0	0.0	0.0	100.0
7+	0.0	77.8	0.0	22.2	0.0	0.0	0.0	0.0	100.0
Socio-economic Group									
Employee	0.0	29.2	0.0	70.8	0.0	0.0	0.0	0.0	100.0
Self-employed - agriculture	0.2	83.5	0.0	16.2	0.0	0.0	0.0	0.0	100.0
Self-employed - other	0.0	61.6	0.0	38.4	0.0	0.0	0.0	0.0	100.0
Other	0.0	80.0	0.0	20.0	0.0	0.0	0.0	0.0	100.0
Gender of the head of household									
Male	0.2	78.5	0.0	21.3	0.0	0.0	0.0	0.0	100.0
Female	0.0	58.3	0.0	41.7	0.0	0.0	0.0	0.0	100.0

Source:CWIQ 2007 Rufiji DC

Table 7.2: Percent distribution of households by material used for walls of the house

	Mud/ mud bricks	Stone	Burnt bricks	Cement/ sandcrete	Wood/ bamboo	Iron sheets	Cardboard	Total
Total	88.2	0.0	1.1	9.2	1.5	0.0	0.0	100.0
Cluster Location								
Accessible	81.6	0.0	1.9	14.2	2.3	0.0	0.0	100.0
Remote	97.2	0.0	0.0	2.4	0.4	0.0	0.0	100.0
Poverty Status								
Poor	97.6	0.0	0.0	0.6	1.8	0.0	0.0	100.0
Non-poor	83.6	0.0	1.6	13.4	1.4	0.0	0.0	100.0
Household size								
1-2	79.5	0.0	3.0	12.1	5.3	0.0	0.0	100.0
3-4	88.1	0.0	0.0	11.9	0.0	0.0	0.0	100.0
5-6	88.2	0.0	2.1	8.9	0.9	0.0	0.0	100.0
7+	95.9	0.0	0.0	2.3	1.7	0.0	0.0	100.0
Socio-economic Group								
Employee	51.0	0.0	0.0	49.0	0.0	0.0	0.0	100.0
Self-employed - agriculture	96.1	0.0	0.0	1.6	2.3	0.0	0.0	100.0
Self-employed - other	76.0	0.0	4.5	19.6	0.0	0.0	0.0	100.0
Other	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
Gender of the head of household								
Male	90.6	0.0	1.3	6.2	1.9	0.0	0.0	100.0
Female	77.3	0.0	0.0	22.7	0.0	0.0	0.0	100.0

Source:CWIQ 2007 Rufiji DC

Table 7.3: Percent distribution of households by material used for floors of the house

	Mud/ earth	Wood/ plank	Tiles	Concrete/ cement	Grass	Other	Total
Total	82.3	0.0	0.0	15.1	0.0	2.6	100.0
Cluster Location							
Accessible	75.6	0.0	0.0	23.9	0.0	0.5	100.0
Remote	90.1	0.0	0.0	4.7	0.0	5.2	100.0
Poverty Status							
Poor	94.5	0.0	0.0	1.3	0.0	4.2	100.0
Non-poor	76.2	0.0	0.0	21.9	0.0	1.9	100.0
Household size							
1-2	74.5	0.0	0.0	22.2	0.0	3.3	100.0
3-4	80.2	0.0	0.0	17.0	0.0	2.8	100.0
5-6	82.9	0.0	0.0	13.1	0.0	3.9	100.0
7+	92.5	0.0	0.0	7.5	0.0	0.0	100.0
Socio-economic Group							
Employee	37.6	0.0	0.0	62.4	0.0	0.0	100.0
Self-employed - agriculture	90.6	0.0	0.0	6.1	0.0	3.3	100.0
Self-employed - other	67.9	0.0	0.0	30.5	0.0	1.6	100.0
Other	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Gender of the head of household							
Male	85.0	0.0	0.0	12.0	0.0	2.9	100.0
Female	69.3	0.0	0.0	29.4	0.0	1.3	100.0

Source:CWIQ 2007 Rufiji DC

walls. Overall, 88 percent of houses are built with mud or mud bricks. Cement or sandcrete occupy the second place, with a share of 9 percent.

The analysis by cluster location reveals that households in remote villages have a higher share of mud and mud bricks than households in accessible villages. The rates are 97 and 82 percent, respectively. Likewise, poor households use mud or mud bricks more often than non-poor households (98 and 84 percent, respectively).

Table 7.4: Percent distribution of households by type of housing unit

	Single room	Flat	Two or more rooms	Whole building	Other	Total
Total	4.8	0.0	6.3	85.6	3.3	100.0
Cluster Location						
Accessible	8.5	0.0	10.4	77.8	3.3	100.0
Remote	0.5	0.0	1.5	94.7	3.2	100.0
Poverty Status						
Poor	2.3	0.0	1.5	90.7	5.5	100.0
Non-poor	6.1	0.0	8.7	83.1	2.2	100.0
Household size						
1-2	4.5	0.0	10.9	80.9	3.6	100.0
3-4	10.5	0.0	6.7	81.7	1.1	100.0
5-6	1.0	0.0	7.3	90.2	1.5	100.0
7+	0.0	0.0	0.0	90.8	9.2	100.0
Socio-economic Group						
Employee	0.0	0.0	29.3	69.7	1.0	100.0
Self-employed - agric	3.1	0.0	2.8	91.1	3.0	100.0
Self-employed - other	11.1	0.0	11.3	73.6	4.0	100.0
Other	6.4	0.0	0.0	85.3	8.2	100.0
Gender of the head of household						
Male	4.1	0.0	5.3	87.8	2.7	100.0
Female	8.2	0.0	11.0	75.0	5.8	100.0

Source:CWIQ 2007 Rufiji DC

The 'other' and the 'self-employed agriculture' are the categories with highest shares living in houses made of mud or mud bricks, whereas employees have the highest share living in houses made of burnt bricks (49 percent).

The breakdown by household size reveals that the share of households using mud or mud bricks as materials for their walls tends to increase with increasing household size from 80 percent for households with one or two members to 96 percent for households with seven or more members. In contrast the shares using cement or sandcrete decreases with increasing household size.

The gender breakdown shows that households headed by males use burnt bricks more often than female-headed households, at rates of 91 and 77 percent of females. In turn female-headed households report a higher share using cement or sandcrete than male-headed households at 23 and 6 percent respectively.

The distribution of households by type of material used in the floor is shown in Table 7.3. Overall, the floor in 82 percent of households is made of mud or dirt and 15 percent of concrete.

The breakdown by cluster location shows that households in accessible villages, with a rate of 24 percent, have more houses with concrete floor than households in remote villages, with a rate of 5 percent. In turn the latter report a higher share of households with mud or dirt floors than the former at 90 and 76 percent respectively.

The breakdown by poverty status shows that poor households have a higher share of houses with mud or dirt floor (95 percent, against 76 percent of the non-poor households). Up to 22 percent of non-poor households have concrete flooring against 1 percent of poor households.

The split-up by socio-economic group of the household shows that employees have a lower share of mud or dirt floors and a higher share of concrete than the remaining socio-economic categories.

Finally, households headed by males have a higher share of mud or dirt floor than female-headed households. In turn, 29 percent of female-headed households have concrete or cement flooring, against 12 percent of male-headed households.

Table 7.4 shows the percent distribution of households by type of housing unit they occupy. Overall, 86 percent of households

Table 7.5: Percent distribution of households by main source of drinking water

	Pipe borne treated	Pipe borne untreated	Bore hole/hand pump	Protected well	Unprotected well	Rain water	River, lake or pond	Vendor, truck	Other	Total	Safe source
Total	3.5	1.4	38.4	3.0	32.1	0.0	20.4	1.0	0.2	100.0	44.9
Cluster Location											
Accessible	6.5	2.5	43.6	2.6	30.0	0.0	12.9	1.9	0.0	100.0	52.6
Remote	0.0	0.0	32.3	3.5	34.5	0.0	29.3	0.0	0.4	100.0	35.8
Poverty Status											
Poor	4.0	1.2	37.1	2.6	31.1	0.0	24.0	0.0	0.0	100.0	43.7
Non-poor	3.3	1.4	39.1	3.2	32.6	0.0	18.6	1.5	0.3	100.0	45.5
Household size											
1-2	0.0	4.0	39.5	0.9	37.5	0.0	16.2	1.8	0.0	100.0	40.4
3-4	5.9	0.6	38.4	4.2	24.8	0.0	25.2	1.0	0.0	100.0	48.5
5-6	1.3	0.8	35.2	2.2	37.0	0.0	21.7	1.3	0.7	100.0	38.6
7+	5.6	1.0	41.8	3.9	33.5	0.0	14.2	0.0	0.0	100.0	51.3
Socio-economic Group											
Employee	5.3	0.0	46.8	0.0	24.8	0.0	12.0	11.1	0.0	100.0	52.1
Self-employed - agric	2.9	1.2	34.5	4.1	34.0	0.0	23.0	0.0	0.3	100.0	41.5
Self-employed - other	5.1	2.4	46.7	0.3	28.0	0.0	16.0	1.5	0.0	100.0	52.1
Other	0.0	0.0	47.2	4.3	35.1	0.0	13.4	0.0	0.0	100.0	51.5
Gender of the head of household											
Male	3.1	1.0	37.4	3.2	33.8	0.0	20.0	1.3	0.2	100.0	43.8
Female	5.3	3.2	43.2	1.8	24.1	0.0	22.4	0.0	0.0	100.0	50.4

Source:CWIQ 2007 Rufiji DC

occupy the whole building where they live.

Households from accessible clusters are slightly less likely to occupy the whole building than households from remote clusters. The breakdown by poverty status shows a similar result, with non-poor households having a lower share occupying the whole building than poor households at 83 and 91 percent, respectively.

The breakdown by household size shows that smaller households are more likely to occupy two or more rooms, whereas bigger households are more likely to occupy the whole building where they live.

The analysis by socio-economic group shows that the 'employee' category has the lowest share of households occupying the whole building at 70 percent, and the highest share occupying two or more rooms at 29 percent. Finally, female-headed households are less likely than male-headed households to occupy the whole building.

The analysis by socio-economic groups shows that the 'other' category has the lowest share of households occupying the whole building, at 66 percent. 22 percent of them occupy two or more rooms and 12 percent occupy one room.

Finally, female-headed households are less likely than male-headed households to occupy the whole building.

7.2 Water and Sanitation

The percentage distribution of households by source of drinking water is shown in Table 7.5. Overall, 45 percent of households have a safe source of water, whereas 32 percent of them get it from an unprotected well. Safe sources of drinking water are treated pipes, bore holes, hand pumps, and protected wells.

The analysis by cluster location shows that 53 percent of households in accessible villages have a safe source of drinking water, whereas the share of households in remote villages is just 36 percent. The shares of households with unprotected wells are 30 percent for accessible and 35 percent for households in remote villages. Poverty status of the household shows no important differences in access to safe water.

The breakdown by household size does reveal that households with seven or more members have the highest access to safe

Table 7.6: Percent distribution of households by main type of toilet

	None (bush)	Flush to sewer	Flush to septic tank	Pan/ bucket	Covered pit latrine	Uncovered pit latrine	Ventilated pit latrine	Other	Total	Safe sanitation
Total	13.0	0.0	1.0	0.0	78.8	6.0	1.1	0.0	100.0	79.9
Cluster Location										
Accessible	4.8	0.0	1.9	0.0	86.5	4.6	2.1	0.0	100.0	88.5
Remote	22.6	0.0	0.0	0.0	69.7	7.7	0.0	0.0	100.0	69.7
Poverty Status										
Poor	15.6	0.0	0.0	0.0	77.0	7.4	0.0	0.0	100.0	77.0
Non-poor	11.7	0.0	1.6	0.0	79.7	5.4	1.7	0.0	100.0	81.3
Household size										
1-2	17.6	0.0	2.6	0.0	69.4	4.5	5.9	0.0	100.0	72.0
3-4	11.3	0.0	1.6	0.0	81.7	5.4	0.0	0.0	100.0	83.3
5-6	15.3	0.0	0.0	0.0	74.7	10.0	0.0	0.0	100.0	74.7
7+	8.4	0.0	0.0	0.0	88.1	3.5	0.0	0.0	100.0	88.1
Socio-economic Group										
Employee	0.0	0.0	9.0	0.0	91.0	0.0	0.0	0.0	100.0	100.0
Self-employed - agric	15.1	0.0	0.0	0.0	77.5	7.4	0.0	0.0	100.0	77.5
Self-employed - other	10.9	0.0	2.1	0.0	78.6	3.6	4.8	0.0	100.0	80.7
Other	7.1	0.0	0.0	0.0	87.3	5.7	0.0	0.0	100.0	87.3
Gender of the head of household										
Male	12.4	0.0	1.3	0.0	78.9	6.8	0.7	0.0	100.0	80.1
Female	15.5	0.0	0.0	0.0	78.7	2.7	3.2	0.0	100.0	78.7

Source:CWIQ 2007 Rufiji DC

sources of drinking water at 51 percent. They are followed by households with 3 to 4 members (at 49 percent), and the lowest being households with 5 to 6 members, at 39 percent. Households with 5 to 6 members have highest access to water from unprotected wells, at 37 percent.

The breakdown by socio-economic group of the household shows that 'self-employed agriculture' is the category with the lowest rate of access to safe sources of drinking water (42 percent), whereas other categories report shares around 52 percent each.

The breakdown by gender of the household head reveals that 34 percent of male-headed households use water from unprotected wells compared to 24 percent of female-headed households. In turn, female-headed households report a higher share of households using water from borehole or hand pump than male-headed households at 43 and 37 percent respectively.

Table 7.6 shows the percentage distribution of households by main type of toilet. Overall 80 percent of all households have safe sanitation, whereas up to 79 percent use a covered pit latrine.

The cluster breakdown shows that 89 percent of households in accessible villages have safe sanitation, while in remote villages the share is 70 percent. Households with 1 or 2 members have the lowest percentage of safe sanitation, at 72 percent, whereas other groups reported the rates above 75 percent each. The share of households using covered pit latrines tends to increase with increasing household size from 69 percent for the households with up to 2 members to 88 percent for households with seven or more members. It stands out that up to 18 percent of households with up to 2 members have no toilet, while the share for households with 7 or more members is 8 percent.

The breakdown by socio-economic status shows that the 'self-employed agriculture' category has the lowest rate of safe sanitation, at 78 percent, whereas other categories report shares above 80 percent each. Virtually all households in the 'employee' category have access to safe sanitation.

The analysis by gender of the household heads reveals that male-headed households are more likely to have safe sanitation than female-headed households. Furthermore, female-headed households are more likely to have no toilet than

male-headed households, with rates of 12 and 3 percent, respectively.
The breakdown by gender and poverty status revealed no strong correlation with households distribution by main type of toilet.

7.3 Type of Fuel

Table 7.7 shows the distribution of households by fuel used for cooking. Overall, 91 percent of households use firewood and 9 percent use charcoal. Virtually all households in remote villages use firewood, while almost 17 percent of households in accessible villages use charcoal. The breakdown by poverty status reveals similar differences, with poor households resembling households from remote villages.

The breakdown by household size shows that the largest households (with 7 members or more) tend to use firewood more often, whereas households with up to two members use charcoal more often than the rest, at a rate 14 percent.

The split-up by socio-economic group of the household shows that 49 percent of the employees and 22 percent of the self-employed in non agricultural activities use charcoal for cooking, whereas the other two categories use firewood in almost every case.

The gender breakdown reveals that male-headed households are more likely than female-headed households to use firewood for cooking, at 92 and 87 percent respectively. In turn, the latter report a higher share using charcoal for cooking than the former at 13 and 8 percent, respectively.

Table 7.8 shows the distribution of households according to the fuel used for lightning. Overall, 96 percent of the households in the district use kerosene or paraffin, 2 percent use firewood and a further 2 percent uses electricity. Gas, solar panels, batteries, and candles are virtually not used for lighting in the district.

The analysis by cluster location shows that virtually all households using electricity are located in accessible villages, but still represent only 3 percent of households in accessible villages in the district. A similar trend is observed in the split-up by poverty status. Virtually all the households that use electricity are non-poor, but only represent 3 percent of non-poor households.

Table 7.7: Percent distribution of households by fuel used for cooking

	Firewood	Charcoal	Kerosene/ oil	Gas	Electricity	Crop residue/ sawdust	Animal waste	Other	Total	Non-wood fuel for cooking
Total	91.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0
Cluster Location										
Accessible	83.4	16.6	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0
Remote	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0
Poverty Status										
Poor	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0
Non-poor	86.6	13.4	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0
Household size										
1-2	85.7	14.3	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0
3-4	89.8	10.2	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0
5-6	92.7	7.3	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0
7+	95.9	4.1	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0
Socio-economic Group										
Employee	50.8	49.2	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0
Self-employed - agriculture	98.7	1.3	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0
Self-employed - other	78.3	21.7	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0
Other	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0
Gender of the head of household										
Male	91.8	8.2	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0
Female	87.2	12.8	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0

Source:CWIQ 2007 Rufiji DC

Table 7.8: Percent distribution of households by fuel used for lighting

	Kerosene/ paraffin	Gas	Mains electricity	Solar panels/ generator	Battery	Candles	Firewood	Other	Total
Total	95.6	0.0	1.8	0.2	0.2	0.2	1.9	0.2	100.0
Cluster Location									
Accessible	94.6	0.0	3.3	0.3	0.0	0.3	1.6	0.0	100.0
Remote	96.8	0.0	0.0	0.0	0.5	0.0	2.3	0.4	100.0
Poverty Status									
Poor	96.2	0.0	0.0	0.0	0.0	0.0	3.2	0.6	100.0
Non-poor	95.3	0.0	2.6	0.2	0.3	0.2	1.2	0.0	100.0
Household size									
1-2	90.4	0.0	2.6	0.8	1.2	0.0	3.9	1.0	100.0
3-4	94.9	0.0	2.2	0.0	0.0	0.4	2.4	0.0	100.0
5-6	96.9	0.0	1.9	0.0	0.0	0.0	1.2	0.0	100.0
7+	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
Socio-economic Group									
Employee	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
Self-employed - agric	97.4	0.0	0.7	0.0	0.0	0.0	1.8	0.0	100.0
Self-employed - other	91.5	0.0	5.5	0.7	1.0	0.7	0.7	0.0	100.0
Other	75.5	0.0	0.0	0.0	0.0	0.0	17.4	7.1	100.0
Gender of the head of household									
Male	96.3	0.0	1.6	0.2	0.3	0.2	1.5	0.0	100.0
Female	92.2	0.0	2.8	0.0	0.0	0.0	3.9	1.1	100.0

Source:CWIQ 2007 Rufiji DC

The breakdown by household size reveals that the shares of households using kerosene or paraffin for lighting tend to increase with household size from 90 percent for households with up to two members to 100 percent for households with seven or more members. Conversely, households with up to 2 members have the highest use of charcoal at 4 percent while the share for households with 7 or more members is virtually null.

The analysis by socio-economic group of the household shows that employees and the self-employed in agriculture have higher rates of use of kerosene or paraffin, with rates of nearly 100 percent each. On the other hand, the 'other' category has the highest rate of use of firewood, at 17 percent

There appears to be no strong correlation between gender and households distribution by fuel used for lighting.

7.4 Distances to Facilities

Table 7.9 shows the percent distribution of households by time to reach the nearest drinking water supply and health facility. Although each table gives more detailed information, the analysis of this section will be focused on the 30 minutes threshold that was used to define access to a facility. It must be kept in mind that distance to public transportation is one of the variables used to define a cluster as accessible or remote, so it must come as no surprise that distance to public transportation and cluster location are strongly correlated. However, the rest of the variables, despite not being used to define cluster location, also show strong correlations.

Overall, 92 percent of households are located under 30 minutes of a drinking water supply. In addition, 47 percent of the households are located under 30 minutes of a health facility.

The breakdown by cluster location shows that 94 percent of households in accessible villages have access to a drinking water source and 49 percent to a health facility, whereas the shares for households in remote villages are 89 and 44 percent respectively. Similar differences are observed by poverty status, with non-poor households having higher access rates than poor households.

Analysis by household size reveals that households with up to 2 members and those with 3 to 4 members have the highest access rate to drinking water supply, at 93 and 92 percent respectively.

Table 7.9: Percent distribution of households by time (in minutes) to reach nearest drinking water supply and health facility

	Drinking water supply					Health facility				
	<= 15	16-30	31-60	61+	Total	<= 15	16-30	31-60	61+	Total
Total	71.9	19.6	7.5	1.0	100.0	27.0	19.7	18.8	34.6	100.0
Cluster Location										
Accessible	76.5	16.6	5.8	1.1	100.0	26.4	22.4	19.5	31.7	100.0
Remote	66.5	23.1	9.5	0.9	100.0	27.7	16.4	17.9	38.0	100.0
Poverty Status										
Poor	66.8	21.4	9.7	2.1	100.0	20.1	18.2	17.9	43.7	100.0
Non-poor	74.5	18.7	6.4	0.4	100.0	30.4	20.4	19.2	30.1	100.0
Household size										
1-2	69.9	23.3	5.9	1.0	100.0	24.6	26.1	17.6	31.7	100.0
3-4	73.8	18.3	7.8	0.0	100.0	29.5	18.1	17.0	35.4	100.0
5-6	69.9	19.6	7.8	2.7	100.0	23.6	16.6	21.3	38.5	100.0
7+	73.2	18.2	8.1	0.6	100.0	29.4	20.3	19.6	30.7	100.0
Socio-economic Group										
Employee	71.3	22.6	6.1	0.0	100.0	56.0	17.0	21.9	5.2	100.0
Self-employed - agric	70.9	20.0	8.2	0.9	100.0	20.5	16.7	20.4	42.4	100.0
Self-employed - other	77.0	14.7	6.5	1.8	100.0	40.0	29.8	10.6	19.6	100.0
Other	54.9	42.9	2.2	0.0	100.0	12.8	13.2	38.7	35.3	100.0
Gender of the head of household										
Male	72.2	19.2	7.3	1.2	100.0	25.9	17.8	20.1	36.2	100.0
Female	70.5	21.3	8.2	0.0	100.0	32.3	28.2	12.6	26.9	100.0

Source:CWIQ 2007 Rufiji DC

On the other hand, households with 3 to 4 members have the lowest access rate to health facilities, at 38 percent. Households with up to 2 members have the highest access rate to health facility at 51 percent, whereas those with 7 or more members have the lowest access to drinking water supply, at 91 percent.

Households where the main income earner is in the 'other' category have the highest rate of access to drinking water at 98 percent, but the lowest access rate to health facilities at 26 percent. The breakdown by gender of the household head shows no strong differences in access to water sources, but households headed by females have higher access rates to health facilities, with 60 percent living less than 30 minutes of health facilities, 14 percentage points higher than male-headed households.

Table 7.10 shows the percent distribution of households by time to reach the nearest primary and secondary school. Overall, 70 percent of households are located within 30 minutes of a primary school, but just 13 percent of households live within 30 minutes of a secondary school. Moreover, 74 percent of households are located 61 minutes or more away from the nearest secondary school. Access to school was also analysed in chapter 3 but with a different focus. In chapter 3, access to school was analysed at child level, i.e. the access rate of each child. In this section the focus is the distance of the house to the nearest school.

The analysis by cluster location shows that 76 percent of households in accessible villages have access to primary school, against 62 percent of remote villages. For secondary school, the rates go down to 24 and 2 percent, respectively.

72 percent of non-poor households are located within 30 minutes from a primary school, 7 percentage points above non-poor households. Similarly, non-poor households have higher rates of access to secondary school than poor households, with shares of 18 and 6 percent, respectively.

The size of the household does not appear to be correlated with access to school, either primary or secondary. However, households with up to 2 members have the highest rate of access to secondary school at 19 percent.

The breakdown by socio-economic group shows that households in the category 'employee' have the highest rates of access to both primary and secondary schools at 97 and 26 percent respectively. Households in the category 'other' have the lowest access rates to both primary and

secondary schools at 46 and 7 percent respectively.

Households headed by females have higher access rates to both primary and secondary schools than male-headed households, at 85 and 27 percent, against 66 and 11 percent respectively.
Table 7.11 shows the percent distribution of households by time to reach the nearest food market and public transportation. Overall, 67 percent of households have access to a food market, and 66 percent to public transportation.

The analysis by cluster location shows that 78 percent of households in accessible villages live within 30 minutes of a food market against 55 of households in remote villages. The shares for public transportation are 84percent for accessible and 43 percent for households in remote villages.

Poverty status is also correlated with distance to food markets and public transportation. Poor households have lower rates of access to food markets, with a rate of 64 percent, against 69 percent of non-poor. There is a similar difference regarding access to public transportation. While 68 percent of non-poor households have access to public transportation, the share for poor households is 61 percent.

The breakdown by size of the household shows that households with 1 or 2 members have the highest rates of access to food market at 74 percent. Households with 3 or 4 members and households with 7 or more members have the highest access to public transportation, at 69 percent each. Households with 5 to 6 members have the lowest access to both food markets and public transportation, at 57 and 61 percent respectively.

Employees have the highest rates of access to food markets and public transportation, with rates of 94 and 93 percent, respectively. Self-employed in non-agricultural activities are in second place, with rates of 89 and 77 percent, respectively, to each facility. The 'other' category comes in third place with rates of 72 and 65 percent, whereas the 'self-employed agriculture' category has the lowest rates at 58 and 59 percent, respectively.

Finally, female-headed households have higher access rate to both food markets and public transportation than male-headed households at 84 and 81 percent against 64 and 62 percent of male-headed households respectively.

Table 7.10: Percent distribution of households by time (in minutes) to reach nearest primary and secondary school

	Primary school					Secondary school				
	<= 15	16-30	31-60	61+	Total	<= 15	16-30	31-60	61+	Total
Total	43.5	25.9	17.1	13.5	100.0	4.0	9.6	12.2	74.2	100.0
Cluster Location										
Accessible	50.7	25.3	16.3	7.8	100.0	7.4	16.5	21.1	55.1	100.0
Remote	34.9	26.6	18.1	20.3	100.0	0.0	1.5	1.8	96.8	100.0
Poverty Status										
Poor	37.9	26.6	16.2	19.3	100.0	4.9	1.2	11.7	82.2	100.0
Non-poor	46.2	25.5	17.6	10.7	100.0	3.6	13.7	12.4	70.3	100.0
Household size										
1-2	40.1	28.2	20.6	11.2	100.0	2.9	15.8	13.1	68.2	100.0
3-4	48.8	24.7	12.4	14.1	100.0	3.2	9.6	12.7	74.5	100.0
5-6	37.4	28.1	19.5	15.0	100.0	4.2	10.9	10.0	74.9	100.0
7+	45.2	22.8	19.3	12.7	100.0	6.2	1.8	13.4	78.5	100.0
Socio-economic Group										
Employee	74.0	23.4	2.5	0.0	100.0	0.0	25.5	12.0	62.5	100.0
Self-employed - agric	33.5	28.6	20.1	17.8	100.0	2.7	6.4	11.6	79.4	100.0
Self-employed - other	64.8	20.9	9.6	4.7	100.0	9.4	14.9	12.1	63.5	100.0
Other	38.4	7.4	40.3	13.9	100.0	0.0	7.4	28.6	64.0	100.0
Gender of the head of household										
Male	42.8	23.3	18.6	15.3	100.0	4.6	6.2	12.3	76.8	100.0
Female	46.5	37.9	10.1	5.5	100.0	1.0	25.5	11.7	61.8	100.0

Source:CWIQ 2007 Rufiji DC

Table 7.11: Percent distribution of households by time (in minutes) to reach nearest food market and public transportation

	Food market					Public transportation				
	<= 15	16-30	31-60	61+	Total	<= 15	16-30	31-60	61+	Total
Total	46.1	21.2	16.4	16.3	100.0	48.8	16.6	10.4	24.1	100.0
Cluster Location										
Accessible	52.9	24.8	18.3	4.0	100.0	65.0	19.4	10.0	5.6	100.0
Remote	38.0	17.0	14.1	30.9	100.0	29.7	13.3	10.9	46.0	100.0
Poverty Status										
Poor	39.5	24.0	16.5	19.9	100.0	43.0	17.8	11.5	27.7	100.0
Non-poor	49.3	19.9	16.3	14.6	100.0	51.7	16.1	9.9	22.4	100.0
Household size										
1-2	41.6	31.5	14.2	12.8	100.0	40.9	22.4	13.1	23.6	100.0
3-4	51.2	17.9	15.0	15.9	100.0	51.5	16.5	7.0	25.0	100.0
5-6	40.4	17.2	20.5	21.8	100.0	48.0	12.9	11.4	27.8	100.0
7+	48.7	22.6	15.4	13.3	100.0	52.9	16.2	12.7	18.2	100.0
Socio-economic Group										
Employee	75.0	18.7	6.3	0.0	100.0	86.6	5.6	3.5	4.3	100.0
Self-employed - agric	38.5	18.5	21.3	21.7	100.0	40.9	18.2	11.1	29.8	100.0
Self-employed - other	62.2	27.4	4.3	6.0	100.0	61.7	15.2	9.3	13.8	100.0
Other	29.8	42.4	19.5	8.2	100.0	49.8	15.4	19.5	15.3	100.0
Gender of head of household										
Male	43.8	20.1	17.7	18.5	100.0	45.8	16.3	10.9	27.1	100.0
Female	56.7	26.6	10.3	6.4	100.0	63.3	18.2	8.1	10.4	100.0

Source:CWIQ 2007 Rufiji DC

7.5 Anti-Malaria Measures

The percentage of households taking anti-malaria measures and the specific measures they take are shown in Table 7.12. Overall, 84 percent of households take measures against malaria. The most commonly taken measures are insecticide treated nets (52 percent) and bed nets (36 percent).

The analysis by cluster location shows no strong correlation with the share taking measures against malaria. However, households in accessible villages report use of insecticide treated nets more often than households from remote villages, at 59 and 44 percent, respectively.

In addition, 86 percent of non-poor households take measures against malaria compared to 79 percent of poor households. The most commonly taken measures are the use of insecticide treated nets, bed nets and maintenance of good sanitation.

The share of households taking measures tends to increase with the size of the household but there are no clear trends by measure taken. The analysis by socio-economic status shows that virtually all households in the 'employee' category take measures against malaria compared to 62 percent in the 'other' category. Similarly, employees report use of insecticide treated nets more frequently than the remaining socio-economic categories.

Finally, households headed by males are more likely to take measures against malaria than households headed by females at 85 and 79 percent respectively. In addition male-headed households report maintenance of good sanitation more frequently than female-headed households with shares of 22 and 16 percent respectively.

Table 7.12: Percentage of households taking anti-malaria measures, by measures taken

	Share taking measures	Use bed net	Insect-icide	Anti-malaria drug	Fumi-gation	Insecticide treated net	Maintain good drainage	Maintain good sanitation	Herbs	Burn leaves	Window/ door net
Total	83.5	35.5	1.9	3.4	0.5	52.2	1.3	21.0	0.2	2.0	8.2
Cluster Location											
Accessible	83.6	36.0	1.3	5.6	0.4	59.0	1.9	17.8	0.4	0.8	13.8
Remote	83.3	34.9	2.6	0.7	0.6	44.1	0.6	24.8	0.0	3.4	1.5
Poverty Status											
Poor	79.1	42.7	0.8	2.8	0.0	41.1	0.0	25.9	0.0	3.8	0.9
Non-poor	85.6	32.2	2.4	3.6	0.7	57.2	1.9	18.8	0.3	1.1	11.5
Household size											
1-2	66.5	33.7	1.9	0.5	0.0	49.3	3.8	20.0	0.0	1.6	11.6
3-4	88.8	40.9	4.2	5.8	0.0	48.6	1.9	22.0	0.5	0.9	7.5
5-6	86.0	28.8	0.0	2.0	0.0	59.9	0.0	18.7	0.0	3.2	13.0
7+	86.7	35.5	0.0	2.9	2.2	50.9	0.0	23.2	0.0	2.7	0.7
Socio-economic Group											
Employee	100.0	9.9	6.2	13.5	2.6	90.1	3.7	33.6	0.0	0.0	29.1
Self-employed - agric	79.7	39.6	1.8	3.1	0.0	47.4	1.3	23.0	0.3	2.2	3.2
Self-employed - other	92.4	30.8	0.9	1.3	1.0	57.6	0.8	10.7	0.0	2.2	15.2
Other	62.4	56.4	0.0	0.0	0.0	0.0	0.0	43.6	0.0	0.0	0.0
Gender of the head of household											
Male	84.5	35.7	1.9	3.6	0.6	51.7	1.2	22.1	0.2	1.2	5.9
Female	78.5	34.3	1.6	2.1	0.0	54.7	1.6	15.5	0.0	5.6	19.6

Source:CWIQ 2007 Rufiji DC

7 Household amenities

8 GOVERNANCE

The PMO-RALG CWIQ expanded the standard CWIQ survey instrument with several questions on governance. This chapter discusses the responses to these questions. The first section discusses attendance at kitongoji, village, ward and district meetings. Section 2 shows the results of questions aimed at measuring satisfaction with leaders at each of these levels. Section 3 concerns public spending at kitongoji, village, ward and district level and discusses to what extent financial information reaches households, as well as their satisfaction with public spending at each level.

8.1 Attendance at Meetings

Table 8.1 summarises responses to the following question "Did you or anyone in your household attend a meeting at [...] level in the past 12 months". This question was repeated 4 times with the dots replaced by kitongoji, village, ward and district. The results show that 67 percent of households had at least one member attending at least one kitongoji meeting in the past 12 months. Attendance at village meetings was slightly higher at 69 percent. Ward and district level meetings did not attain attendance of the majority of households at 15 and 3 percent respectively.

Looking at the breakdown of the results by poverty status, it can be seen that while there is no difference in attendance at ward and district meetings, non-poor households seem to have better attendance rates at kitongoji level meetings than poor households. Furthermore, meeting attendance at ward level is correlated with cluster location, with households in accessible villages reporting a higher attendance rate than households in remote villages at 18 and 10 percent respectively.

Analysis of the results by socio-economic group shows that the 'other' socio-economic category -a small group of households consisting mainly of households where the main income earner is neither an employee nor self-employed- consistently have lower attendance rates than the other socio-economic groups. The employees, self-employed agriculture and self-employed other groups have similar attendance rates at kitongoji level. Village, ward and district level meetings, however, are characterised by lower attendance rates of the self-employed in non-agricultural activities compared to those who are self-employed in agriculture and those who are employees.

Analysis of the results by socio-economic groups indicates that the employees show the highest rates of meeting attendance for all government levels. The 'self-employed agriculture' and the 'self-employed other' groups have similar

Table 8.1: Percentage distribution of attendance of meetings (any household member within past 12 months)

	Kitongoji Meeting	Village Meeting	Ward Meeting	District Meeting
Total	67.3	68.6	14.7	2.6
Cluster Location				
Accessible	65.9	66.5	17.9	2.8
Remote	69.1	71.0	10.8	2.5
Poverty Status				
Poor	61.5	67.8	11.7	0.0
Non-poor	70.2	68.9	16.1	3.9
Socio-economic Group				
Employee	70.7	75.3	34.6	11.3
Self-employed - agricult	68.5	68.6	15.0	1.7
Self-employed - other	66.6	70.3	9.2	3.3
Other	38.4	38.4	8.2	0.0
No. of Obs.	450	450	450	450

Source:CWIQ 2007 Rufiji DC

Table 8.2: Distribution of leaders' satisfaction ratings and reasons for dissatisfaction

	Kitongoji Leaders	Village Leaders	Ward Leaders	District Leaders	District Councillor
Total					
Satisfied	79.0	71.7	64.8	57.9	43.4
Not Satisfied	18.8	23.6	23.8	16.7	45.7
Don't Know	2.3	4.7	11.5	25.4	10.8
Share Satisfied by Cluster Location					
Accessible	76.1	70.4	65.2	59.2	45.0
Remote	82.3	73.2	64.2	56.4	41.5
Share Satisfied by Poverty Status					
Poor	78.1	70.9	65.8	58.1	40.3
Non-poor	79.4	72.1	64.2	57.8	45.0
Share Satisfied by Socio-economic Group					
Employee	91.9	87.7	91.0	73.9	58.9
Self-employed - agriculture	80.9	72.6	62.6	57.0	37.9
Self-employed - other	71.9	65.7	66.8	59.1	58.6
Other	61.8	64.0	40.9	34.6	16.8
Reasons for Dissatisfaction (incl. don't know)					
Political differences	0.0	1.7	0.0	0.0	2.5
Embezzlement/corruption	21.1	16.1	12.2	1.5	3.9
They do not listen to people	39.5	27.6	19.6	5.3	21.8
Favouritism	16.4	15.0	14.5	7.3	8.9
Lazy/inexperienced	25.0	25.0	18.7	8.6	16.0
Personal Reasons	0.6	0.8	0.5	0.7	1.3
I see no results	30.9	38.7	38.3	27.9	52.0
They never visit us	15.7	28.0	63.2	79.1	52.3
No. of Obs.	450	450	450	450	450

Source:CWIQ 2007 Rufiji DC

1. While the question for kitongoji, village, ward and district leaders was framed as: "do you think the leaders at this level are polite and helpful', the question for the district councillor was framed as 'are you satisfied with the work of your district councillor?'

attendance rates at kitongoji and villages level meetings. Generally, ward and district level meetings are characterised by lower attendance rates by all groups as opposed to the attendance of similar groups at lower government levels.

8.2 Satisfaction with Leaders

The main respondent was asked whether he or she considered the leaders at kitongoji, village, ward and district levels of government to be polite and helpful. For those who were not satisfied or answered that they did not know, the reasons for this were asked. For district councillors the question was phrased slightly differently and respondents were asked whether they were satisfied with their work and for those who responded ‘no’ or ‘don’t know’ the reason for this response was asked.

The results, displayed in Table 8.2, show a clear trend of satisfaction with leaders going up as the level of government goes down. While, respectively, 79 percent and 72 percent of respondents say they are satisfied with kitongoji and village leaders, only 43 percent say the same of district councillors. This does not, however, mean that respondents specifically reported dissatisfaction with leaders at higher levels of government. In fact, the percentage of people claiming they are dissatisfied with leaders does not differ much between kitongoji, village, ward and district leaders. Rather, the number of people responding ‘I don’t know’ increases for higher levels of government. Just a quarter of respondents

Table 8.3: Percentage distribution of households who received financial information in the past 12 months

	Kitongoji Finances	Village Finances	Ward Finances	District Finances
Total	6.3	18.7	2.4	2.7
Cluster Location				
Accessible	5.8	21.6	2.2	4.0
Remote	7.0	15.1	2.6	1.2
Poverty Status				
Poor	5.9	18.9	1.1	1.9
Non-poor	6.6	18.5	3.1	3.2
Socio-economic Group				
Employee	9.0	27.0	3.3	2.9
Self-employed - agricultu	6.1	19.2	2.3	2.3
Self-employed - other	6.2	15.3	2.1	4.3
Other	6.4	13.2	6.4	0.0
Source				
Letter	0.0	1.1	0.0	13.0
Notice board	12.4	4.2	8.9	17.7
Meeting	67.8	84.4	51.7	0.0
Rumours/hear-say	17.0	13.0	47.7	50.2
Radio/newspapers	0.0	0.0	0.0	19.1
No. of Obs.	450	450	450	450

Source:CWIQ 2007 Rufiji DC

were not satisfied with the work of their district leaders, while 58 percent was satisfied and 17 percent answered 'I don't know'.

Disaggregating the data by cluster location exposed that household in remote villages report being satisfied by kitongoji leaders more frequently than accessible villages at 82 and 76 percent respectively. The breakdown did not expose any considerable difference among respondents in either accessible or remote villages for other levels. Further disaggregation of the data by poverty status of household shows that non-poor households report being satisfied by village leadership more often than poor households at 45 and 40 percent respectively.

Disaggregating the rates by socio-economic group shows that especially the 'other' category has lower satisfaction rates, whereas the 'employee' category reports higher satisfaction rates across all government levels than the remaining socio-economic groups.

Finally, all respondents who did not report that they were satisfied with the leaders at a certain level of government where asked why this was so. The bottom part of Table 8.2 summarises the responses. Note that the base for the percentages here is the number of people who answered 'don't know' or 'no' to the question of whether they were satisfied with their leaders at the specified level.

The reasons for dissatisfaction are very different across the different levels of government. While at kitongoji level only 16 percent of dissatisfied respondents complain that leaders never visit them, this figure goes up to 79 percent for district leaders. Leaders not listening to people by contrast is the most commonly cited response at kitongoji level at 40 percent, while it is less important at district level at 5 percent. The most common reason for dissatisfaction with district councillors is their failure to pay visits, followed by the complaint that no results of their work can be seen. A very low percentage of respondents complains about embezzlement and corruption by the district leaders and the district councillor, while this complaint is more common for ward, village and kitongoji leaders. Finally, political difference and personal reasons are not important reasons for dissatisfaction on leadership at all levels of government.

Table 8.4: Satisfaction with public spending and reasons for dissatisfaction

	Kitongoji Spending	Village Spending	Ward Spending	District Spending
Total				
Satisfied	42.3	38.8	27.0	28.8
Not Satisfied	22.3	29.6	26.4	18.5
Don' Know	35.4	31.6	46.6	52.7
Share Satisfied by Cluster Location				
Accessible	45.3	42.8	28.1	31.7
Remote	38.8	34.1	25.8	25.5
Share Satisfied by Poverty Status				
Poor	33.1	33.2	27.1	29.8
Non-poor	46.8	41.6	27.0	28.4
Share Satisfied by Socio-economic Group				
Employee	74.6	65.3	46.0	52.2
Self-employed - agriculture	38.9	37.5	25.3	26.9
Self-employed - other	46.4	36.7	29.2	30.5
Other	19.8	28.3	8.9	8.9
Reasons for Dissatisfaction (incl. don't know)				
I see no results	18.8	30.1	26.2	21.7
Embezzlement/corruption	12.4	26.8	15.6	8.1
Favouritism	0.6	1.0	1.6	2.4
This is what I hear	2.9	8.6	6.7	2.9
They give no information	69.1	68.2	79.6	86.4
No. of Obs.	450	450	450	450

Source:CWIQ 2007 Rufiji DC

8.3. Public Spending

This section discusses the results of questions on the extent to which financial information reached the sample of respondent, as well as their satisfaction with public spending. Table 8.3 shows the distribution of the percentage of respondents that reported having received financial information from four different levels of government. Information on village finances seems to reach the largest share of households at 19 percent. Information on kitongoji, ward and district finances reaches 6, 2 and 3 percent of the households respectively. Overall slightly more households in accessible villages report receiving financial information than households in remote villages, especially on village finances; while the breakdown by poverty status does not yield important differences.

There are no major differences across socio-economic groups, although the 'employee' category seems to receive more information on village finances than the remaining socio-economic groups. For those that received financial information, the source of this information was probed for.

The results in Table 8.3 show that at all levels of government the most important method of acquiring information was attendance of meetings. Information received through rumours or hear-say scores second place at all levels, ranging from 13 percent at ward level to 50 percent at district level.

Respondents were asked whether they were satisfied with spending at different levels of government and were requested to respond with either 'yes', 'no' or 'don't know'. Table 8.4 shows the results. While around 42 and 39 percent of respondents were satisfied with kitongoji and village spending respectively, the proportion is slightly lower at 27 and 29 percent for ward and district spending, respectively. The proportion of respondents who specifically reported dissatisfaction with spending at district level was low at 9 percent for district finances. On the other hand the share of respondents reporting 'I don't know' was considerably high at all

government levels and increased as the level of government increased, from 35 percent at kitongoji level to 53 percent at district level.

In line with the results on satisfaction with leaders, respondents living in non-poor households and in accessible villages consistently show higher satisfaction rates than respondents living in poor households and in remote villages. The breakdown by socio-economic group shows that the 'employee' group displays higher satisfaction rates, for all government levels than the remaining socio-economic categories.

When respondents were further queried why they were not satisfied, or why they did not know whether they were satisfied, the most common response was that they did not receive any information. Other important responses were those associated with embezzlement/corruption and seeing no results arising from the public spending.

8 Governance