WORLD FOOD PROGRAMME
LIBERIA

LOFA COUNTY

FOOD SECURITY & NUTRITION ASSESSMENT

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Executive Summary

WFP in collaboration with MOH & SW, UNICEF, IMC and ACF conducted a food security and nutrition survey in Lofa County from January 22 to February 3, 2005. The survey provides baseline information on the key food security and nutrition indicators and possible causes of vulnerability in the County. The results will facilitate the review of the already existing programmes and guide the planning and appropriate targeting of future food assistance in Lofa and in Liberia in general.

The survey utilized both quantitative and qualitative information collected at both household and community level. A two-stage cluster sampling methodology was used in which 30 communities were randomly selected. In each community, at least 25 households were assessed.

The assessment indicates uncertain food security situation in Lofa County. Based on food diversity, accessibility and expenditure patterns, the survey reveals that only less than 20% of the population have adequate food consumption levels. Majority (>70%) of the surveyed households have unsatisfactory consumption pattern characterized by less food diversity, high (over 60%) expenditures on food items at the expense of other basic needs, low frequency of daily food intake, low household asset holdings (mainly limited to utensils and other relatively less valued household goods), less reliable income sources etc. There is high dependency on food purchases and other relief sources with limited own production reported by the communities.

Although the communities are resettling in their villages, seeds and farming tools are not readily available neither do they have the capacity to purchase the required farm tools. They will still heavily rely on external support to undertake farming activities.

Generally, the communities have limited capacity to respond to problems afflicting them. For example, their capacity to construct schools, health facilities, and even be involved in constructive farming endeavours is constrained by poverty levels. This makes them extremely vulnerable to negative affects of shocks. Results indicate that while 60% of the households had experienced some shock (in food or income access) over the previous 12 months, a significant proportion (40-50%) did not have enough mechanisms to absorb the negative impacts.

For the nutrition component, 950 children were surveyed from 648 households. The results indicate a global acute malnutrition of 2.6% and severe acute malnutrition was 0.4%. Compared to national averages, stunting levels is not extremely high at about 24% while underweight is 11%. Crude Mortality Rate (CMR) is 1.35 deaths per 10,000 per day while Under-Five Mortality Rate (U5MR) is 2.41 deaths per 10,000 per day. Both CMR and U5MR is slightly elevated and requires caution. Main causes of deaths among under-five year old children are malaria, diarrhoeal diseases and acute respiratory infections. Inadequate provision of health care services, unsafe water and poor child feeding practices remain major issues of concern. A significant 30% of the children were introduced to foods other than breast milk before the recommended time of 4-6 months while less than one-fifth of the children continued to breastfeed beyond one year of their life. Assessment of HIV/AIDS awareness reveals appalling statistics characterized by high levels of ignorance about the pandemic, stigmatization, and discrimination. Less than 10% of the assessed household have appropriate knowledge on the spread, prevention and care for the pandemic.

The survey also confirms massive destruction of the basic social services such as education facilities, health institutions, shelters, and farms. Thus the uptake of education is still relatively low, there is acute shortage of shelter while health service provision is grossly inadequate. The communities heavily rely on sourcing basic food items from far markets in the neighbouring countries.

The report recommend the following actions as a priority in the county: Support in the provision of shelter to encourage resettlement process especially targeting the poor households; rehabilitation of basic infrastructures such as schools and skills training facilities; health service provision especially urgent in Salayea District where no health facility currently exists; improvement in water and sanitation situation through construction of latrines, water pumps etc. Other recommendations include initiation of income generating activities especially those involving women and the youth; provision of agricultural tools and equipment; intensification of health and nutrition education mainly focusing on primary health care and child feeding practices and concerted HIV/AiDS awareness campaigns in the county.
BACKGROUND AND INTRODUCTION

In 1999, UN-HACO (UN Humanitarian Assistance Coordination Office in Liberia) had estimated Lofa County population at 351,492. However, as a consequence of repeated conflicts, a number of Lofa residents emigrated as refugees to the neighboring countries, namely Guinea, Sierra Leone and Ivory Coast, or as internally displaced persons in other parts of Liberia (mainly Montserrado, Margibi and Bong Counties). It is estimated that nearly three-quarters of the Lofa county residents are still outside their original areas of residence. Lofa County experienced probably the worst impact of the long and protracted civil conflict in Liberia. The County experienced the severest recurrent fights between the Taylor Government and the LURD forces. The war left a tale of widespread devastation and destruction of property and gross inhuman abuses. For sometime, even with the improvement in security in Liberia after the signing of the Comprehensive Peace Agreement (PCA) in Accra on August 18, 2003 and the subsequent establishment of UN Peacekeeping forces under the UN Mission to Liberia (UNMIL) in September the same year, rebel forces in Lofa county continued to operate in some communities. Due to insecurity and poor road conditions, most areas of Lofa County remained inaccessible to humanitarian agencies for a very long period. Consequently, it is one of the latest counties in Liberia where peace was restored with the disarmament process only ending in December 2004.

Economy of Lofa County

Lofa, Nimba and Bong Counties are the leading agricultural producers in Liberia. Thus, Lofa has been described as a food basket for the country. The main food crop in Lofa County has been rice although production of crops such as cassava, vegetables, lentils etc is also significant.

In 1998, Lofa was projected to be the third largest source of paddy rice production after Nimba and Bong Counties with an estimated 25,000 hectares under cultivation and 32,500 tonnes of produce. Additionally, Lofa still produced significant amounts of cassava though not as much as counties Nimba, Bong, Grand Bassa, Montserrado and Grand Gedeh. It is notable that Lofa is not popularly known for cassava but still made significant production in relation to other counties.

Lofa has also been known for its vast and probably the leading cash crop producer in Liberia especially for coffee and cocoa, the leading cash crop commodities in the county. Many households depended on income from these cash crops as their main sources of livelihood.

Like in other parts of Liberia, rainfall is not a limiting factor for agricultural production. The annual precipitation ranges between 3000mm and 4,500mm. However, like other sectors of the economy, agricultural production has been severely affected by the flight of at least a three-quarter of Lofa county residents to either IDP camps or neighbouring countries. Homesteads were destroyed, seeds and tools lost and agricultural production for both subsistence and income generation was dramatically reduced. Thus Lofa residents have mainly depended on assistance from international communities either within the various IDPs camps in Liberia or refugee camps in the neighbouring countries (Guinea, Sierra Leone and Ivory Coast).

Survey justification

Lofa County is expected to receive the largest returnee and IDP population resettlement. About 210,000 of the combined figure for expected IDP and refugee, returnees and ex-combatants preferred being resettled in Lofa County according to HIC study of May 2004. The county has relatively limited humanitarian operations at the end of 2003 and 2004 as most agencies still feared the fragile security situation. It is now that the county is opening up for humanitarian operations albeit slow pace mainly due to extremely poor infrastructural network and limited data to guide interventions. Some remote areas of the county are still inaccessible due to poor road conditions. There is still limited information existing on the food security and nutrition situation in the county. And due to massive destruction that resulted from the war, the pre-war data cannot provide guidance either.
Furthermore, in February 2005, Lofa County was finally declared safe for return and resettlement of refugees and IDPs. This puts increased pressure and urgency to provide concrete baseline information to guide resettlement activities. As part of WFP operations, the vulnerability and nutrition assessment will provide baseline data on food security, health and nutrition situation in the county. The information will assist in the planning and proper targeting of aid interventions and allow proper impact assessment in the future. Various Partners in Nutrition and Food Security were involved including UNICEF, ACF, IMC, MOH & SW and Ministry of Planning.

OBJECTIVES AND METHODOLOGY

The survey provides baseline information on key food security and nutrition indicators and possible causes of vulnerability in Lofa County. The results will facilitate review of already existing programmes and guide the planning and appropriate targeting of future food assistance in Lofa County.

Specific objectives

Food security and vulnerability:
- To determine the underlying food security situation in the county
- To identify coping mechanisms available to the population in the county
- To assess peoples’ access to basic social services
- To identify the characteristics of vulnerable groups
- To determine the levels of vulnerability of the households

Nutrition:
- To estimate prevalence of acute malnutrition in children less than five years of age
- To estimate a two-week cumulative morbidity rate in children less than five years of age
- To estimate Crude and under five mortality rates and causes of death over the past 6 months
- To determine coverage of measles vaccination among children 6 – 59 months of age
- To estimate coverage of Vitamin A supplementation in children less than 5 years of age
- To determine the prevalence of appropriate Infant and child feeding practices (introduction of complementary feeding).

Methodology

A two-stage cluster sampling methodology was utilized in which 30 clusters were randomly selected and 25 households surveyed in each cluster for general household/food security questionnaire and 30 households assessed for mortality.

Qualitative and quantitative information were collected at community and household levels respectively. The community level data was collected through focus group discussions with knowledgeable informants in the survey areas (both men and women together) in order to allow better understanding of opportunities and constraints to access basic services in the communities. Food security, maternal and child health and nutrition data were collected at the household level. The WFP Nutrition and Vulnerability Analysis and Mapping (VAM) Units of Liberia designed the assessment methodology, tools, analyzed and wrote the survey report.

Sampling Frame

Population statistics are lacking for Lofa County. However a list of villages/towns with their corresponding population estimates obtained from ICRC was used as a basis for sampling of communities/villages. This data, however, did not include some remote and inaccessible parts of Lofa, specifically Vahun District. Thus, the survey design did not include Vahun District mainly due to inaccessibility and uncertain insecurity situation at the time of the survey.

Cluster Selection

Counties in Liberia are divided into districts, Clan and village, which is the same as for Lofa County. Villages/communities were the smallest sampling units used for selection of clusters. A list of villages and their corresponding population estimates was obtained from the ICRC. A sampling frame was established using list of villages/communities with their corresponding population and household numbers. Cluster selection from each village/community was on a probability proportional to its population size giving equal chance of selection for each village. The cumulative size (CUMM SIZE)
of the estimated population was 99,240 and divided by 30 to derive the Sampling Interval (SI) of 3,308. After calculating the Sampling Interval (SI) by dividing total population by 30, a random number between 1 and the SI was drawn from a random number table to identify the first cluster. The randomly selected number generated to select the first cluster was 545. The subsequent clusters were selected by adding the sampling interval to the number that identified the previous cluster. The sum and SI were added each time to select a new cluster. The sampling frame is shown in the table in appendices.

Microsoft Excel software was utilized to select the sample. See annex showing the sampling frame.

**Household Selection**

In the second stage of sampling, improved cluster survey methodology was used. Household selection within a selected cluster employed systematic random sampling, rather than the usual EPI methodology that entails identifying the center of the cluster and selecting a direction by spinning a bottle on the ground. A systematic random sampling yields a more representative sample of households as all households have equal chance of selection.

On arrival to a village, a village leader was contacted and asked to provide the total number of households in the village including new arrivals. The total number of households in the selected village was used to calculate the sampling interval by dividing the total number of households by the number of households desired, in this case 30. Based up on the sampling interval, every n\textsuperscript{th} household was selected and interviewed. A departure number was randomly selected and adding it to the interval to determine each household to be visited for administration of both the household questionnaire and measurement of children in case an under-five was present in that household.

The survey team started at the furthest point of the village and worked their way through to the opposite end of the village.

If household members were not at home, a neighbor was consulted regarding the whereabouts of the household. If the members had departed permanently or would not return before the survey team had to leave the village, the household was skipped and replaced. The team supervisor made note of any households replaced on the cluster control form. If household members were expected to return, the team visited the house before declaring absent and replacing it. If the village fails to have enough households with children meeting the criteria the adjacent village on the left of the original village was used.

When the team encountered a large village, the village leader was asked to help in dividing the village into small segments. A list of segments was constructed containing number of households. Similar to the first stage of sampling, the segment was selected probability proportional to size. The total number of households in the selected segment was noted to calculate the sampling interval and therefore the same procedure as described above was applied.

**Sample sizes for Food security, Nutrition and Mortality assessments**

Different sample sizes were selected depending on the questionnaire administered although using the same methodology. For the general household questionnaire (food security), 25 households were assessed in each cluster. However, for mortality survey, additional 5 households were included using the same household sampling interval to reach a target of 30 households in a cluster. It is notable that mortality assessment did not depend on presence of an under-five year old child in household but rather, only on the household sampling interval. On the other hand, the child anthropometry questionnaire largely depended on the presence and number of under-fives in the various households visited for mortality or food security interview. Only households with under-fives were assessed for anthropometry. Thus in a case where a household had an under-five, all the three questionnaires were administered. Accordingly, 750 households were assessed for the general household profile questionnaire, 900 households for mortality assessment and 648 households for child anthropometry.

**Questionnaires**

The survey data was collected through community and household interviews. The community questionnaire is composed of the following indicators: demographic information, economic, infrastructure, agriculture, education, health, markets, community organizations and community priorities while the household questionnaire is composed of the following indicators; household demographics, household circumstances and movements, housing, household and animal assets, agriculture, sources of income, household expenditures, food consumption, food aid, Household risks and maternal health and nutrition.
The household questionnaire was used together with anthropometry and mortality questionnaire to collect household information.

**PART I: COMMUNITY LEVEL FINDING**

1.1 **Demographic information**

1.1.1. **Population/displacement**

In the community focus group discussions, interviewees were asked a question on whether people had moved away from the community within the previous 5 years (i.e. since 2000). The majority of respondents in Foya, Kolahun and Zorzor districts said that more than half of the population moved out. However, in Voinjama and Salayea, the group noted that virtually everyone had moved out during the war.

The focus groups were also asked to estimate the number of displaced people in the communities. The responses shown in the chart indicate that on the district level, Voinjama hosts the highest number of displaced people in the county followed by Zorzor and Foya. The responses show that slightly less than 35% of the people in Voinjama and about 20% in Zorzor district are displaced.

The interviewees were asked if the original inhabitants have returned to their communities in the districts. The response of majority was that more than half of the original inhabitants have not returned home. When asked about the main reasons stopping people from returning, the commonest answer was that homes are damaged. The second main reason given was that people are waiting to be repatriated to the districts. In addition, fear of insecurity in Foya, Voinjama and Kolahun has stopped some people from returning although they also note that security situation has now considerably improved. A small group of interviewees reported that lack of food in Salayea and Zorzor also stopped people from returning to their communities.

Most of the returnees are from refugee camps in Guinea and to some extent, Sierra Leone. Some of these returnees still have part of their families or relatives in refugee camps due to the lack of enough resources to return or to maintain their entire family in their places of origin.

1.2 **Land and resource access**

1.2.1 **Natural resources**

Agricultural production, the dominant livelihood source for majority of people in the County was abandoned due to displacement and continued disruption of farming activities during the fighting. However, land still counts as the single most important natural resource in generation of income and food for people in Lofa County. Wild animals, fishing in the rivers and collection of palm nuts are significantly important food and income sources across the districts. The oil pressed palm nuts is currently a leading source of livelihood and is mainly sold in Guinea and Monrovia. The second most important resource is wild animals followed by fishing as another important economic resource activity.

1.2.2 **Access to markets**

Most of the permanent food markets are located within the district headquarters where most people walk ½ day to 1 day to reach. Trekking is the commonest means of getting to the markets, particularly along the borders with Guinea and Sierra Leone. Furthermore, the roads are impassable during the rainy seasons i.e. June to September, making road transport impossible during this period of the year.

Except for vegetables and palm oil which are locally produced, the population in Lofa depends on cross border trade for food and other essential commodities. The supply of commodities in the districts depends on the accessibility of markets in the two neighbouring Countries. Most of the people who travel to the markets on foot usually carry their own goods, or often assisted by family members in carrying the goods rather than spend on transportation. Transporting a 50 kilogram bag of rice on foot costs $60 – 100 Liberia Dollars (LD) during the dry season (still an expensive undertaking for the poor), the cost still increase to LD$ 100-200 for the same bag of rice.
During the rainy season, this makes transporting items extremely expensive, thus families would always try to self-transport their commodities.

For most of the villages/communities, it takes less than ½ days traveling to the markets on public transport within the district and the limiting factor would normally be cost. Public transport is available in most villages/communities at least once a week at a return fare of LD$100–200 for most people. During the dry season it costs LD$50-100 to transport a 50 kilogram (kg) bag of rice on public transport but the cost is normally double or triple (LD $150 –200) during the rainy season due to poor road conditions for most villagers in Foya and Kolahun districts. On the contrary, in Voinjama, Zorzor and Salayea, fares more or less remain constant irrespective of seasons since vehicles are normally readily available. Meanwhile, private transports are not commonly used for traveling to the markets in districts.

1.3 Education services

1.3.1 Functioning School facilities
From the community responses collaborated with statistics from UNMIL and County Education Office, 260 schools (12 of them secondary schools) including 206 public schools, 35 mission schools and 19 private schools existed in Lofa County before the massive destruction. However, fighting destroyed all of them. UNHCR in collaboration with other international organizations mainly Peace Wind-Japan, IRC, CHF and GTZ have renovated a number of the damaged schools except in Salayea and Vahun districts. Nonetheless, communities in Salayea district are running tutorial classes for their children to catch up on literacy skills.

Renovation has been completed for 10 schools in Voinjama district, 7 schools in Kolahun district, 6 others in Zororz District and 4 schools in Foya District. Another school facility (Solonba Public School) was under construction in Foya district at the time of the survey. In total 32 schools are either already rehabilitated or earmarked for rehabilitation within the first quarter of 2005. Schools have opened in about 65–80% of the communities, although most of them are being operated at the primary level. English is the main language of instruction in all of the schools.

1.3.2 School enrolment and attendance
Discussions regarding enrolment and attendance of primary school age children (ages 6-14 years) was held with the communities surveyed. The communities indicate that more boys than girls are enrolled in schools. Zoroz and Salayea Districts have the highest enrolment rate at 80% and 81% respectively for boys and 79% and 74% respectively for girls. On the contrary, Kolahun reports the lowest enrolment of boys (44%) and girls (30%). Kolahun also has the widest gender disparity in terms of enrolment and attendance of primary school age children. The communities also reported that schools in Salayea have not fully opened nor functioning. In Foya District, 60% of the boys and 55% of the girls of the primary school age are enrolled and attending school. Conversely, the trend is different in Voinjama District where fewer boys (55%) than girls 62% are enrolled and attending school.

1.3.3 Schooling problems
There were similar reasons for which boys and girls of primary school age were not enrolled nor attending school in all of the districts assessed. Those community members who are unable to take their children to school mentioned lack of school fees (50-55%), doing other work at home (25-30%), no food (15-20%), and no school in the areas of residence (10-20%) as the main reasons for school age children not attending school.

1.4 Health services

1.4.1 Access to health care
From the existing records, until 1990, Lofa County had 53 health centres, 43 clinics and 4 hospitals spread all over the six districts (HCS-Lofa 2005). However, all these health institutions were destroyed during the subsequent wars. Currently, 14 facilities have been renovated and functional in the county: 7 clinics in Voinjama, 3 clinics and a health centre in Zorzor, one clinic and a health centre in Kolahun and a health facility in Foya. Until the survey time, both Salayea and Vahun Districts had no operational health facility. Non-governmental Organization (NGOs) namely: ICRC, IMC (Zoroz, Voinjama and Kolahun), MSF (Foya and Kolahun) and Lutheran Church operate all the rehabilitated facilities. UNHCR is supporting these NGOs in the reconstruction of the facilities. IMC has identified additional 10 health facilities for rehabilitation in 2005 while IRC has identified 2 more facilities (Salayea and Zororz). Currently, IRC operates two mobile clinics in Fessibu and Konia towns, Zororz District. ICRC is currently rehabilitating a health facility in Voinjama and plans to rehabilitate 3 more facilities. The health services are free of charge. It is notable that mobile clinics can only be accessed twice a week in areas where no health facility exists. People are therefore constrained to walk long distances to reach the nearest health facilities in days when mobile services are not available. As a whole, the county still lacks a hospital.
The former, Curran hospital in Zorzor is currently running as a clinic with mobile services in Salayea district.

In Kolahun District, the population utilizes the two health facilities in Bolahun and Kolahun towns. In Foya district, the people acquire health services from the only clinic located in Foya town.

The focus groups reported that malaria and diarrhea are the main sicknesses affecting both children and adults in Lofa County. Additionally, children suffer from acute respiratory infections, while adults also suffer from STIs (mainly gonorrhea). Most of the community members seek medical assistance from health centers in addition to seeking prescriptions and treatment at drug stores and traditional healers.

1.5 Community Perception of needs

1.5.1. Development priorities

With regard to priorities for the communities, the focus group interviews revealed that what needs to be done tends to be similar across the districts, although there are variations in the importance given to the type of priorities. The following are five immediate community priorities for development projects:

- **Construction of shelters** – is a major priority occasioned by the fact that fighting in the County left many towns and villages completely wiped out residential structures, in addition to other destructions of property. Houses that were destroyed over the years of fighting have to be re-built. Communities point out that shortage of housing may hinder the resettlement of refugees and IDPs in their original areas of residence. Respondents point that some families would not opt to return unless there are guaranteed of support to construct residential houses. The net effect could be an increase in split families with only part of the household members choosing to come.

- **Construction of Health facilities/provision of health services** – is the second priority. Virtually all health facilities were destroyed during the wars. The population needs health services. In some areas, the need is acute as evidenced by the lack of facilities.

- **Rehabilitation of educational facilities including skills training** – This is the third immediate priority for majority of the community members. Schools were damaged. Thus children especially in rural areas are still locked of the learning process by sheer absence of schools. In addition, many youthful population have missed chance to acquire formal education. Some are already adults. Skills development for this category is regarded by the community as a priority. This can guarantee some engagement for the group thus reducing the vices that could accompany idleness especially among the ex-combatants.

- **Water and sanitation** - Improvements in the quality of drinking water is felt to be particularly needed in most communities.

- **Agriculture rehabilitation** – In addition to prioritizing water and sanitation, revitalization of agricultural production is prioritized. Residents in virtually all districts depend mostly on farming and gardening for their livelihoods. Currently, the farming population that has already resettled is involved in cultivation of rice and vegetables for income generation, even though the farmers are not fully equipped. Inadequate financing of meaningful production, materials and crude agricultural skills are major constraints stopping rehabilitation and proper maintenance of crops such as coco, coffee, palm, and other cash crops.

1.5.2. Community organizations

With resettlement process many grassroots organizations have begun operating across the districts. The focus group discussions revealed that the local organizations are undertaking various community development projects as well as promoting social reintegration activities. NGOs operating in the county have been supporting some of the local groups with skills training e.g. on carpentry, mechanics etc.

The community focus groups stated too that nearly ten local organizations exist in Voinjama district. The organizations are involved in revitalization of farming activities and construction of community social halls. More than five local groups are reported in Kolahun District and slightly more exist in Foya District. Organizations in Kolahun and Foya Districts mainly focused on agricultural projects. In Zorzor and Salayea Districts, the local organizations are mostly involved in farming and rehabilitation of social projects.

With regards to four main projects being implemented in each of the districts in the county, rehabilitation/revitalization of farming activities, reconstruction of water facilities and community social amenities are the main projects ongoing in Foya District while building of schools, health and water facilities, and
farming activities are the main focus projects in Voinjama District. The other districts, Salayea, Zorzor and Kolahun have same projects as those undertaken by Foya and Voinjama Districts. Minimal rehabilitation of roads is also taking place in most districts.

1.5.3. External organizations
The community members acknowledge that NGOs, UN agencies and other humanitarian agencies are providing substantial support in most projects undertaken in the county. These organizations include ICRC, IMC, MSF, GTZ, Peace Wind Japan, WFP, UNHCR, ACF, IRC, CONCERN, CHF CCF, NRC and LWF/WS. Projects assisted include improvement of water and sanitation facilities, non-food and food assistance, agriculture and shelter construction, protection and peace building programmes as well as health and education facilities.

PART II. HOUSEHOLD FINDINGS

2.1 Household demographics
The typical household size in Lofa is 6 persons. There exist no significant differences in size of households across the different districts in Lofa. The survey equally reveals more males than females head households. Across districts, Salayea has the highest proportion (55%) of women headed households while Zorzor has the lowest proportion (26%) of female-headed households. Additionally, females head 39%, 37% and 44% of households in Foya, Kolahun and Voinjama Districts respectively. The average age of household heads is 37 years, indicating relatively youthful families though this finding correlates with the low life expectancy reported in Liberia (DHS 2000).

The survey also reveals that households in Lofa depend on diversified activities. Agriculture (mainly subsistence farming and gardening) dominant occupation in Lofa County reported by 68% of the respondents. Business (trade and selling) ranks second as major occupation (8%) followed closely casual wage labor at 6%. Carpentry is also highlighted as important (4%) especially in the on-going reconstruction process that has started in the county. Other occupations also playing important roles in the households are teaching, fishing and blacksmithing.

A small proportion (2%) of the households in the county reports no activity. They report doing nothing. A further 8% do not have specific occupation and depends on any activity that comes across for their livelihoods. There are no significant differences at the district level in the proportion of household that depend on the various occupations.

2.2 Effect of the war

2.2.1 Household circumstances
The assessment sought to find out the proportion and status of various households residing in the districts. Of the total surveyed, about 75% were returnee households, 20% host households (the households that either remained in the districts during the war or returned much earlier/immediately active fighting stopped) and 5% displaced households.

Across the Districts, Foya has the highest proportion (98%) of returnee households followed by Salayea at 96%. On the other hand Zorzor has the lowest (48%) returnee population. For the remaining two districts, findings indicate that 76% of the surveyed households in Voinjama are classified as returnee households while the proportion of returnee households in Kolahun is 68%.

Zorzor District has the highest proportion (43%) of host households followed by Kolahun, 28% and Voinjama with 15%. In both Foya and Salayea Districts, the proportion of host households is low (2-5%). The finding confirms responses from community discussions that indicated that virtually all households in Voinjama and salayea Districts emigrated during the wars.

With regards to displaced households, the results indicate that no displaced persons households reside in Foya and Salayea Districts. If there were any displaced households in these districts, the number would be very insignificant. However Zorzor, Voinjama, and Kolahun Districts report proportion of displaced households at 10%, 9% and 5% respectively.

2.2.2 Returning to place of origin
On overall, the survey reveals that 71% of the surveyed households have returned to Lofa mainly towards the end of 2004. Some 12% of the surveyed households returned in 2005 (with some arriving only some few days before
the survey. It is noted that the survey was carried out at a time when resettlement activities were just starting with both the Liberia Government and international community encouraging spontaneous resettlements. Only 9% and 5% of the households returned in 2003 and 2002 respectively.

For the IDP population in the county, the households report insecurity (70%) was what had prevented them from moving back to their areas of origin. Some have simply stayed for far too long from the districts of residents thus fearing that the adoption process may not be easy. They also recall bad memories of the agonies they underwent before they finally moved out of their original areas of residences. Inadequate resources to facilitate movement is also reported by 8% of the households as a major hindrance to return, while another 7% lack of any pull factor (left nothing behind) in their original areas of residence. Other reasons cited for non-return include damaged roads and bridges leading to their origins (4%), may not be able to find income earning opportunities (4%), several unspecified reasons (6%) and no reason at all (<1%).

2.3 Housing

The survey also inquired about the availability of accommodation as revealed by number of people sleeping under one roof. An acute shortage of accommodation is revealed with between 60 and 80% of the households reporting that 5-10 people sleep in one house. This finding reveals a lot of sharing of accommodation as the number sleeping under one house exceeds the average household size. Only 23% of the households report that less than 5 people sleep in their houses, while 33% indicate that they have 5 or 6 people, and an overwhelming proportion (40%) said they have 6 to 10 people sleeping in the same house. However, only 4% of the households have more than 10 people sleeping in same house.

Responding to the question of how long households have stayed in the districts where they live, 75% said they had recently returned (within the previous 1 year), 14% returned within the previous 2-5 years while only 2% were there some 6 to 10 years ago. Some 10% of the surveyed households have been residing in the districts for over 10 years, meaning that they were not displaced by the recent wars.

Only 4% of the respondents acknowledge that their houses are in good condition, 15% report their structures are acceptable although may not be necessarily good. On the other hand, majority (53%) report that their houses require improvement with some 25% indicating residing in partly damaged houses. A further 3% of the houses are reportedly either uninhabitable or completely broke down (beyond repair).

2.4 Ownership of assets

2.4.1 Household assets

Respondents were asked about ownership of assets. The responses were then grouped into five categories based on the number of assets that the households owned: ownership of 0 to 2 assets, 3 to 4 assets, 5 to 6 assets and 7 or more assets. Asset ownership grouped in the four categories is shown on the chart for the 5 districts in Lofa County. Typical households tend to have only four assets from the list consisting of mattress, seeds, tools, wheelbarrow, radio, bicycle, machetes, chicken etc.

The survey reveals that most (54%) of households have 3–4 assets, 18% have 5-6 assets while another significant proportion (23%) has only 0-2 assets. A meager 4% of the households have 7 or more assets.

Variation in asset ownership was observed across the districts. Salayea District appeared relatively better off with an overwhelming 95% reporting ownership of 3 or more assets. On the other hand, a significant 19% in Zorzor, 22% in Kolahun, 23% in Voinjama and 46% of the households in Foya District have only 0-2 assets.

2.4.2 Credit access

Majority of households in Lofa County do not have access to credit facilities. For those that receive credit, the main sources for obtaining credit are: from their relatives or friends, through charities or NGOs, and local lenders or Susu club as well as anybody that can credit.
As shown on the adjacent chart, fewer households (5%) in Foya District have access to credit compared to 40% and 32% of the households in Kolahun and Zorzor Districts respectively as well as 17% in Salayea and 11% in Voinjama District.

In general, households receive more credit from relatives and friends than from the other sources. However, only 3% of the households in Foya District access credit from relatives. Besides, there are no local lenders or Susu clubs in Salayea and Foya Districts. On the contrary, more households access credit from relatives in Kolahun District (35%), Zorzor (25%), Salayea (16%) and Voinjama District (9%).

2.5 Agriculture

2.5.1 Crop production

The households in Lofa County produce mainly rice, cassava and vegetables as food crops. However, the County has also been the leading food and cash crop producer in the county before the wars. The returning population is therefore resuming agricultural activities. However more than a half of the returning households have not acquired land for agriculture production as the main preoccupation immediately they arrived has been renovation and reconstruction of shelters.

Of those households that have acquired land for agricultural production, rice is the main crop under cultivation reported by 80-95% of households. At the district level, Voinjama has the highest proportion (90%) of households that cultivated rice, followed by Salayea (86%), Zorzor (84%), Foya (82%) and Kolahun District (75%).

The second most important crop of choice for production is vegetables. Notably, households choose on vegetables as it is relatively less involving especially in terms of tools, seeds and area under cultivation. More households (48%, 40% and 35%) cultivated vegetables in Foya, Zorzor and Kolahun Districts respectively than in Salayea and Voinjama Districts with 25% and 15% of households producing vegetables respectively.

Cassava is the third most important food crop currently being produced in the county. Higher proportion, 40% and 31% of households produce cassava in Voinjama and Salayea Districts respectively. Some 21% of households in Foya produce cassava, while 19% and 17% of households in Kolahun and Zorzor Districts respectively produce cassava. Other food and cash crops produced in Lofa, albeit currently in minimal amounts are: Kola nuts, cocoa, coffee and coconut. Kola nuts are more available in Kolahun, Voinjama and Zorzor Districts, whereas Cocoa and Coffee are more in Foya, Kolahun, Voinjama and Zorzor Districts.

2.5.2 Access to seeds and fertilizers

From the household interviews, it is revealed that the most important means of acquiring seeds is through purchases. Borrowing of seeds is also an important source of seeds followed by receiving seeds in form of gifts and drawing from previous stocks.

Use of fertilizers on crops is not a common practice in the surveyed communities. Few households indicate use of fertilizers on their farms. This can be attributed to either inaccessibility or simple lack of knowledge on the importance of fertilizers. Zorzor District has the highest proportion (at about 10%) of households indicating that they use fertilizers compared to the rest of the districts where only 1-2% report use of fertilizers. Farmers mainly purchase fertilizers although some few organizations are reported to be assisting with pesticides and fertilizers. Pesticides are rarely used on crops in the county, with only 6% of the households in Zorzor and less than 1% in Foya Districts saying that they used it on their crops.
2.6 Water and sanitation

2.6.1 Water sources
The households’ interviews provided important findings on access to drinking water in the county. Boreholes with pump, unprotected well, stream and ponds are the main sources of drinking water. In Salayea District, a high percentage 93% of the sampled households reported that they obtain drinking water from borehole with pump. Likewise households in Kolahun and Voinjama Districts report fetching water from boreholes with pumps (88% and nearly 75% of the households respectively for the two districts). The percentage of households drawing water for drinking from pumps is lower in Foya and Zorzor Districts, at 31% and 52% respectively.

Unprotected water from wells is used in more (31%) households in Foya District. On the other hand, only 2% in Kolahun, 4% in Salayea, 12% in Voinjama and 16% in Zorzor District obtain drinking water from unprotected wells. Rivers and ponds are commonly used as sources of drinking water in Foya and Zorzor Districts (36 and 32% respectively in the two districts). In Kolahun, Salayea and Voinjama Districts, stream and ponds as sources of drinking water account for 10%, 3% and 14% respectively.

2.6.2 Toilet facilities
Access and use of toilet facilities is limited in the county. An overwhelming proportion, 97% and 90% of the households in Salayea and Zorzor Districts respectively relieve themselves in the nearby bushes for toiletry. Another 80% of the households in Foya, 66% in Voinjama and 60% in Kolahun also go to bushes toiletry. Latrines are only used by minority of the households (27% of the households in Kolahun, 11% in Voinjama and 5% in Foya Districts). Use of latrines is not mentioned at all in Salayea and Zorzor Districts. Latrines mentioned are mainly the improved type (VIP latrines) constructed by NGOs.

2.7 Household income

2.7.1 Income activities
Households report deriving their income from diversified/multiple activities, mainly business, sale of crops, wage labour and skilled labour. Three main income activities reported in the county are: sales of crops; petty trade and casual wage labour.

The importance attached to these activities as households’ income source varies depending on the district. While sale of crops (42%), casual labour (17%), sale of palm oil (11%), fishing (5%), salaried/skilled labour (11%) and petty trade (4%) are the main income activities in Salayea district, casual labour is significantly more important in Zorzor with about 37% of households mentioning it a main source of their income. Other important income sources in Zorzor include sale of crops (17%), petty trade (8%). Sale of palm oil (11%) and salaried employment/skilled labour (10%) also make significant contribution to the income of households in Zorzor District.

Households in the districts of Voinjama, Foya and Kolahun have similar activities for generation of income. The most important income activity in these districts, crop sales represents is reported by 29% of households in Kolahun, 27% of households in Foya and 25% of households in Voinjama District. Proportion of households involved in petty trade is also 16%, 15% and 12% in the Kolahun, Foya and Voinjama Districts respectively. Casual labour is also an important income source for 30% of households in Voinjama, 33% in Foya and 18% in Kolahun Districts respectively. The proportion of households’ dependent skilled varies 10-20% in the three districts. Sale of bush meat (5%) and some other less importance activities like borrowing and begging also act as in income sources for some households in these districts.

At least 30% of the households in the county do not have a second source of income. Further more some 1-2% of the households in the county do not undertake any income activity. Only about 30% report a third or fourth income
activity. In Foya District less than 10% report a third income activity. Only a small proportion, about 5-10% households in Kolahun and Voinjama Districts reported that they have a fourth activity for income generation.

2.8 Household Expenditures

Analysis of household expenditure has been done district level. On overall, greater proportion of the household expenditure is on food items. The proportion of expenditure on food is highest (61%) in Foya District. Proportion of expenditure on food was equally high in other districts at 59%, 58%, 55% and 52% for households in Kolahun, Zorzor, Voinjama, and Salayea Districts respectively. Other commodities or services expended on by households include clothing, education, medical expenses, transportation, debt payment, and social expenses.

2.8.1 Household expenditure Salayea District

As shown on the chart, the proportion of household expenditure on food items is 52% in Salayea District, followed by medical expenses (11%), clothing (11%), transportation cost (8%), education-school fees and materials (7%), social activities (3%), and others at 6%. Compared to markets in other districts, bulgur wheat was found to be more readily available. Bulgur wheat is only sourced as a food aid commodity. Also in comparison with other districts, Salayea district has the highest proportion of expenditure on medical services. This could be explained by lack of medical facilities within the district and that alternative medical services (mainly traditional healers and drug stores as reported by 75% of the households) are relatively more expensive. On the other hand, districts with available health facilities do access medical services free of charge as they are mainly provided for by NGOs.

Cereals (rice and bulgur wheat) account for 22% of expenditure on food, oil 11%, fish 5% and other foods like fruits and vegetables account for 15%.

2.8.2 Household expenditure Voinjama District

As in the case of Salayea, expenditure on food account for more than one-half (55%) of overall household expenditure in Voinjama District. Cereals (mainly rice, 19% and bulgur wheat 9%) account for 28% of expenditure on food. Purchase of cooking oil accounts for 9%, fish 6%, and other food items such as bush meat, vegetables, pulses etc account for 11% of the expenditure on food. Bulgur wheat was found to be also readily available in Voinjama than most districts. The finding indicates that sale of WFP commodities such as bulgur wheat is therefore on-going especially in Voinjama District. This commodity is reportedly sourced from camps in neighbouring Guinea as well as from IDPs camps within Liberia.

On the overall household expenditure in the district, transportation accounts for 8% while clothing is reported at 21% (the highest in comparison to other districts). Most of the commodities are purchased from markets in neighbouring Guinea. Frequent movements across the borders for commodities involve increased costs of transportation. It is worth pointing out that “Voinjama City” is
the leading route to neighbouring Guinea as well as the main commercial town in Lofa County.

### 2.8.3 Household expenditure Foya District

About 61% of the household expenditure goes to food in Foya District. As in the case of other districts, cereals (rice) is the single most major food expenditure accounting for 30%, followed by oil 15%, fish 3% while others food items account 7% of expenditures on food. The households in this district did not mention expenditure for bulgur wheat.

Expenditure on education is also significant at 13%, followed by clothing 8%, medical 5%, transportation, 3%, social activities 2% and other non-food items e.g. beer, cigarettes etc. account for 8% of overall household expenditure. Compared to other districts, Foya has the highest proportion of expenditure on education and the lowest proportion of expenditure on clothing.

### 2.8.4 Household expenditure Kolahun District

Almost similar patterns of the expenditure are observed in Kolahun District with food as the leading (59%) item of household expenditure. This is followed by expenditure on clothing at 15%, education (school fees and materials) 6%, medical 5% and transportation cost at 3%. The proportion of expenditure on social activities is only 3% while other expenses account for 7% of overall household expenditure, a similar finding to what is observed in Salayea and Foya Districts.

### 2.8.5 Household expenditure Zorzor District

Of the total food expenses, rice account for 22% while purchase of bulgur wheat is only accounting for 2%. Other food expenses include oil 11%, fish 4%, while other food commodities such as vegetables, fruits, milk and sweets account for 20%.

As in the case of other districts, food expenditure accounts for the highest (58%) of household expenses in the district. In addition, cereals (rice 20% and bulgur wheat 12%) are the leading food items purchased by households at 32%. It apparent that some food aid beneficiaries sell part of their rations to meet other food needs.
Other major household expenditures in the district include clothing, 15%, medical and transportation expenditure are both reported at 6%, education 2% and other social activities account for 5% of total household expenditures.

### 2.8.6 Magnitude of monthly household expenditure

Voinjama and Zorzor Districts have the highest amount of expenditure in a month, slightly above USD $75. On the other hand, Kolahun District has the lowest average monthly expenditure at only USD $40 per month.

The average monthly expenditure in Salaya District is about USD $60, while Foya District has about USD $45.

There were wide variations in monthly expenditures across districts as depicted on the chart.

### 2.9 Frequency of food consumptions

#### Rice consumption frequency

Rice is the staple food commodity in Lofa County in particular as well as Liberians in general. The county has been one of the leading producers of rice in Liberia. However, consecutive wars have greatly hampered agricultural cultivation in the County. The population therefore depends mainly on purchases from the markets. Nevertheless, rice still remains the most frequently consumed commodity. About 92% of households in Foya District report eating rice on a daily basis. The communities report on-going harvest of swamp rice in Foya District at the time in assessment. Some households that returned earlier had used the opportunity to cultivate small rice plots.

Respondents also reveal that people travel from Kolahun District to purchase the locally produced rice in Foya District.

Other districts also reported rice as the most frequently consumed food item. About 65% of households in Zorzor, 60% in Voinjama, 38% in Kolahun and 33% in Salaye Districts report the intake of rice on daily basis.

However, some households reported not to have eaten rice in the week prior to the assessment. As shown on the chart, the lowest proportion of households that never consumed rice in the week prior to the assessment is Voinjama District at only 5% while the Kolahun and Salaye Districts reported the highest proportion on non intake of rice in the week prior to the assessment at 27% and 25% respectively. Slightly more than 15% of the households in Voinjama District rarely (1 to 2 days) consumed rice in the week prior to the assessment. Similarities are reported in other districts like Kolahun, Zorzor and Salaye Districts where only 5%, 7% and 15% respectively reported rare (1 or 2 times in a week) rice consumption.
**Frequency of Cassava consumption**

Typically, people in Lofa County rarely consume cassava. The commodity is lowly regarded (compared to rice) and consumed only during the “hunger-gaps”, June to August (when there is a food shortfall and communities cannot access their staple).

On average nearly 40% of the households in the county report non-consumption of cassava in the week prior to the assessment. Additionally, about 25% of the households had rarely consumed cassava and slightly more than 30% had eaten it only sometimes (3 to 4 days). A paltry 5% had daily intake of cassava in the week prior to the survey in Kolahun, Voinjama and Zorzor Districts.

**Bulgur wheat consumption frequency**

Variations in frequency of consumption of bulgur wheat are witnessed across the districts as shown on the chart below. An overwhelming proportion 98% and 80% of the households in Foya and Kolahun Districts respectively never ate bulgur wheat in the previous week, a finding that is corroborated with results of the households’ expenditures in the two districts that revealed no expenditure on the food commodity.

However, only 10%, 20% and 30% of the households report that they have never consumed bulgur wheat in Zorzor, Voinjama and Salayea Districts. The proportion of households that have a daily intake of bulgur wheat is high in Zorzor, Salayea and Voinjama Districts (70%, 38% and 36% respectively for the three districts). Bulgur wheat consumption is reportedly more frequent in areas located closer Internally Displaced Persons (IDPs) camps in Bong County where monthly food distributions take place. Moreover, some of the IDP beneficiaries return to their districts of origin with food rations.

**Bread**

The intake of bread is minimal in the county with less than a quarter of the households reporting at least some consumption of the commodity in the week prior to the survey. Foya has the lowest intake of bread with only less than 2% indicating consumption in the previous week. Bread in not a staple food in Liberia. It is mainly regarded as a commodity consumed by town populations. A household would rather buy a staple cereal than bread.

**Pulses (beans) consumption frequency**

Majority of the households in the county rarely or never eat pulses. As presented in the chart, large proportion (65% and 48%) of households in Foya and Kolahun Districts respectively had never consumed pulses in the week before the assessment. Those who have never eaten pulses in the week before the assessment is also reported at about 36% in Voinjama, 24% in Salayea and 30% in Zorzor Districts. Another significant
proportion (about 40%) had rarely consumed pulses in Voinjama. Results indicate that less than 10% of households had daily intake of pulses in all districts in Lofa County. In Foya District, no household reported intake of pulses on a daily basis or often. Households only report rare or occasional (sometimes) intake of pulses in Foya District.

Vegetable oil
Unlike in other counties where intake of vegetable oil or maize meal has been fairly common, 76% of the households in Lofa indicate that they have never eaten vegetable oil. About 12% of the households had eaten vegetable oil daily and 7% rarely ate it in the week preceding the assessment. The rest had eaten vegetable oil occasionally in the week. 100% of households in Foya report no intake of vegetable oil. Kolahun and Salayea report the highest number of households (25 to 35%) that had eaten vegetable oil in the week.

Maize meal
The consumption of maize meal is also generally uncommon. 80% of the households report that they had never eaten maize meal. Although 8% report intake of maize meal sometimes in the week, and another 3% eating the commodity daily, but 8% report rare intake of maize meal. Most of the households that never ate maize meal (85 to 95%) are situated in Foya, Zorzor and Salayea Districts. 25 to 30% of the households in Voinjama and Kolahun Districts had consumed maize meal at least once in the week. Both vegetable oil and maize meal are commodities in the WFP rations.

Poultry
Poultry is not a common dish in most households. A significant number of the households, 94% hardly ever eat poultry in a week. Moreover, 4% report rare intake of poultry and less than 2% occasionally consume chicken.

Eggs
The households eat eggs exceptionally. 96% of the households report never eating eggs in the week before the survey. Less than 2% report rare intake of eggs while a few sometimes eat them. Egg consumption is most uncommon in Foya District where 99% of the households never ate eggs.

Milk
The intake of milk is also infrequent. On the average 94% of households had never consumed milk and Slightly less than 4% had rarely had it in a week. Only 1% report daily intake of milk, while less than 2% sometimes consume it in the week. As compared to the other districts, households in Voinjama (4-6%) report intake of milk from time to time. However, in Foya, Kolahun, Zorzor and Salayea Districts, only an insignificant proportion of households (around 1%) report occasional milk intake during the week preceding the survey.

Sugar
On average 73% of households from the sample had not consumed sugar at all. In addition, 19% of the households rarely consume sugar while 5% report eating sugar once in a while. Only around 3% of the households report regular intake of sugar.

Frequency of Palm oil consumption
Households in Lofa County produce palm oil both for consumption and sale. It is the most frequently eaten food in the districts. On average 62% of the households said they had consumed palm oil everyday in the week. However, 35% of households had never consumed palm oil in Salayea, about 40% of households never consumed palm oil in Kolahun, the only two districts with high proportions of households that never ate palm oil in the week before the survey. Zorzor District has the highest proportion (80%) of households that had daily intake of palm oil followed by Foya (73%), Voinjama (60%), Salayea (55%) and Kolahun District (42%). Only a small proportion of
households (3%) rarely (1–2 days) consumed palm oil in the week preceding the survey.

**Frequency of meat consumption**

Bush meat (meats sourced from non-typical domestic animals) is the most popular meat product in Lofa County. To get the meat, households have to buy in markets, hunt or trap wild animals in forests. As shown on the chart, only less than a half of the surveyed households had consumed meat at least one or more times during the week before the assessment. The least percentage of households that had eaten meat were in Foya followed by Kolahun. Only less than 3% of the households in Foya ate meat five or more times in a week. The rest (15%) of the households in Foya had eaten meat only 1–4 times in a week. Similarly in Kolahun only less than 5% ate meat 5 or more times in the week before the survey. On the other hand, about 23% of the households in Zorzor had a daily intake of meat.

2.9.7 Frequency of Fish consumption

The St. Paul River, Lofa River and other rivers in the county are the main source of fish for the population in the county. However, some fish is also bought from the neighbouring markets in Sierra Leone and Guinea. Fishing is also an income activity for some households in the districts. Fish is the most important source of protein for the people in Lofa. More than 75% of the households in the Lofa districts consumed fish at least twice in the 7 days preceding the assessment. Kolahun reported the highest percentage (about 50%) of households that never consumed fish in the week before the assessment while Foya recorded the highest proportion (43%) of households that consumed fish on daily basis, followed by Zorzor (26%), Salayea (18%) and Voinjama (17%). The chart also shows that some (12%) households rarely ate fish while some others (20%) consumed fish 3 to 4 times in the week before the assessment.

**Vegetables consumption frequency**

Many households in the districts that are involved in agriculture are cultivating vegetables for their own consumption as well as for occasional sales. As illustrated in the chart, majority of the households ate vegetables in the week prior to the assessment. A small group of households said they did not eat vegetables at all. Variations are witnessed on the proportions that did not eat vegetables in the week before the survey with Kolahun District recording the highest proportion (16%)
while Salayea and Zorzor has the lowest proportion (both at 8%). Zorzor District noted the highest percentage (35%) of households that had daily intake of vegetables while Foya and Voinjama Districts recorded the lowest levels at less than 5%. The survey indicates that vegetables are mainly eaten 3 – 4 times in a week (shown on the chart).

2.10 Livelihood, Shocks and coping strategies

Livelihood strategies are defined as the ways households use and combine their assets in order to achieve a desired outcome. These strategies may include combinations of natural assets (e.g. land, livestock, water), physical assets (housing, tools, equipment, radio, bicycle), social assets (nuclear and extended family ties), financial assets (savings, income, credit), and human assets (e.g. levels of education, nutritional status, households size and composition, maternal and child health status etc.). The goal of most livelihood strategies is to improve household welfare in some way—e.g. in achieving enough to eat; stabilizing the fluctuations of income; ensuring that children are better able to go to school; being able to afford or access health services; or better managing of natural resources. At the same time, however, households also look to their livelihood strategies as a way to reduce risk and vulnerability to external and internal factors (i.e., economic crises, death of household members etc.). Therefore, households are likely to have a diverse set of livelihood strategies that, simultaneously, seek to improve welfare and reduce risk and vulnerability. The success of these types of livelihood strategies is based on initial asset endowments. Livelihood assets are both material (e.g. land, income, savings, and tools) and non-material (e.g. skills, knowledge, social networks, labour, and health).

In times of stress shocks, food insecure and vulnerable households will adopt strategies that hopefully allow them to mitigate the effects of these shocks on their livelihood and food security. Coping strategies may produce short-term relief but may have longer term negative effects. Often, they are categorised as being sustainable (s) or non-sustainable (ns) – meaning that households are negatively affecting their tangible and non-tangible assets. The types of assets affected include natural, physical, social, financial and human.

2.10.1 Shocks in the 12 months prior to survey

Households were asked about shocks that had had negative effects on them over the last 12 months. Sixty percent of the households indicate one shock or another in the 12 months preceding the survey. The three most prevalent shocks in the county were: sudden price fluctuation, insecurity/violence, and unusual level of human diseases. About 28%, 19% and 5% of the households were affected sudden price fluctuation, insecurity and high human diseases respectively. Other shocks noted in the county include high/violent winds/storm, irregular rains, high level of crop pest and disease, restricted access to market etc.

At district level, proportion of households affected by sudden price fluctuations was 53% in Zorzor, 35% in Salayea, 32% in Voinjama, 11% in Foya and lowest in Kolahun District at a meager 8%. Insecurity as a shock was commonly mentioned in Foya and Voinjama Districts (49 and 22% respectively) but lowest in Kolahun and Salayea Districts (7 and 5% respectively). Foya was still the district most affected by unusually high levels of human diseases.

Some households indicated that they have been affected by more than one shock within the previous one year. These households still mentioned sudden price fluctuations and insecurity/violence as the second ranked shock that affected them in the year preceding the assessment, followed by restricted access to markets. For households that experienced three shocks in the
preceding year, high winds/storm and irregular rains featured in addition to the previously mentioned shocks.

Other negative influences weighed heavily on the surveyed households. At least 60% of the households had one or more problems besides the observed shocks. These problems include (i) death of a working member or another household member affecting 27% of the households, (ii) serious illness or accident of working member or another household member falling 20% of respondent households, (iii) loss of employment for a household member affecting 6% of the households, and (iv) theft and/or violence affecting 10% of the households. Reduction of wage of a household member was also mentioned by some few households.

Of the households affected in the districts, slightly more (31% and 28%) in Foya and Voinjama respectively experienced death of a working member or another household member amongst the districts compared to 19% affected by the same in Kolahun.

While Foya District recorded the highest proportion (29%) of the households that had witnessed serious illness by a member of the household in the preceding one year, Salayea recorded the lowest (12%) proportion of seriously sick member.

Other problems mentioned include loss of employment by a household member that affected 10% of the households in Zorzor, 8% in Salayea, 5% in Foya, 7% in Voinjama and less than 1% in Kolahun District. Theft and/or violence also affected people in all the districts though more common in Zorzor (10%) and Foya (7%).

2.10.2 Coping Strategies

Households use various strategies to manage the problems and shocks. However, majority (40-40%) of the households reported only one coping strategy, 40 –50% had both primary and secondary strategies while only 15 – 20% had a third option of responding to shocks. Some 5-10% of the respondents indicate no definite strategy for responding to shocks.

Main strategies for responding to shocks and problems include: reducing the quality and/or quantity of diets in order to minimize the effects of the sudden price fluctuation, skipping a day without eating, and as well decreasing expenditures on non essential items. In most cases, entire household was forced to move to new locations to reduce the impact of insecurity or violence.

Loans from family or friends were also a common to strategy to get sick members of a household treated. Other strategies included sale of income-generating equipment/assets, and/or social support by community members.

Other ways of coping mainly mentioned by families that had experienced multiple shocks include: purchase of food on credit or providing additional wage labour, and increased collection and sale of natural resources. It is notable that some of these strategies have far reaching negative effects on environment and community.

PART III. CHILD NUTRITIONAL STATUS

Of households visited during the survey, 658 had children aged 6-59 months, thus qualifying for anthropometric assessment. The survey team assessed nine hundred and sixty one (961) children aged 6-59 months. However, 11 children were dropped at analysis stage mainly due to incomplete records. Of the 950 children analyzed, 51.6% were boys giving an overall ratio of boys to girls at 1.06, a finding within the recommended range of 0.9 – 1.1. There was no sex bias in the selection of children (see graph on distribution of children). The distribution of the surveyed children was normal for children aged 6-59 months in developing countries.
3.1 Acute Malnutrition

Global Acute Malnutrition (Weight/Height $<-2$ z-scores and/or oedema) was relatively low at 2.6% (95% CI 1.7 – 3.9) while severe wasting was 0.4% (95% CI 0.1–2.1). Only one oedema case was noted. While the low acute malnutrition rates may indicate relatively good access to food by most households, it may not in itself signal food security. It is common knowledge that at least a third of the Liberian population depend on food assistance from international community, with very minimal crop production on the ground. Thus, as revealed in previous sections, food aid commodities were consumed in significant proportions of the households.

As presented in the table below, acute malnutrition was significantly higher amongst the younger age group (6-29 months) than among children aged 30-59 months. The age bracket 6-29 months is normally associated with introduction of complementary and weaning foods. It is at this age when children are more prone to common childhood diseases mainly occasioned by poor feeding practices (unhygienic preparation of foods, use of unclean water, introduction to family foods which are in most cases inappropriate for the digestive system of the young etc.). As indicated in previous findings, significant proportions of surveyed households in Lofa county fetch their water from unprotected sources. Water is hardly boiled or treated even for the younger children. Additionally, rice is the main food provided to younger children. It is in most cases prepared as a family dish which may not be appropriate for the younger children. Previous surveys conducted by WFP in Liberia (Bomi, Nimba, and Montserrado etc), all reveal similarly higher levels of acute malnutrition among the younger age bracket.

Prevalence of Acute Malnutrition based on weight-for-height z-scores and/or Oedema Lofa County, February 2005

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Prevalence of Acute Malnutrition (&lt;-2 z-score and/or oedema)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-59 months</td>
<td>No. = 25, % = 2.6, 95% CI (1.7 – 3.9)</td>
</tr>
<tr>
<td>6-29 months</td>
<td>No. = 22, % = 4.4, 95% CI (2.8 – 6.7)</td>
</tr>
<tr>
<td>30-59 months</td>
<td>No. = 3, % = 0.7, 95% CI (0.2 – 2.1)</td>
</tr>
</tbody>
</table>

Prevalence by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Severe Acute Malnutrition (&lt;-3 z-score and/or oedema)</th>
<th>Global Acute Malnutrition (&lt;-2 z-score and/or oedema)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>No. = 2, % = 0.4, 95% CI (0.1 – 1.6)</td>
<td>No. = 13, % = 2.7, 95% CI (1.5-4.6)</td>
</tr>
<tr>
<td>Female</td>
<td>No. = 2, % = 0.4, 95% CI (0.1 – 1.6)</td>
<td>No. = 12, % = 2.6, 95% CI (1.4 -4.6)</td>
</tr>
</tbody>
</table>

As presented in the table above, there was no sex variation in the prevalence of acute malnutrition. Almost as many boys as girls were acutely malnourished.

As reflected on the chart (acute malnutrition by districts in Lofa), acute malnutrition was slightly higher in Voinjama and Zorzor (over 4%) as compared to other districts (<2%) of Lofa County. This difference could not be fully explained as all the districts appear to face the same food security situation.

3.2 Stunting/Chronic Malnutrition

Nearly a quarter (23.6%) of the children surveyed were stunted (too short for their age) with over one-tenth (7.8%) of the children severely stunted (see table below). This finding was significantly lower than results from previous nutrition surveys in Liberia that have consistently shown higher levels of stunting with the national average reported at 39% (Liberia National Nutrition Survey 2000). The Bomi and Cape Mount Nutrition survey had also indicated high levels of
stunting (44% with a 95% CI 40.1-48). Lofa County used to be the food basket for Liberia. However, since 2000, Lofa has faced repeated and protracted episodes of insecurity that disrupted any meaningful agricultural production. Most the population sought refuge in camps both inside and outside Liberia. Both refugee and IDP camps have all along benefited from humanitarian food assistance thus arresting a great deal of hunger. It is therefore not surprising that combination of humanitarian assistance from both sides of the border has led to overall lowered level of stunting when compared to other counties. Children aged 30-59 months showed significantly higher levels of stunting than younger children. As since stunting is cumulative, it is reasonable to believe that nutritional status was relatively better in Lofa even before the onset of the recent wars. However, the rates are still high relative to international standards. Chronic malnutrition portrays longer-term welfare problems as could be indicted by poor feeding practices, consumption of unsafe water, unsanitary environments, common childhood illnesses etc. Chronic malnutrition is highly correlated to levels of poverty in country. In sub-Saharan Africa stunting averages around 30% which correlates to poverty level observed. Liberia has high poverty levels, unsanitary conditions (low usage of toilets and poor waste disposal), high illiteracy levels etc. Correcting chronic malnutrition requires concerted efforts from all stakeholders to correct the devastating problems. It is well documented in literature that stunted children are would never attain their optimal learning capacities.

Prevalence of Chronic Malnutrition/Stunting based on Height-for-Age z-scores Lofa County, February 2005

<table>
<thead>
<tr>
<th></th>
<th>6-59 months n = 950</th>
<th>6-29 months n = 503</th>
<th>30-59 months n=447</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalence of Stunting (&lt;-2 z-scores HFA)</td>
<td>No. = 224</td>
<td>No. = 92</td>
<td>No. = 132</td>
</tr>
<tr>
<td>%</td>
<td>23.6 95% CI (20.9-26.4)</td>
<td>18.3 95% CI (15.2-22.0)</td>
<td>29.5 95% CI (25.4-34.0)</td>
</tr>
<tr>
<td>Prevalence of Severe Stunting (&lt;-3 z-scores HFA)</td>
<td>No. = 74</td>
<td>No. = 20</td>
<td>No. = 54</td>
</tr>
<tr>
<td>%</td>
<td>7.8 95% CI (6.2 – 9.7)</td>
<td>4.0 95% CI (2.5 – 6.2)</td>
<td>12.1 95% CI (9.3 – 15.6)</td>
</tr>
</tbody>
</table>

Except for Salayea District that showed stunting levels of less than 15%, the rest of the districts had stunting levels greater than 20%. No statistically significant variations was witnessed on the levels of stunting across the districts of Lofa with except of Foya (31.6%) that showed significantly higher level when compared to Salayea (13.7%). In all the districts, stunting level was less than the national average of 39%.

3.3 Under-Weight or Weight for Age

About one-tenth of the surveyed children were underweight (a combination of both wasting and stunting) with less than 1.5% of the children severely underweight. This was remarkably lower than findings of previous surveys in Liberia as well as national figure of about 27% (DHS 2000).

The survey indicates no significant variations in the levels of underweight across the districts.

Prevalence of Underweight based on weight-for-Age z-scores Lofa County, February 2005

<table>
<thead>
<tr>
<th></th>
<th>6-59 months n = 950</th>
<th>6-29 months n = 503</th>
<th>30-59 months n=447</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalence of Underweight (&lt;-2 z-scores WFH and/or oedema)</td>
<td>No. = 101</td>
<td>No. = 56</td>
<td>No. = 45</td>
</tr>
<tr>
<td>%</td>
<td>10.6 95% CI (8.8-12.8)</td>
<td>11.1 95% CI (8.6– 14.3)</td>
<td>10.1 95% CI (7.5–13.3)</td>
</tr>
<tr>
<td>Prevalence of severe underweight (&lt;-3 z-scores WFH and/or oedema)</td>
<td>No. = 12</td>
<td>No. = 11</td>
<td>No. = 2</td>
</tr>
<tr>
<td>%</td>
<td>1.3 95% CI (0.7-2.3)</td>
<td>2.2 95% CI (1.2 –4.0)</td>
<td>0.4 95% CI (0.1 –1.3)</td>
</tr>
</tbody>
</table>
3.4 Morbidity

About 67% of the surveyed children had developed some symptom of sicknesses in the two weeks prior to the survey. As presented in the table below, the commonest symptom of sickness experienced by children is fever followed by malaria, acute respiratory infections and diarrhoea in that order. The survey could not verify the reported malaria cases. However, the high incidences of fever could signal diseases like malaria, ARI etc. Only three children were suspected by the respondents to have had measles in the two weeks preceding the survey. As for the adult mothers, fever was again the commonest sign of sickness (49%). Diarrhoea was also common with over a quarter of the mothers reporting having had diarrhoea in the two weeks prior to the survey. The result underscores the glaring statistics of worrisome disease burden in Liberia. According to MOH monthly epidemiological statistics (1993-2003), at least 3.5% of the outpatient morbidity consultations result in hospital admission with a current inpatient death rate of 67 per 1000 admissions. The statistics showed that on average, there was 1.5 million morbidity cases seen each year at health facilities in Liberia. This makes Liberia to be a generally “sickling population”. Worrying more is reportedly increasing and presently high prevalence of HIV/AIDS indicated all over Liberia. The current national HIV/AIDS prevalence is estimated at 8-12% (NACP 2004). This could have a heavy toll on the morbidity trend thereby worsening morbidity caseload in Liberia.

<table>
<thead>
<tr>
<th>Symptoms of reported illness in the two weeks prior to the survey, Lofa County, February 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>Fever</td>
</tr>
<tr>
<td>Malaria</td>
</tr>
<tr>
<td>ARI</td>
</tr>
<tr>
<td>Diarrhoea</td>
</tr>
<tr>
<td>Measles</td>
</tr>
<tr>
<td>Others (vomiting, stomach pains etc)</td>
</tr>
</tbody>
</table>

| MOTHERS |
|------------------|-----|--------------|
| Diarrhoea | 205 | 28.2% |
| Fever | 363 | 49.2% |
| Both Diarrhoea and Fever | 100 | 13.4% |

3.5 Measles Immunization and Vitamin A supplementation Coverage

Immunization of children is important for boosting their immune system. Fully immunized children are less susceptible to common childhood infections and are better equipped to fight of the illnesses than children who are not immunized. Measles vaccine is normally administered to children at the age of nine months or when they are suspected to have suffered episodes of infections that might have altered their immunity reserve levels. Overall, 71% of the eligible children (9-59 months) had received the measles vaccine. The survey reveals that majority (87%) received the measles jab in the six months prior to the survey. However, less that 40% of the reported measles vaccination was verified by card. Foya District had the lowest coverage of measles vaccination at just about 50% while Zorzor and Salayea had the highest coverage at over 80%. The later districts became accessible earlier than the former. Foya also has extremely poor road connection especially during rains when compared to Zorzor and Salayea Districts.

The coverage of Vitamin A supplementation in the 6 months prior to the survey is reported at 90%. NIDs carried out in 2004 was accompanied by administration of Vitamin A supplements. This explains the relatively higher Vitamin A supplementation coverage. No major variations in Vitamin A supplementation coverage were recorded across the districts.

3.6 Mortality

Retrospective mortality data was collected utilizing ACF’s methodology as outlined in their book, Assessment and Treatment of Malnutrition in
The recall period for collecting the data was about 184 days, i.e., July 26, 2004 through the time of the survey. A total of 902 households were visited in randomly selected 30 clusters. The total number of household members was 5,141 with the under-five year population of 1,260.

The crude mortality rate (CMR) was 1.35 deaths per 10,000 people per day. The under 5 years of age mortality rate (U5MR) was 2.41 deaths per 10,000 under five population per day. The CMR is less than the threshold1 of 2 deaths per 10,000 population per day that characterizes emergency. However, the CMR was higher than the average in Sub-Saharan Africa of 0.9/10,000 per day. Previous results had indicated a generally “sickling population”. Life expectancy in Liberia is estimated at only 47.7 years (DHS 2000) while WHO 1998 State of the World Report indicated that 80% of Liberians die before their 50th birthday. Most deaths among adults were attributed to unknown causes (45%), a signal that the uptake diagnostic health services is very low, followed by Diarrhoea (17%) and fever (11%) and accidents. Acute respiratory infections accounted for about 6% of the deaths among people aged more than 5 years.

The U5MR was less than the threshold of 2.3 deaths per 10,000 population per day that characterizes emergency in most Sub-Saharan Africa settings. However, the death rate among under-fives was still very high. This collaborates with the high morbidity levels among the under-fives reported in previous sections of this report. Diarrhoea (31%) fever (17%) and ARI (15%) were the main causes of death among under-fives.

To interpret crude and under 5 mortality, thresholds have been established. The emergency threshold for CMR is 0.9/10,000 per day for Sub-Saharan Africa; greater than 0.9/10,000 per day indicates an emergency2. For under-five year olds, the emergency threshold for mortality rates is 2.3 per 10,000 per day in Sub-Saharan Africa; greater than 2.3/10,000 per day indicates an emergency3.

3.6.1 Access to health and child care practices by mothers during pregnancy and lactation

Information on mother and child care practices was elicited from 750 families randomly selected in 30 clusters.

Results from the interviews indicate that women start giving birth at a very young age averaging only 15 years with a range of 13 - 36 years. The finding signals sexual debut among women at a very tender age. This collaborates with the high levels of illiteracy (over 70%) amongst the population with women being the most affected. Illiterate women are more likely to have been married at younger ages thus starting their birth cycle earlier that the literate ones who would normally take many years in school before they can settle for marriage. Illiterate women are also less likely to use birth control methods than the literate ones. On average, mothers report having 5.7 children. This indicates a generally high fertility rate amongst the Lofa population. Given the high illiteracy ratio, the results are not surprising. Date of first birth and level of

1 The threshold chosen for the interpretation of the mortality rate (Moren, 1995) as cited by ACF, assessment and treatment of malnutrition in emergency situations
Total population: alert cut-off = 1/10,000 people/day, emergency: 2/10,000 people/day
Children <5 years = alert cut-off = 2/10,000 children/day, emergency = 4/10,000 people/day

education among women is highly correlated to number of children a woman bears in her lifetime. Thus, lower literacy levels would normally be associated with high numbers of births.

Of the visited households, 58.3% of the women were either pregnant or breastfeeding at the time of the survey, with some 1% reporting both pregnancy and breastfeeding at the same time. This underscores the high fertility rates in the community. Qualitative findings also indicate poor child spacing with a number of women reporting two births in less than two years.

A paltry 26% of mothers received an injection against tetanus, a precautionary measure against tetanus infection at birth, during their pregnancy. Vitamin A supplementation for mothers after birth was no better either with only a quarter reporting having received the supplement. Considering the high prevalence of Vitamin A deficiencies, the supplementation coverage was extremely low.

Only 15.6% of the pregnant/lactating mothers slept under mosquito net the night prior to the survey. Malaria is one of the leading causes of death among under-fives and even adults in Liberia. The disease also has far reaching consequences of the life on unborn baby if the pregnant mother develops malaria. There are increased chances of the mother becoming anaemic, which could complicate delivery of the child.

Only 37% of the respondents use detergents/disinfectants to wash their hands after toiletry. However, majority would wash their hands with only water, an observation that could signal either poor knowledge on the hygiene issues or stinging poverty that makes it unaffordable for mothers to use detergents. As the primary caretakers of the young children, there is high risk of transmitting germs from unclean hands to the child if mothers do not disinfect their hands after toiletry or after any other contact with unclean environment. Furthermore, unclean hands would normally lead to rapid spread of infectious diseases such diarrhoeal infections.

### 3.7 Infant feeding practices

Infant feeding practices are determinants of the health and nutritional status of a child. WHO recommends that an infant should be exclusively breast feed for the first 4 to 6 months of age and complementary food is introduced progressively thereafter.

On overall, 83% of children aged below two years were breastfed up to 12 months. The proportion drops further with only 17% breastfeeding beyond their first birthday. While majority (95.7%) of the children aged 6-12 months were still breastfeeding, only a quarter of the children aged 13-24 months continued to breastfeed. WHO recommends breastfeeding up to the age of two years. Findings from

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<table>
<thead>
<tr>
<th>Care for women during pregnancy and lactation</th>
<th>Outcome</th>
<th>No. &amp; proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seek ante-natal care during pregnancy</td>
<td>Yes</td>
<td>259 (87.2%)</td>
</tr>
<tr>
<td></td>
<td>Trained</td>
<td>216 (83.4%)</td>
</tr>
<tr>
<td>Ever received TT injection during pregnancy</td>
<td>Yes</td>
<td>40 (26.1%)</td>
</tr>
<tr>
<td>Vitamin A supplementation after delivery</td>
<td>Yes</td>
<td>180 (24.6%)</td>
</tr>
<tr>
<td>Slept under mosquito net with child</td>
<td>Yes</td>
<td>112 (15.6%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Outcome</th>
<th>No. &amp; proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you wash hand after visiting toilet?</td>
<td>No</td>
<td>55 (7.4%)</td>
</tr>
<tr>
<td></td>
<td>Use water only</td>
<td>412 (55.8%)</td>
</tr>
<tr>
<td></td>
<td>Using soap and water</td>
<td>225 (36.8%)</td>
</tr>
</tbody>
</table>
other surveys conducted in Liberia reveal an almost universal breastfeeding by mothers in the few months of life of a child. However, continued breastfeeding beyond one year is remarkably low. Qualitative findings indicate that by or immediately after the first birthday of most children, their mothers are in some cases pregnant leading to abrupt stoppage of breastfeeding especially among the teen-age mothers. The mean age of stopping breastfeeding was however, high at about 20 months but with a large variance. This indicates that while most children were only breastfed up to one year, there were few extreme cases where breastfeeding continued even beyond 24 months.

About 54% of the children were introduced to solid foods at the right age of 6-9 months. However, also significant was the number of children (about 30%) introduced to solid foods before the age of complementary feeding. UNICEF recommends complementary foods to be introduced at the ages 4-6 months. The average age of introducing solid foods in a child’s diet is 8 months while fluids are introduced much earlier (5 months), but with most children taking their fluids before two months.

Another indication of poor feeding practice is reflected in the frequency of feeding young children. A paltry (less than one-fifth) proportion of the children are fed three or more times in a day. Researches on infant feeding indicate that young children (less two years) should be feed 4-7 times. These children may not be able to take much at a time (small storage capacity), however frequent feeding would normally lead to adequate intake of required nutrients. Majority (83%) were fed only one or two times in day.

3.8 HIV/AIDS knowledge

Mothers were asked about their knowledge on HIV/AIDS pandemic. Respondents were expected to indicate their knowledge or lack of knowledge on the transmission, prevention, control and recognition of HIV/AIDS. About sixty percent (59.6%) of the interviewed mothers acknowledge that they have heard HIV/AIDS. Some forty percent have never heard of the disease. This reveals a considerably low awareness on the existence of the pandemic despite its high prevalence in Liberia (at 8-12%).

On transmission and prevention, knowledge varied depending on the mode. Of those who have heard about the disease, about two-thirds (66.5%) correctly acknowledge that the virus can be transmitted from mother to the child. However, some 13% said that such transmission is not possible while 20% admit that they do not know whether mother to child transmission of the virus is possible. Knowledge of mothers on the different stages of child development at which Mother To Child Transmission (MTCT) of the virus is possible does not vary. Over 60% of the mothers indicated that the virus can be transmitted to the child through breastfeeding.

Only 47% of the respondents indicate that it is possible for a healthy looking person to have the virus that causes AIDS. Majority (53%) either indicate that a healthy looking person can not have the virus or lack knowledge as to whether such a person may have the virus.

On control and prevention of the virus, only about 60% acknowledge that there are steps people can take to prevent themselves from contracting the virus. The remaining 40% indicate that either nothing can be done or simply that they do not know whether something can be done to prevent themselves from the virus. The revelations underscore the limited knowledge people have about the virus.

Knowledge on HIV/AIDS with regard to sexuality was not only poor but also response was not forthcoming with less than 40% responding to the questions. Sexuality is regarded sacred and not openly discussed in most African cultures. Populations are normally shy to discuss sexuality especially with strangers. Majority (65%) of the respondents, however, believe that one can protect herself/himself from the virus by having sex with only one uninfected and faithful partner. Conversely, only 47% believe that abstinence, if not already infected, can prevent one from infection. A significantly high (53%%) proportion of respondents either flatly reject that abstinence is important for prevention of HIV infection or are indifferent about it. This reveals that advocacy for abstinence as a control measure against the virus is unlikely to succeed in an environment when few believe in abstinence,
more so with the responses coming from women. In most African cultures, women readily control the sexual behaviours than male counterparts and are more likely to maintain virginity than males.

On the other hand, the usage of condoms is trusted by about 57% of the respondents as a preventive measure against infection by the virus, if properly and routinely used each time a person has sex. This is a good encouragement. It could signal that the population is more likely to accept use of condoms than other control measures.

Discrimination towards people living with HIV/AIDS, stigmatization coupled with inadequate knowledge on the HIV virus remains a major issue in Liberia, a revelation corroborated with findings from other surveys conducted in the country. Only 17% of the respondents would allow a healthy looking teacher who is infected with the virus to continue rendering his/her services to their children if they happen to know his/her status. An overwhelming majority (71%) would not allow him/her to continue teaching while a further 12% are indifferent as to their would be decision. The same treatment will be given to a healthy looking HIV infected shopkeeper whose goods will not be bought by a significant majority (86%) of the respondents. Only 14% would continue buying goods from such a shopkeeper. About one-quarter (24.6%) believe that sharing meals with HIV-infected persons can lead to transmission of the virus and would probably avoid sharing given the high discrimination in the society. These are worrying statistics of discrimination.

Fighting the virus would remain a major challenge in such extremely hostile environments.

Some 36.5% of the respondents wrongly believe that the virus that causes AIDS can be transmitted through mosquito bites and a further 20% do not know whether such transmission is possible. Some 20% of the respondents also indicate that witchcraft is associated with HIV/AIDS. However, at least two-thirds do not believe on witchcraft as a cause of HIV/AIDS.

3.9 Overall rating of knowledge on HIV/AIDS

On a scale of 0-9, overall knowledge on HIV/AIDS was rated based on correct responses on their knowledge on HIV/AIDS transmission and prevention. This was aimed at providing an overall picture of knowledge on the pandemic. Thus, respondents that correctly answered 8-9 questions relating to knowledge on the pandemic were rated as having satisfactory knowledge, 5-7 correct responses signified some good knowledge, 1-4 correct responses denoted poor knowledge will none of the correct responses meant complete lack of knowledge.

As presented on the graph, only 7% of the respondents had satisfactory knowledge on the pandemic. Some 25% of the respondents had minimal good knowledge, 21% had poor knowledge while a significant majority (46%), lacked the pre-requisite knowledge on HIV/AIDS transmission and control.

The findings above corroborates to initial findings by WFP and other agencies that indicated high levels of ignorance about the pandemic as well as stigmatization, and even discrimination. For example, “WFP Needs Assessment on HIV/AIDS in Liberia- March 2004” revealed glaring gaps in HIV/AIDS knowledge with limited protective steps to the infection despite the high sexual activities amongst the Liberian population. A WFP VAM assessment in Bong and Margibi Counties, May 2004 also indicated gaps in
knowledge as well high degree of social discrimination where over 40% indicated that an asymptomatic should not be allowed to teach.

**PART IV: HOUSEHOLD FOOD CONSUMPTION AND FOOD SECURITY TYPOLOGIES**

Based on food frequency and diversity during the week prior to the survey in 750 surveyed families, homogeneous groups of households were identified. The analysis took into account the frequency (0 to 7 days) of consumption of food items: rice, bulgur wheat/maize meal, bread, potatoes/eddoes, pulses, palm oil/vegetable oil, poultry meat, eggs, milk, vegetables, fruits and sweets/sugar.

4.1 Food consumption classification of households

The household food consumption classification is based on the consumption of food items belonging to the seven main food groups: cereals; legumes and oilseeds; tubers and roots; vegetables and fruits; animal products; oils and fats and sugar.

The criteria for qualifying into a food consumption grouping is as follows:

- **Very poor food consumption:** when the households hardly manage a daily access to the staple food or their diet is based for a large part on cereals only.
- **Poor food consumption:** when the household can access everyday at least cereals and frequently one or more additional foods belonging to other food groups.
- **Fairly good food consumption:** when the household can access everyday at least three food groups and frequently at least two or more food groups. In particular, households having daily access to more than one cereal, plus daily or frequent access to food items belonging to oil, animal product and vegetable food groups have been included into this cluster.
- **Good food consumption:** when the household can access at least four food groups and frequently integrate their diet with items belonging to other two food groups. In particular, households having daily access to cereals, oil, vegetables and animal products plus frequent access to legumes and sugar have been included into this cluster.

The chart illustrates the proportion of households belonging to each of the groups in the districts. The following pages contain detailed description of the four groups.
4.1.1 Very Poor food consumption

This group represents 25% of the households in Foya and 10% of the households in each of the other four districts: Kolahun, Salayea, Voinjama and Zorzor. The group consume at least 3 different food items out of the seven main food groups 3-4 days per week. Children from only a few of these households (less than 5%) eat three meals per day, while 40% of the adults were reported to eat only one meal per day.

Households in this group have a poorly diversified diet, mainly consisting of rice and oil. Fish, maize/bulgur, and cassava/fufu are consumed rarely, only one to two times a week.

Food Sources: The group has more diversified food sources, which are mainly purchasing (72%), own production (16%), gifts received (8%), exchange (3%) and remittances (2%). It is understandable that households do not access enough food from any one particular source and have to keep fending on many sources including exchanging household items for food.

Household Income: Their main income earning activities are agricultural wage labour, casual labour and sale of field crop. Some of these households earn cash from sale of bush meat and salary of government.

Household Expenditure: The very poor consumption group spends an average of LD$2,050 per month. High proportion (64%) of the expenditure is on food. High shares of expenditure for household foods reflect limited access not only the basic needs, but also other budgetary allocations are extremely low. For example, expenditure on clothing is 9%, medical expenses (7%), transportation (6%), and extremely low education expenditures at around 3 percent.

Household assets - On average, more than half of the households in the very poor food consumption group owns 3 to 4 assets, while 31% owns 2 or less assets, 16% own 5 to 6 assets and only less than 5% of the households own 7 or more assets.
4.1.2 Poor food consumption

This is the largest group of households in the sample. Within the districts the group comprise 60% of the households in Foya, 40% in Kolahun, 35% in Salayea, 20% in Voijnama and 25% in Zorzor. Around 10% of the children eat three meals per day, while 25% of the adults were reported to eat only one meal per day.

Compared to very poor food consumption this group has a slightly better access to food as many consume fish 3 to 4 times per week. These households eat oil/fats often and they also eat vegetables sometimes and a few of them eat fruits rarely.

Food Sources: The poor food consumption group does not exchange household items for food and does not get remittances. They get food mainly through purchase (80%), production on their own (19%) and receiving gifts (3%).

Household Income: More than half of the households belonging to this group earn their income through sale of field crop, agricultural wage labour. Casual labour is both first source of income for some households and second one for some others. Sale of Palm oil is the most common secondary income source. Some other households in this group earn their money from salary, skilled labour, and sale of bush meat, small business and petty trade.

Household Expenditure: The poor food consumption group typically spends LD$ 2,700 per month. Like very poor consumption group, a greater proportion (62%) of this group's expenditure is on food. Clothing is also an important part of their expenditure, accounting for an average of 12% of total expenditure. The expenditures on other items is 7%, education 6%, Medical 5% and transportatio n cost 4%.

Household assets – 57% of the households in poor food consumption group own 3 to 4 assets while 27% own 2 or less assets, 12% own 5 to 6 assets while only less than 5% of the household own 7 or more assets.
4.1.3 Fairly good food consumption

About 10% of the households in Foya, 30% in Kolahun, 45% in Salayea, 35% in Voinjama and 40% in Zorzor belong to this group. They have a more diverse dietary intake pattern than the poor and very poor groups. Fish, pulses, meat, vegetables, and fruit are consumed two to six days a week.

Food Sources: They get food mainly through purchasing (87%), own production (11%), and gifts (2%); these households also do not exchange household items for food and do not get remittances.

Household Income: Income sources are quite diversified among this group. Slightly more than half these households are engaged in sales of field crops, agricultural wage labour, and casual labour. Some of them also earn income from skilled labour, Petty trade, Salary/Government job, and sale of palm oil.

Household Expenditure: The average household expenditure for the group is LD$ 3,580 per month. As indicated in the chart, expenditure on food is 54%, lower than the expenditure of poor and very poor food consumption groups. Clothing is the second most important expenditure for these households consuming roughly 15% of the total expenditure, while transportation costs are 7%, and medical and education expenditure are 5% each. It is important to note that the proportion spent towards debt repayment, 2%, is similar in all of the consumption groups.

Household assets – In the fairly good food consumption group, 54% of the households own 3 to 4 assets while 20% own 2 or less assets, 22% own 5 to 6 assets and less than 5% of the household own 7 or more assets.
4.1.4 Good food consumption

The group comprises relatively low proportion of the sampled households in most districts. In Foya, this group comprises only 5% of the households, 15% in Kolahun, 10% in Salayea, 35% in Voinjama and 25% in Zorzor. These households consume rice, vegetables, oil and meat often or daily. They have access to six out of the seven food groups/items in a week.

Food Sources: Their sources of food are mainly purchasing (90%), own production (6%) and exchange (3%). They do not get remittances but they borrow (1%) and receive food aid (1%).

Household Income: For most of these households, small business and skilled labour are supplemented by income from sales of cash/field crops. Some of them also earn income from Petty trade salary/ Government job and sale of palm oil.

Household Expenditure: The mean monthly expenditure for this group is approximately LD$4,500. On average, 49% of expenditure for this group is on food, much lower than other food consumption groups. This group appears to have relatively better cash availability. Clothings/shoess are the highest non-food expenditures (22%). Transportation expenditure is 7% while education accounts for 6%. Medical expenditure is 4% while expenditure on other non-basic items (alcohol and tobacco) and social expenditures accounts only for 4%.

Household assets – 60% of the households in food consumption group own 3 to 4 assets while 20% own 5 to 6 assets, 16% own 2 or less assets. A paltry less than 5% of the households own 7 or more assets and could be considered ‘asset rich’.
PART V: CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The assessment concluded that the food security situation of households in Lofa County is unstable. The analyses indicate that overall, the food consumption of the households is inadequate. Less than 20% of the sample can be considered to have a good access to food.

A lot of the household foods, (70-90%) are derived through purchases. The staple commodity, rice is mainly sourced through purchases, depicting that the households are highly dependent on markets and external supply of food. In addition, households’ expenditure is mainly dedicated to food (50-70%) meaning that other necessities are to some extent denied.

The household income generating activities are not sufficiently reliable. The per capita monthly income of a typical household in Lofa County is about LD$3,000 equivalent to US$60 at the prevailing rate of 50LD$ to 1USD. Many households are not up to this level, and it is important to bear in mind that about 83% of the households returned in Lofa between end of the year 2004 and beginning 2005. They are mostly busy resettling in their communities, and need time to be explore opportunities, be absorbed into existing income generation activities and too, to get re-integrated later on.

The lack options for solving problems in the communities render the majority of households extremely vulnerable to negative affects of shocks. In fact, in the last 12 months from February 2005, 60% percent of the households had a sort of instability in their access to food and income, but 40 to 50% of those affected were unable to find more than two options to deal with effects of the problems.

Four food consumption groups were identified in the districts vulnerable to different degrees, and classified based on food consumption patterns. Of the households sampled, 25% in Foya and equally 10% in Kolahun, in Salayea, in Voinjama and in Zorzor have poor food consumption. Often they consume only 2 different food items out of the seven main food groups 3-4 days per week, and rarely consume 4 of the food items. Approximately 5% of children in these households less than eat three meals per day, while 40% of the adults were reported to eat only one meal per day.

The largest group of households in the sample, 60% in Foya, 40% in Kolahun, 35% in Salayea, 20% in Voinjama and 25% in Zorzor have fairly good food consumption because their is, with a more diverse dietary intake pattern than the two previous groups. About 5% of the households sampled in Foya, 15% in Kolahun, 10% in Salayea, 35% in Voinjama and 25% in Zorzor have good food consumption with daily access to four out of the seven food groups plus frequently two others at least.

5.2 Recommendations

Priorities should be given to intervention in areas that the very poor and poor households live.

Shelter

- Communities prioritized on shelter as a major undertaking required to facilitate the resettlement process.

Education

- Schools rehabilitation should be continued. Children should be encouraged to register in schools through such avenues as school feeding.

- Emphasis should also be given skills training especially for the youthful population that missed chance to obtain formal education.

Health interventions

- Include building health infrastructures, supplies of medicines and hygiene practices should be considered foremost in Salayea District no health facility currently exists resulting to most community members seeking medical assistance from uncouth sources.
Water and sanitation

- Continue to improve facilities, especially building VIP latrines, and hand pumps in Foya followed by Zorzor District. These two districts have mainly fetched their drinking water from unsafe and unclean sources.

Income activities

- Support the development of income generating activities, particularly targeting women headed households with credit facilities and assistance to access productive assets.
- Improve access to agricultural inputs, fishing tools and other equipments.

Nutrition activities

- Improve access to basic treatment of common childhood illnesses such as diarrhoea, malaria, ARI, and provide education on appropriate child feeding and caring practices at clinic level through intensified campaign on outreach services while construction of adequate health facilities is ongoing.
- Strengthen health, hygiene and nutrition education. Train women on proper food preparation and cooking techniques.
- Integrate food aid support with other primary health care services. This should target pregnant and lactating women at primary health facilities to encourage the uptake of MCH services as immunization, treatment of communicable diseases, health and nutrition education.

HIV/AIDS interventions

- There is urgent need for community sensitization on HIV-AIDS issues to equip the communities with the right knowledge on prevention, control and management of the virus in the community.
- Concerted efforts should be directed to educating the communities on HIV/AIDS transmission and prevention to control the existing discrimination of the victims.

APPENDIX 1:
Sampling frame for selection of 30 clusters.

<table>
<thead>
<tr>
<th>Name of village/town</th>
<th>Population obtain from NGOs</th>
<th>Cumulative of the estimated population</th>
<th>Clusters</th>
<th>Number of household</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOYA CITY</td>
<td>11699</td>
<td>11699</td>
<td>1, 2, 3, 4</td>
<td>100</td>
</tr>
<tr>
<td>SHELLOE</td>
<td>2844</td>
<td>14543</td>
<td>5</td>
<td>25</td>
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<tr>
<td>MENDEKOMA</td>
<td>1358</td>
<td>15901</td>
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<td></td>
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<tr>
<td>ZORZOR</td>
<td>2421</td>
<td>18322</td>
<td>6</td>
<td>25</td>
</tr>
<tr>
<td>MORRIS TOWN</td>
<td>1356</td>
<td>19678</td>
<td>7</td>
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<tr>
<td>KONIA</td>
<td>1602</td>
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<tr>
<td>BORKEZA</td>
<td>1585</td>
<td>22865</td>
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<td>FESIBU</td>
<td>2439</td>
<td>25304</td>
<td>8</td>
<td>25</td>
</tr>
<tr>
<td>WOZI/WOUMAI</td>
<td>5211</td>
<td>30515</td>
<td>9, 10</td>
<td>50</td>
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<tr>
<td>ZOLOWO</td>
<td>1311</td>
<td>31826</td>
<td></td>
<td></td>
</tr>
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<td>SALAYEA</td>
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</tr>
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<td>GBAWANY</td>
<td>1401</td>
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<td>12, 13</td>
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<td>GNAGKOLOTA</td>
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<td>42032</td>
<td></td>
<td></td>
</tr>
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<td>KOLBA CITY</td>
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<td>14, 15</td>
<td>50</td>
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<td>52221</td>
<td>16</td>
<td>25</td>
</tr>
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<td>2794</td>
<td>55015</td>
<td>17</td>
<td>25</td>
</tr>
<tr>
<td>POPALAHUN</td>
<td>7835</td>
<td>62850</td>
<td>18, 19</td>
<td>50</td>
</tr>
<tr>
<td>MAVUYASU</td>
<td>1985</td>
<td>64835</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>GONDONLAHUN</td>
<td>3528</td>
<td>68363</td>
<td>21</td>
<td>25</td>
</tr>
<tr>
<td>VOINJAMA CITY</td>
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<td>80006</td>
<td>22, 23, 24, 25</td>
<td>100</td>
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<td></td>
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<td>25</td>
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<td>LAWALAZU</td>
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<td></td>
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<td>97205</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>VELEZALA</td>
<td>2035</td>
<td>99240</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX 2: Interpretation of Nutrition data

Definitions: The prevalence of acute malnutrition is presented using z-scores. However, percent of median is usually used for screening and admission to feeding programs. Therefore to estimate expected number of beneficiaries for feeding programs, the prevalence of acute malnutrition is also presented as percent of median.

Weight for Height: Measures wasting or acute malnutrition. This is the weight of a child compared with height of reference children of the same height and sex. For simplicity this is expressed in z-scores. It is the most reliable indicator for acute malnutrition in children.

- Global Acute Malnutrition (GAM): <-2 z-score weight-for-height and/or oedema
- Severe Acute Malnutrition (SAM): <-3 z-score weight-for-height and/or oedema
- Global Acute Malnutrition (GAM): <80% median weight-for-height and/or oedema
- Severe Acute Malnutrition (SAM): <70% median weight-for-height and/or oedema

Height/Age: Measures stunting or chronic malnutrition. This is the height of a child compared with reference children of the same age and sex. A child with a low height for age is termed as stunted. This is caused by an extended period or repeated episodes of inadequate diet, illness or both, which slows the rate of growth. The height for age index of a child is expressed as a z-score. As in the case of wasting, children falling below –3 z-scores are considered stunted, while those falling below –2 z-scores are severely stunted.

Weight/Age: Measures underweight in children: This index expresses the weight of a child in relation to his age, and compares him/her to reference children of the same age and sex. A child with a low weight for age is termed as underweight. However, this index does not allow the differentiation between children of the same weight and age, one being tall and thin (wasted) and the other being shorter (stunted), but not wasted. The weight for age index of a child is expressed as a z-score with children falling below –2 z-scores regarded as underweight and those below –3 z-scores as severely underweight.

Interpretation of Malnutrition Rates

The Western African region has an estimated prevalence of global acute malnutrition of 10.3%. In sub-Saharan Africa, rates of wasting or Global acute malnutrition (GAM) are usually within the range of 5-9%. In the nationwide nutrition survey conducted in Liberia in 1999-2000, the prevalence of GAM for Monrovia was reported as 5.5%. Nutrition surveys (November 2003) in the IDP camps outside of Monrovia reported GAM rates of 3.4% to 7.8%. The GAM rate reported in a nutrition survey conducted in March 2003 in Bomi and Cape Mount Counties was 4.1%. Wasting was estimated at 6.9% (5.4 – 8.4) for the survey in Monrovia and environments (August 2004).

In contrast, stunting or chronic malnutrition and underweight are high in Liberia, 39% and 26% respectively. Chronic malnutrition is estimated at 32.9% and underweight at 27.1% for the West African region. WFP’s VAM surveys in Monrovia (June, September 2003) and Bong Counties (February 2004) reported a similar pattern of malnutrition results, i.e. low levels of GAM but high levels of underweight and chronic malnutrition.

---

4 Stunting is more common in older children because there has been a longer period of slow height growth (FAO, 1990).


6 GAM is weight for height measurement below –2 z-scores and/or oedema. It is a measure of acute malnutrition


8 Ibid, 7.
Food Consumption Maps

Food Security and Nutrition Assessment
% of population with Poor food consumption at clan level
WFP LIBERIA VAM UNIT

Source: VAM data collection

Legend:
- 49 to 50% hh
- 24 to 49% hh
- 19 to 21% hh
- 14 to 18% hh
- 0 to 10% hh
- Not sampled

Food Security and Nutrition Assessment
% of population with Very poor food consumption at clan level
WFP LIBERIA VAM UNIT

Source: VAM data collection

Legend:
- 31 to 40% hh
- 21 to 30% hh
- 11 to 20% hh
- 0 to 10% hh
- Not sampled

LOFA

Lofa-Survey final
### APPENDIX4 (HOUSEHOLD QUESTIONNAIRE)

**A: QUESTIONNAIRE IDENTIFICATION:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tr>
<td>A.1</td>
<td>Date of interview</td>
</tr>
<tr>
<td>A.2</td>
<td>Interviewer ID</td>
</tr>
<tr>
<td>A.3</td>
<td>County name</td>
</tr>
<tr>
<td>A.4</td>
<td>County code</td>
</tr>
<tr>
<td>A.5</td>
<td>District name</td>
</tr>
<tr>
<td>A.6</td>
<td>District code</td>
</tr>
<tr>
<td>A.7</td>
<td>Cluster Code</td>
</tr>
<tr>
<td>A.8</td>
<td>Clan name</td>
</tr>
<tr>
<td>A.9</td>
<td>Clan code</td>
</tr>
<tr>
<td>A.10</td>
<td>Town /village name</td>
</tr>
<tr>
<td>A.11</td>
<td>Town /village code</td>
</tr>
<tr>
<td>A.12</td>
<td>Household ID:</td>
</tr>
</tbody>
</table>

**A.13:** Name of Respondent __________________________

**A.14:** Checking of Questionnaire: Supervisor / Team leader's signature __________________________

**A.15:** Date checked: | | |   | 2005

### Section 1 – Household Demography

1.1 – Sex of household head

- Male = 1
- Female = 2

1.2 – Age of HH head (in years)

1.3 – What is the main occupation of this household head?

- 1 = Carpenter
- 2 = Teacher
- 3 = Taylor / Seamstress
- 4 = Blacksmith
- 5 = Farmer / Gardener
- 6 = Casual labourer
- 7 = Trader / seller
- 8 = Fisherman
- 9 = Other (specify) __________________________
- 10 = nothing

1.4 – Total number of persons in household

- Males 0-5 years |___|
- Males 6-14 years |___|
- Males 15-59 years |___|
- Males 60+ years |___|
- Females 0-5 years |___|
- Females 6-14 years |___|
- Females 15-59 years |___|
- Females 60+ years |___|

1.5 – How many children do you have currently enrolled and attending school?

- Male |___|
- Female |___|
Section 2 – Household Circumstances
Please use the codes below to complete the following questions.

Liberia county and other countries codes
1 = Bong 7 = Grand Kru 13 = Rivercess
2 = Bomi 8 = Lofa 14 = Sinoe
3 = Gbarpolu 9 = Margibi 15 = River Gee
4 = Maryland 10 = Nimba 16 = SIL
5 = Grand Bassa 11 = Cape Mount 17 = Guinea
6 = Grand Gedeh 12 = Montserrado 18 = COT
19 = other counties

2.1 – What is the status of your household? (Circle only one option)
1 = displaced household
2 = returnee household
3 = host household

2.2 – Where is your household coming from? (Use the above codes)

2.3 – When did your household move to this current settlement? (Record year)

2.4 – What main problems prevent you or have prevented you from returning? (Circle all that apply)
1 = Insecurity
2 = No land in place of origin
3 = Land in place of origin occupied by others
4 = Cannot find work/earn enough money there
5 = Roads/bridges/infrastructure destroyed
6 = Don’t have enough resources to return
7 = Nothing existing to return to
8 = Other (specify) ______________

2.5 Are any members of your households currently living else where? If so where exactly are they?

1 = IDP camp
2 = Another town
3 = Another house within the village/town
4 = Other County/country
5 = Other (specify) ______________

If so, what kind of disability? (Circle all that apply)
1 = Amputee
2 = Blindness
3 = Mental illness
4 = deaf/mute
5 = lame – polio /injury
6 = chronic illness (eg. TB)
7 = Other (specify) ______________

2.6 Are any members of this household disabled?
YES.............1   NO.............2

If so, what kind of disability? (Circle all that apply)

Section 3 - Housing

3.1 – How many years has your household been living in this dwelling?

Years

3.2 – How many people usually sleep in this house?

People

3.3 – How would you classify the physical condition of this dwelling?

1 = Good
2 = acceptable
3 = partly damaged
4 = Needs improvement
5 = Other

3.4 – What is the main source of drinking water for your household?

1 = Piped into dwelling, yard or plot
2 = borehole with pump
3 = Protected dug/well covered
4 = Rain water
5 = Unprotected/well not covered
6 = Pond, river or stream
7 = Tanker
8 = Other (specify) ______________

3.5 – What kind of toilet facility does your household use?

1 = NGO build latrine
2 = Traditional pit latrine
3 = Open pit
4 = bush/open space
5 = Flush toilet
6 = Other (specify) ______________

3.6 – What is the main source of lighting for this house?

1 = Generator
2 = Oil lamp
3 = Kerosene lamp
4 = Candle
5 = Firewood
6 = Other (specify) ______________
7 = None

3.7 – How much do you spend for lighting per month?

LD$
3.8 - What is the main source of cooking fuel for this household?
1 = Firewood / bush  
2 = Charcoal  
3 = fuel oil  
4 = Kerosene  
5 = Generator  
6 = Gas  
7 = Other (specify)  
___________________

3.9 - How much do you spend for cooking fuel per month?
|___|___|___|___| LD$

Section 4 - Household & animal assets

4.1 - Does your family own any of the following household items/productive assets? (Circle all that apply)
4.1.1 = Bed  
4.1.2 = Table  
4.1.3 = Chair  
4.1.4 = Mattress  
4.1.5 = Cutlass / axe  
4.1.6 = hoe / digger  
4.1.7 = Coal pot  
4.1.8 = Bucket / tub  
4.1.9 = Wheel barrel  
4.1.10 = Radio / Tape  
4.1.11 = Cooking utensils  
4.1.12 = Mobile phone  
4.1.13 = Generator  
4.1.14 = Other (specify)  

4.2 - Does your family own livestock?
YES............1  NO.............2  (If no skip to 4.7)

4.3 - How many poultry does your family own?
Poultry  |___|___| (chickens/ducks)

4.4 - How many goats does your family own?
Goats  |___|___|

4.5 - How many sheep does your family own?
Sheep  |___|___|

4.6 - How many cows does your family own?
Cows  |___|___|

4.7 - Do you have access to credit?
YES............1  NO.............2  (If no skip to 4.9)

4.8 - From whom do you usually credit? (Circle all that apply)
1 = relatives / friends  
2 = charities / NGOs  
3 = local lender / Susu club  
4 = Church / Mosque  
5 = Anybody  
6 = other (specify)  

4.9 - Does your family have cash savings?
YES............1  NO.............2

4.10 - Do you lend out cash or kind to other people?
YES............1  NO.............2

Section 5 - Agriculture

Land access codes
1 = rent  
2 = Own land  
3 = Sharecropping  
4 = Lend by Govt  
5 = Inherited  
6 = Squat by permission  
7 = Other (specify)  

Production codes
1 = Rice  
2 = Cassava  
3 = potatoes / eddoes  
4 = Maize (corn)  
5 = other vegetables  
6 = Plantain / banana  
7 = other fruits  
8 = Kolanuts  
9 = Rubber  
10 = peanuts  
11 = coconuts  
12 = Other (specify)  

5.1: Do you have access to Agriculture land?
YES............1  NO.............2  (If no skip to 6)

5.2a: Do you have a farm plot?
YES............1  NO.............2  (If no Skip to 5.3a)

5.2b: How did you or members of your household acquire this land?  
(See Land Access codes)

5.2b1 |___|  5.2b2 |___|

5.2c: What do you produce in this farm plot? (See Production codes)
5.2c1 |__| 5.2c2 |__| 5.2c3 |__|

5.3a: Do you have a vegetable plot / garden?
YES..............1  NO............2

5.3b: How did you or members of your household acquire this garden plot? (See Land Access codes)
5.3b1 |__| 5.3b2 |__|

5.3c: What do you produce in this garden? (See Production codes)
5.3c1 |__| 5.3c2 |__| 5.3c3 |__|

5.4: For your farming /garden, what is the main source of seeds? (Circle all that apply)
1 = purchase
2 = own stock
3 = Government
4 = borrowed
5 = NGOs/INGOs
6 = no seed required (orchards)
7 = credit
8 = gift

5.5a: Do you use fertilizers? (Circle one)
YES..............1  NO............2
If no (Skip to 5.6a)

5.5b: For your farming /garden, what is the main source of fertilizer? (Circle one)
1 = purchase
2 = Borrow
3 = Government
4 = NGOs/INGOs
5 = credit
6 = gift

5.6a: Do you use pesticides / herbicides? (Circle one)
YES..............1  NO............2
If no (Skip to 6.1)

5.6b: For your farming /garden, what is the main source of pesticides / herbicides?
1 = purchase
2 = borrow
3 = Government
4 = purchase and own stock
5 = NGOs/INGOs
6 = credit
7 = gift
Section 6 – Sources of income
Using the following codes, please complete the following questions:

### Income activity codes

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<thead>
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<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Sales of field crops</td>
</tr>
<tr>
<td>2</td>
<td>Small business</td>
</tr>
<tr>
<td>3</td>
<td>Mining</td>
</tr>
<tr>
<td>4</td>
<td>Sales of cash crops</td>
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<tr>
<td>5</td>
<td>Skilled labour</td>
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<td>6</td>
<td>Casual labour</td>
</tr>
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<td>7</td>
<td>Petty trade</td>
</tr>
<tr>
<td>8</td>
<td>Salary/Government job</td>
</tr>
<tr>
<td>9</td>
<td>Remittances</td>
</tr>
<tr>
<td>10</td>
<td>Sale of palm oil</td>
</tr>
<tr>
<td>11</td>
<td>Sale of bush meat</td>
</tr>
<tr>
<td>12</td>
<td>Sale of fish</td>
</tr>
<tr>
<td>13</td>
<td>Agricultural wage labour</td>
</tr>
<tr>
<td>14</td>
<td>Firewood/charcoal sales</td>
</tr>
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<td>15</td>
<td>Sales of prepared foods</td>
</tr>
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<td>16</td>
<td>Sales of livestock</td>
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<td>19</td>
<td>Handicrafts</td>
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<td>Sale of productive assets</td>
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<tr>
<td>22</td>
<td>Borrowing</td>
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<tr>
<td>23</td>
<td>Begging</td>
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<tr>
<td>24</td>
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### Participant codes

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<tr>
<td>1</td>
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</tr>
<tr>
<td>2</td>
<td>women only</td>
</tr>
<tr>
<td>3</td>
<td>children only</td>
</tr>
<tr>
<td>4</td>
<td>adults only</td>
</tr>
<tr>
<td>5</td>
<td>women &amp; children</td>
</tr>
<tr>
<td>6</td>
<td>men &amp; children</td>
</tr>
<tr>
<td>7</td>
<td>everybody</td>
</tr>
</tbody>
</table>

**Throughout the Year………**

6.1: What is your household’s main income activity? [___] [___]
6.2: Who participates in this activity? [___]

6.3: What is your second most important income activity? [___] [___]
6.4: Who participates in this activity? [___]

6.5: What is your third most important income activity? [___] [___]
6.6: Who participates in this activity? [___]

6.7: What is your fourth most important income activity? [___] [___]
6.8: Who participates in this activity? [___]

6.9: Using proportional piling or ‘divide the pie’ methods, please estimate the relative contribution to total income of each activity and record below.

6.9: 1 - % Most important income (Q6.1)

6.9: 2 - % Second income (Q6.3)

6.9: 3 - % Third income (Q6.5)

6.9: 4 - % Fourth income (Q6.7)

= 80%

Note: If less than four sources are named, please put ‘0’ in the empty spaces above.

Section 7 – Household expenditures – IN PAST MONTH

### Expenditure activities – in past MONTH

<table>
<thead>
<tr>
<th>Expenditure activities – in past MONTH</th>
<th>Total expenditure (In LD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1 – Rice</td>
<td></td>
</tr>
<tr>
<td>7.2 – cassava, Potatoes</td>
<td></td>
</tr>
<tr>
<td>7.3 – Palm oil</td>
<td></td>
</tr>
<tr>
<td>7.4 – Vegetable oil</td>
<td></td>
</tr>
<tr>
<td>7.5 – Meat, fish, poultry</td>
<td></td>
</tr>
<tr>
<td>7.6 – maize meal</td>
<td></td>
</tr>
<tr>
<td>7.7 – Bulgur wheat</td>
<td></td>
</tr>
<tr>
<td>7.8 – Pulses (Beans, lentils)</td>
<td></td>
</tr>
<tr>
<td>7.9 – Other food (fruits, vegetables, salt, Sugar)</td>
<td></td>
</tr>
<tr>
<td>7.10 – Food &amp; drinks consumed outside the home</td>
<td></td>
</tr>
<tr>
<td>7.11 – Alcohol &amp; tobacco</td>
<td></td>
</tr>
<tr>
<td>7.12 – Payment for medical services</td>
<td></td>
</tr>
<tr>
<td>7.13 – Medical items and drugs</td>
<td></td>
</tr>
<tr>
<td>7.14 – Transportation, fuel (vehicle)</td>
<td></td>
</tr>
<tr>
<td>7.15 – Fines or debt repayments</td>
<td></td>
</tr>
<tr>
<td>7.16 – Education/school fees</td>
<td></td>
</tr>
<tr>
<td>7.17 – Clothing/shoes</td>
<td></td>
</tr>
<tr>
<td>7.18 – Soaps / Detergents / HH items</td>
<td></td>
</tr>
<tr>
<td>7.19 – Celebrations/social events</td>
<td></td>
</tr>
<tr>
<td>7.20 – Other/miscellaneous</td>
<td></td>
</tr>
</tbody>
</table>
**Section 8 – Food Consumption**

Yesterday, how many meals did the.....in this house eat?

**8.1 - Adults**

**8.2 - Children**

I would like to ask you about all the different foods that your household members have eaten in the last 7 days. Could you please tell me how many days in the past week your household has eaten the following foods?

<table>
<thead>
<tr>
<th>Food item</th>
<th>DAYS eaten in past week (0-7 days)</th>
<th>Sources of food (see codes below)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.3a – Rice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3b – wheat (Bulgur)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3c – maize meal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3d – Cassava (tubers)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3e – Vegetables (including leaves)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3f – Beans (Pulses)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3g – Fish – fresh or dry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3h – Meat (bush/imported)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3i – Poultry (chicken/duck)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3j – Vegetable oil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3k – Palm oil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3l – Eggs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3m – Milk (liquid or powder)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3n – Bread</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3o – Fruits (banana, orange)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3p – Sweet, sugar</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Food source codes:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Purchase</td>
</tr>
<tr>
<td>2</td>
<td>Borrowed</td>
</tr>
<tr>
<td>3</td>
<td>Remittances</td>
</tr>
<tr>
<td>4</td>
<td>Own production</td>
</tr>
<tr>
<td>5</td>
<td>Received as gift</td>
</tr>
<tr>
<td>6</td>
<td>Exchange services</td>
</tr>
<tr>
<td>7</td>
<td>Traded goods</td>
</tr>
<tr>
<td>8</td>
<td>Food aid</td>
</tr>
<tr>
<td>9</td>
<td>Other (specify)</td>
</tr>
</tbody>
</table>

**Section 9 – Food aid**

9.1 – Has any member of your household received food aid in the past month?

YES.............1          NO.............2

9.2 – If so, through which programme is the food aid received?

1 = General food ration
2 = School feeding
3 = Supplementary feeding
4 = Food for work

9.3 – How many kilograms of each of the following commodities has your household received in the past month?

9.3a – Bulgur wheat

9.3b – Maize meal

9.3c – vegetable oil

9.3d – pulses/beans

9.3e – CSB

9.4 – Did you sell any of the food aid received last month?

YES.............1          NO.............2

9.5 – If so, how much of each?

9.5a – Bulgur wheat

9.5b – Maize meal

9.5c – vegetable oil

9.5d – pulses/beans

9.5e – CSB
### Section 10 – Household Risks

| In the last 12 months has the HH been negatively affected by any of the following (shock)? | What did the household do to compensate or resolve it? |
|---|---|---|
| | Primary strategy | Secondary strategy | Tertiary strategy |
| 10.1 | 101a | 101b | 101c |
| 10.2 | 102a | 102b | 102c |
| 10.3 | 103a | 103b | 103c |

1. **Insecurity/violence**
2. **Sudden price fluctuations**
3. **High winds/storms**
4. **Irregular rains**
5. **Floods**
6. **Unusually high level of crop pests & disease**
7. **Unusually high level of livestock diseases**
8. **Unusually high level of human disease**
9. **Erosion**
10. **Restricted access to markets**

1. Reduced quality/quantity of diet
2. Skip a day without eating
3. Decreased expenditures
4. Increased collection and sale of natural resources
5. Sold furniture or other HH assets
6. Sold income generating equipment or assets
7. Sold female reproductive livestock
8. Additional wage labour
9. Loans from family/friends
10. Loans from moneylender/trader
11. Purchased food on credit
12. Sold household items to others
13. Received help from others in community
14. Worked on relief programs from Government, NGO or UN
15. Spent savings or investments
16. Out-migrated to look for work
17. Entire family moved to new location
18. Sent children to work for money or food
19. Marry off young daughters (< 13 years)
20. Begging
21. Other_________
22. Did not do anything

### Section 11 – Maternal Health and Nutrition

| In the last 12 months has the HH member been negatively affected by any of the following types of problems? | What did the household do to compensate or resolve this problem. |
|---|---|---|
| | Primary strategy | Secondary strategy | Tertiary strategy |
| 10.4 | 10.4a | 10.4b | 10.4c |
| 10.5 | 10.5a | 10.5b | 10.5c |
| 10.6 | 10.6a | 10.6b | 10.6c |

1. Loss of employment for a household member
2. Reduced salary of a household member
3. Serious illness or accident of working household member
4. Serious illness of other household member
5. Death of a working household member
6. Death of other household member
7. Theft and/or violence

1. Reduced quality/quantity of diet
2. Skip a day without eating
3. Decreased expenditures
4. Increased collection and sale of natural resources
5. Sold furniture or other HH assets
6. Sold income generating equipment or assets
7. Sold female reproductive livestock
8. Additional wage labour
9. Loans from family/friends
10. Loans from moneylender/trader
11. Purchased food on credit
12. Sold household items to others
13. Received help from others in community
14. Worked on relief programs from Government, NGO or UN
15. Spent savings or investments
16. Out-migrated to look for work
17. Entire family moved to new location
18. Sent children to work for money or food
19. Marry off young daughters (< 13 years)
20. Begging
21. Other_________
22. Did not do anything
Mother’s name_________________ Age |___|___|
Note: If more than one mother in household, please select according to following preferences:
1. Mother with child(ren) under 5 years of age.
2. Mother with most child(ren) under 5 years of age.
3. If none with young children, then mother 15-49 years of age.
4. If more than one mother but no children < 5 years, then select most senior mother for interview.

11.1 – Are you currently pregnant or breastfeeding? (Circle one)
1 = pregnant  2 = breastfeeding  3 = neither  4 = both  5 = don’t know

11.2 – If pregnant, how many months pregnant? |___|

11.3a – If pregnant, did you receive iron-folate tablets (pink/reddish tablets) from the WCD, SVA, FAB, SUB or maternity clinic?
1 = YES  2 = NO (skip to 11.4a)

11.3b – If so, how many tablets have you taken in the past 7 days? |___|

11.4a – How many times have you been pregnant? |___|___|

11.4b – How many children do you have now? |___|___|

11.4c – How old were you with your first delivery? |___|___|

11.5 – After the birth of your last child, did you receive a vitamin A capsule?
1 = YES  2 = NO

11.6a – Diarrhoea?  1 = YES  2 = NO
11.6b – Fever?
1 = YES  2 = NO
11.7 – Last night, did you sleep under a mosquito net?

11.8 – After visiting the toilet, what do you use to wash your hands?
1 = water only,  2 = local soap & water,  3 = washing soap & water,  4 = nothing

Now I would like to talk to you about a serious illness, in particular, about HIV and AIDS.

11.9 – Have you ever heard of the virus HIV or an illness called AIDS?
YES…………1  NO…………2 (if no end the interview)

11.10 – Is there anything a person can do to avoid getting HIV, the virus that causes AIDS?
YES………1  NO………2 (skip to 11.16)  Don’t Know…9 (skip to 11.16)

Now I will read some questions about how people can protect themselves from the AIDS virus. These questions include issues related to sexuality which some people might find difficult to answer. However, your answers are very important to help understand the needs of people in Liberia. Again, this information is all completely private and anonymous. Please answer YES or NO to each question.

11.11 – Can people protect themselves from getting infected with the AIDS virus by having one uninfected sex partner who also has no other partners?
YES………1  NO………2  Don’t know………9

11.12 – Do you think a person can get infected with the AIDS virus through witchcraft?
YES………1  NO………2  Don’t know………9

11.13 – Can people protect themselves from the AIDS virus by using a condom correctly every time they have sex?
11.14 – Can a person get AIDS from mosquito bites?
YES........1  NO........2  Don't know........9

11.15 – Can people protect themselves from getting infected with the AIDS virus by not having sex at all?
YES........1  NO........2  Don't know........9

11.16 – Is it possible for a healthy-looking person to have the AIDS virus?
YES........1  NO........2  Don't know........9

11.17 – Can the AIDS virus be transmitted from a mother to a child?
YES........1  NO........2  Don't know........9

11.18 – Can the AIDS virus be transmitted from a mother to a child through breast milk?
YES........1  NO........2  Don't know........9

11.19 – Can a person can get AIDS by sharing a meal with someone who is infected?
YES........1  NO........2  Don't know........9

11.20 – If a teacher has the AIDS virus but is not sick, should he or she be allowed to continue teaching in school?
YES........1  NO........2  Don't know........9

11.21 – If you knew that a shopkeeper or food seller had AIDS or the virus that causes it, would you buy food from that person?
YES........1  NO........2
**APPENDIX5 (COMMUNITY QUESTIONNAIRE)**

**A: QUESTIONNAIRE IDENTIFICATION:**

<table>
<thead>
<tr>
<th>A.1: Date of interview</th>
<th>A.2: Interviewer ID</th>
<th>A.3: County name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A.4: County code</th>
<th>A.5: District name</th>
<th>A.6: District code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A.7: Cluster Code</th>
<th>A.8: Clan name</th>
<th>A.9: Clan code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A.10: Town /village name</th>
<th>A.11: Town /village code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A.12: Y-coordinate (latitude)</th>
<th>A.13: X-coordinate (longitude)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Section 1: Demographic Information**

1.0 - Number of people living in this community? [ ] [ ] [ ] [ ] [ ]

1.1 - Number of people who live in this community before? [ ] [ ] [ ] [ ] [ ]

1.2 - Number of dwellings/houses in this village? [ ] [ ] [ ] [ ]

1.3 - Number of households in this village? [ ] [ ] [ ] [ ]

1.4 - Since 2000 (that is, 5 years ago), have people moved away from your community? (Circle answer)

   1 = Less than half moved  
   2 = More than half moved  
   3 = Everyone moved  
   4 = No one moved

1.5 - Are there displaced people living in this community?

   YES...............1  
   NO...............2 (If no skip to 1.7)

1.6 - How many displaced people are in the total population of this community?

1.7 - How many original inhabitants have returned to this community?

   1 = All  
   2 = Less than half  
   3 = More than half  
   4 = None

1.8 - What are the main reasons stopping people from returning to this community? (Circle all that apply)

   1 = Fear of insecurity  
   2 = Homes are damaged  
   3 = Land occupied by others  
   4 = No food  
   5 = Do not want to return  
   6 = Other (specify) ____________

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Section 2 – Economy

2.1 - What are the three most important natural resources for income generation for the people in this community? (Check in order of importance)

<table>
<thead>
<tr>
<th>Resources</th>
<th>Rank 1st</th>
<th>Rank 2nd</th>
<th>Rank 3rd</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forest / forest products</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mines (Iron ore, gold, diamond)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wild plants / herbs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palm nuts / bamboo</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wild animals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish / sea mammals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section 3 – Infrastructure

3.1a - Is the road that comes to this community (or passes by it) impassable by vehicle during certain times of the year? (Circle answer)

YES........................1 NO...................2 (skip to 3.2a)

3.1b - During which months is the road usually impassable?

From |__|__| to |__|__| (see codes below)

| 1 = January | 2 = February | 3 = March |
| 4 = April   | 5 = May      | 6 = June  |
| 7 = July    | 8 = August   | 9 = September |
| 10 = October| 11 = November| 12 = December|

3.2a - Do people in this community have access to credit? (Circle answer)

YES........................1 NO...................2

Section 4 – Agriculture

4.1 - How much money (in LD) does an agricultural laborer earn for a day’s work?

<table>
<thead>
<tr>
<th>4.4.1 CLEARING</th>
<th>4.4.2 PLANTING</th>
<th>4.4.3 WEEDING</th>
<th>4.4.4 HARVESTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>a – Amount for a MAN</td>
<td>b – Amount for a WOMAN</td>
<td>c – Amount for a CHILD</td>
<td></td>
</tr>
</tbody>
</table>
Section 5 – Education

5.1 Are there schools open in this community?

YES………………..1  NO………………..2
(if yes fill the bellow table, if no skip to 5.2a)

Name of School | Kind | Status | Ownership | Physical Condition | Functional Condition
--- | --- | --- | --- | --- | ---
5.1a. |  |  |  |  |  |
5.1b. |  |  |  |  |  |
5.1c. |  |  |  |  |  |
5.1d. |  |  |  |  |  |
5.1e. |  |  |  |  |  |

School Codes physical and function conditions also apply for Health center

Kind | Status | Ownership | Physical | Functional
--- | --- | --- | --- | ---
1=English | 1=Secondary | 1=Gov’t | 1=Good | 1=Good
2=Arabic | 2=Primary | 2=Private | 2=Average | 2=Ave. with some problems
3=French | 3=Literacy Program | 3=NGO | 3=Bad | 3=Irregular
4=Community | 4=Unacceptable | 4=Mostly not functioning

5.2a Are children in this community attending school in another community?

YES………………..1  NO………………..2 (skip to 5.2c)

5.2b About what proportion of the boys of primary school age are enrolled and attending?

1 = Almost all of the boys
2 = More than half, but not all
3 = Half of the
4 = Less than half
5 = Only a few boys
6 = None

5.2c What are the reasons for boys not attending school?

<table>
<thead>
<tr>
<th>Reason</th>
<th>% boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = No school fees</td>
<td>A</td>
</tr>
<tr>
<td>2 = School damage</td>
<td>B</td>
</tr>
<tr>
<td>3 = No food</td>
<td>C</td>
</tr>
<tr>
<td>4 = The distance is far</td>
<td>D</td>
</tr>
<tr>
<td>5 = Doing other home work</td>
<td>E</td>
</tr>
<tr>
<td>6 = No school in the area</td>
<td>F</td>
</tr>
<tr>
<td>7 = Other</td>
<td>G</td>
</tr>
</tbody>
</table>

5.2d About what proportion of the girls of primary school age are enrolled and attending?

1 = Almost all of the boys
2 = More than half, but not all
3 = Half of the
4 = Less than half
5 = Only a few boys
6 = None

5.2e What are the reasons for girls not attending school?

<table>
<thead>
<tr>
<th>Reason</th>
<th>% boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = No school fees</td>
<td>A</td>
</tr>
<tr>
<td>2 = School damage</td>
<td>B</td>
</tr>
<tr>
<td>3 = No food</td>
<td>C</td>
</tr>
<tr>
<td>4 = The distance is far</td>
<td>D</td>
</tr>
<tr>
<td>5 = Doing other home work</td>
<td>E</td>
</tr>
<tr>
<td>6 = No school in the area</td>
<td>F</td>
</tr>
<tr>
<td>7 = Other</td>
<td>G</td>
</tr>
</tbody>
</table>
### Section 6 – Health

**6.1** Is there any health center in this community?  
YES………………..1 NO………………..2

<table>
<thead>
<tr>
<th>Clinic/Health Center</th>
<th>Fees for clinic in LD$</th>
<th>Availability of drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 = Less $10.00</td>
<td>(1 = yes; 2 = No)</td>
</tr>
<tr>
<td></td>
<td>2 = 10.00-$30.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 = 30.00-$50.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 = Above $50.00</td>
<td></td>
</tr>
</tbody>
</table>

**6.2** What are the three main sickness affecting children in this community?  
6.2a |__| 6.2b |__| 6.2c |__|

**6.3** What are the three main sickness affecting adult in this community?  
6.3a|__| 6.3b |__| 6.3c |__|

**6.4** Where do people in this community go for treatment when they are sick?  

<table>
<thead>
<tr>
<th>Facility</th>
<th>% Pop</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = Health Center/clinic</td>
<td>a</td>
</tr>
<tr>
<td>2 = Traditional healer</td>
<td>b</td>
</tr>
<tr>
<td>3 = Drug Store</td>
<td>c</td>
</tr>
<tr>
<td>4 = Other</td>
<td>d</td>
</tr>
</tbody>
</table>

### Section 7 - Markets

**7.1** - Transportation and costs to markets

<table>
<thead>
<tr>
<th>Means of transport</th>
<th>7.1.1 - What is the time taken to get to the nearest permanent food market?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 = In the community</td>
</tr>
<tr>
<td>Foot</td>
<td>2 = Less than ¼ day</td>
</tr>
<tr>
<td></td>
<td>3 = ¼ to ½ day</td>
</tr>
<tr>
<td></td>
<td>4 = ½ day to 1 day</td>
</tr>
<tr>
<td></td>
<td>5 = More than 1 day</td>
</tr>
<tr>
<td></td>
<td>6 = Transport type does not exist</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Means of transport</th>
<th>7.1.2 - What is the cost (in LD) of return transport to the permanent food market?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public transport</td>
<td>1 = Daily</td>
</tr>
<tr>
<td></td>
<td>2 = Once per week</td>
</tr>
<tr>
<td></td>
<td>3 = Once per month</td>
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<td>4 = Once per season</td>
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<td>5 = Never</td>
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<table>
<thead>
<tr>
<th>Means of transport</th>
<th>7.1.3 - What is the frequency of vehicle transport to the nearest permanent food market?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public transport</td>
<td>1 = Daily</td>
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<td>2 = Once per week</td>
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<td>3 = Once per month</td>
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<td>4 = Once per season</td>
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<tr>
<th>Means of transport</th>
<th>7.1.4 - What is the cost (in LD) of transporting 50 kg rice bag from the permanent food market to the community in the dry season (excluding the cost of the rice)</th>
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<tbody>
<tr>
<td>Private vehicle</td>
<td>1 = Health Center/clinic</td>
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<tr>
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<td>2 = Traditional healer</td>
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<td>4 = Other</td>
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<th>Means of transport</th>
<th>7.1.5 - What is the cost (in LD) of transporting 50 kg rice bag from the permanent food market to the community in the rain season (excluding the cost of the rice)</th>
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<tbody>
<tr>
<td>Public transport</td>
<td>1 = Health Center/clinic</td>
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<td>2 = Traditional healer</td>
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<td>4 = Other</td>
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</table>
Section 8– Community organizations

8.1 Are there community groups, organization (NGOs) or structures existing in this community? |______|
YES.................1 NO...................2 (skip to 9.1)

8.2 - What four major community development projects exist in this community? (circle the main three)
1 = No community development projects
2 = Construction of school building
3 = Construction/maintenance of health facility
4 = Provision of drinking water
5 = Provision of irrigation water
6 = Construction of Community Centre
7 = Construction of Community Farm
8 = Construction of Community Market
9 = Construction/maintenance of Roads
10 = Other (specify)

8.3 What are the main community organizations that exist in this community, such as women’s groups, farmer’s co-operatives, credit organizations? If so, please name and describe their activities.

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<thead>
<tr>
<th>Community organizations</th>
<th>Type of project or activity</th>
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</thead>
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</table>

8.4 Are there any external agencies such as NGOs, Church Groups or Government agencies that are supporting activities in this community? If so, please name and describe their activities.

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<thead>
<tr>
<th>Community organizations</th>
<th>Type of project or activity</th>
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Section 9– Community priorities

9.1 – What are the three immediate priorities for people in this community?
   (a) ____________________________________________ |___|___|
   (b) ____________________________________________ |___|___|
   (c) ____________________________________________ |___|___|

9.2 – What are the three long-term priorities for people in this community?
   (a) ____________________________________________ |___|___|
   (b) ____________________________________________ |___|___|
   (c) ____________________________________________ |___|___|
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<tr>
<th>Child number</th>
<th>DOB (m/d/y) or age in months</th>
<th>Gender (M/F)</th>
<th>Oedema (Y/N)</th>
<th>Weight (Kg) 0.1 kg</th>
<th>Height (cm) 0.1cm</th>
<th>Registered in SFP/TFC [no, Yes; SFP (Wet/Dry) or TFC]</th>
<th>Measles vaccine (1-7; see below)</th>
<th>Vitamin A last 6 months (y/N)</th>
<th>Illness last 2 weeks [no or 1 = Diarrhoea; 2 = ARI; 3 = Malaria; 4 = Fever; 5 = Measles; 6 = Other]</th>
<th>Is the child breastfeeding now [Yes, no]</th>
<th>If no to breastfeeding at what age in months did you stop?</th>
<th># of Times a day feed child</th>
<th>Age of child in months when</th>
<th>Fluids + Breast</th>
<th>Foods started</th>
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Measles vaccination- 1 = past 2 months by card; 2 = past 2 months by recall; 3 = past 4-6 months by card; 4 = past 4-6 months by recall; 5 = before the last 6 months by card; 6 = before the last 6 by recall; 7 = never received vaccine
### APPENDIX Cluster #

#### MORTALITY DATA COLLECTION FORM

<table>
<thead>
<tr>
<th>HH No.</th>
<th># Live Births to the Mother</th>
<th>Number and Date of live births That died</th>
<th>total people in hh</th>
<th>total under 5 in hh</th>
<th>total deaths after September 1, 04</th>
<th>No. deaths of &gt; 5 after September 1, 04</th>
<th>No. deaths of &lt; 5 after September 1, 04</th>
<th>causes of death in &lt; 5</th>
<th>causes of death in &gt; 5</th>
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Key for cause of death: 1 = diarrhea, 2 = ARI, 3 = fever, 4 = measles, 5 = malnutrition, 6 = accident, 7 = war related, stray bullet, etc., 8 = unknown, 9 = other
Explanations for Mortality Questionnaire

Selection of the Household:
The method of selecting the families to take part in the survey is the same as that for an anthropometric survey except that families that have no children aged between 6 and 59 months are also included. The survey must include at least 30 families per cluster.

The household or family is defined as all the people eating from the same cooking pot.

Defining the time period and the questionnaire:
For the nutrition survey in Lofa County in January-February 2005, the time period will be July 26, 2004 through the date of the data collection.

The Data Collection Form for Mortality, (see next page) will be completed by asking:
- Record total number of live births to the mother
- Ask whereabouts of each live births including deaths, which will provide number of live births now dead
- Record number and approximate dates of the live births that died; Circle any occurring since July 26, 2004
- Record the number currently living in the household
- Record the total under 5s living in the household
- Record the total number of deaths since July 26, 2004
- Record no. of deaths of members over 5 years old
- Record no. of deaths of member under 5 years old include live births that died since July 26, 2004
- Select all the deaths that occurred within the time period in < 5s and dead births; record causes of death
- Record causes of death in > 5

Key for cause of death: 1 = diarrhoea, 2 = ARI, 3 = fever, 4 = measles, 5 = malnutrition, 6 = accident, 7 = war related, stray bullet, bomb, etc., 8 = unknown, 9 = other

Diarrhoea: any episode of more than 3 stools per day; bloody diarrhoea (blood in the stools)
Measles: defined as any episode of fever with skin eruptions
Fever: high body temperature
ARI: defined as any episode associating fever and cough and at least one of the following symptoms: expectoration, thoracic pain, dyspnea, wheezing
Malnutrition: defined as anyone presenting with bilateral oedema and/or wasting
Accidental
Others (to be specified after the pilot)
Unknown