

**Djibouti Livelihood Zone
In-depth Emergency Food Security Assessment
September 2006**

The authors of this report would like to thank

The beneficiaries who responded to the questionnaires

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UNICEF

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Executive Summary

Djibouti is one of the smallest countries in Africa, with a geographical area of only 23,200 square km. The country is strategically located on the Red Sea, and Djibouti port is an important transit port for the region and wider international context. Population estimates place the total population of Djibouti at approximately 800,000 people, with between 60 and 80% of the population thought to reside in Djibouti town. The hot and dry climate does not support agriculture, especially cultivation of staple crops, as average rainfall is around only 150 mm per year for most of the country.

Djibouti ranks 148th in 2006 Human Development Index out of 177 countries. Recent studies have identified that 26% of the population is undernourished and under-5 mortality rate was 126 per 100,000 births. According to 2004 PRSP extreme poverty rose significantly between 1996 and 2002, from 34.5% to 42.2%. School enrolment ratio is 33% (2004 data), and secondary school enrolment ratio is 19%. However, these aggregate figures mask the discrepancy between rural and urban enrolment and difference between boys and girls. Net enrolment rate in urban areas is 53%, whereas it is only 12% in rural areas. Boys are significantly more likely to be educated than girls, with an index of parity of 0.77 for urban areas and 0.50 for rural areas. Literacy rates are also low in Djibouti, with 27.3% of population knowing how to read and write (Human Development Report 2006).

The results of September 2006 EFSA, undertaken at the peak of the dry period, identify that 13% of the rural population are food insecure and highly vulnerable. However, there is a great deal of variation within the country, with the prevalence of food insecure/highly vulnerable households ranging from 27%/13% highly in the Northwest to 12%/7% in the Southeast.

Drawing upon the results of the study, in the Northwest Livelihood Zone food insecure household were more likely to be affected by a shock, predominately drought, which has caused a reduction in their consumption. In the Central and Southeast Livelihood zones, food insecure households are more likely to be female headed or undertake marginal livelihoods which depend on gifts. Households in the Central and Southeast Livelihood Zones with access to land or remittances from urban employment are more likely to be food secure. As with the Northwest Livelihood Zone, pastoral households who have lost pasture land in the recent drought are more likely to be food insecure.

Generally, although food insecure households eat 2-3 meals per day, have a dietary gap of pulses (5 days) and oils (4 day) out of seven with an acute difficulty of feeding their families between July and September. Relative to the sample, the food insecure households have a very low total expenditure per person coupled with a high percentage of the total expenditure on food. Food insecure households rely on food aid, as well as the market and where possible their own production (animal husbandry and market gardens) for sustenance.

Recommendations

Since 2004 WFP with partners have been assisting over 87,000 beneficiaries through emergency and protracted relief and recovery operations. Based on the weighted results of the household study, 13% of the population are food insecure and 7% are highly vulnerable.

However, the distribution of the food insecurity is not uniform. In general this report recommends the following:

1. Continuation of general distribution until the end of the June-September lean season
2. After the next lean period, shift general distributions to targeted food for assets (FFA) and food for training (FFT) programmes in the livelihood zones while continuing limited general distributions to marginal households in the northwest livelihood zone.
3. During the 2007 lean period (June – September) provide a general distribution to the highly food insecure households
4. Support school feeding programmes in all three livelihood zones

Sample Methodology

The study was designed to provide representative results for three aggregated livelihood zones in the country of Djibouti. Sampling was a two-stage cluster sample with 25 villages in each of the three livelihood zones. 8-12 households were then randomly selected in each of the 75 clusters. A total of 749 households were interviewed.

Recommendations

Based on the results of the EFSA, the report recommends assistance as follows:

1) Targeted General Food Distribution & Food for Assets (FFA) Programmes

- i.) General distribution to 42,750 beneficiaries until August 2007
- ii.) Food for Asset programmes for 28,000 beneficiaries between September 2007 and May 2008
- iii.) General distribution to 42,750 beneficiaries between June 2008 and August 2008
- iv.) Food for Asset programme to 28,000 beneficiaries between September 2008 and December 2008

The total estimated tonnage for the programme between January 2007 and December 2008 is 15,956 MT

Targeting

Below is a brief list of possible targeting criteria of food insecure and highly vulnerable households. However, these criteria can be refined with the communities.

- i.) 30% of households that own sheep are food secure which is significantly higher ($p < 0.05$) than households that do not own sheep.
- ii.) The proportion of female headed households that are food insecure is significantly ($p < 0.05$) higher than male headed households
- iii.) Households with marginal livelihoods (depend on gifts) are significantly more likely to be food insecure
- iv.) The food insecure households have the highest average household size (7.3 members), highest number of dependents (4.6) and the highest ratio of dependents to productive adults (1.7 to 1).

- v.) Food insecure households are more likely to be affected by a shock which has caused them to reduce their consumption.

2) School Feeding

Both the secondary data and information collected from the households indicate that there is a significant problem with child enrolment. According to the household responses, less than one-in-four school age boys and less than one-in-five school age girls attend school; the principle reasons for not sending children to school are: inaccessibility of school, domestic chores and school fees. The lack of school infrastructure agrees with the community focus group discussions where 60% of the communities indicated that they did not have a functioning school.

To address this, this report recommends that WFP with UNICEF improve child access to schools as well as continue provide a school feeding programmes in the rural areas of all three livelihood zones. In order to quantify the scope of the programme, WFP should develop the school feeding programme with the Ministry of Education (MoE) and UNICEF so as to comply with government priorities. In order to encourage female enrolment, due to the disparity between the percentage of boy and girl enrolled, the programme could consider a take home ration of oil (5l) for each female attending school each month. However, the ration size and priority areas should be decided in consultation with the MoE and other partners.

Social-economic background:

Djibouti is one of the smallest countries in Africa, with a geographical area of only 23,200 square km. The country is strategically located on the Red Sea, and Djibouti port is an important transit port for the region and in wider international context. The hot and dry climate does not support agriculture, especially cultivation of staple crops, as average rainfall is around only 150 mm per year for most of the country. Therefore, in comparison to most other African countries, Djibouti's economy is largely service-based (around 80% of GDP), and most of the national revenue is derived from the port and railway. Despite the relatively high GDP per capita (USD 1,993 in 2004), Djibouti ranks 148th in 2006 Human Development Index out of 177 countries. Djibouti's ranking on the index has not changed much in recent years, but Djibouti has nevertheless made some progress in terms of the index: in 1995 (the first year that Djibouti was included in Human Development Index) Djibouti's index was 0.479 and it has since risen steadily to 0.494 in 2006 (Human Development Report 2006)..

There is no accurate population data available for Djibouti, as the last census was conducted in 1983. Most estimates place the number of people somewhere around 800,000, and between 60 and 80% of the population is thought to reside in Djibouti town. Rural population comprises approximately 15% of the total population. The population belongs mainly to two ethnic groups, the *Issa* and the *Afar*. *Issa* are ethnic Somalis, whereas *Afar* are of Ethiopian and Eritrean origin. Relationship between the two ethnic groups has at times been tense, due to traditionally more dominant role of the *Issa* in country's politics, which the *Afar* have resented.

Regarding health indicators, the situation in Djibouti is improving but many gaps still exist. According to 2006 HDR 26% of the population is undernourished, in comparison to 53% in 1990/92. Around 18% of children under 5 years old are underweight, whereas 26% of children under 5 are stunted. According to WHO, under-5 mortality rate was 126 in 2004, whereas maternal mortality rate was 730 per 100,000 births. Poor pre-natal and obstetrical care, anaemia, malnutrition, and high levels of female genital mutilation (98% of women have undergone FGM) are the main causes for high maternal death rates. Data on current poverty levels is sketchy and not easily available, but according to 2004 PRSP levels of people living in relative and extreme poverty rose significantly between 1996 and 2002, from 64.9% to 74.4% and from 34.5% to 42.2%, respectively. Education sector in Djibouti faces big challenges: despite some progress, primary school enrolment ratio is still only 33% (2004 data), and secondary school enrolment ratio is 19%. These numbers are very low, even when compared to other Sub-Saharan countries. Furthermore, disparities exist between rural and urban areas and girls and boys. According to PRSP, the net enrolment rate in urban areas is 53%, whereas it is only 12% in rural areas. Boys are significantly more likely to be educated than girls, with an index of parity of 0.77 for urban areas and 0.50 for rural areas. Literacy rates are also dismally low in Djibouti: 27.3% of population knows how to read and write, again women being more disadvantaged as only 22.2% of them are literate.

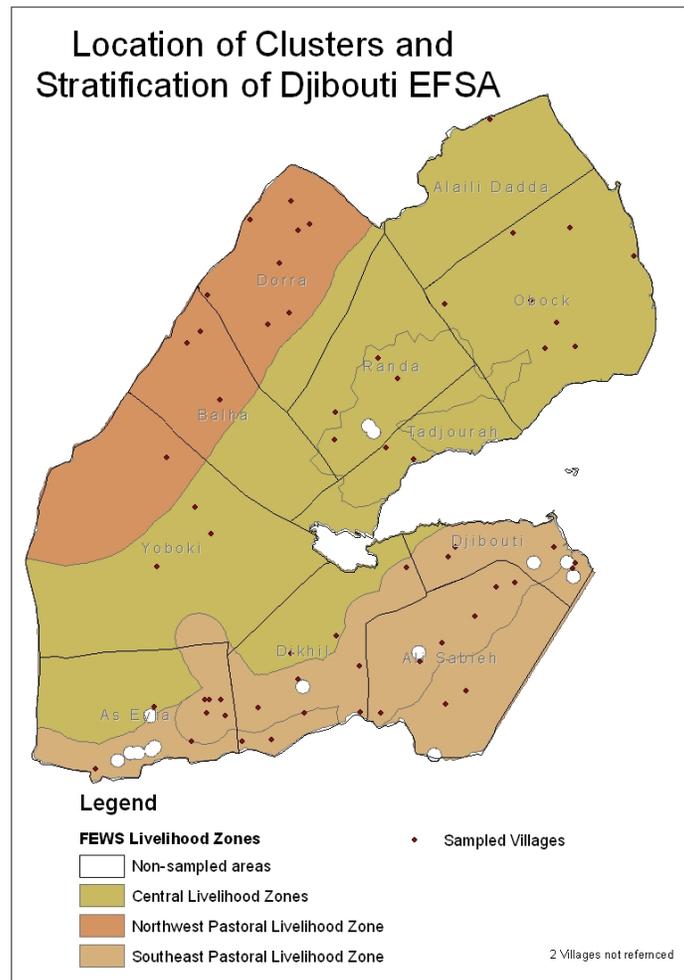
Djibouti FewNet office, in cooperation with the Government, has prepared livelihood zone profiles and maps, which are often used as a basis for understanding food security situation in the country. There are four principal rural livelihood zones in Djibouti: Northwest Pastoral zone, Central Pastoral zone, Southeast Pastoral zone, and Market Gardening zone. The only urban livelihood zone consists of Djibouti City. For all rural zones livestock forms an important source of livelihood. However, a majority of population needs another source of

income besides livestock and therefore connections to towns, especially Djibouti town are important. Towns offers markets for rural products (e.g. milk, meat, vegetables, and charcoal) and labour opportunities for rural people. The main difference between the rural zones is their proximity and degree of access to Djibouti town. In this respect the Northwest livelihood zone is the most disadvantaged by its location, whereas access is better especially for people living in Market Gardening zone and Southeast Pastoral zone.

Djibouti is a net importer of food. According to the FAO Food Balance Sheets, only 8% of the Kcal per person per day is from national production (pulses & vegetables, milk, and meats). The remainder is from imports.

Sample Methodology

The Djibouti EFSA aims at characterizing the households within three livelihood zones. The zones divide Djibouti into three bands labelled “Northwest”, “Central” and “Southeast”. A map of the cluster locations and the stratification of the country is presented below. The sample universe for this study was all the households within each of the three strata. The sample was drawn through a two-stage cluster exercise. The first stage was drawn using a list of all villages in each of the three livelihood zones. A total of 25 villages were selected for each of the three strata. 12 households per village were then randomly selected.



Limitations to Study

The EFSA, like any field study, is subject to limitations. While rigorous standards were applied, the following must be acknowledged:

Threat to external validity: Limitations in the ability to generalize the results from the sample to the general population must be acknowledged. The data were collected to be representative for the households in each of the three livelihood zones ('Northwest', 'Central', and 'Southeast'). The survey data is designed to represent the situation at a given point in time. Data collection was conducted during the lean period and consequently the overall food security situation at the time of the survey can therefore be considered as below typical level.

Threat to internal validity: Inaccurate recall and quantitative estimates may affect the validity of the results. The enumerators were trained to facilitate recall and quantitative estimates to improve internal validity. In some cases social desirability, lack of freedom of speech and expectations may have affected the responses and set patterns, especially given that the households may previously have been the object of program oriented assessments (e.g. food aid) and responses. However, the anonymous character of the survey contributed to mitigate this bias.

Threat to reliability: Threat to the reliability or repeatability (Kalton et al., 2005) of the results was minimized through questionnaire design and training of the enumerators. Training of the household questionnaire was conducted to reduce individual variation in how enumerators understood the questions. The questionnaire, although designed in English, was translated into French for the enumerators to use.

Northwest Livelihood Zone

Demographics

In the northwest livelihood zone, the estimated number of people per household is 5.8. Of the interviewed households, 87% were male-headed household while 13% were female-headed. The study categorized the age of heads of households into 3 categories, "child-headed", "productive adult-headed", and "elderly-headed households". The majority of the households (82%) were headed by a productive adult. However, 17% of the households were headed by an elderly adult (>59yrs) and less than 1% of the households are headed by children.

Drawing on the responses from the Northwest strata, 86% of the heads of households were married, 12% of the heads of the households were widows or widowers, while the remaining 2% of the heads of households were either divorced or never married.

Dependents

In the Northwest livelihood zone the mean number of children per households was 2.8. Households had also a mean of one household in 3 with elderly dependents. The mean ratio of dependents to number of productive adults is 1.4 to 1.

Literacy and Child Education

According to the household results, 3% of the heads of households could read and write. However, it was indicated that none of the spouses could read and write. Secondary data suggests that 12% of children attend school. 59% of the households had children of school age (6-14) but only 21% reported having boys attending school and 15% of girls attending school. When asked why households did not send their children to school 50% responded that the school was too far or inaccessible. Other reasons included taking care of livestock (18%) and not being able to pay school fees (15%).

The community focus groups in the Northwest livelihood zone indicate that only 20% of the communities have a functioning school. If there is no school in the village, usually the journey to the nearest school takes more than an hour.

Access to Water

According to the household responses, 71% of the households do not have access to potable/protected water. Between 79 and 84 percent of the households in the Northwest livelihood zones access their water source throughout the year and 64% use the same source all year long. 94% of the households indicated that they do not pay for water and for 61% of the households, water collection takes 30 minutes or less.

For households that require a second water source, the second water source is used in conjunction with the primary source by 57% of the households. The remaining households (43%) use their second source, primarily open spring (31%) or open well (29%), when the first source is not available.

Assets

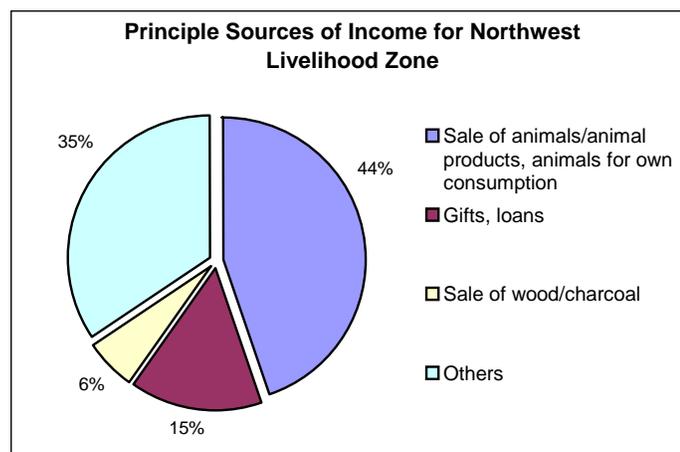
Aside from the ownership of mattresses (33%), blankets (67%) and mosquito nets (27%), very few households indicated that they owned wealth assets such as radio (9%). Of the remaining 13 assets, less than 5% of the households indicated owning any.

Animal Ownership

Very few of the households in this livelihood zone reported owning cows, donkeys or poultry. The mean ownership of camels per household is 3.8, while the mean number of sheep and goats per households is 3.9 and 26.7.

Economic Activities and Sources of Income

The dominant economic activities for the households in the Northwest Livelihood zone in terms of income are focused primarily on the sale of animals, gifts and loans, and animal husbandry. As the graph to the right



illustrates, 44% of the households identified the sale and consumption of animals as an important economic activity. For 15% of the sample, gifts and loans were key economic activities. Finally 6% of households indicated that the sale of wood or charcoal was a key source of income. The remaining 35% of households indicated the other 29 activities, which include remittances, pension and sale of ‘onga’.

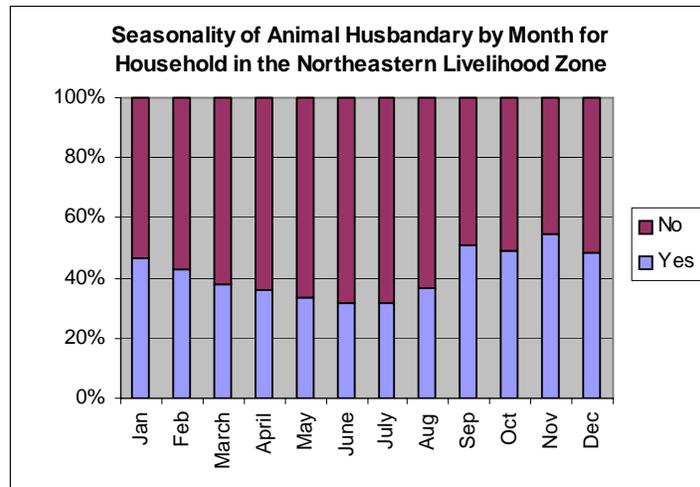
Sale of Animals & Animal Products

The respondent households identified animal husbandry in this livelihood zone as a key economic activity. In terms of contribution to the household income, activities related to animal production contributed on average 70% of the household’s income.

Within the household unit, according to the survey, 82% of the households indicated that animal husbandry was the responsibility of men.

The types of animal produces that are sold are focused on the sale of the animal (72%) and the sale of milk (24%).

Looking at the seasonality, households tend to undertake animal husbandry throughout the year. However, there is a reduced frequency between May and August.

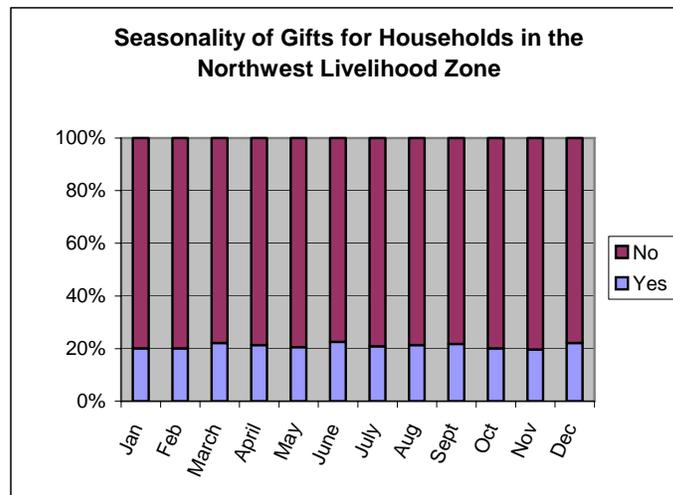


Gifts & Family Aid

Reception of gifts was the second highest income generation activity by household responses. In terms of importance to the household’s income, gifts contribute, on average, 51%.

Unlike animal husbandry, women participate more in this activity (23%). It is important to note that this does not suggest that women send remittances, it implies that they participate in the source of income.

As illustrated in the graph above, households that receive gifts received them almost equally throughout the year.

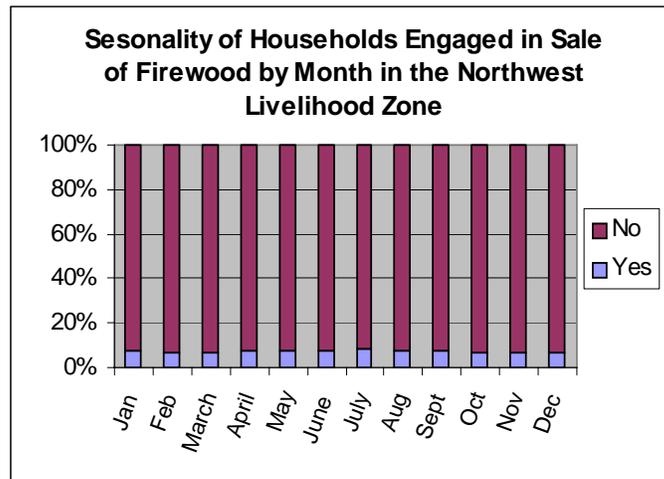


Sale of Firewood and Charcoal

The sale of fuel wood is undertaken only by 6% of the population. For households that do sell firewood, however, it contributes on average 31% of the household's income.

Within these households, 59% indicated that men undertake the income activity, 23% is by women, and adults, and all household members undertake the remainder.

As the graph above highlights, the sale of firewood is undertaken throughout the year.



Access to Land

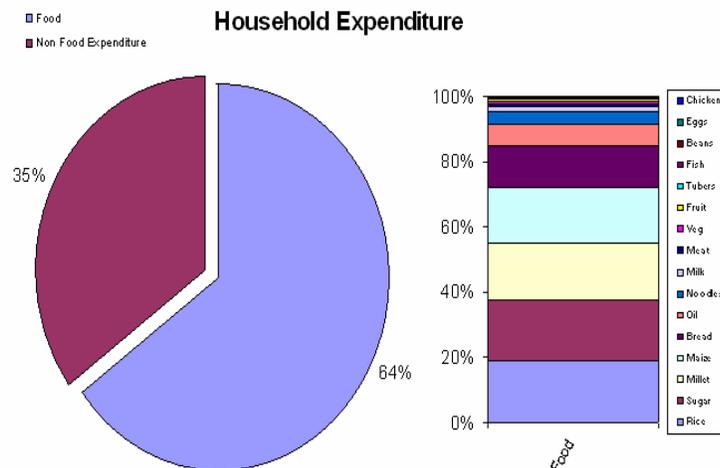
97% of the households in the Northwest sample indicated that they did not have access to agricultural land.

Access to Credit/Debt

Drawing upon the responses from the households, 6% of the households had access to credit. Of the households that have access to credit, 40% of the households rely on credit from traders. 26% of the households access credit from moneylenders and family and friends. The household results suggest that 93% of the households that had access to credit used the credit to buy food.

Expenditure

Reviewing household expenditure, 64% is centred on the purchase of food. Of the expenditure on food, the bulk of it is employed to purchase staples such as millet, maize, rice or bread.

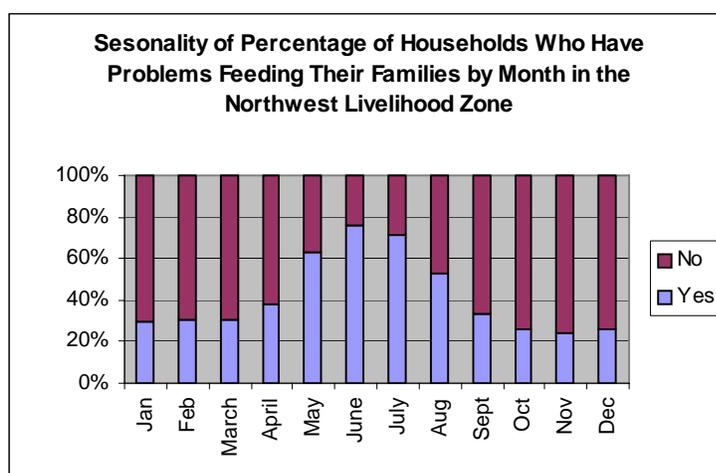


Migration

For the households in this livelihood group, number of households with a migrating male family member was very small (<1%). However, there is the possibility that there was some difficulty on this question as the community questionnaire suggests that 45% of villages in Northwest undertake migration. According to the community focus groups, migration is usually undertaken from November to February. Migrants generally migrate to Djibouti town to look for work. Most of the work sought after is low- or non-skilled. Absence from community is usually for long term and lasts up to a year.

Difficulty to Feed their Families

When asked, 43% of the households indicated that they perceived the current situation had moderately or severely deteriorated compared to the same period in 2005. Coupled with the household's perception of the situation, 56% of the households indicated that they had problems sometimes to always feeding their families.



Looking at the seasonality of when households have problem feeding their families, there is a peak in June with almost 80% of the households indicating they have food problems.

Shocks and Responses

In the last 12 months, 41% of the households in this livelihood zone indicated that they had suffered from a shock. 30% of the sample indicated that they were affected by a lack of pasture or fodder for their animals, and 23% of the households mentioned a decrease in the amount of water. 42% of the households that indicated they were affected by a lack of pasture or fodder indicated that they coped with the shock by migrating with animals. Other response options included borrowing from NGOs or traders (5%) and increased dependence on remittances (5%). 18% of the households indicated that they could do nothing. A decrease in the amount of water was addresses by 60% of the households by migration with animals. The remaining responses constituted very small percentages (<5%) of responses.

Consumption and Access to Food¹

¹ For a discussion of the construction of an access ranking please consult Annex 2 of this report

According to the household responses, 83% of the households indicated that children ate between 2-3 meals the previous day. On average children ate 2.6 meals per day. For the adults 86% of the households indicated that the adults consumed between 2-3 meals the previous day with a mean of 2.5 meals.

On average for all the households in the Northwest Livelihood zone, the market is the biggest food source, which contributes on average to 68% of food consumed in the households. The remainder is made up from own production (9%), gifts (2%), and food aid (21%). The large percentage contribution of food aid is explained by 83% of the households indicating that they had received food aid, which was almost exclusively from general distributions (97%).

Within the livelihood zone, there are three main consumption profiles. Most of the population (65%) living in the zone belong to good consumption group. The next largest group is the very poor consumption (18%), followed by the poor consumption class (15%). According to the households' responses in the 7-day recall call, food aid contributed to almost a quarter of the household's food sources. The importance of food aid as a source of food and the percentage of households that received food aid could explain the extreme difference between the first and second consumption profiles.

Within the North West Livelihood zone, 20% of household have weak and very weak access to food. The remaining 80% have either medium access (61%), or good and very good access (19%).

Food Security and Vulnerability²

Based on the responses of the questions concerning their consumption and access to food, the breakdown of household food security within the livelihood zone is as follows:

Food Security Class	N (Sample)	Pct Households
Food Insecure	64	27%
Highly Vulnerable	30	13%
Moderately Vulnerable	111	47%
Food Secure	30	13%

Food Insecure in the Northwest Livelihood Zone

According to the results, 40% of the households in the Northwest Livelihood zone are either food insecure or highly vulnerable. Below is a brief summary of significant characteristics of the two classes

- In the Northwest Livelihood Zone the food insecure households have the highest average household size (7.3 members), highest number of dependents (4.6) and the highest ratio of dependents to productive adults (1.7 to 1).
- The proportion of food insecure households that indicated being affected by a shock is significantly higher ($p > 0.05$) than other households

² For a discussion of the construction of the measure of household food security, please consult Annex 3 of this report

- 35% of food insecure households indicated that a shock caused a reduction in their consumption. This is significantly higher ($p < 0.05$) than the other food security classes.

Central livelihood zone

Demographics

Of the households surveyed in Central zone, females headed 24%. In terms of marital status, 86% of household heads were married, and 11% widowed. The rest (approximately 3%) are either divorced/separated or never married. Of heads of households, 80% are productive adults, 19,6% are elderly (>59 years), and 0,4% are children. The average household size is 5.6 members.

Dependents

The mean number of children per household is 2.5. Of all households in Central zone, 28% have 1 or 2 elderly dependents. The average ratio of dependents to number of productive adults is 1.3 to 1.

Literacy and Child Education

About 6% of household heads know how to read and write, whereas 2% of spouses are literate. Half of the households (51%) in Central zone have school-aged children, but only 29% of boys and 20% of girls attend school. The primary reasons for not sending boys to school were the inaccessibility of school (57%) and taking care of animals (29%). For girls the most important reasons for lack of education were the same, namely inaccessibility of school (40%) and taking care of animals (23%). However, for girls also domestic chores (13%) contributed significantly to lack of education.

There is a school in about 30% of villages in Central zone. About 30% of villages responded that there is no alternative school in the vicinity of the village. If an alternative school exists, journey there takes usually more than an hour. No villages visited in Central zone had a secondary school.

Access to Water

About 70% of the respondents get their water primarily from an open well or from a borehole. Between 91% and 97% of households are able to use the primary water source throughout the year. Only 3% of households pay for the water from primary water source, and for 71% of households fetching water takes 30 minutes or less.

66% of households do not have an alternative water source. 14% of respondents have an alternative water source, which is used together with the primary water source, and 20% of households use an alternative water source when the primary water source is unavailable. Of the latter households 80% use an open well and 14% unprotected spring.

Assets

The most widely owned assets in Central zone are blankets (81%) and mattresses (39%). Of productive assets the most commonly owned are wheelbarrows (6%) and hoes (5%). Overall the ownership of productive assets is very low and a lot lower than ownership of most non-productive assets.

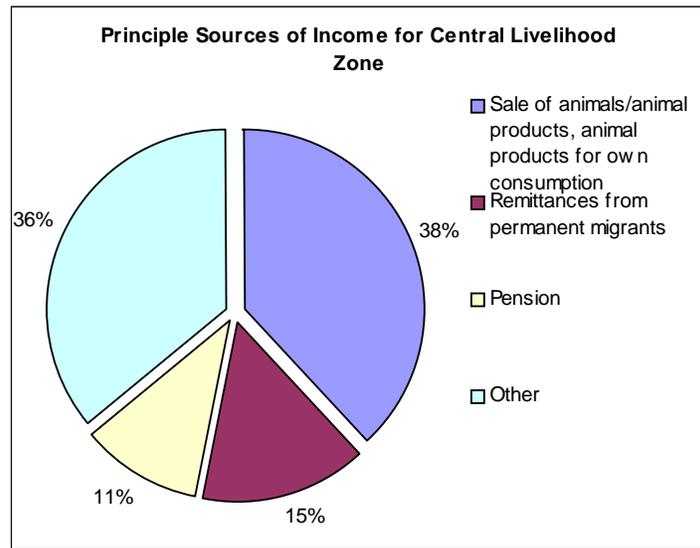
Animal Ownership

On average households own 27 goats, 3 camels and 4 sheep. Only a few households own cows or donkeys, and no household owns poultry.

Economic Activities and Sources of Income

The most important livelihood activities in the Central zone are animal based livelihoods (sale of animals and animal products, and animal products for own consumption), remittances from permanent migrants, and pension.

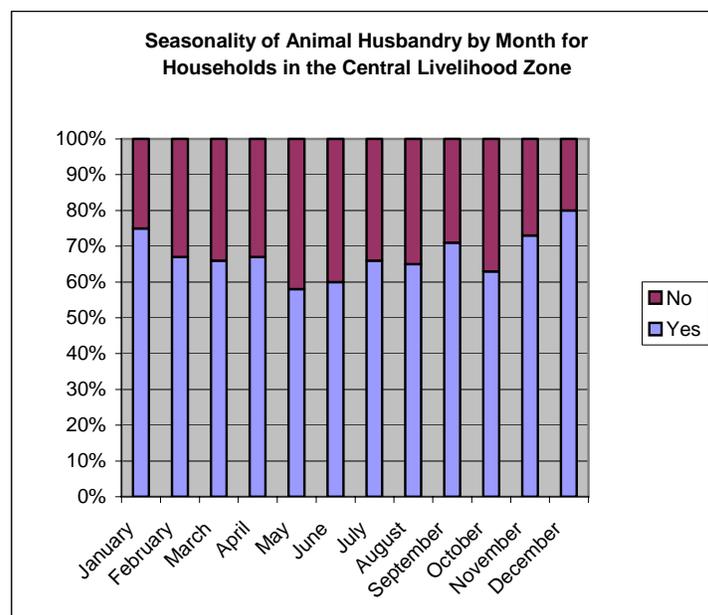
In reference to the graph, sale of animals/animal products, and animal products for own consumption is the primary livelihood for 38% of the respondents. 15% of households consider remittances from permanent migrants as their most important income source. For 11% pension is the most significant source of income. The rest 36% of households considered other sources of income more important, e.g. sale of wood/charcoal (9%) and non-skilled, paid rural work (4%).



Sale of Animals & Animal Products

For those households where animal husbandry is the most significant income source, the mean contribution of sale of animals and animal products to household income is 76%.

Men contribute approximately 76% of income from sale of



animals and animal products, whereas women contribute 15%.

The animal products sold are live animals (78%), sale of other animal products (11%), sale of milk (8%), and lastly sale of meat (3%).

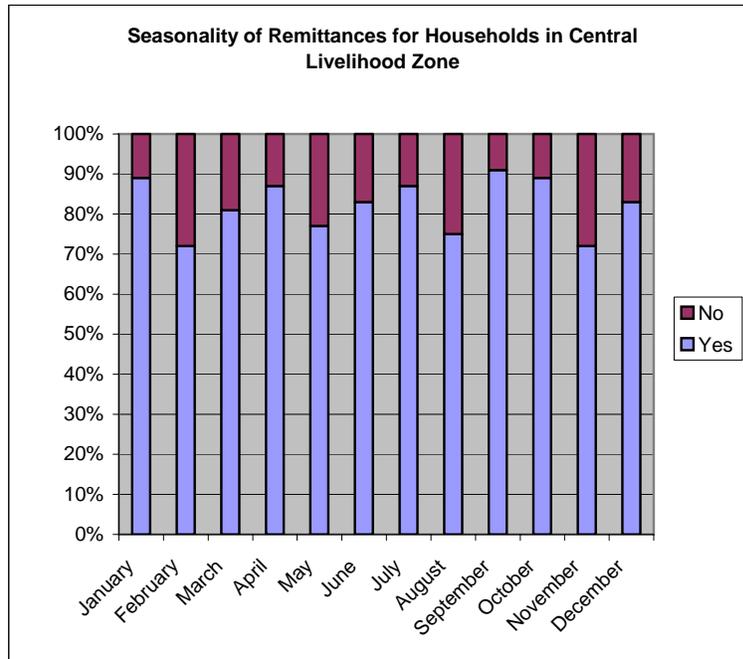
Of those households that practice animal husbandry, large majority practice it throughout the year. There is, however, a slightly decreasing tendency from May to August, which coincides with the main lean season in Djibouti.

Legend in the graph should be changed

Remittances from Permanent Migrants

Around 15% of respondents in Central zone stated that remittances are their most important livelihood source. Remittances are a very significant source of income for these respondents; as on average remittances contribute 80% of household income.

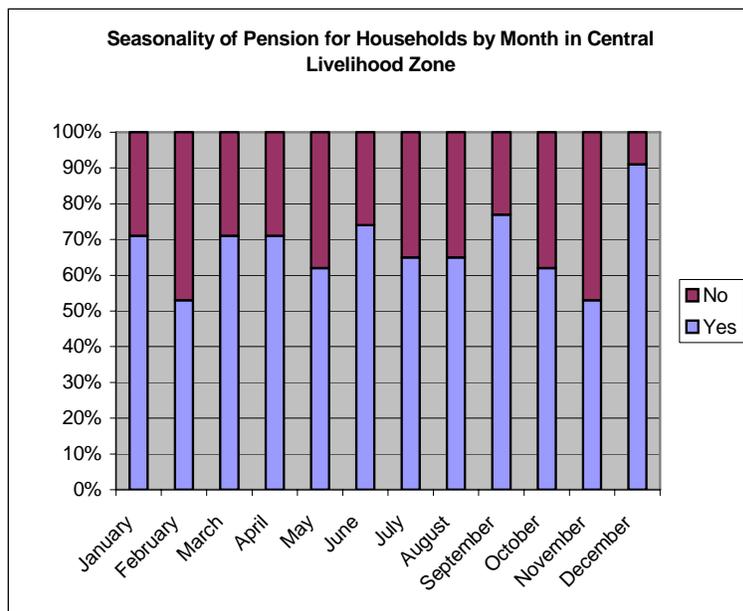
Men contribute 86% of income received from remittances, whereas women contribute only 6%. This can mainly be explained by the fact that in households, it is mostly men who migrate in search of work.



Concerning seasonality, income from remittances is quite stable throughout the year (differing between 72% in February and 91% in September).

Pension

For the 11% of the households who consider pension as their most important income source, on average 86% of their income are derived from pension.



In terms of contributions inside household, men contribute around 67% of pension income, whereas women contribute 21%. Women participate more in this livelihood than in other two main livelihoods.

There is higher seasonal variation in income received from pension than in other income sources. The share of pension differs between 53% in February and November to 91% in December.

Access to Land

Around 15% of respondents in Central livelihood zone have land for cultivation.

Access to Credit/Debt

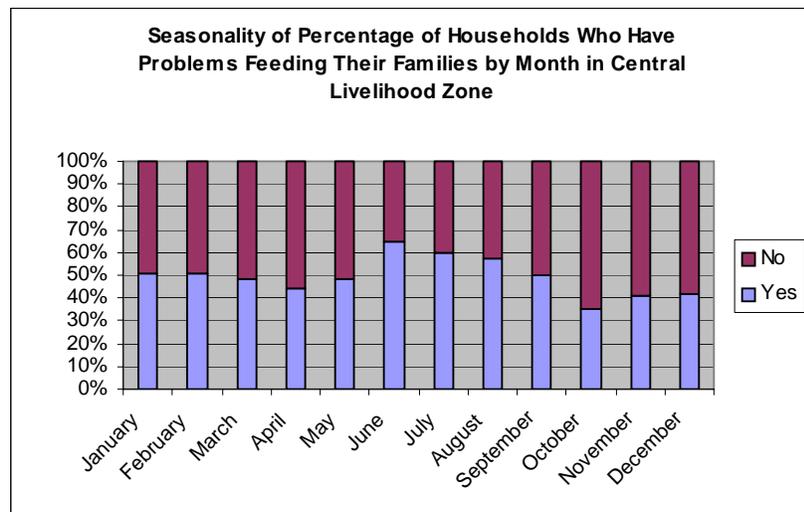
A minority of 12% of households has access to credit. Half of those have access to credit from traders, and 3% from friends. More institutionalized form of credit, i.e. from banks or NGOs, is almost non-existent.

Migration

In Central livelihood zone, about 17% of households have at least one permanently absent male migrant. Female migration is considerably less common, with <2% of households reporting a permanent female migrant member of the household. However, as is the case with other zones, migration may not have been captured well in the household questionnaire, as 78% of villages indicated migration in focus group discussions in Central livelihood zone. Migration, on basis of community questionnaires, seems to be more prevalent in Central livelihood zone than in the other two zones. Looking at seasonality, more than half of the villages reported migration between November and May, which signifies that less migration occurs during the lean season from June to September. In Central zone absence from household lasts usually between 3 and 9 months, and migrants most often travel to Djibouti town or other towns in search of work. Migrants from Central livelihood zone usually look for low- or non-skilled work, or they migrate with animals.

Difficulties to Feed Families

45% of households have sometimes to very often problems in feeding their families. Around 46% of respondents considered their economic situation to be about the same as last year. 34% of households had



experienced moderate or severe deterioration in their economic situation since last year.

There is a clear seasonal pattern in households experiencing difficulties in feeding their families. The most difficult period is that from June to September, with a peak in June (65%), whereas in October households have less problems (35%) in feeding their families than in any other month.

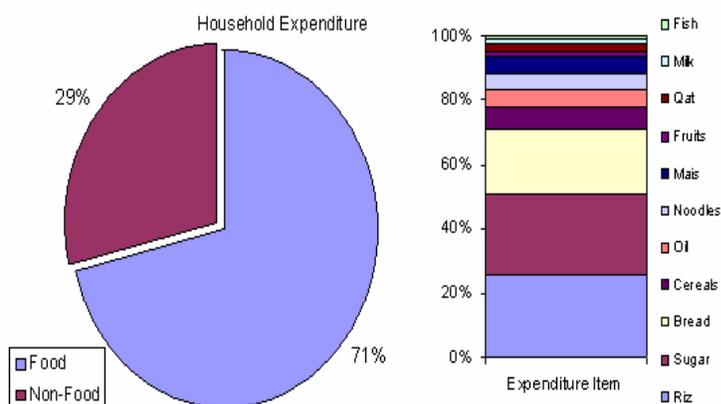
Shocks and Responses

30% of households indicated that they had experienced a negative shock during the last 12 months. Of these households, 24% reported reduction of pastures for animals, and 12% of respondents stated that there had been problems with wild animals. According to another 12% there was reduced water for animal consumption.

Unfortunately many households experienced that nothing could be done in response to the shock (37%). The second most common coping mechanism was migration with animals (13%).

Expenditure

Around 71% of expenditure is spent on food, and 29 % on non-food items. Of food expenditure, 58% is spent on staple foods, e.g. on rice (18%), sugar (17%) and bread (14%).



Consumption and Access to Food³

Almost all households (94%) reported that adults eat 2-3 meals a day or on average 2.7 meals each day. In general children eat 2-3 meals with a mean of 2.9 meals per day. The three main consumption profiles in the livelihood zone are good consumption (81%), poor consumption (11%) and very poor consumption (7%).

On average for all the households in the Central Livelihood zone, the market is the biggest food source, which contributes on average to 74% of food consumed in the households. The remainder is made up from own production (11%), gifts (7%), and food aid (6%).

Nevertheless, around half of the population in Central livelihood zone received food aid (55%), and 92% of those who receive food aid are beneficiaries of general food distribution.

Within the livelihood zone, there are three consumption profiles. Most of the population (81%) living in the zone belong to good consumption group. The next largest group is the poor consumption profile (11%) and finally very poor (7%). Unlike the Northwest Livelihood zone where food aid contributed to almost a quarter of the household's food sources, in the

³ For a discussion of the construction of an access ranking please consult Annex 2 of this report

Central Livelihood zone food aid only contributed 6% of the households' food sources. This could be explained by just over half the sampled households indicating that they received food aid. However, it is unclear if this explains the high percentage of good consumption households. In addition the importance of remittances and pensions could suggest an explanation for such broad distribution of a good consumption profile

For the good consumption group the market is the principle food source with 75% of their diet in the last 7-days coming from the market. Own production contributes on average 10% of the household's food basket, with the remainder coming from food aid and gifts (<6%). 72% of the food in the previous 7 days came from the market. The remainder of the household's comes from gifts (16%) and own production (8%). For the very poor consumption group, 54% of food is accessed through markets, and 22% of food is received through food aid. 17% of food comes from own production.

Within the Central Livelihood zone, 41% of household have good (28%) and very good (13%) access. 41% of the households in the livelihood zone have medium access. The remaining 18% have either poor access (5%), or very poor access (13%).

Food Security and Vulnerability⁴

Based on the responses to the questions concerning their diet and access to food, the breakdown of household food security within the livelihood zone is as follows:

Food Security Class	N (Sample)	Pct Households
Food Insecure	41	16%
Highly Vulnerable	20	8%
Moderately Vulnerable	104	41%
Food Secure	92	35%

Food Insecure in the Central Livelihood Zone

According to the results, 24% of the households in the Northwest Livelihood zone are either food insecure or highly vulnerable. Below is a brief summary of significant characteristics of the two classes

- The proportion of female headed households that are food insecure is significantly ($p < 0.05$) higher than male headed households
- Households with marginal livelihoods (depend on gifts) are significantly more likely to be food insecure
- There is no significant relationship between food security and shocks and coping.
- Households with a literate head of households are more likely to be food secure than illiterate heads of households

⁴ For a discussion of the construction of the measure of household food security, please consult Annex 3 of this report

Southeast Livelihood Zone

Demographics

In the Southeast Livelihood zone, the estimated number of people per households is 5.8. A productive adult heads 75% of the households in this livelihood zone. The remaining households are headed by an elderly member (24%) or a minor (<1%).

The marital statuses of the households within the Southeast Livelihood zone are 80% married, 17% widowed, with 2% or less either divorced or single.

Dependents

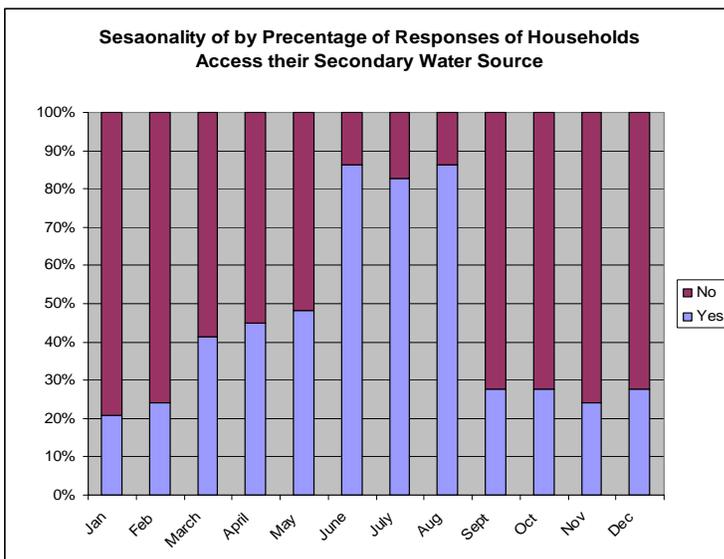
In the Southeast Livelihood zone households have on average 2.6 children. There is one in three households with an elderly member and the ratio of dependents to productive members (15-59 yrs) is 1.3 to 1.4% of the responding households indicated that they had either a disabled household member or a disabled head of household.

Literacy and Child Education

The results from the households indicate that 94% of the heads of the household indicated that they could not read or write. Similarly, 98% of the spouses responded that they could not read or write. 56% of the households indicated that they had children of school age. However, of the households with school age children, 34% of the boys and 20% of the girls attended school. The explanations given for why children did not attend school were a school was not accessible (34%), not able to pay school fees (21%), and taking care of animals (21%). The high percentage of households indicating the lack of school infrastructure agrees with the community focus group discussions where 60% of the communities indicated no functioning school.

Access to Water

According to the household responses, 63% of the households do not have access to potable/protected water. 91% of the responding households use the same source all year long. According to the households, water collection takes for 96% 30 minutes or less and only 4% of responding households indicated they paid for water.



Although the majority of households have year round access to water, 29% indicated they use a secondary source. 35% of the households use the second source in conjunction with the primary. The remaining 65% of households use the secondary source when the primary source is not available. For households that require a second water source, the second water source is used in conjunction with the primary source by 57% of the households. As the graph above illustrates, there is a high usage of the second water source between April and August.

Assets

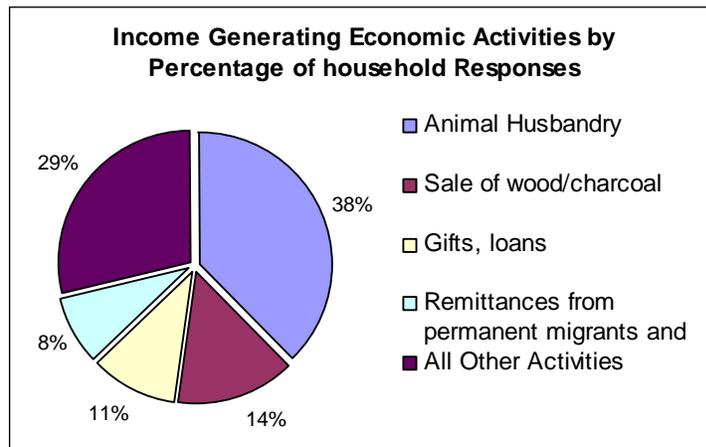
Ownership of the 17 household assets asked in the questionnaire varied. However, 14% of the household owned blacksmith tools, 17% owned a radio and 40% of the households owned a mosquito net. Very few of the households owned the remaining assets (<10%).

Animal Ownership

On average, household owned 4 sheep, 1 camel, and 19 goats. 53% of the responding households indicated that they owned one donkey or more. Less than 1% of the sample indicated that they own cattle and poultry.

Economic Activities and Sources of Income

According to the percentage of responses of the households, the principle economic activities undertaken by order of importance are animal husbandry (53%), sale of fuel wood (20%), gifts (15%), and remittances from permanent migrants (12%). The remaining 19 activities were

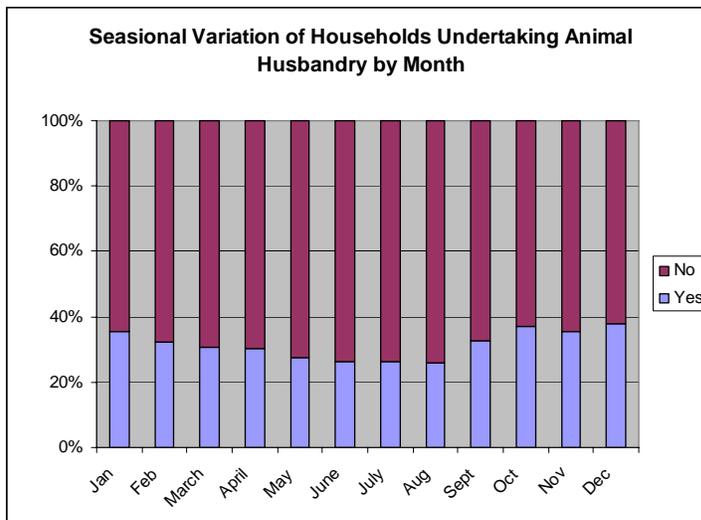


identified by 29% of the households as an economic activity. The graph to the right illustrates the breakdown of responses by households by economic activity.

Animal Husbandry

Over 50% of the responding households indicated that activities related to animal husbandry (sale of animals, production and sale of milk products, sale of animal products for own consumption, sale of animal products) are their most important income source. In terms of contribution to the household's income, for households that engage in animal husbandry, on average 67% of the household's income comes from this activity. In terms of types of products that are sold, 49% of the households indicated that they sell live animals, and 41% of households indicated the sale of milk and butter.

48% of the households indicated that animal husbandry was the responsibility of men, whereas 30% of the households responded that it was the responsibility of women. The high participation of women, when compared to the Northwest Livelihood Zone is attributed to the high number of women that are involved in the sale of milk products.

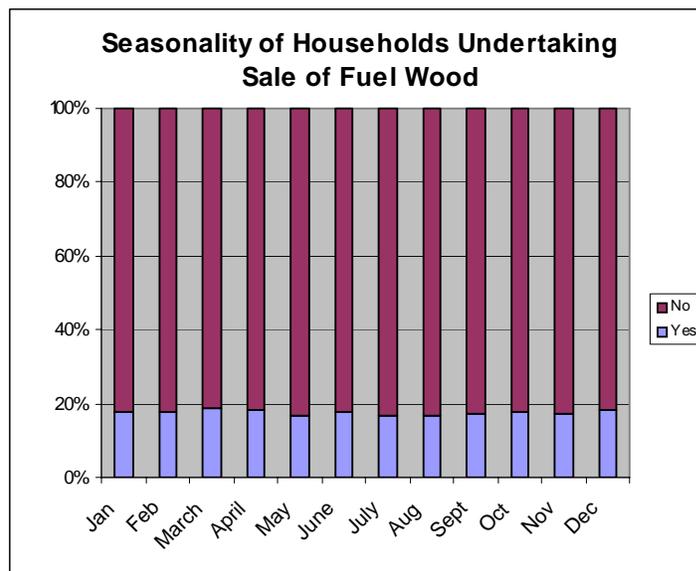


The graph above is the seasonal distribution of animal husbandry activities throughout the year. As the graph illustrated, there is a seasonal dip of households undertaking this activity between May and September.

Sale of fuel wood

The second most indicated source of income undertaken by the households is the sale of firewood. According to the households who undertake the sale of firewood, on average, it contributes 68% to the household's income.

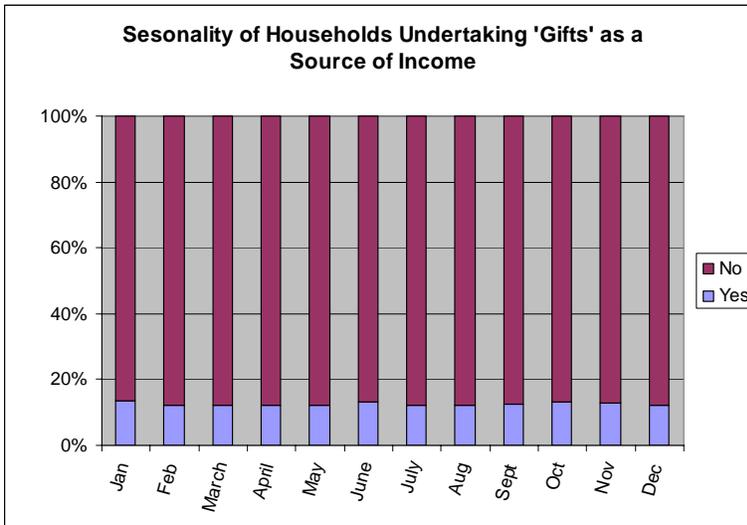
58% of households responded that men undertake the sale of fuel wood, while 26% of the sample indicated that the sale of fuel wood is the responsibility of women.



Gifts

Gifts were identified by 11% of the respondents as a key income generating activity. Of the households that depend on gifts as a source of income, on average, 64% of the household's income comes from this activity. Of the households that identified 'gifts' as their primary source of income, 30% identified no other activity.

Within the household, 58% responded that income from gifts was undertaken by men only. 25% of the households indicated income from gifts as the responsibility of women only. The remaining households indicated that gifts were undertaken by adults only.



Seasonally, households who rely on gifts as a source of income, undertake this activity all year long. As the graph above illustrates, there is very little seasonal variation when households rely on 'gifts' as a source of income.

Remittances from permanent migrants

Of the 8% of the households that employ remittances as a source of income 75% of the household's income comes from this activity. Looking at the other activities undertaken by the households who identify remittances as a primary source of income, 71% of the households did not identify another activity.

63% of the households receiving remittances indicated that it was the responsibility of men. The remaining 33% of households indicated that remittances are received by women only (22%) and adults only (11%).

Remittances are received through out the year. Between 95 and 100% of the households, that receive remittances indicated that they received it each month.

Access to Land

Unlike the households in the Northwest Livelihood Zones, 13% of households indicated that they had a garden. Of these households, 39% of respondents indicated that they grow melons or watermelons and 28% responded with growing tomatoes. Of the 30 households engaged in gardening, 50% of the gardens are irrigated

Access to Credit

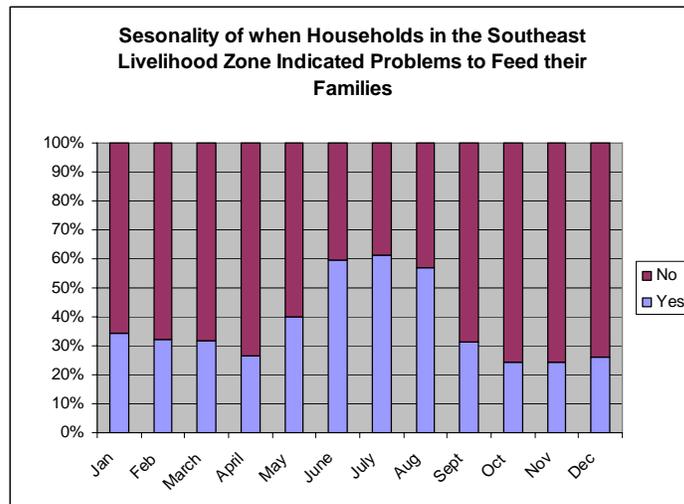
Within the Southeast Livelihood Zone, 7% of the households indicated that they had access to credit, which was dependent on traders (61%). The remaining sources of credit included moneylenders and NGOs (11% each respectively). As the dominant source of credit is traders it is little surprise that 61% of the households with access to credit used credit to buy food. Buying food on credit is an activity undertaken "sometimes" by 44% of the sample that have access to credit.

Migration

Less than 10% of the households indicated that they had family members either temporarily or permanently migrating. This result corresponds with households that indicated income from remittances or gifts. The very small percent of households with migrants makes it difficult to discern a seasonal pattern. However, the results would suggest that it is undertaken throughout the year. It should be noted that migration is an almost exclusive male activity as households indicated very few females sending remittances (<1%).

Difficulties to Feed their Families

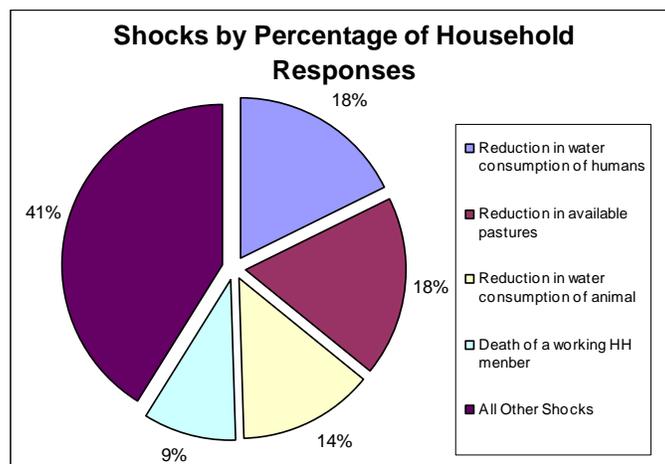
According to the households in the Southeast Livelihood Zone, 36% of the households indicated that the situation, in comparison to 2005, had deteriorated moderately or significantly. However, 70% of the households responded that in the last year they had between sometimes to most of the time difficulties feeding their families.



Looking at the seasonality, there is a marked increase in the percentage of households that have a difficulty to feed their families between May and September.

Shocks and Responses

Unlike the Northwest livelihood zone, 25% of the households indicated that they had been affected by a shock and 21% by a shock that had affected their household consumption in the last 12 months. Of the households that reported shocks, as the graph illustrates, the three principle shocks are a reduction in water for humans (22%) and animals (18%), and reduction of pastures (18%).

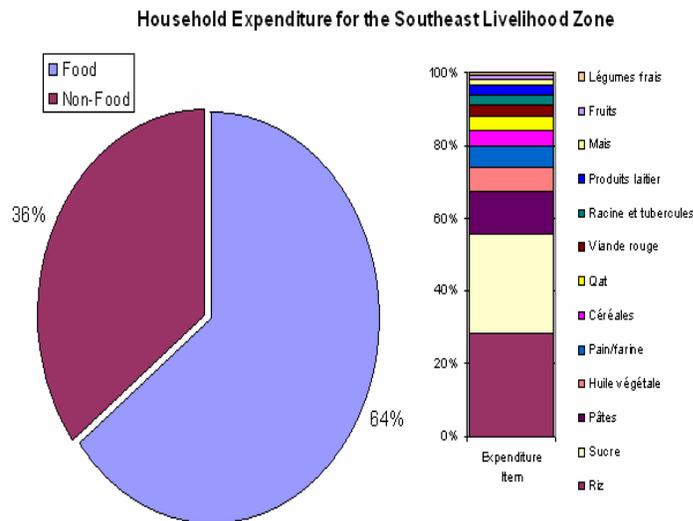


Of the 21% of the households indicating a shock affecting their household consumption, 26% identified reduction in pastures. Other shocks, which affected the household's consumption, included the lack of drinking water (16%) and death of household member (14%).

To respond to the shocks households were asked to identify how they coped. Of the households that had indicated a shock affecting their consumption, 55% of the households responded that they did nothing. The remaining households identified (<7% each) a reduction in food quantity and selling of animals

Expenditure

For all the households in this livelihood zone, 64% of expenditure is centred on the purchase of food. Of the expenditure on food, 55% is attributed to the purchase of rice and sugar. The bulk of the non-food expenditure, in the last 30 days, is allocated to clothing (16%), education (3%) and soap (3%).



Consumption and Access to Food⁵

According to the household responses, 94% of the households indicated that the adults consumed between 2-3 meals the previous day with a mean of 2.7 meals. Similarly 82% of the households indicated that children ate between 2-3 meals the previous day and on average children ate 2.9 meals per day.

On average for the households in the Southeast Livelihood zone, the market is the principle food source, which contributes on average to 69% of food consumed in the households. The remainder is made up from own production (6%), and food aid (22%). 80% of the responding household indicated that they received food aid in the last 30 days.

There are 4 main consumption profiles in the Southeast Livelihood zone. The good consumption group dominates this zone with 85% of the households classified into this category. The second biggest group is very good consumption (6%) and finally poor and very poor consumption make up the remaining 9% of the households. The graph to the right is the distribution of consumption classes in the Southeast Livelihood Zone.

For the good class, based the 7- day recall, the primary household food source is the market (69%), food aid (22%), and own production (8%).

⁵ For a discussion of the construction of an access ranking please consult Annex 2 of this report

For households in the very good consumption profile, based on the 7- day recall, the key household sources of food are market (69%), food aid (21%), and own production (7%). For the very good consumption households the main sources are the market (65%), and food aid (29%). Do you mean the good consumption group instead of the very good? For the poor and very poor consumption profiles, 76% and 61% of the households' consumption came from the market. Food aid contributes to 20% and 30% of the households' food basket for the poor and very poor households respectively

Within the Southeast Livelihood zone, 51% of households have medium access. The remaining households have good access (19%), weak access (18%), very good access (9%), and very poor access (3%).

Food Security and Vulnerability⁶

Based on the responses concerning their diet and access to food, the breakdown of household food security within the livelihood zone is as follows:

Food Security Class	N (Sample)	Pct Households
Food Insecure	29	12%
Highly Vulnerable	16	7%
Moderately Vulnerable	133	55%
Food Secure	186	26%

Food Insecure in the Southeast Livelihood Zone

According to the results, 24% of the households in the Southeast Livelihood zone are either food insecure or highly vulnerable. Below is a brief summary of significant characteristics of the two classes

- The proportion of female headed households that are food insecure is significantly ($p<0.05$) higher than male headed households
- Households with marginal livelihoods (depend on gifts) are significantly more likely to be food insecure
- Loss of pasture affected a significantly ($p<0.05$) higher proportion of food insecure households.
- Households with income from urban employment are significantly more ($p<0.05$) food secure than households who depend on animal husbandry activities.
- The proportion of households that are food secure and have access to land is significantly higher than food security of households without access to land.

⁶ For a discussion of the construction of the measure of household food security, please consult Annex 3 of this report

Recommendations

Since 2004 WFP with partners have been assisting over 87,000 beneficiaries through emergency and protracted relief and recovery operations. Based on the weighted results of the household study, 13% of the population are food insecure and 7% are highly vulnerable. However, the distribution of the food insecurity is not uniform. In general this report recommends the following:

5. Continuation of general distribution until the end of the June-September lean season
6. After the next lean period, shift general distributions to targeted food for assets (FFA) and food for training (FFT) programmes in the livelihood zones while continuing limited general distributions to marginal households in the northwest livelihood zone.
7. During the 2007 lean period (June – September) provide a general distribution to the highly food insecure households
8. Support school feeding programmes in all three livelihood zones

Livelihood Zone	% Food Insecure and highly Vulnerable	General Distribution (Food insecure and Highly Vulnerable)	Food for Assets (Food Insecure Households)
Northwest Livelihood Zone	40%	4,500	3,000
Central Livelihood Zone	24%	5,750	4,000
Southeast Livelihood Zone	19%	32,500	21,000
Total Beneficiaries (weighted)	13%	42,750	28,000

More precise numbers and targeting criteria as well as rations are described for each of the three livelihood zones below.

Northwest Livelihood

Households in the Northwest Livelihood zone,

- I. Have the highest percentage of food insecure and highly vulnerable households among the three livelihood zones
- II. Between the months of May and September, over 50% of the households indicated that they had a problem with food. Very few households have access to credit, which is primarily used to buy food (93%).
- III. 41% of the households indicated that they had suffered a shock, which was dominated by the lack of pasture or fodder for their animals. The dominant economic activity for the households in this livelihood zone is dependent on animal husbandry for income. In response to the shock 42% of the households indicated that they migrated with animals.

Consequently, the report recommends general food distributions should continue until the end of the next lean season. After the next lean season programming should shift from general food distributions to more self-targeting programmes such as food for assets between September and June. However, during the lean period in 2008, a general distribution to both the food insecure and highly vulnerable should recommence. Finally, between September and December 2008, return to FFA for the food insecure households. As the principle economic

activity is animal husbandry, FFA projects that increase the amount of fodder or the number of water access points in the livelihood zone would reduce the households' need to migrate during shocks such as the loss of pasture.

Ration

WFP recommends a ration of 400g of cereals, 25 ml of oil, 60g of pulses and 50g of fortified/blended food per person per day, the total ration per household per month is 80.25 kg (50kgs of cereals, 5l of oil and 10kg of pulses per month) which is approximately equivalent to 2100 Kcal per person per day. Based on population estimates, the ration and tonnage for the two interventions over the next 24 months is as follows:

Northwest				Phase 1	Phase 2		
Food Security Class	% Population	No HH's	Ration (kg)	GD (MT)	September 2007 to June 2008	June 2008 to August 2008	September 2008 to December 2008
					FFA (MT)	GD (MT)	FFA (MT)
Food insecure	27%	550	80.25	353	353	353	353
Highly Vulnerable	13%	250	80.25	161		161	

Targeting & Interventions

According to the household responses,

- In the Northwest Livelihood Zone the food insecure households have the highest average household size (7.3 members), highest number of dependents (4.6) and the highest ratio of dependents to productive adults (1.7 to 1).
- Food insecure households are more likely to be affected by a shock, which has caused them to reduce their consumption.
- According to community focus groups, the key problems are availability of health services and water for both human and animal consumption.

Central Livelihood

Households in the Northwest Livelihood zone,

- Less than one third of the households indicated that they have been affected by a shock in the last 12 months. Of these households 24% indicated a loss of pastures and 12% decrease in the quantity of water available for their animals. In response to the shock 13% of the households affected by a shock indicated that they migrated with animals, whereas 37% responded that they did nothing.
- Between the months of June and September, over 50% of the households indicated that they had a problem with food.
- According to community focus groups, the key problems are availability of health services and water for both human and animal consumption.

Consequently, the report recommends general food distributions should continue until the end of the next lean season. After the next lean season programming should shift from general

food distributions to more self-targeting programmes such as food for assets between September and June. However, during the lean period in 2008, a general distribution to both the food insecure and highly vulnerable should recommence. Finally, between September and December 2008, return to FFA for the food insecure households. As the principle economic activity is animal husbandry, FFA projects that increase the amount of fodder or the number of water access points in the livelihood zone would reduce the households' need to migrate during shocks such as the loss of pasture.

Ration

Based on the WFP recommended ration of 400g of cereals, 5 ml of oil and 10g of pulses per person per day, the total rations per household per month is 65 kg (50kgs of cereals, 5l of oil and 10kg of pulses per month) which is equivalent to 2100 Kcal per person per day

Central				Phase 1	Phase 2		
Food Security Class	% Population	No HH's	Ration (kg)	GD (MT)	September 2007 to June 2008 FFA (MT)	June 2008 to August 2008 GD (MT)	September 2008 to December 2008 FFA (MT)
Food insecure	16%	750	80.25	482	482	482	482
Highly Vulnerable	8%	375	80.25	241		241	

Southeast Livelihood

- Between the months of June and September, over 50% of the households indicated that they had a problem with food.
- According to community focus groups, the key problems are availability of health services and water for both human and animal consumption.

Consequently, the report recommends general food distributions should continue until the end of the next lean season. After the next lean season programming should shift from general food distributions to more self-targeting programmes such as food for assets between September and June. However, during the lean period in 2008, a general distribution to both the food insecure and highly vulnerable should recommence. Finally, between September and December 2008, return to FFA for the food insecure households. As the principle economic activity is animal husbandry, FFA projects that increase the amount of fodder or the number of water access points as in the Northwest or Central Livelihood zones; or as indicated in community interviews, project relating to reforestation. One particular complaint by communities in the Southeast livelihood zone is deforestation for fuel wood by households in the refugee camps.

Ration

As with the Northwest and Central Livelihood Zones, the ration for the Southeast the FFA ration would be the same (80.25 kg per household per month or 2100 Kcal per person per day)

Southeast				Phase 1	Phase 2		
Food Security Class	% Population	No HH's	Ration (kg)	GD (MT)	September 2007 to June 2008	June 2008 to August 2008	September 2008 to December 2008
					FFA (MT)	GD (MT)	FFA (MT)
Food insecure	12%	3600	80.25	2311	2311	2311	2311
Highly Vulnerable	7%	2000	80.25	1284		1284	

The total ration for FFA and general distribution for the targeted households over the next 24 months is 15,956 MT.

School Feeding

Both the secondary data and information collected from the households indicate that there is a significant problem with child enrolment. According to the household responses, less than one-in-four school age boys and less than one-in-five with school age girls are sent to school.

According to the household responses, the principal reasons for not sending male children to school are the inaccessibility of school and/or taking care of livestock. For girls, household responses indicated that they did not attend school due to inaccessibility of the school and domestic responsibilities. The lack of school infrastructure agrees with the community focus group discussions where 60% of the communities indicated that they did not have a functioning school.

To address this, this report recommends that WFP with UNICEF improve child access to schools as well as continue provide a school feeding programme in the rural areas of all three livelihood zones. In order to quantify the scope of the programme, WFP should develop the school feeding programme with the Ministry of Education and UNICEF so as to comply with government priorities.

Longer Term Programming Recommendations

Households and focus groups have indicated that one of the main difficulties for households is access to water both for human and animal consumption. Globally the study suggests that 68% of the households in the study use an unprotected water source. Although there are differences between the livelihood zones, 80% of the households indicated that they access water from their primary water sources throughout the year. A slightly higher percentage of households indicated difficulties accessing their water source between April and August.

To address the high percentage of households that do not access potable water sources, the Government of Djibouti and organisations that improve household access to protected and potable water should re-enforce their efforts, particularly in the Northwest Livelihood Zone where the highest percentage of households indicated accessing water from an unprotected source.

Annex 1

Food Consumption Profiles

Food consumption group	n (Sample)	Percentage	No Sub-Profiles	Brief Description of Profile
Very Poor Consumption	45	6%	1	Households in this group have higher number of dependents than in any other group (4). Most children and adults eat between 2 and 3 meals a day. The households in the group have a mean consumption of cereals every day. However, the households consume pulses just over one time a week and oils 2.2 days out of seven This group has the second most difficulties (after poor consumption group) in satisfying household food needs throughout the year. However, in “lean” season from July to September, this group has more difficulties than any other group. This group has the highest percentage (67%) of households, which have school-aged children who do not attend school.
Poor consumption	40	5%	2	Most difficulties to satisfy food needs all year long. Most children and adults have between 2 and 3 meals a day. On average households consume cereals over 18 times in 7 days. However, oil and pluses are consumed 4.7 times and 5 times in the previous seven days. During the calendar year, this group experiences overall most difficulties in satisfying household food needs.
Borderline consumption	1	<1%	1	This group is composed only of 6 households. Adults and children have 3 meals a day. This group of households consumes cereals and proteins 14 and 10 times in the last 7 days. Oils, however, are consumed 2 days in the last seven. The lean months from May to July are the only ones when this group experiences difficulties in satisfying household food needs.
Good consumption	626	84%	5	This profile has more migration than in any other group, and also more remittances from migration than in other groups. Most adults and children have 2-3 meals a day. In general the households in this group consume cereals between 13 and 16 times in the previous seven days. Three of the five sub profiles consume oils and proteins 7 to 10 days in seven days. The remaining two sub-profiles consume oils less than every day. However, these two sub-classes have a high consumption of fish, which supplements their oil consumption. Respondents of this group have more diverse sources of income. The prominent income sources in order of importance are ‘animal herding, transfers, and sale of salt’, ‘salaried’, ‘military’, and ‘sale of onga’. More seasonal migration than in

				other groups. The largest food sources are markets (71%) and food aid (16%). For this group June (56%) and July (55%) are the hardest months to satisfy household food needs, although they report experiencing difficulties throughout the year.
Very good consumption	36	5%	1	This group has the lowest number of dependents (2.6). Again most adults and children have 2-3 meals a day, however more often 3 than other groups. Households have the highest consumption of all three components (cereals, pulses and oils) Households have the highest expenditure on food and non-food items, and in individual items e.g. on education and clothing. Livelihood activities more cash-based (sale and transfer) than those of other groups. In order of importance the income sources are animal herding, transfers, and sale of salt, tourism/skilled labour, and sale of onga. Overall the income sources in this group are more diverse -not a single income source contributes more than 30% to the total household income-. Markets provide 67% of food for this group. Interestingly, this group also reports the highest share of food aid (25%) as food source. August is the most difficult month for this group to satisfy household food needs, although in general they also report difficulties through the year. Rather surprisingly, this group has the second highest percentage (47%) of households with school-aged children who do not attend school.
Total	749	100%		

Source Esasu Djibouti, 2006

Annex 2

Household Food Access profiles

Food access is the ability of a household to acquire adequate amounts of food. Households can access food through its own production, income-generating activities (i.e. wage employment or trade), ownership of assets and transfers from external sources. A household would be considered as having weak access if its command or entitlements over its resources is inadequate on a continual basis. For the purposes of the EFSA in Djibouti, the degree of access is based on the ability of the household to acquire food either from the market or through the harvest of a household's own production. Using this definition, information on (1) percentage of the household food basket from the seven day recall that was provided by the market; (2) percentage of the household food basket from the seven day recall that was provided by own production (3) per capita household expenditure on food, (4) total per capita expenditure, (5) per capita expenditure on food as a percentage of total expenditure per capita.

A Principal Component Analysis (PCA) was run on the 4 variables and resulted in 4 factors, which accounted for 99% of the variance in the original dataset. Employing the 4 factors, a cluster analysis (CA) was then run to group households that shared a particular access pattern. A total of 15 classes were derived and labelled as having either very weak, weak, medium, good or very good access

The table below is a summary of the 4 access categories derived from the cluster exercise described above.

Food Access profile	n (sample)	% in Pop. (weighted)	Number of Sub-Profiles	Short Description
Very Weak	33	5%	3	Households in this class have very low expenditure on food, total expenditure and expenditure on food as a percentage of total expenditure. The bulk of the household's food either comes from their own production, food aid or the market.
Weak	121	17%	1	Households in this class have low expenditure on food and total expenditure. Both the market and own production provide small contributions to the household food basket even though household expenditure on food as a percentage of total expenditure is close to the sample's average. It should be noted that the bulk of the household's food comes from food aid (64%).
Medium	367	50%	5	Households in this profile have better access as both the total per capita

				expenditure and per capita expenditure on food are either on average or higher than the average. Between 64% and 93% of household expenditure is on food with the market providing over 50% of the household's food basket ⁷ .
Good	141	19%	2	Household with good access have both a higher than average expenditure on food and total expenditure per person. Likewise, on average almost 90% of the household's food basket was sourced from the market
Very Good	70	9%	4	Households in this profile have the highest expenditure per capita on food and total expenditure (>8,000 DF and 9,400 DF respectively). Access from their own production varies but over three quarters of the household's food was acquired from the market.
Total	732	100%		

⁷ This holds true for all but one sub-class in this profile, for which 27% of the household's food basket comes from the market. For households in this sub-class over 40% of the household's food basket came from food aid.

Annex 3

Household Food Security and Vulnerability Profiles

Combining a household's dietary diversity and access allows the degree of food security to be estimated. The table below illustrates the breakdown of the sampled population by access, consumption and their respective food security class.

Percentage of Households						Category
	Very Weak Access	Weak Access	Medium Access	Good Access	Very Good Access	
Very Poor Consumption	1.2%	1.6%	4.6%	<1%	<1%	Food Insecure
Poor Consumption	1.0%	1.4%	5.2%	1.1%	1.1%	Highly Vulnerable
Borderline Consumption	0%	0%	<1%	<1%	0%	Moderately Vulnerable
Good Consumption	5.0%	9.0%	39.6%	16.3%	8.0%	Food Secure
Very Good Consumption	<1%	<1%	<1%	1%	<1%	

The table above is breakdown of the sample by food security class. The table below is a brief summary of food security classes.

Food Security Profiles

Food Security profile	N Sample	% in Pop. (weighted)	Short Description
Food Insecure	97	13%	Households with very poor or poor consumption coupled with very weak or weak food access. Households with very poor consumption and medium access were also classified as food insecure.
Highly Vulnerable	52	7%	Food access and consumption profiles for households in this class are limited by either poor or borderline consumption or a weak to good access
Moderately Vulnerable	387	53%	Households in this profile although have low degree of vulnerability tend to be limited either by their consumption profile or the household's access.
Food Secure	191	27%	Food secure households have a combination of both good consumption and access.
Total	732	100%	

While examining the results above, although they provide representative estimates for the percentage of households that are food (in)secure, the following should be noted. First, the results of the analysis suggest that 21% of the households are food insecure and highly vulnerable. However, it should be noted that the study was undertaken during the lean season. Thus the snapshot of households that are food insecure is likely much higher than the other

periods throughout the year. Second, typically there is a relationship between households with weak access and poor consumption. However, in the case of Djibouti, over 73% of the responding household indicated that they had received food aid in the last 30 days. Consequently, the percentage of household with Good Access and Very Poor and or Poor consumption is much higher than would be expected. The impact of food aid on improving household consumption profiles should be taken into consideration when adjusting assistance to households⁸. Third, food insecure households are heterogeneous terms of characteristics (e.g. sex of head of the household). Below is a discussion of the key characteristics of food insecure and highly vulnerable households.

Food Insecure and Highly Vulnerable Households

Although there is a great deal of heterogeneity among the food insecure and vulnerable households, for the entire sample, the following hold true.

- 74% of Food Insecure households do not have donkeys which is significantly higher ($p < 0.05$) than households with donkeys
- 70% of Highly Vulnerable households do not own sheep, which is significantly higher ($p < 0.05$) than households with sheep.
- The proportion of female headed households that are food insecure is significantly ($p < 0.05$) higher than male headed households
- Households with marginal livelihoods (depend on gifts) are significantly more likely to be food insecure
- The food insecure households have the highest average household size (7.3 members), highest number of dependents (4.6) and the highest ratio of dependents to productive adults (1.7 to 1).
- Food insecure households are more likely to be affected by a shock, which has caused them to reduce their consumption.
- In general the sex of the head of the household, matrimonial status of the head of the household, age of the household head, literacy of the head of the household, access to credit, access to land, asset ownership (except mosquito nets and blankets) have no significant impact ($p < 0.05$) of the food security status of the household

Food Security by Livelihood Zone

The distribution of the food security classes by livelihood zone is as follows:

	% Livelihood Zone		
	Northwest Livelihood Zone	Central Livelihood Zone	Southeast Livelihood Zone
Food Insecure	27%	16%	12%
Highly Vulnerable	13%	8%	7%
Moderately Vulnerable	47%	40%	55%
Food Secure	13%	36%	26%
Total	100%	100%	100%

⁸ A model was prepared that estimated the impact of the removal of food aid on household consumption profiles. For a more details discussion of the results please consult annex 4

Annex 4

Impact of Food Aid on Dietary Diversity

In the past 30 days, over 73% of households indicated that they have received food aid; food aid contributed to over 16% of the households' food basket over the previous 7 days; and 9% of households had good consumption but poor access. In order to estimate the impact of the removal of food aid on dietary diversity, a model was created that measured the change in the household consumption profile taking into consideration the ability of a household capacity to cope with the loss of food aid.

In general the model:

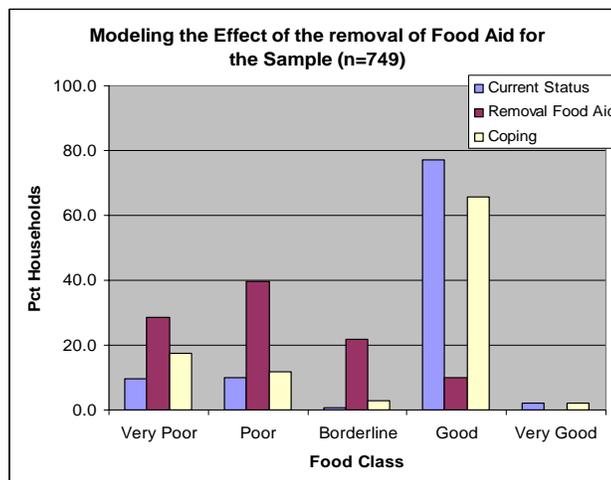
1. The number of days the household consumed a food aid commodity was removed from the 7-day dietary recall.
2. A PCA and cluster analysis was re-run and the households re-categorised based on the frequency and diversity.
3. The estimated average cost of each of these items was calculated and the price gap for each household was determined.
4. If the cost of the replacement food was more than 50% of the current non-food expenditure, then a household was determined not to be able to adapt.

Removal of Food Aid and Impact on Consumption Profiles

According to the sample, food aid contributed between 6 and 25% of the household's basket.

A model of the impact of the effect of the removal of food aid was created. The change in the distribution of food classes between food aid included and removal of food aid is illustrated in the graph to the right (blue to maroon). With the removal of food aid, the food profiles shift from 20% to over 60% of households having either poor or very poor consumption.

Incorporating the ability of the household to adapt to the loss of food aid shifts 11% of the good consumption households to borderline (2%), poor (2%) and very poor (7%). However, 88% of the households remain unchanged.



Employing this model for the three livelihood zones, suggests that both the southeast and central livelihood zones would be more able to adapt to reallocation of food aid through non-food expenditure. However, if food aid is removed in the northwest zone, there will be a higher than expected number of household remaining in the 'poor' and 'very poor' consumption profiles. The change in the distribution of the food profiles through the model is presented in the graph below.

