

EFSA

DJIBOUTI

July 2011

Data collected May 2011

**Urban In-depth EFSA Djibouti**, July 2011(Data collected in May 2011)

© World Food Programme, OMDF Food Security Analysis Service



Financial support for this study was provided by the World Food Programme. The views expressed herein can in no way be taken to reflect the official opinion of the donors.

For any queries on this document, please contact [wfp.vaminfo@wfp.org](mailto:wfp.vaminfo@wfp.org)

For information about Food Security Analysis, visit [www.wfp.org/food-security](http://www.wfp.org/food-security)

United Nations World Food Programme

Headquarters: Via C.G. Viola 68, Parco de' Medici, 00148, Rome, Italy

For questions or comments concerning this survey and/or report, please contact:

**WFP Djibouti**

Mr Mario Touchette [Mario.Touchette@wfp.org](mailto:Mario.Touchette@wfp.org)

Mr Alessandro Dinucci [Alessandro.Dinucci@wfp.org](mailto:Alessandro.Dinucci@wfp.org)

**WFP Regional Bureau (OMJ – Johannesburg)**

Ms Genevieve Chicoine [Genevieve.Chicoine@wfp.org](mailto:Genevieve.Chicoine@wfp.org)

Mr Mark Gordon [Mark.Gordon@wfp.org](mailto:Mark.Gordon@wfp.org)

Ms Marie Enlund [Marie.Enlund@wfp.org](mailto:Marie.Enlund@wfp.org)

## ACKNOWLEDGMENT

Assessments of this undertaking are never the work of one individual alone, and we would like to take this opportunity to thank those who were involved in the process and helped make it as successful as it was. The list is long, but there are a few key individuals we would like to mention specifically.

A number of individuals in WFP Djibouti made important contributions to this project in terms of planning, preparation, field work and data entry. They are Halimo Housein, Baidane MohamedMiyir, Alessandro Dinucci, Dato Gaas, Dilan Daoud, Abdoukader Mohamed, Saada Ahmed, Abdallah Mohamed, Hasna Moussa and Intihad Ahmed.

The assessment could not have taken place without the important contribution of the team of supervisors and the team members. The quality of the work was particularly high, which greatly improved the confidence of the data collected and ultimately, the analysis. There were 60 team members (including five supervisors) from different organisations and we would like to thank the following organisations for releasing their staff to support this work, as well as the individuals themselves, who gave up four weeks of their time:

- Conseils Régionaux et Préfectures
- Agence Djiboutienne de Développement Social (ADDS)
- Ministère de la Promotion de la Femme, des Affaires Sociales et du Bien-être Familial
- Direction des Statistiques et des Etudes Démographiques (DISED)
- Secrétariat d'Etat chargé de la Solidarité Nationale (SESN)
- Office National des Réfugiés et des Sinistrés (ONARS)
- Ministère de l'Agriculture, de l'Elevage et des Ressources Hydrauliques (MAERH)
- FEWSNET
- Société Pour la Sécurité Alimentaire DJIBOUTI

Finally, and in addition to the above institutions, our thanks go to all the members of the Comité de Pilotage, the Ministère de la Santé, Ministère de l'intérieur, the Présidence, FAO, UNICEF UNDP, and WHO.

## EXECUTIVE SUMMARY

The aims of this in-depth emergency food security assessment (EFSA) were to: (i) estimate the proportion of the rural food insecure in the five district of Djibouti; (ii) further substantiate the main causes of food insecurity; and (iii) provide broad, feasible and appropriate recommendations on response options for improving food security.

A two-stage random sampling strategy was used to select 105 clusters ( within 89 villages) and 1260 households to provide statistical confidence for the five rural districts (Arta, Dhikil, Tadjourah, Obok, Ali Sabieh) and the three main livelihood zones (Northwest, Southwest and Central Zone). After data cleaning, a total of 1,251 households were kept. Data collection was conducted in May 2011, at the start of the summer and lean season.

Overall, the rural food security situation has remained very critical and similar to 2010. The profiling of food security was done using the same approach as in 2009 and 2010. It is based on a cluster analysis of the following indicators: 1) a seven days recall on food consumption, 2) degree of reliance on own production as a source of food and 3) degree of reliance on food gift as a source of food, 4) total monthly expenditure per capita (as a proxy of income) and 5) asset holding as an indicator of material wealth.

Based on this cluster analysis, the 2011 rural EFSA distinguished the following four food security profiles:

1. Food Insecure ( $\approx$ 36,200 people),
2. Moderately Food Insecure ( $\approx$ 24,500 people),
3. Moderately Food Secure - at risk ( $\approx$ 12,700 people)
4. Food Secure ( $\approx$ 17,600 people)

**Food Insecure** households make up 42% of the rural population. These households have a very poor consumption pattern – made of cereal, oil and sugar. In addition, they owned the least number of assets and total expenditure per person per day is 80 DjF (about \$ 0.45 USD per person per day). Of this total, 77% of total expenditure goes on food. On average about 12% of the food consumed comes from relatives and the community and another 10% comes from food assistance. Food insecure households stated having difficulties feeding their family almost twelve months of the years. Food insecurity appears to be chronic with poor access to food all year around.

The food insecure households are also statistically more likely than households in the other food security profiles to be burdened with the care of ill or/and disabled persons. Food Insecure households are also more likely to have no income source, and similarly no or one income earner than the moderately food insecure and the food secure households.

Food insecure households are less likely to earn an income from a salary, pension, or a small business. However they are more likely to rely on gifts, begging, sales of charcoal and sales of livestock as a main source of income. Significantly more food insecure households (56%) also stated they had witnessed a decrease in their income compared to the previous year which was more than any other food security profile, indicating greater vulnerability in earning for the food secure profiles.

In comparison, the **Moderately Food Insecure** households seem to be in a transient situation, with difficulties to provide for their families higher during the lean season (starting April/May up to September). These households make up 27% of the sampled population. Their average expenditure is higher than that of the Food Insecure households, but still very low at 3,390 DjF per person per month or 113 DjF per person per day (0.65 USD per person per day). These households also have fewer assets than the food secure profile, although the difference is small. They are involved in many various income activities of which none is dominant. On average 9 % and 6% of their food is sourced from gift and food aid respectively. These households will be more difficult to target as fewer distinctive characteristic describe the profile.

The **Moderately Food Secure** households which make up 12% of the sample and are characterised by a relatively high reliance on own production, with 30% of their food, namely milk, meat and to a lesser extend pulse coming from their own production. The consumption score is high at 66 and well above the level of an acceptable consumption. It shows the impact own production, namely milk, have on household consumption. Total monthly expenditure is also higher than the national average at 4,150 DjF per person or (just below 0.80 USD per capita per day), remaining below the 1 USD/per

person/per day. Although household consumption is currently acceptable, there is a concern that if the drought conditions persist, food from own production could reduce drastically, and that a proportion of this group could become moderately food insecure. These households are mainly concentrated in Obock and Tadjourah.

The **Food Secure** households make up 19% of the rural population. They are much more likely to earn a salary, live from a pension or have small business than any other food security profile. Their total monthly expenditure is just above 7,000 DjF per person or 233 DjF per person per day (1.32 \$ USD per person per day). They use significant fewer coping strategies than any other profile and barely rely on gift (1%) and own production (2%) as source of food.

In 2011, the main shocks affecting food security were high food prices, droughts conditions and livestock deaths. These were the same shock stated in 2009 and 2010. There were little differences amongst food security profile, except that livestock death as a shock was most mentioned by the moderately food secure households. This is in-line with the fact that these households rely most on livestock to feed their family.

The lack of access to milk and milk products for most of the food insecure and moderately food insecure households directly affects consumption and food security level. However, the root causes of food insecurity in rural Djibouti appear to be structural poverty. This is illustrated by very low productive and non productive asset holding, low income levels, and absence of job opportunities in rural areas. The lack of access to services such as education and health aggravate this situation. In the last two years, this chronic situation has been exacerbated by high international food prices and very poor rainfalls. The study suggests that the combination of structural poverty and recurrent shocks (high food prices and poor rainfalls) has lead to abnormal livestock sales amongst part of the food insecure and moderately food insecure in 2011.

In short, the food security situation in rural Djibouti has remained similar to 2010 and continues to be very critical. Most of the households interviewed had received assistance in the last six months which may have contributed to maintaining a similar food security situation despite the continuing drought conditions and high food prices. As the situation as not evolved from the 2010 EFSA, similar recommendations are provided.

1. **Continue to provide unconditional transfer during the lean period for the food insecure and the moderately food insecure** to improve access to nutritious food and to diminish the risk of household selling/losing more productive assets such as livestock.
2. **Unconditional transfer for the food insecure should remains at least for the next 12 months**, as food insecure households have shown little signs of recovery and have important difficulty in accessing food all year around. Nonetheless, at the same time high priority must be given to finding, together with the government of Djibouti and the humanitarian community longer term solution to chronic food insecurity, including the possibility of establishing a national safety net.
3. **Seasonal conditional transfer of food during the Hagea season ( October to April)** for the Moderately Food insecure households that includes a training or/and work components. Project related to improving access to and the amount of water available, building health centers and school infrastructures, increasing access to income generating activities, livestock restocking and micro-finance were seen as priorities by community leaders.
4. **Ensure that long term activities in the Country Development Programme compliment the operation by supporting education, technical adult training, and nutrition intervention.**
5. **Encourage the targeting of relief aid to the most food insecure** in each community based on the targeting criteria stated in this and prior EFSA.
6. **As per recommended in the urban EFSA, protect the population against international food price surges** by promoting the development of safety net systems, fiscal policies and/or grain/food reserves that can be activated when the situation becomes critical. Close monitoring of the prices of a nutritional and culturally acceptable food basket is also essential;
7. **At the same time as relief is provided, promote longer-term investments in education and job creation to enhance work force capacity and ultimately reduce unemployment and reliance on unsustainable livelihoods.**

## Table of Contents

<b>ACKNOWLEDGMENT .....</b>	<b>3</b>
<b>EXECUTIVE SUMMARY .....</b>	<b>4</b>
<b>SECTION I: OBJECTIVES, METHODOLOGY AND LITERATURE REVIEW .....</b>	<b>9</b>
<b>1 OBJECTIVES .....</b>	<b>9</b>
<b>2 METHODOLOGY.....</b>	<b>9</b>
2.1 CONCEPTUAL FRAMEWORK.....	9
2.2 SOURCE OF DATA AND TOOLS .....	10
2.2.1 <i>Secondary data review</i> .....	10
2.2.2 <i>Primary data collection</i> .....	10
2.3 SUPERVISION AND COORDINATION OF THE STUDY .....	11
2.4 STRATIFICATION AND SAMPLING .....	11
2.5 DATA ENTRY AND ANALYSIS .....	11
2.6 LIMITATIONS OF STUDY .....	11
<b>3 LITERATURE REVIEW .....</b>	<b>12</b>
3.1 COUNTRY BACKGROUND .....	12
3.2 ECONOMY, EMPLOYMENT AND LIVELIHOOD STRATEGY .....	13
3.3 MARKET.....	14
3.4 POVERTY, FOOD SECURITY AND SAFETY NET .....	15
3.5 SEASONALITY AND MIGRATION .....	16
3.6 NUTRITION AND HEALTH .....	16
3.7 DJIBOUTI FOOD SECURITY STRATEGY .....	17
3.8 CURRENT LIVELIHOOD AND FOOD SECURITY ASSISTANCE .....	17
<b>SECTION II: MAIN FINDINGS.....</b>	<b>19</b>
<b>1 DEFINING HOUSEHOLD FOOD SECURITY .....</b>	<b>19</b>
<b>2 HOUSEHOLD FOOD CONSUMPTION.....</b>	<b>20</b>
2.1 MEAL FREQUENCY .....	21
2.2 FOOD SOURCES .....	21
<b>3 HOUSEHOLD FOOD SECURITY CHARACTERISTICS AND PROFILING.....</b>	<b>22</b>
3.1 HUMAN CAPITAL .....	22
3.1.1 <i>Household Demography</i> .....	22
3.1.2 <i>Education and Health</i> .....	23
3.1.3 <i>Migration</i> .....	23
3.2 SOCIAL CAPITAL .....	24
3.3 FINANCIAL CAPITAL.....	24
3.3.1 <i>Livelihood and income sources</i> .....	24
3.3.2 <i>Total expenditures as a proxy for income</i> .....	27
3.3.2.1 Food and Non-food expenditures.....	28
3.3.3 <i>Changes in expenditure and income</i> .....	29

3.3.4 Assets.....	29
3.3.5 Livestock.....	30
<b>4 SHOCKS .....</b>	<b>31</b>
<b>COPING STRATEGY INDEX .....</b>	<b>31</b>
<b>5 SEASONALITY .....</b>	<b>32</b>
<b>6 PRIORITY OF ASSISTANCE.....</b>	<b>34</b>
<b>7 CONCLUSION AND RECOMMENDATIONS FOR RESPONSE OPTIONS.....</b>	<b>34</b>
<b>8 BIBLIOGRAPHY: .....</b>	<b>38</b>
<b>ANNEX 1: CALCULATION OF FCS AND FOOD WEIGHTS.....</b>	<b>40</b>
<b>ANNEX 2: ADDITIONAL FIGURES AND TABLES .....</b>	<b>41</b>

## LIST OF FIGURES

Figure 1: Conceptual Framework of the Impact of Price Shocks on Food Security and Nutrition .....	10
Figure 2: Map de Djibouti et ses districts.....	12
Figure 3: Seasonal Calendar for Djibouti – FEWSNET 2003.....	16
Figure 4: Consumption score per Livelihood zone .....	21
Figure 5: Proportion of food source by food security profile.....	22
Figure 6: Distribution of Income Sources .....	25
Figure 7: Distribution of Food Security Profiles across Income Sources .....	26
Figure 8: Total household expenditures per Consumption Profile.....	27
Figure 9: Expenditure per capita per month compared across the year and districts. ....	28
Figure 10: Total household food monthly expenditures per Food Security Profiles.....	28
Figure 11: Changes in wealth between 2009, 2010, and 2011. ....	30
Figure 12: Proportion of shock affecting households per districts.....	31
Figure 13: 2011 Coping Strategy Index (CSI) per districts compared to 2009 and 2010.....	32
Figure 14: CSI Index value per livelihood activities.....	32
Figure 15: Proportional and Seasonal differences in perception of being unable to satisfy household food needs. .....	33
Figure 16: Proportional and Seasonal differences in expenditures between Food Security Profiles.....	33
Figure 17: Seasonality of main shocks.....	34
Figure 18: Proportion of food security profiles per livelihood zones .....	36
Figure 19: Proportion of food security profiles per district.....	36
Figure 21: Total household food and non-food monthly expenditures per Food Security Profile .....	41
Figure 22: Proportion of food source by District.....	41
Figure 24: Breakdown of expenditures on food across consumption profile.....	42

## LIST OF TABLES

Table 1: Djibouti Population per region and characteristics (Djibouti Recensement 2009).....	13
Table 2: Prevalence of malnutrition in Djibouti (UNICEF 2010) .....	17
Table 3: Results of the two step cluster analysis and description of the indicators used to define food security in the sedentary rural population.....	20
Table 4: Average days of different food group consumption by food consumption categories .....	20
Table 5: Demographic of the rural population of Djibouti.....	23
Table 6: Proportion of household receiving transfer by district .....	24
Table 7: Percentage of household owning animal since 2009.....	30
Table 8: Percentage of household owning animal per district.....	30
Table 9: Estimate of the rural sedentary population per food security profile.....	35
Table 10: Weights used to calculate dietary diversity.....	40
Table 11: Establishing Dietary Diversity categories .....	40



# Section I: Objectives, Methodology and Literature review

## 1 OBJECTIVES

The primary aim of the assessment was to estimate the proportion of food insecure in rural Djibouti that include the five rural districts, further substantiate the main causes of food insecurity, and evaluate the changes since 2010. In order to achieve this, the assessment also aimed to:

- Assess how the food security situation has evolved in rural Djibouti since 2010;
- Define how many people are food insecure and vulnerable to food insecurity, where these people are located, and what are the immediate and underlying causes of their food insecurity
- Identify targeting criteria for the food insecure in rural settings.
- A preliminary identification of potential response options to address the immediate and underlying causes of food insecurity and vulnerability in rural Djibouti.

## 2 METHODOLOGY

### 2.1 CONCEPTUAL FRAMEWORK

Food Security was defined by the 1996 World Food Summit as follows:

*“Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life.”*

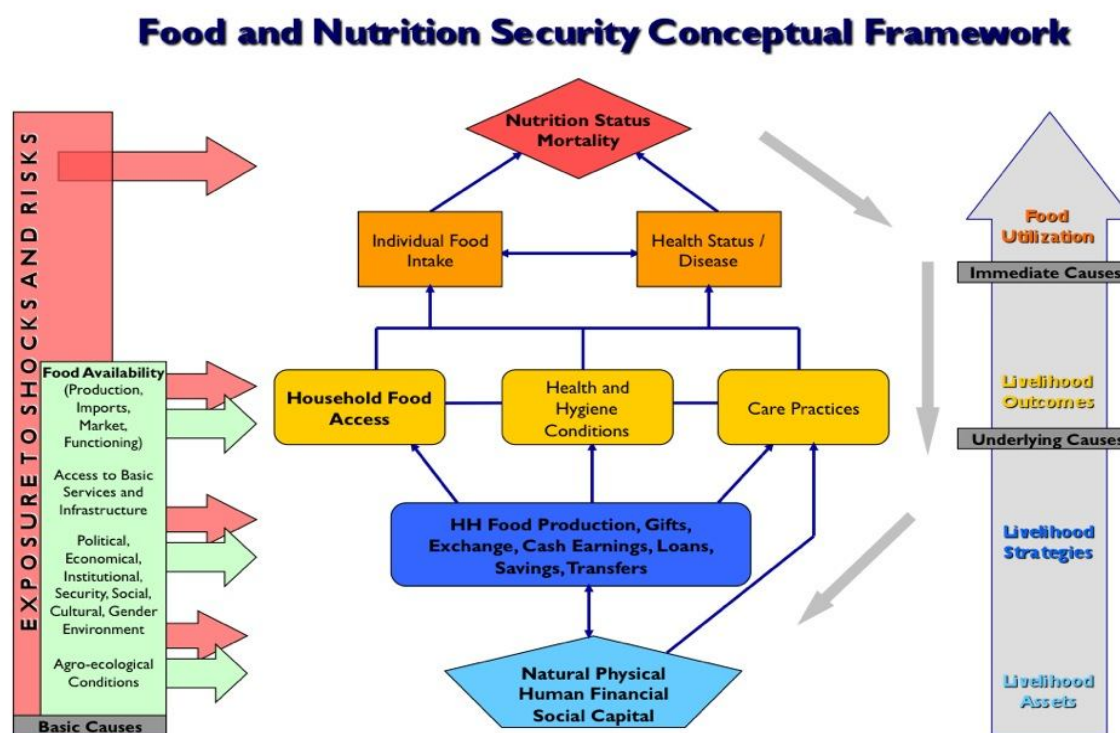
The approach used for this study is based on the Food and Nutrition Security Conceptual Framework (Figure 1). The food security status of any household or individual is typically determined by the interaction of a broad range of agro-environmental, socioeconomic, political, institutional and biological factors. However, the complexity of the food security problem can be simplified by focusing on three distinct, but interrelated dimensions of the concept: aggregate food availability, household food access, and individual food utilization, which includes care practices, health and hygiene conditions.

In the context of Djibouti, the study gave particular importance to understanding how households accessed food and what factors influenced their access. The study used the Sustainable Livelihood Framework and its five livelihood capitals<sup>1</sup> (Natural, Physical, Human, Financial and Social) to describe household assets.

---

<sup>1</sup> Physical: basic infrastructure and producer goods needed to support livelihoods; Human: skills, knowledge, ability to work, good health; Financial: financial resources that can contribute to production and consumption; Social: social resources that people can draw upon; Natural: natural resources stock (land, pasture, water) important to livelihood source (IPC, 2009).

Figure 1: Conceptual Framework of the Impact of Price Shocks on Food Security and Nutrition



## 2.2 SOURCE OF DATA AND TOOLS

### 2.2.1 Secondary data review

A literature review of the recent information on the food security and nutritional status of populations living in the assessment area was conducted prior to, and during, the survey. This information included nutritional assessments, rural and urban baseline studies, early warning reports on meteorological data, access to natural resources, food insecurity and vulnerability profiles, market information, livelihood data, reports on previous development and food assistance interventions in the Djibouti rural environment.

### 2.2.2 Primary data collection

Primary data collection aimed at filling in the information gaps on household food security. Primary data collection examined if, who, and why households in rural Djibouti were food insecure, and whether food assistance would be the most appropriate intervention. The study gathered information from households and key informants. The following tools were developed based on an analysis of the secondary data available in Djibouti and experiences in other countries where similar studies were carried out by WFP/VAM<sup>2</sup>.

**Household (HH) questionnaire:** In the interest of being able to make comparisons between this assessment, and the 2010 rural EFSA, the household tool was changed as little as possible. Modifications were made to include seasonality, migration and to reduce references to the high food price crisis. The questionnaire was designed to provide quantitative data in the following areas of interest: (a) food security profiles and socio-economic characteristics; (b) household expenditures; (c) household food consumption patterns and patterns among children between 6 and 23 months of age (frequency, diversity and source); (d) access to food, health, water, sanitation and education services; (e) household exposure and response to risk, including coping strategies; (f) assets and livelihoods (e.g. income/livelihood sources, ownership of physical assets such as land, livestock, seasonality,

<sup>2</sup> Tools are available upon request – contact WFP Djibouti Country Office.

migration, etc.); (g) normal and abnormal migration patterns; (h) seasonality of food insecurity and employment; and (i) screening for acute malnutrition using mid-upper-arm-circumference (MUAC).

**Key informant (KI) questionnaire:** This tool was administered to focus groups of elected leaders, administrators, religious representatives, health workers, school principals and teachers. It covered issues related to employment, infrastructure and services, migration, structural problems and possible solutions.

## 2.3 SUPERVISION AND COORDINATION OF THE STUDY

The data collection was carried out by five teams, each composed of a supervisor or team leader (KI questionnaire), and seven household survey enumerators (HH questionnaire). National and local government staffs were also involved in leading and facilitating the assessment from the very beginning. For each of the cluster, 12 household questionnaires and one KI questionnaire were completed.

Prior to carrying out the assessment, a training workshop was conducted to insure that everyone involved in data collection understood the objectives of the assessment, the sampling strategy, and their roles and responsibilities regarding data collection. The training was carried out late April at WFP offices in Djibouti. Trainers from the WFP Country Office and the Regional Bureau conducted a three days training and also assisted during the testing of the questionnaires (two additional days).

The study was done in cooperation with a number of Government of Djibouti Ministries and NGOs operating in the country and areas of concern. Consultations were also held with other UN organisations working in Djibouti as to the purpose and outputs of the assessment.

## 2.4 STRATIFICATION AND SAMPLING

The sampling methodology selected for the assessment was based on a two stage sampling procedure, so that data could be aggregated and compared across districts and livelihood zones with a specific degree of statistical confidence. The first stage, or cluster, was set at the village level, while the second stage was set at the household level. Villages were selected using the probability proportion to size (PPS) method.

The initial sample frame was the entire list of villages in the country provided by the WFP Country Office. This list comprised of a total 283 villages. However, this was later amended as 65 villages were inaccessible - leaving 218 villages from which the sample could be drawn. Regional population figures for proportion sampling were based on the results of the 2009 census. Village population figures used were based on those provided by the village elders and government. Village and/or peri-urban areas with a population greater than 5,000 people were not included as population centres with this number of people are not classified as rural. The study area was stratified along two dimensions; by summarized livelihood zones (Southeast Zone, Central Zone, and Northwest Zone) and by district (Ali Sabieh, Arta, Dikhil, Obock, and Tadjourah).

Based on the two stratifications, a minimum of 20 clusters per strata (district or livelihood zone) and 12 households per cluster were calculated based on a prevalence of 20% and a 95% (with a precision of +/- 7.5%). Weights for the analysis were calculated. At village level, households were then selected randomly. In total, 1,261 households were interviewed in 105 clusters.

## 2.5 DATA ENTRY AND ANALYSIS

A data entry application was created in Microsoft Access by the WFP Regional Bureau. A half-day training was given to the data-entry clerks to provide them with the opportunity to practice with the application. In total nine data entry clerks entered 1,261 household questionnaires and 89 KI questionnaires over a period of eight days.

After cleaning and discarding cases that lacked sufficient information, a total of 1,251 household questionnaires and 86 Key informant questionnaires were kept.

## 2.6 LIMITATIONS OF STUDY

While rigorous standards were applied to the analytical process, the following limitations must be acknowledged and are common to all quantitative assessments:

**Threat to external validity:** Limitations in the ability to generalize the results from the sample to the general population must be acknowledged. The survey data is designed to represent the situation at a given point in time.

**Threat to internal validity:** Incorrect 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 programme-oriented assessments (e.g., food aid). However, survey anonymity hopefully helped mitigate this bias.

**Threat to reliability:** Threat to the reliability or repeatability (Kalton et al., 2005) of the results was minimized through careful questionnaire design and enumerator training. Training in the household questionnaire was carried out to reduce the degree of variation in individual enumerator interpretations of the questions. The questionnaire, although designed in English, was translated into French for the enumerators and in most cases the interviews were conducted in the local language or dialect.

### 3 LITERATURE REVIEW

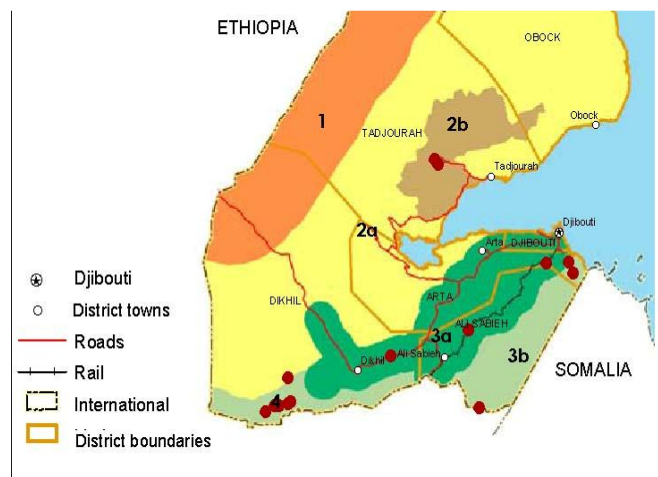
#### 3.1 COUNTRY BACKGROUND

Djibouti is one of the smallest countries in Africa with an area of 23,200 square kilometres. Total population is estimated at 818,159 of which more than 70% live in urban centres (and of this figure, 58% in Djibouti Ville (DISED, 2009) (Table 1). In rural areas, it is estimated that a third of the population is sedentary and two third nomads, however the recognition of these population in the field is not simple. Household size averages at 6.2 people. About half the population is ethnically Issa (of Somali origin) and slightly less than half are Afar (EIU, 2008).

Strategically located at the intersection of the Horn of Africa and the southern end of the Red Sea, Djibouti has a hot and dry climate that does not allow for agricultural production. Djibouti is mostly volcanic desert and the land is among the least productive in Africa. Agriculture is limited and meets only 3% of the country's food requirements. In addition, it is entirely dependent on irrigation. Temperatures range between 30 and 45 degrees with an average rainfall of only 200 mm per year for most of the country. (EIU, 2008).

Djibouti ranks 147 out of 169 countries in the 2010 Human

Figure 2: Map de Djibouti et ses districts



Development Index (HDI)<sup>3</sup>, placing the country at the bottom of the Medium Human Development Countries categories. Despite an annual per-capita income of US\$1,024<sup>4</sup>, about 19% of the population live on less than 1.25 USD per day and 41% live on less than 2 USD per day<sup>5</sup>.

FEWSNET has divided the country into four main livelihood zones, one of which the southeast is sub-divided into two sub-zones. All have livestock keeping as a component of local livelihoods but nowhere can the majority of the population nowadays survive on livestock income alone. Most of the other incomes are urban in origin, and the main difference between the four rural zones is in their economic relationship to Djibouti city and the secondary towns. Pastoralists in the Southeast Pastoral Zone have relatively good road and rail access to the urban markets of Djibouti, selling milk, wood and charcoal to Djibouti city, Arta, Ali Sabieh and Dikhil. Milk tends to be sold by pastoralists living within reach of the tarmac roads and the railway (the Roadside Sub Zone) while wood and charcoal are sold by the more isolated communities along Djibouti's southern border (the Border Sub Zone

People in the Central Pastoral Zone are equally dependent upon the city, but in this case it is urban employment that is the key activity, with pensions and remittances from family members working in the city especially important. The main difference between the Lowland and Highland Sub Zones is in terms of the livestock kept; cattle and small stock are kept in the highlands whereas camels and small stock are kept in the lowlands.

The remote Northwest Pastoral Zone is alone among the zones in having relatively tenuous links to the city and an economy rather more oriented towards neighbouring Ethiopia than urban Djibouti. Far from the major towns, access to the urban market is poor and few households have someone working in the city and remitting money on a regular basis. The zone's only advantage is its proximity to Ethiopia, where sorghum can be bought for half or less of the price at which it is available in Djibouti.

The last zone, Market Gardening, which is somehow relatively small is spread across three larger zone, The city and secondary towns are likewise the main market for the fruit and vegetables sold by people in the Market Gardening Zone.

**Table 1: Djibouti Population per region and characteristics (Djibouti Recensement 2009)<sup>6</sup>**

Region	Urban population			Sedentary rural population	Nomadic population	Total population
	Regular	Particular	Total Urban			
Djibouti Ville	353 801	121 521	475 322			<b>475 322</b>
Ali Sabieh	22 630	15 309	37 939	11,977	37 033	<b>86 949</b>
Dikhil	19 347	5 539	24 886	22 510	41 552	<b>88 948</b>
Tadjourah	12 157	2 663	14 820	23 482	48 402	<b>86 704</b>
Obock	9 933	1 773	11 706	9 780	16 370	<b>37 856</b>
Arta	11 043	2 217	13 260	11 345	17 775	<b>42 380</b>
<b>Total</b>	<b>428 911</b>	<b>149 022</b>	<b>577 933</b>	<b>79 094</b>	<b>161 132</b>	<b>818 159</b>

### 3.2 ECONOMY, EMPLOYMENT AND LIVELIHOOD STRATEGY

The Djiboutian economy depends largely on its proximity to Ethiopian markets and a large foreign expatriate community. The economy is based on services that revolve around the port, the railway, the civil service and the French and US military bases. Services account for an estimated 78% of the GDP, followed by Industry (18%) and Agriculture (3%) (2008, EIU). In short, Djibouti's economy depends primarily on the Port of Djibouti, which contributes to over 70% of the country's GNP, while the banking sector and the airport come in at a distant second<sup>7</sup>.

<sup>3</sup> <http://hdrstats.undp.org/en/countries/profiles/DJI.html>

<sup>4</sup> World Bank 2008

<sup>5</sup> Oxford University July 2010

<sup>6</sup> *population particulière*: elle est composée des personnes vivant dans des ménages collectifs, c'est-à-dire un ensemble de personnes, souvent sans lien de parenté vivant en communauté (internat, orphelinat, prison, caserne militaire, hôpital, l'hôtel, chantiers,...) et de personnes de statut particulier (sans-abris, réfugiés,...).

<sup>7</sup> <http://www.state.gov/e/eeb/rls/othr/ics/2009/117422.htm>

Economic performance has improved in recent years, driven by Foreign Direct Investment (FDI). FDI as a percentage of investment to GDP grew from 19% in 2005 to 38.3% in 2007<sup>8</sup>. The capital, Djibouti Ville, is the main platform for Ethiopian imports and exports. Its transport facilities are also used by several landlocked African countries that fly in their goods for re-export. This earns Djibouti much needed transit taxes and harbour fees. However, recent economic growth has not successfully translated into increased employment. Employment opportunities remain limited due to: (i) the absence of labour-intensive economic sectors such as agriculture; (ii) underdeveloped manufacturing and industries; (iii) weak productivity of labour (resulting from low skill and education levels to match employment requirements); and (iv) scarce potential for self-employment due to limited access to finance for micro and small enterprises. Recent investments in the port and free zones have generated only a few jobs to date – in large part due to structural issues (including infrastructure and shortage of skills).

According to the British Red Cross recent study (Dec 2010) Population increases coupled with an inability of the land to sustain subsequent higher numbers of livestock, has led to many families dropping out of livestock keeping altogether and migrating to urban areas whilst those remaining have been forced to adapt their livelihoods. Few people in rural areas of Djibouti can therefore still be described as pastoralist according to the definition in Box 1, although many may still define themselves as such. Although pastoralists still migrate with their livestock in and out of the neighbouring countries Ethiopia, Eritrea and Somalia, about half of Djibouti's herders are now reported to be semi-sedentary around water points and villages. These semi-sedentary pastoralists still roam 20 to 100 km but eventually return to their home where their families additionally engage in other types of productive employment, tend small gardens, receive food rations, receive remittances from relatives, and send their children to schools that provide free meals. The trend towards semi-sedentary pastoralism seems to be more pronounced among Afar pastoralists than among the Issa.

#### **Box 1: Definition of pastoralism**

*“Pastoralists are people who primarily derive their living from the management of livestock (sheep, goats, camels and cattle) on rangelands and obtain 50% or more of household gross revenue from livestock or livestock related activities. Agro-pastoralists (those who engage in both pastoralism and agriculture) derive more than 50% of household gross revenue from farming and 10-50% from livestock (Ellis and Swift, 1988). Kebebew et al (2001) further describe that there are three types of pastoralist: Sedentary (who are more or less permanently settled with their animals within a defined area), semi-nomadic or transhumant (who move with their animals over more or less regular routes, settling for part of the year in a permanent home area) and nomadic (who move with their animals and transportable homes over irregular routes, seeking pasture and water for their animals almost continuously).*

*(Taken from Fassil et al, 2001)*

The creation of jobs is a major ongoing concern. Accurate employment figures do not exist for Djibouti but it is estimated that the unemployment rate is as high as 60% in urban centres (HLTF, 2009; WB 2009). Djibouti has an estimated 110,300 migrants, which represent almost 14% of the total population (HDR-UNDP, 2009). This migrant population further increases competition for unskilled and daily labour wage.

### **3.3 MARKET**

As Djibouti is an arid country, the agricultural and livestock sectors are quite small and account for only 3% of the national GDP. Agricultural production through micro fruit and vegetable gardens yields around 6,000 Mt per year, which covers only 10% of the national needs (Central Bank of Djibouti, 2009). Djibouti remains therefore, highly dependent on imports for its food supply, and households are highly dependent on markets in order to meet their food needs. This dependency puts Djibouti into a difficult position in relation to global price developments. Within the last two years, global

---

<sup>8</sup> World Bank 2008

market price increases for basic commodities such as cereals and oil immediately translated into increased prices for basic commodities on the local market<sup>9</sup>.

The taxation structure in Djibouti on importation of food commodities is both direct and indirect. Indirect taxes include the Value Added Tax (VAT), at a standardised rate of 7% (though it does not apply to staple food items<sup>10</sup>) while direct taxes include property, patent, and tax on profits with surtaxes applicable to some products.

Formal banks and microfinance institutions are still in their early growth stages; there were a total of nine banks in 2009. Credit supply to enterprises and individual entrepreneurs in 2009 accounted for 73% of all credit supplied by banks and represented an annual increase of 36.1% versus the previous year (Central Bank of Djibouti, 2009). Depending on the duration and the amount of credit supplied by banks, the cost of receiving credit is relatively high and ranges from 7% to 14.09%. In January 2009, the *Agence Djiboutienne de Développement Social (ADDS)*, with the support of UNDP, created a microfinance corporation which included 15 microfinance institutions, almost half of which are based in Djibouti Ville. Since its creation, the number of members has increased from 1,500 to 5,287, with the majority of the members being women (African Economic Outlook)<sup>11</sup>.

### 3.4 POVERTY, FOOD SECURITY AND SAFETY NET

Despite the relatively high per capita income (US\$ 1,024), the incidence of poverty remains high (42% absolute and 75% relative<sup>12</sup>). As a food-deficit country, totally dependent on imports to meet its food requirements, Djibouti is highly vulnerable to external shocks such as surging food and fuel prices, and to natural disasters such as droughts. As mentioned earlier, poverty is exacerbated by the presence of migrants from neighbouring countries, who place further pressure on the country's already strained employment

Compared to 2009, the May 2010 rural EFSA measured a significant reduction in average household per capita expenditure on food and non-food items, a proxy for household income. This decline in revenue, measured through reduced expenditure, coupled with higher than normal prices meant that the percentage of household expenditures allocated to food versus total household expenditures had increased from 60% (2009) to 70% (2010). In addition, the quantities of items typically produced by households themselves (considered 'own production'), such as milk and butter had also fallen, which further increased household reliance on markets, remittances and 'community support'. These factors led to a decline in household consumption with the percentage of households having a 'poor' food consumption score doubling, and the use of harmful coping mechanisms increasing, with the coping strategy score (CSI) almost doubling. The rural 2010 EFSA estimated that 38% of households (29,500 people) were acutely food insecure, and an additional 33% of households (24,500 people) were classified as moderately food insecure.

According to FEWSNET (May 2011), Significant food deficits exist in all pastoral livelihoods due to consecutive failed rainy seasons and high staple food prices. The situation is especially critical in the northwest pastoral livelihood zone and southeast pastoral border livelihood zone. Staple food prices are higher as compared to the five-year average. Water is very scarce in most livelihood zones and pasture and browse are extremely limited. Pastoralists are shaking the acacia trees to collect animal food, an indicator of a very serious situation. Malnutrition rates among children are expected to deteriorate in coming months due lack of milk, the main source of food for children under 5 years of age during this time of year. Prices in Djibouti city remain high and will continue to impact on rural prices as most of the food commodities comes from Djibouti city. The current basic expenditure basket for poor households remains 68% above the five-year average. According to FEWSNET, food

---

<sup>9</sup> See FEWSNET alert 2006

<sup>10</sup> [www.ministere-finances.dj/fiscalite2.htm](http://www.ministere-finances.dj/fiscalite2.htm)

<sup>11</sup> [www.africaneconomicoutlook.org](http://www.africaneconomicoutlook.org)

<sup>12</sup> **Relative poverty** is a poverty measure based on a poor standard of living or a low income relative to the rest of society. Unlike absolute poverty, it does not necessarily imply that physical human necessities of nutrition, health and shelter cannot be met; instead it suggests that the lack of access to many of the goods and services expected by the rest of the contemporary society leads to social exclusion and damaging results for the individuals and families in relative poverty.

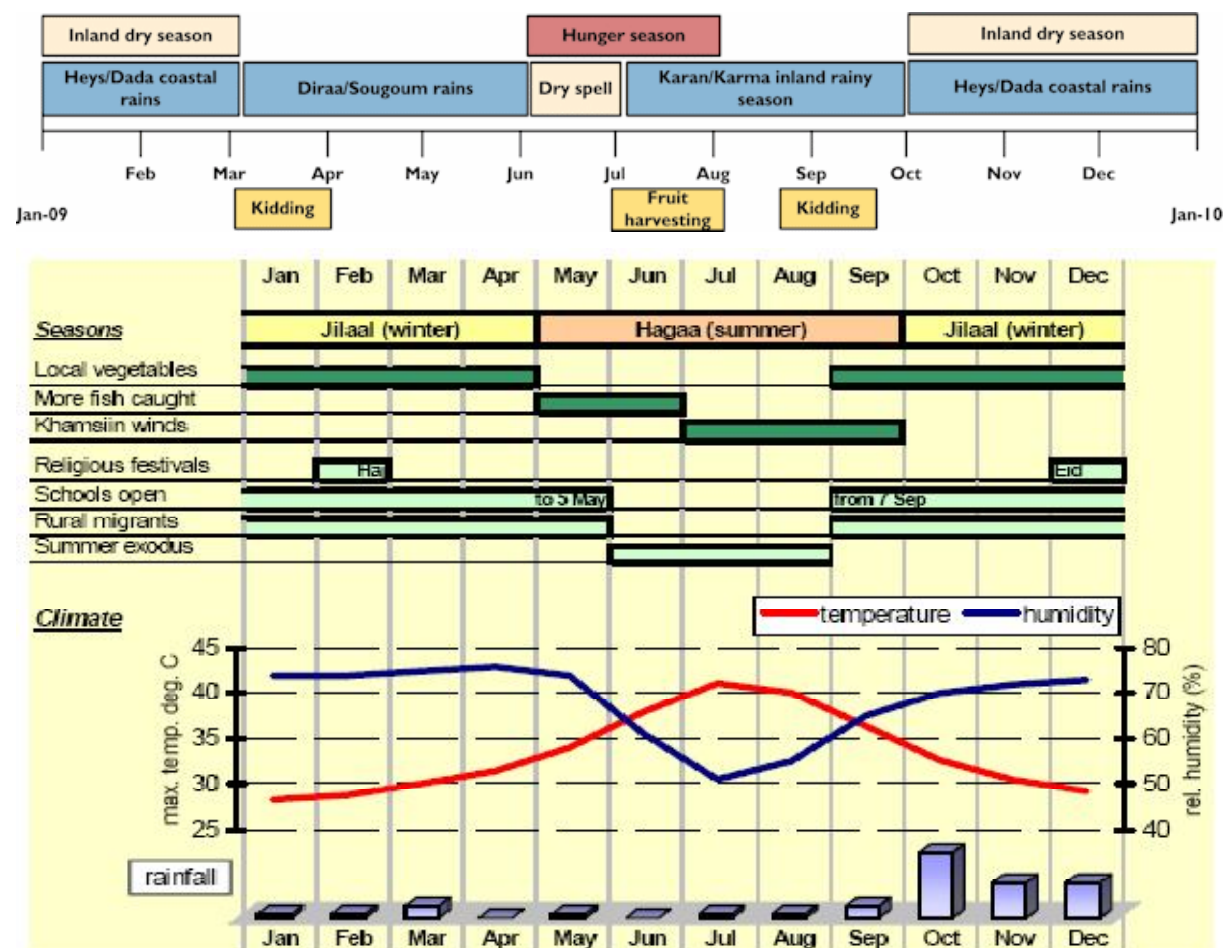
Measurements of relative poverty are similar to measurements of social inequality.

security is not expected to improve through the end of the year though forecasts are favourable for the July to September season.

### 3.5 SEASONALITY AND MIGRATION

Djibouti is affected by seasonal variations in income sources, expenditures, and short term migration. The calendar below from the 2003 FEWSNET baseline highlights the impact of seasonal variations on household access to employment and expenditure.

Figure 3: Seasonal Calendar for Djibouti – FEWSNET 2003



### 3.6 NUTRITION AND HEALTH

Djibouti generally experiences a high disease burden, and the country’s tuberculosis prevalence is one of the highest worldwide with 1,104 cases per 100,000 people (TB country Profile, WHO). Among the most prevalent child diseases are Acute Respiratory Infections (ARI), diarrhoeal diseases, malaria and malnutrition (MICS 2006). Diarrhoea and ARIs are also among the most common causes of infant mortality. As a possible contributing factor to diarrhoea, only 67% of Djiboutian has improved sanitation facilities and 1.8% use appropriate methods for water treatment (MICS 2006)

A total of 31.7% of children between the ages of 12 and 23 months have received the full immunization package for the six childhood diseases (MICS 2006). The coverage of individual DPT, BCG, Polio and Measles vaccination is shown below. Most women (96%) attend antenatal care sessions, while 87% of women give birth in health facilities and 93% give birth with the assistance of a qualified health person (MICS 2006). According to the world bank (2009), health challenges include: (i) high maternal mortality; (ii) high and rising incidence of communicable diseases, among them tuberculosis, malaria, and HIV/AIDS; (iii) significant geographic inequalities in health indicators; (iv)



weak health systems and management capacity due to the scarcity of qualified personnel; and (v) periodic shortages of medicines and medical supplies.

The most recent 2010 UNICEF survey shows that GAM levels are considerably lower than those observed in 2007. The global acute malnutrition is estimated 10% country wide compared to 17% in 2007. GAM levels are lower in urban settings (8.5%) than in rural areas (11.4%). The highest GAM rates are found in Dhikil (12.9%) and lowest in Obock (9.4%). Country wide, the mortality rates among children <5 years is below the alert threshold (1 deaths/10 000 children / day). According to the same UNICEF study, the level of stunting is at 30.8% across the country with 37.3% of stunting in rural areas and 24.2% in urban setting. Exclusive breastfeeding rates have improved but are still insufficient at 24.5%. About 12% of the children receive early, complementary foods before 6 months while another 15% receive them too late after 12 months. For the 70% of children that receive complementary food between 6 and 12 months, at least 50% received less than 3 meals a day, which is largely insufficient. Infant and young child feeding practices in Djibouti are inadequate.

**Table 2: Prevalence of malnutrition in Djibouti (UNICEF 2010)**

Type of Malnutrition	Indicator	Prevalence (%)
<b>Acute malnutrition (Wasting)</b>	Global Acute Malnutrition (GAM)	10%
	Severe Acute Malnutrition (MAM)	1.2%
<b>Chronic Malnutrition</b>	Stunting	30.8
<b>Combined Acute/Chronic Malnutrition</b>	Underweight	22.9

### 3.7 DJIBOUTI FOOD SECURITY STRATEGY

Following the global high food and fuel crisis in 2008 and within the framework of the World Food Summit in 1996, the Government of Djibouti (GoD) agreed on a National Food and Nutrition Security Strategy in 2009. The first specific objective of the strategy is to achieve food security by 2025, addressing issues related to availability, access, stability and utilization of food. The second objective aims at strengthening national capacity for early warning and disaster risk reduction. Within this framework and in order to achieve its objectives, the GoD has established the Djiboutian Society of Food Security (DSFS) for the management of overseas farms in Ethiopia, Sudan and Malawi. The plan envisages the creation of strategic grain stock reserves at district level that would be sourced from these overseas farms. The strategy also calls for increase coordination amongst food and nutrition security stakeholders. Any assistances and responses strategies to address Food and Nutrition Security in Djibouti should be elaborated within the government strategy and framework<sup>13</sup>.

### 3.8 CURRENT LIVELIHOOD AND FOOD SECURITY ASSISTANCE

Overall, the safety nets and livelihood assistance programmes available to the vulnerable population of Djibouti are very limited, despite these well meaning strategies the poor remain critically exposed and inadequately protected against systemic crises and shocks. This section provides a succinct overview of the assistance strategies currently implemented by the main players and their respective programme objectives, it is by no means exhaustive.

**WFPS** current assistance to rural areas include: i) general food distribution for vulnerable groups; ii) Food for Work activities through the rehabilitation of rural roads in collaboration with the government and FIDA, water catchments with UNICEF and the government, reforestation and environmental rehabilitation with local associations; iii) School feeding and take home ration programmes covering all rural schools; iv) supplementary food for moderately malnourished mothers and children in all rural health/nutrition centers, while severe cases referred to UNICEF/GOV programmes.

**ADDS** manages a project focused on bridging the gap between livestock farmers and markets by strengthening farmer capacities and managing road construction projects between Djibouti-Loyada. The benefits gained not only stimulate economic development in rural areas but improve access to services.

---

<sup>13</sup> For more details consults: Strategie National de Security Alimentaire et Nutritionelle. Volume 1 et 2. Presidence de la Republique de Djibouti. Conseil National de Securite Alimentaire. Decembre 2007.

**UNICEF** supports programmes and activities relating to health, nutrition, education, water and sanitation. Specific programmes include the monitoring, prevention and treatment of malnutrition through the promotion of breast feeding and improved hygiene, water and sanitation. UNICEF also finances several projects to improve access to water through a number of channels including water trucking, rehabilitation and drilling of wells and improved water treatment.

Since 2005 the emergency programme of **FAO** has worked with the government of Djibouti in implementing activities linked to agriculture and livestock production. With the increasing frequency of drought in recent years, the emergency programme has concentrated on interventions with an overt focus on the rehabilitation of assets that fosters sustainable development whilst serving to mitigate the impact of drought on the vulnerable rural population.

**UNDP** contributes to the implementation of the project PROMES-GDT (financed by the IFAD and coordinated by the ministry of Agriculture) that focuses on improving access to water in rural areas.

-

# Section II: Main Findings

## 1 DEFINING HOUSEHOLD FOOD SECURITY

WFP has been conducting food security assessments in Djibouti rural areas since 2009. Assessments have been conducted the same month every year, at the start of the lean period in order to guide WFP on the interventions needed during the lean season. To ensure the comparability of results across years, household food security in this assessment is measured applying the same indicators used in 2009 and 2010. The food security index included recent household consumption patterns (using seven-day recall) and sources of food, namely own production and gift, and longer-term food access that is expenditures, assets ownership and the coping strategy index.

The measurement of food security is based on three pillars: access, availability and utilisation. As this study did not include malnutrition indicators, the measurement of household food security will focus on access. For the Food Security analysis, six variables were used, as follow:

1. Food consumption score – represents current consumption/HH food security (see annex 1)
2. Per capita monthly expenditure in cash (as a proxy for income) – represents ability to access food
3. Percentage of food from community/friend (gift) as an indicator of reliance on social network for food access
4. Percentage of food from own production as an indicator of reliance on own production and indicator of vulnerability to natural disaster
5. Number of different types of physical assets own - represents wealth and the ability of households to smooth consumption during shocks
6. Comparative/Reduced Coping Strategy Index in past 7 Days – represents stress on households

Food Consumption Groups were used as categorical variable to ensure that the classification of households according to their level of consumption remained consistent in the Food Security classification. Households were analyzed on the base of these six variables using a clustering technique called 2-step cluster analysis, a statistical analysis method that can take account of continuous and categorical variables. As result of the analysis, 4 groups were produced with the following summary which is explained in the following section.

The **food insecure households** make up 42% of the sample. All households have a poor consumption. In addition, they owned the least number of assets and total monthly expenditure per capita is on average below 2,400 DF or \$0.45 USD per person per day. In addition, on average about 12% of the food consumed come from relative and community, while only 2% comes from own production.

The **moderately food insecure households** represent 27 % of the sample. These households have an average consumption score of 45, just above the borderline level. About 60% of the households in this profile have a borderline consumption, and 40% have an acceptable consumption. However, this group has very poor access with low expenditure (3,400 DF per month per person or 65 cent per person per day), few assets. On average 9% of the food consumed comes from relative and community, while only 4% comes from own production.

The **moderately food insecure** households make up 12% of the sample and are characterized by a reliance on own production for the food they consumed. Approximately 30% of the food consumed in the last seven days came from their own production. These include meat, milk, vegetables and to a lesser extent pulses. The consumption score is high at 66 which reflect an acceptable consumption. Their expenditure is also higher than the previous profiles at 4,150 DjF per month per person (\$0.78 USD per person per day) but remains low at less than 1 USD per person per day. There is also a concern that if the drought continues; it could affect negatively livestock body condition, reproduction and ultimately, access to milk and meat for these households that are particularly reliant on livestock ownership to feed their family.

The **food secure** households represent 19 % of the sample, and have the highest per-capita monthly expenditure with 7, 084 DjF per month per person (1.30 USD/per person per day). This is almost

double the rural average. Households in this profile have all an acceptable consumption. This profile also has the lowest coping index meaning they employed very few negative coping strategies to provide food for their family. Food secure households have on average a higher number of assets than the other profiles.

**Table 3: Results of the two step cluster analysis and description of the indicators used to define food security in the sedentary rural population**

	Percentage of Population (%)	Average Food Consumption Score	Total Monthly Expenditure per Capita (Cash)	Percent of HH food consumption on from Gift	Percent of HH food consumption on from Own production (%)	Average Number of HH Assets	Average Reduced CSI
<b>Food Insecure – Chronic</b>	<b>42%</b>	<b>21</b>	<b>2,343</b>	<b>12%</b>	<b>2%</b>	<b>3.9</b>	<b>12</b>
<b>Moderately Food Insecure – Transitory</b>	<b>27%</b>	<b>45</b>	<b>3,389</b>	<b>9%</b>	<b>4%</b>	<b>4.3</b>	<b>12</b>
<b>Moderately Food Secure</b>	<b>12%</b>	<b>64</b>	<b>4,146</b>	<b>3%</b>	<b>29%</b>	<b>5.2</b>	<b>11</b>
<b>Food Secure</b>	<b>19%</b>	<b>66</b>	<b>7,083</b>	<b>1%</b>	<b>2%</b>	<b>6.7</b>	<b>3</b>
<b>Total Average</b>		<b>41</b>	<b>3,728</b>	<b>8%</b>	<b>6%</b>	<b>4.7</b>	<b>11</b>

In the next sections, more characteristics associated with food insecure/secure households are presented and described.

## 2 HOUSEHOLD FOOD CONSUMPTION

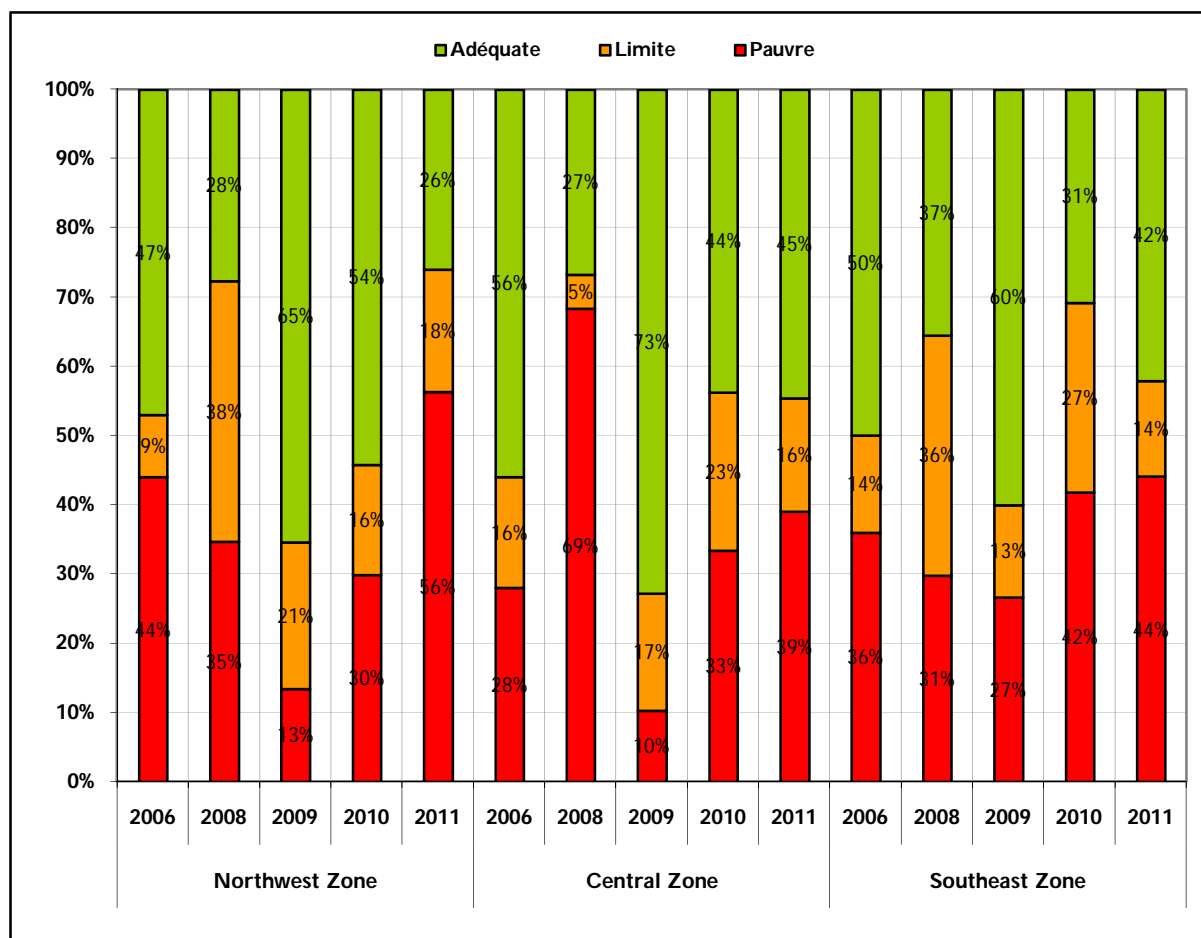
Household food consumption is measured by a food consumption score (FCS), which is based on a recall of food groups eaten in the seven days preceding the moment of interview. It is a short-term indicator for household food intake or food consumption which takes the form of a weighted scoring of the food groups consumed, compared against WFP standardized cut off points. It ultimately allows for a quick categorisation of food intake levels by distinguishing the three different food consumption patterns of “poor”, “borderline” and “acceptable”.

Overall, across the sedentary rural population of Djibouti, 43% of households had an “acceptable” food consumption pattern while 15% and 42% had “borderline” and “poor” consumption levels respectively. Diet is very poor with main food consumed being cereal, sugar and oil. Milk is only consumed by the adequate profile. Fruits are not consumed and vegetables are barely consumed (Table 4). The results are similar to 2010 when 37% of the population had a poor consumption, 24% a borderline and 38% an acceptable consumption. Only in the Northwest zone, the consumption has deteriorated severely with 56% of the population having a poor consumption in comparison to 30% in 2010. This is in line with recent FEWSNET publication which warn of a worsening situation especially in the Northwest zone (FEWSNET May 2011).

**Table 4: Average days of different food group consumption by food consumption categories**

	Starch	Meats	Pulses	Dairy	Veg	Fruits	Oil	Sugar
<b>Poor</b>	7	0	0	0	1	0	6	6
<b>Borderline</b>	7	1	2	1	2	0	7	7
<b>Acceptable</b>	7	2	3	6	2	0	7	7
<b>Average</b>	7	1	1	3	1	0	6	6

Figure 4: Consumption score per Livelihood zone



## 2.1 MEAL FREQUENCY

There is a small but significant difference with regard to the number of meals consumed by household members across the Food Security Profiles. The less food secure the household, the fewer meals members were likely to consume in a day. The difference was significant between the food insecure and the food secure. The food insecure households consumed on average 2.4 meals a day while the food secure households consumed 2.9 meals a day.

Children below the age of 12 years old consumed slightly more meals than adults, and this was so across all Food Security Profiles. Children in the food insecure households consumed 2.6 meals a days while children in the Food Secure households consumed on average 3 meals a day.

## 2.2 FOOD SOURCES

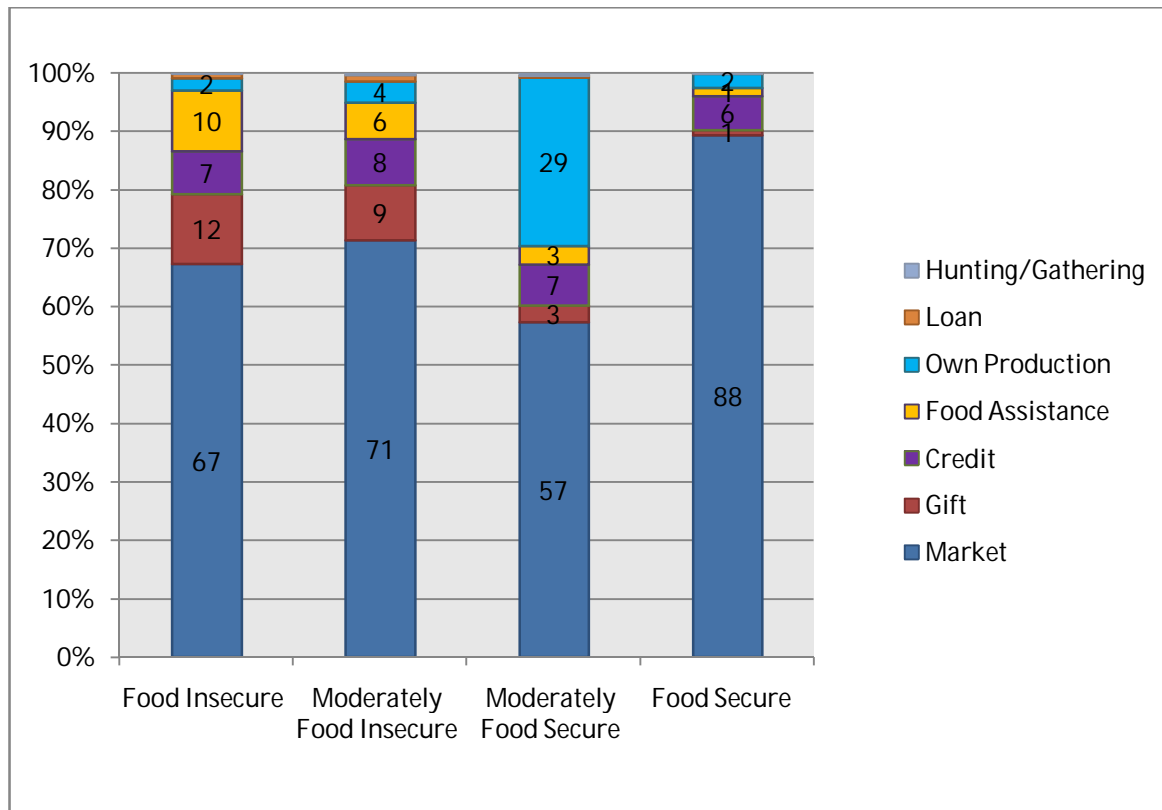
In Djibouti rural sedentary population, just over 70% of the food consumed was purchased with cash from markets. Gift (8%) is the second most common means of acquisition, followed by receiving food as a food aid or purchase on credit both at 7%. Own production is yielding overall 6% (Figure 5). WFP distribution prior to the assessment was at an 80% ration and only to 33,000 people which may explain the relatively low reliance on food assistance at the time of the survey.. Hunting and gathering was not reported as a source of food at the time of the survey.

There were, however, regional differences. Gift is most important in Obock and Tadjourah with 18% and 11% of food coming from this specific source. Foods coming from own production is lowest in Arta and Ali Sabieh, and highest in Tadjourah, followed by Obock. Food aid as a source of food was highest in the Northwest livelihood zone, but similar across districts.

Since gift and own production as sources of food were used in the cluster analysis to define the food security profile, it is not surprising that they are difference between the food security profiles. Food aid

was however not used, and interestingly, the study shows that Food insecure and to a lesser extent moderately food insecure households depend more on food aid than the other profiles.

**Figure 5: Proportion of food source by food security profile**



### 3 HOUSEHOLD FOOD SECURITY CHARACTERISTICS AND PROFILING

This section describes Food Security Profiles considering human capital, social capital, financial capital and physical capital.

#### 3.1 HUMAN CAPITAL

##### 3.1.1 Household Demography

Human capital encompasses the skills, knowledge, ability to labour and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives. At the household level human capital is limited by the amount and quality of labour available; this varies according to household size, skill levels, leadership potential, health status, etc.

The assessment found that the average household size in the rural setting was 6 – the same as the recent 2009 census. Basic Demographic information are presented in Table 5. Overall, 31% of the households were female headed, 79% of all heads of household were married, 16% were widowed, 2.5% of the surveyed people were divorced, and 2.3% are single or living apart. The female headed households were neither more likely to be food insecure nor to have a poor consumption. In general, the average age of the heads of the household was 44 years old. There was no relationship found between food security and marital status, dependency ration or the number of adults per children/elderly, or the age of the head of households. The food insecure households were more likely

to have to care for an ill or disabled person than households in the other Food Security Profiles. The differences were significant<sup>14</sup>.

**Table 5: Demographic of the rural population of Djibouti**

Av. HH Size	% Widowed Households	Av. Age of Head HH	% Female Headed HH	Dependency Ratio	Percentage of HH with Physically Disabled and Ill Member	Percentage of HHs with Orphan
6.0	15%	44	31%	54%	13%	13%

### 3.1.2 Education and Health

Among the households with children of school age (6 to 11) that were attending school, 60% of boys and 52% of girls at the time of the study were attending school. Food Insecure households had fewer girls (44%) and boys (58%) attending school than food secure households (66% girls and 69% boys), the difference is only significant for girl's enrolment/attendance (a significance level of  $p=0.000$ ). The principal reasons given for not attending school were the same as in 2009 and 2010. These are in order of importance: 1) school is too far, 2) cost of enrolment and school supplies are too high, 3) children need to care for livestock, 4) children need to stay to help at home. The last reason was mainly stated as a reason for girls not to attend school.

According to the information from the key informants, 45% of the village visited had a primary public or Koranic school, the proportion was by far the lowest in Obock (16%). Of the village that did not have a school in Obock, 42% stated that the nearest primary school was between half a day to a day walk. Although schools seem fewer and further away in Obock than in any other district, households in Obock were not the ones most mentioning distance as a limiting factor to enrolment. Distance as a limiting factor was most stated by households in Ali Sabieh, followed by Dikhil.

Only 18 of the 82 villages visited had a health centre – within these villages that had a health centre, key informants stated that consultation were free in 17 of the 18 centres. Key informants in these same villages also stated that their health centre was operating on a regular basis.

Children diseases reported by the key informants were linked to respiratory tract infections, malnutrition and Diarrheal, while adult's diseases were mainly linked to respiratory tract infections.

Key informants were also asked, how far their villages was from the tarmac road. In Obock, villages were on averages 50 km from the tarmac road, while villages in Ali Sabieh were on average 15 km away from a tarmac road. The overall average for the sampled villages was 33 km.

### 3.1.3 Migration

Just below 20% of households had one or more family members who migrated in the last 6 months. This is the same as in 2009 but twice as high as in 2010. Out of the 20% of household members who had a family member who migrated, the reasons for migration were i) Livestock (7%), ii) Work (5%), iii) Education (4%) and iv) Health or join family (2%). About three quarter of the people that migrated stated it was normal. Of the people that migrated for livestock most migrated within the district (80%) or to another country (8%). When the reason for migration was education, 60% migrated within the district and another 26% to Djibouti ville. About 60% of the people that migrated because of work went to Djibouti; another 35% remained within the same district. Slightly more households have household members migrating in Dikhil. Lowest reported migration is in Ali Sabieh and Arta.

According to the key informants, livestock migration occurred mainly between February and September with a peak around April-May.

<sup>14</sup> A significance level of  $p=0.05$  was found for the proportion of ill people per households between food security and  $p=0.03$  for the proportion of disable people per household between food security profile.

## 3.2 SOCIAL CAPITAL

Social capital is intended as the social resources upon which people draw in pursuit of their livelihood objectives; these are developed through social networks, relationships of trust, reciprocity and exchanges that facilitate co-operation, and may provide the basis for informal safety nets for the poor.

In rural areas, food, non-food and cash transfers from a household's social network is an important social mechanism to allow households to meet their food and non-food needs. According to the household responses and as shown in Table 6, a total of 14% and 3.8% households reported receiving food and non food items respectively from family during the previous month. In addition 5.4% of households received cash transfer in the last 6 months. It is however not possible to compare the results of this question to 2010 as the recall period were different. In 2010, the recall period was 12 months while in 2011 it was six months for cash transfer and one month for food and non food transfers. As Table 6 illustrates, there are variations between districts, where Obock received most transfers and Dikhil the least transfers.

Transfers were also compared amongst food security profiles. It is interesting to note that fewer food secure households received food transfer than the other three food security profiles, but there was little difference in the proportion of household receiving food transfer between the food insecure, moderately food insecure and moderately food secure. Although the proportion of households receiving cash transfers was overall small (5.4%), a larger proportion of food secure households (7.4%) received them in the last 6 months than the food insecure household (3.8%).

**Table 6: Proportion of household receiving transfer by district**

District	% HH receiving food transfer in the last month	% HH receiving non-food transfer in the last month	% HH receiving cash transfer in the last six months
Ali Sabieh	2.1%	0.5%	7.9%
Arta	13%	1%	6.1%
Dikhil	6%	-	3.9%
Obock	32%	10%	5.9%
Tadjourah	20%	8%	5.1%
<b>Total</b>	<b>14%</b>	<b>3.8%</b>	<b>5.4%</b>

Households were asked if they had received assistance in the six months preceding the survey from either *zakat* (Islamic charity), NGOs, and/or Government, or from neighbours, colleagues or family members (their social network). At total of 62 %of the rural population stated having receiving assistance, this proportion is much higher than in the urban areas (less than 20%) (Djibouti Urban EFSA, 2010). Of this population that received assistance, most received it from the UN (76%), from family, friends and colleagues (13%), from NGOs (7%) and only 4% from having received support from *zakat* or the government.

## 3.3 FINANCIAL CAPITAL

Financial capital refers to the financial resources that people use to achieve their livelihood objectives. In the context of Djibouti's, financial capital is of strong importance as it influences consumption, food security and ultimately, nutrition.

### 3.3.1 Livelihood and income sources

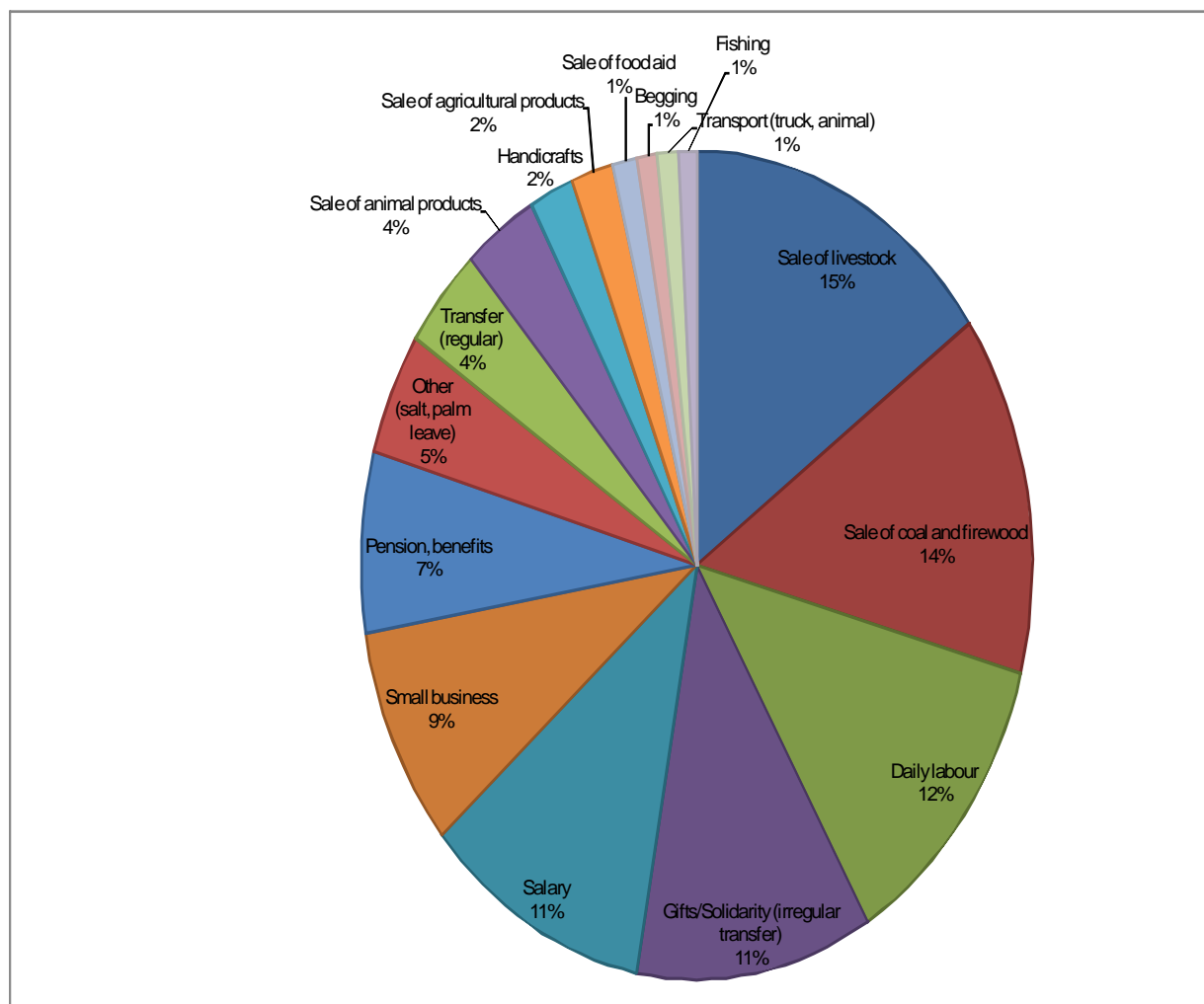
70% of the households surveyed reported having one adult income earner in the family, 11% reported having two income earners. About 18% of households reported having no income earners at all. The majority of households with no income relied on gifts, and/or charity, food aid and other assistances. These households were more likely to be food insecure (significant level  $p=0.05$ ).



The study also assessed the number of income sources per family –i.e., the types of income-generating activities use by a household to earn a living<sup>15</sup>. The large majority of the rural households (76%) had only one source of income, while 24% had two sources. Less than 1% reported a third source. Food secure and moderately food secure households were more likely to have more than one income source and more than one income earner than the other food security profiles (significant level p=0.05)..

Overall, as per FEWSNET livelihood study, few households rely on livestock for a living (FEWSNET, 2004). These results are also similar to the 2009 and 2010 EFSA. Combining all sources of income, about 15% of the households reported the sale of livestock as a source of income, followed by sale of charcoal (14%), daily labour (12%), gift (irregular transfer) (11%), salary (11%), small business (9%) Pension (7%), transfer (4%). The other activities were less than 4% (Figure 6).

**Figure 6: Distribution of Income Sources<sup>16</sup>**



It is important to note that only 15% households rely on livestock sale and another 2% on the sale of livestock products or income as a first or second source. However this proportion seems to be higher than last year when only 9% reported it as a source of income. On the other hand gift/solidarity as a source of income reduced slightly from 16% in 2010 to 11% in 2011 as well as the sale of charcoal which was stated by 21% of households in 2010, against 14% in 2011. The proportion of households earning from salary, daily labour and Pension has remained similar to 2010.

<sup>15</sup> For example, if two people earn a salary – only one income activity “salary” was identified however if one adult was earning a salary and the household also had a “boutique” – two income activities were identified.

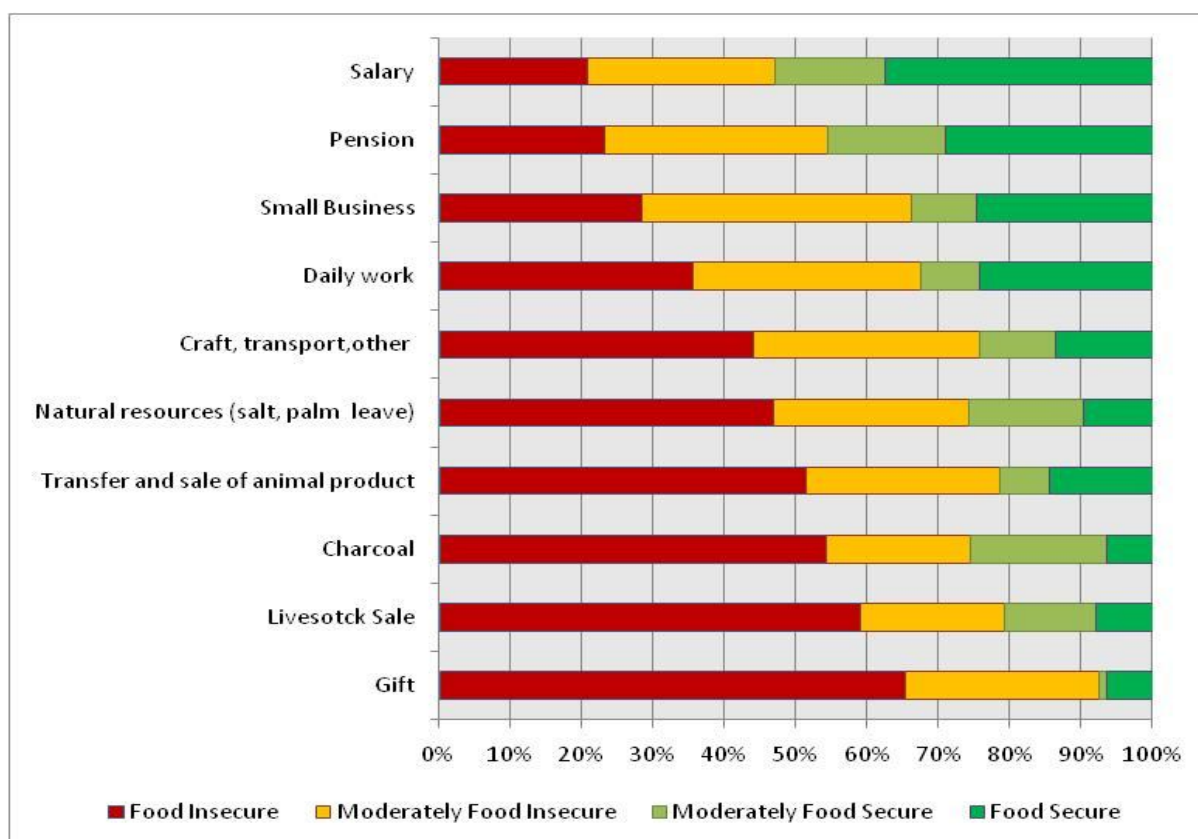
<sup>16</sup> Fishing & artisans is taken out as it represents not even 1% of the total urban population.

The low proportion of household earning from livestock and livestock product sale (17%), combined with low migration due to livestock (7%) and low reliance of own production as a source of food (6% of all food sources) suggests that Djibouti rural population does not overall rely mainly on livestock herds as a source of income or food at the time of the survey. This finding is very much in line FEWSNET livelihood study (FEWSNET 2004) and British Red Cross recent assessment (British Red Cross 2010). The data also suggests that the sale of charcoal is one of the most important sources of income and has been for the last two years. This should be of concern as it is most likely unsustainable if not managed appropriately

Income source responses were regrouped into a fewer numbers through a cluster analysis in order to cross-tabulate with other factors. These main livelihood groups were cross-tabulated with the food security profiles. Overall, food insecure and moderately food insecure households make use of all the livelihood types and income sources (Figure 7). However, there are a few significant differences:

- Households earning a salary, a pension or having a small business are less likely to fall in the food insecure profile (significance level of  $p=0.05$ );
- Food insecure households are more likely than households in the other food security profiles to rely on gifts/solidarity (irregular transfer) (significance level of  $p=0.05$ ) and begging as their main sources of income;
- Food insecure households also tend to rely more on sale of livestock and sale of charcoal than the food secure and the moderately food insecure (significance level of  $p=0.05$ ), although all profile also relies on it, but to a lesser degree .

**Figure 7: Distribution of Food Security Profiles across Income Sources<sup>17</sup>**



<sup>17</sup> Fishing & artisans is taken out as it represents not even 1% of the total urban population.

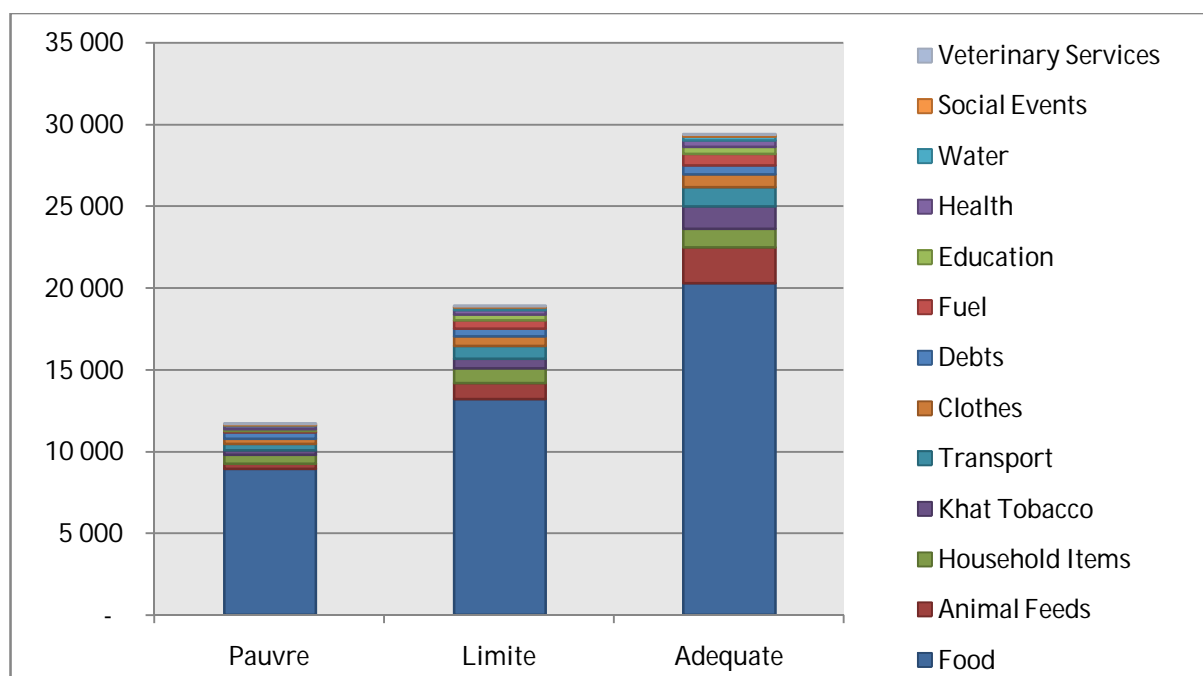
### 3.3.2 Total expenditures as a proxy for income

Total household expenditure – used as a proxy indicator for household income – was calculated by adding the monetary value of all the food and non–food items acquired in cash over the six months preceding the survey. In kind donations are not included in this calculation.

The average total household expenditure was just below de 20,000 Djiboutian Francs per month – equivalent to about 115 USD per month or about \$ 0.74 USD per person per day. This is only slightly higher than last year when household monthly expenditure was estimated at 15,600<sup>18</sup> (\$ 88.00 USD). Overall, expenditures have increased compare to 2010 and are similar to 2009 (Figure 9).

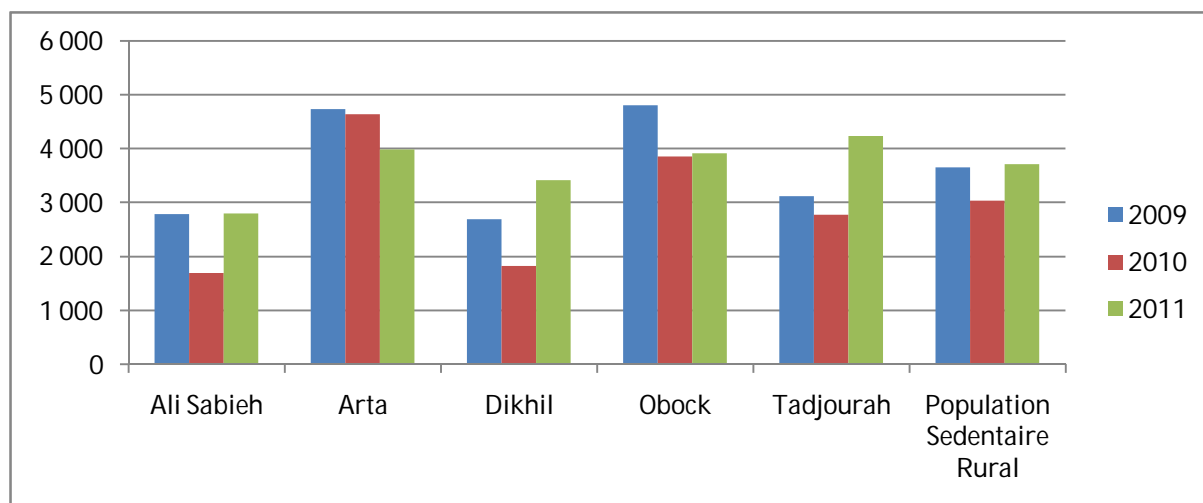
As expected there were great differences in expenditure levels across the Food Consumption Profiles. Average monthly per capita expenditure was estimated at 2,370 DjF for households with poor consumption; at 3,560 DjF for households with borderline consumption households; and at 5,520 DjF for households with acceptable consumption. Total monthly expenditure follows the same profile, with just below 30,000 DjF for adequate consumption, about 18,900 DjF for Borderline consumption and 11,700 DjF for the poor consumption profile. The difference in monthly household expenditure and per capita expenditure amongst the three consumption profiles is highly significant (P=0.000) (Figure 20: ).

**Figure 8: Total household expenditures per Consumption Profile**



<sup>18</sup> For comparison, Total expenditure was recalculated for 2009,2010, 2011 to ensure the data are comparable. Coffee/Tea and powder milk are included in Food expenditure while repayment of debts is included in the non-food expenditure for all the 3 years.

**Figure 9: Expenditure per capita per month compared across the year and districts.**



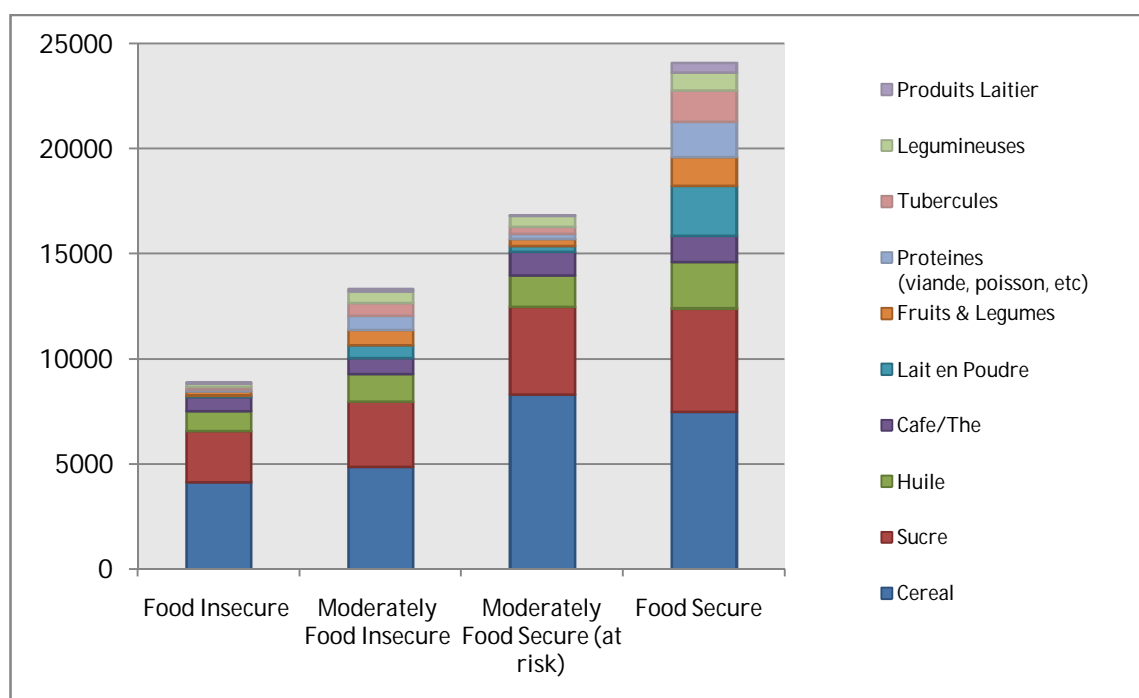
### 3.3.2.1 Food and Non-food expenditures

Overall, 73% of total household expenditure is spent on food. This is slightly higher than in 2010 when households stated spending 69% of their total expenditure on food. There is no significant difference between regions and livelihoods. However, this percentage was significantly higher for households with poor consumption, with 77% of the total expenditures on food, while households with borderline and acceptable consumption spend 71% and 70% respectively (significant level  $P=0.001$  and  $P=0.000$ ).

Non food expenses included: food for livestock (6%); household articles, tobacco/khat and transport all at 4%. Percentage spent on khat is much lower than reported in the literature review. Debt repayment counts for 2% of the total expenditure.

In terms of total expenditures on food, on average 40% of expenditures went to the purchase of cereal, followed by sugar (24%), oil (10%) and coffee (6%). As per shown in Figure 10, spending on food varied across the consumption profiles: The food insecure spent 92% of their food expenditure on four items alone - cereal (46%), sugar (27%) oil (11%) and coffee/tea (6%).

**Figure 10: Total household food monthly expenditures per Food Security Profiles**



### 3.3.3 Changes in expenditure and income

Households were also asked about changes in income levels and key expenditures compared to the previous year. About 40% households stated there had been no change in their income levels, 48% stated they had experienced a decrease and 12% had experienced an increase. This is slightly contradictory to the expenditure data that show a slight increase in total expenditure – an indirect indicator of income

Nonetheless, one issue is evident - more food insecure households (56%) stated they had witnessed a decrease in their income compared to the previous year than any other food security profile (35% of food secure profile stated a decrease in income), indicating greater vulnerability in earning for the food insecure profiles. The difference is significant ( $p=0.05$ ) between the food insecure profile and the moderately food secure, and the food insecure and the food secure profile.

Households were also asked if expenditure for food, education, health, transport and energy cost had changed compared to last year. More than 80% of household stated food prices had increased in the last year, however with regard to other expenditures, most stated that they were not concerned by changes in these commodities/services or that there were no change.

### 3.3.4 Assets

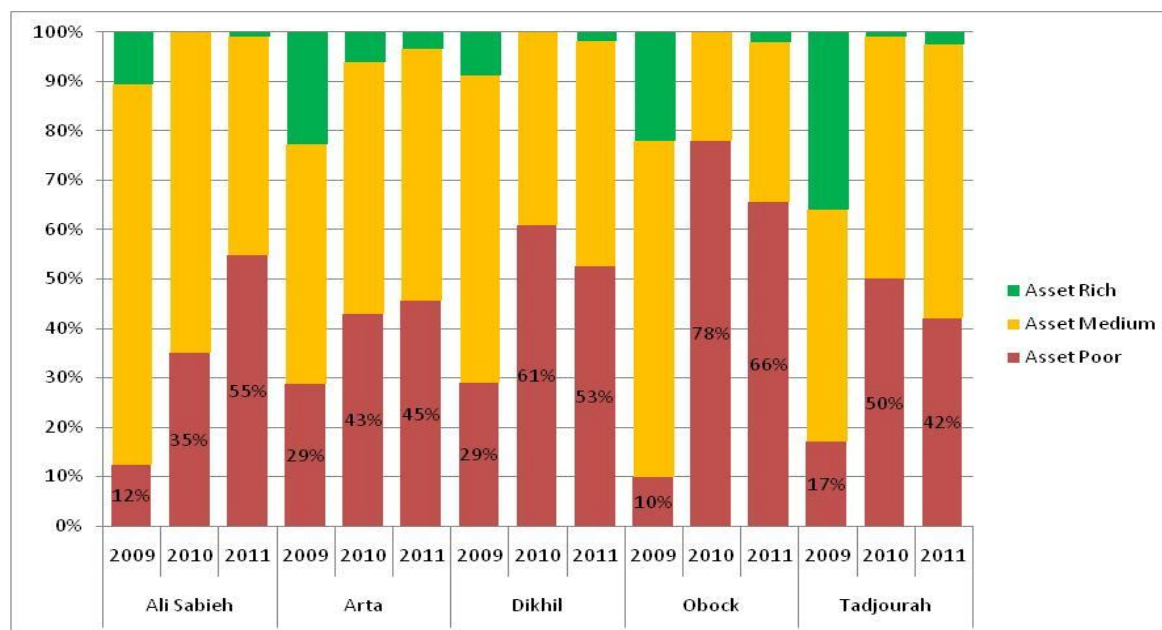
As per the EFSA 2009, and 2010, the assessment asked households if they owned a series of 12 basic assets (bed, mat, mattress, blanket, mosquito net, radio, bicycle, cart, cell phone, kerosene lamp, water tanker and arable land). Asset wealth was then determined by counting the number of different types of assets a household owned and then categorised these households into 'asset wealth' groups. The thresholds for the three groups are as follows: *asset poor* (0-4 different types), *asset medium* (5-9 different types) and *asset rich* (10 or more).

Nationally about 50% of the households sampled were in the asset poor category, 48% were classified as asset medium and 2% as asset rich. These results are very similar to 2010 when 54%, 45% and 1% were respectively asset poor, asset medium and asset rich; however, the data suggests a net reduction of assets compared to 2009. The district of Obock has the most "asset poor" households, followed by Dikhil, however in both districts the situation is relatively similar to 2010. Only in Ali Sabieh, the data suggest an increase of "asset poor" households compared to 2010 (Figure 11). Despite that the data suggest an increase in proportion of "asset poor" households in Ali Sabieh between 2010 and 2011, no household in Ali Sabieh reported the sale of assets in the last 6 months.

Over 96% of the households reported that they had not sold any asset in the last 6 months. Of the 4% of households that did report selling livestock, two thirds stated it was abnormal sales. Of the population stating abnormal sales of assets, a majority were food insecure or moderately food insecure. Almost all (90%) sold asset in order to purchase food.

As with the results of the 2009 and 2010 assessment, the most commonly owned household assets were jerry cans, traditional mats (used as mattresses in most of the rural areas), blankets, mattresses, mosquito nets, kerosene lamps.

Figure 11: Changes in wealth between 2009, 2010, and 2011.



### 3.3.5 Livestock

According to the results of this study, the proportion of households owning livestock in 2011 has overall remained similar to 2010 (Table 7). Tadjourah and Obock districts have highest proportion of households possessing livestock, while Ali Sabieh and Arta districts have the least number of households owning livestock (). The moderately food secure households have much more livestock than any other food security profiles, which explain partly the high proportion of own production in the household source of food. Except for the moderate food secure households that possess more livestock than any other profiles, there is no significant difference in the proportion of households owning livestock between food security profiles. Only the ownership of cow to improve food security significantly (significant at  $p=0.004$  between food insecure profile and moderately food insecure;  $p=0.007$  between food insecure and food secure).

Similarly to 2009 and 2010, over 75% of the households reported that they had not sold any animals in the last 6 months. Of the 21% of households that did report selling livestock, half (10.5%) stated it was abnormal sales. Of this, 96% sold animals in order to purchase food. 78% of the households that stated abnormal sales, (50%) are food insecure or moderately food insecure (28%).

Table 7: Percentage of household owning animal since 2009

Animal	2009	2010	2011
Donkeys	30%	29%	28%
Camels	39%	22%	34%
Cows	20%	9%	9%
Goats	82%	79%	82%
Sheep	38%	25%	31%

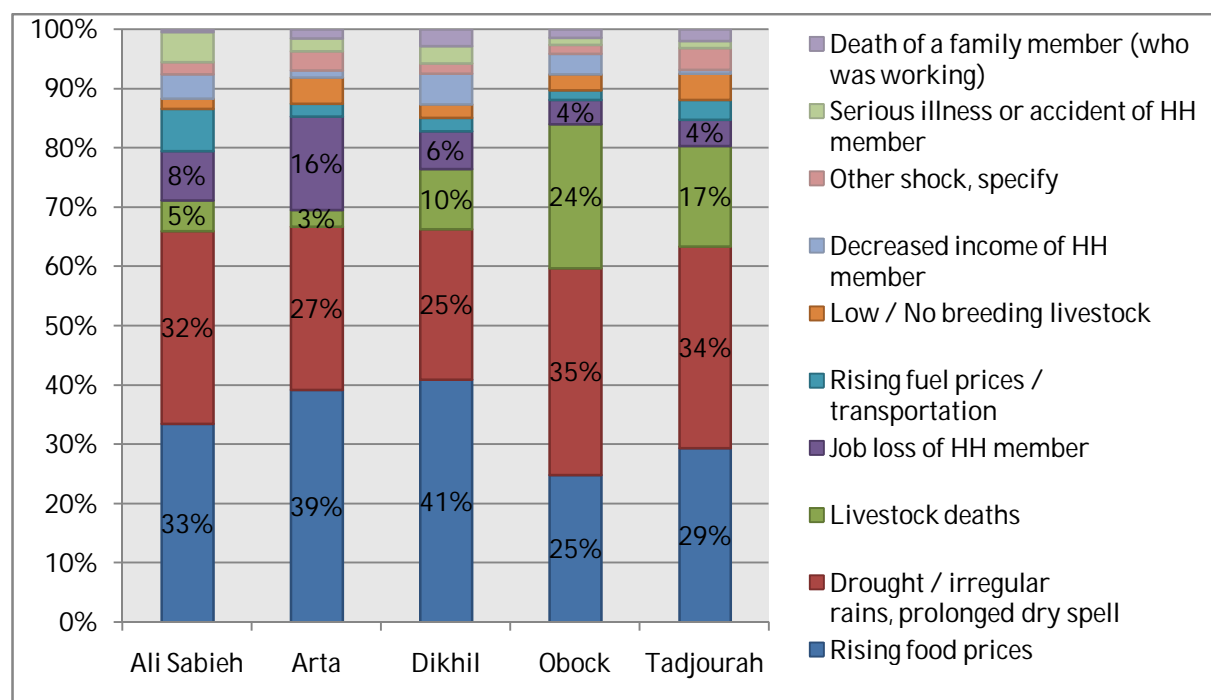
Table 8: Percentage of household owning animal per district

	Donkey	Camel	Cow	Goat	Sheep
Ali Sabieh	25%	7%	0%	75%	31%
Arta	15%	7%	2%	67%	23%
Dikhil	26%	41%	4%	85%	30%
Obock	50%	53%	11%	88%	36%
Tadjourah	23%	61%	29%	92%	33%
Total	28%	34%	9%	82%	31%

## 4 SHOCKS

Households were asked about difficulties or shocks experienced in the six months prior to the survey. The most commonly reported shock was **unusually high food prices**, which was reported by **34%** of the households, followed by **drought/irregular rains** (31%), **death of livestock** (12%) and **losses of income** (7%). The order is exactly the same as previous years with only slight difference in proportion, as prices, drought, death of livestock were reported by 27%, 26%, and 17% of the household in 2009. This result suggests that these shocks are not new but have been recurrent for at least the last 3 years.

**Figure 12: Proportion of shock affecting households per districts**



High food prices as a shock was mentioned most often in Dikhil (41%) and Arta (39%) while livestock death was reported most often in Obock (24%) and Tadjourah (16%). Droughts/irregular rainfall was mentioned across all districts, with no strong difference across districts. Rising fuel price/transport was mentioned most in Ali Sabieh (7% of the households compared to the overall average of 3%) and finally about 16% of households stated job losses as shock in Arta, which is double the overall average of 7% (Figure 12). All three main shocks affected households regardless of their livelihood/source of income.

## COPING STRATEGY INDEX

The Reduced Coping Strategy Index (CSI) is a standardized means of comparing the various coping strategies used by households. Households were asked how many days, over the seven-day period preceding the survey – had they employed a set of defined coping strategies in order to access food. Replies were then weighted and summed together to develop an index.

Overall rural sedentary households in 2011 were using less frequently detrimental coping strategies than in 2010 and 2009 (Figure 13). In fact, the 2011 CSI value was only 52%, 67% of the CSI value of 2010 and 2009 respectively. Nonetheless, the data also shows that households with poor consumption have a slightly higher CSI score than households with borderline consumption and that similarly households with borderline consumption have a higher CSI value than the ones with an adequate consumption. This shows that households with poorer consumption tend also to use more often harmful coping strategies than households with an acceptable consumption. Households relying on begging, gifts (irregular transfer), craft, livestock sale and charcoal sale had higher CSI index than households relying on salary, pensions and the sale of livestock products and regular transfers (Figure 14).

Figure 13: 2011 Coping Strategy Index (CSI) per districts compared to 2009 and 2010

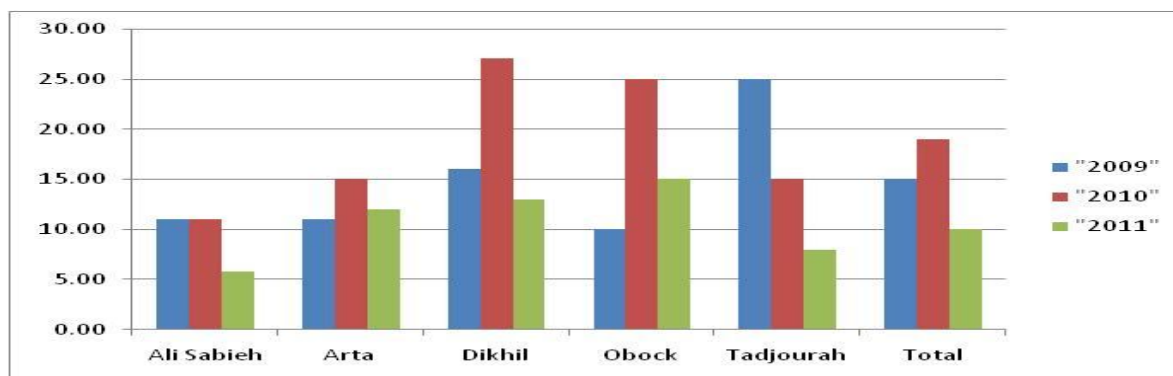
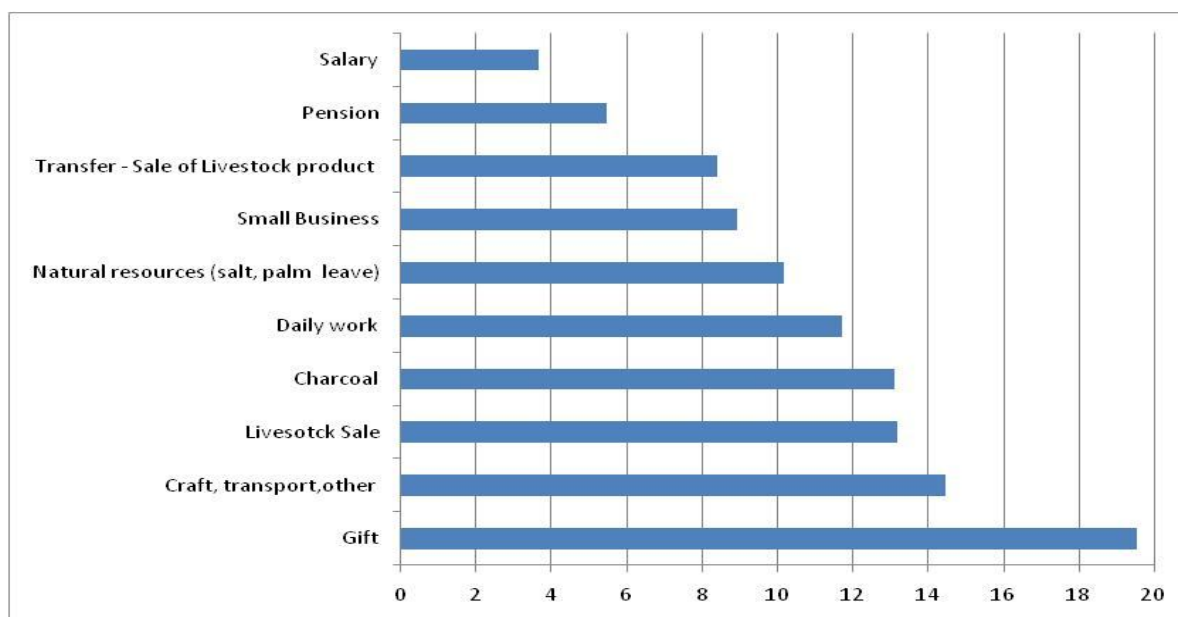


Figure 14: CSI Index value per livelihood activities.



The coping strategies most often mentioned were: 1) buying less favourite/ less expensive food, 2) limit the portion eaten at each meal, 3) reduce the number of meals eaten per day, 4) borrow food or rely on relative/friends and 5) Reduce adult portion for adult to provide for the children. Except for the food secure profile who used few coping strategies, there was little significant difference between the three other profile in terms of coping strategies employed, except that food insecure household were more likely to reduce the number of meals per day than any other profile.

## 5 SEASONALITY

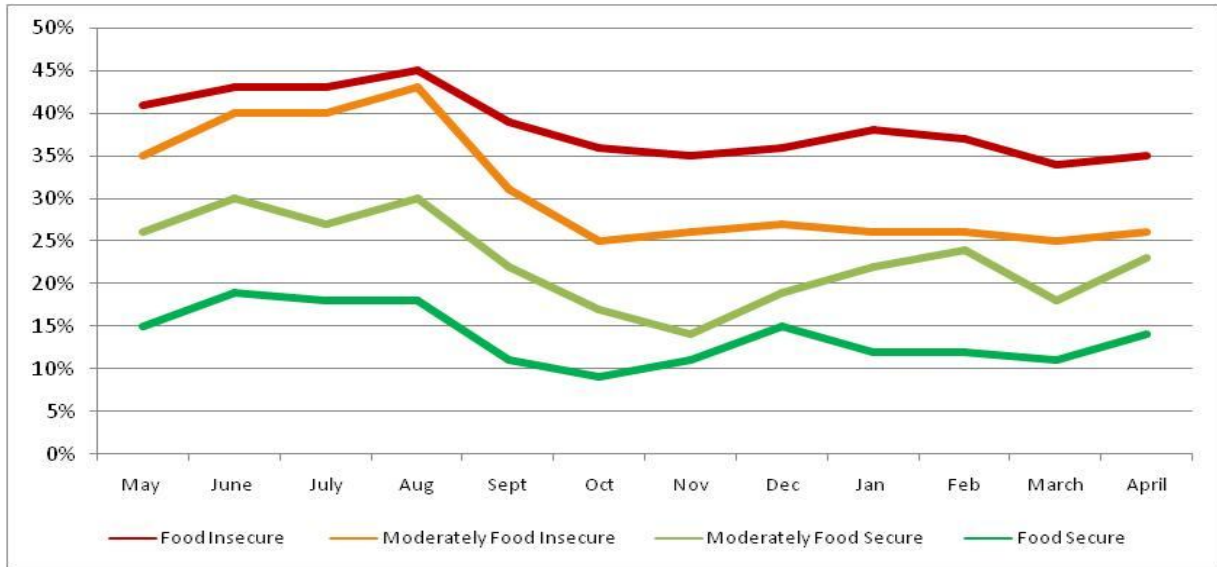
Data collected on seasonality indicated that in 2011, similarly to previous survey, food insecurity was highest during the months of April/May to September, with a peak in August at the end of the lean period. These were the months during which households, especially the Food Insecure and Borderline Food Insecure, had the hardest time getting enough food to feed their families (Figure 15). July to October was also the period during which high spending was registered, across three of the four food security profiles.

In comparison to the other food security profile, the food insecure households stated having difficulties feeding their family all year around with very little seasonal difference. Similarly, it was the only profile reporting similar level of spending across the year (Figure 16). This is perhaps because, their income is so low that they have very little flexibility, and thus are likely to reduce consumption of goods during high prices period rather than increase spending. Shocks, especially related to livestock death, low

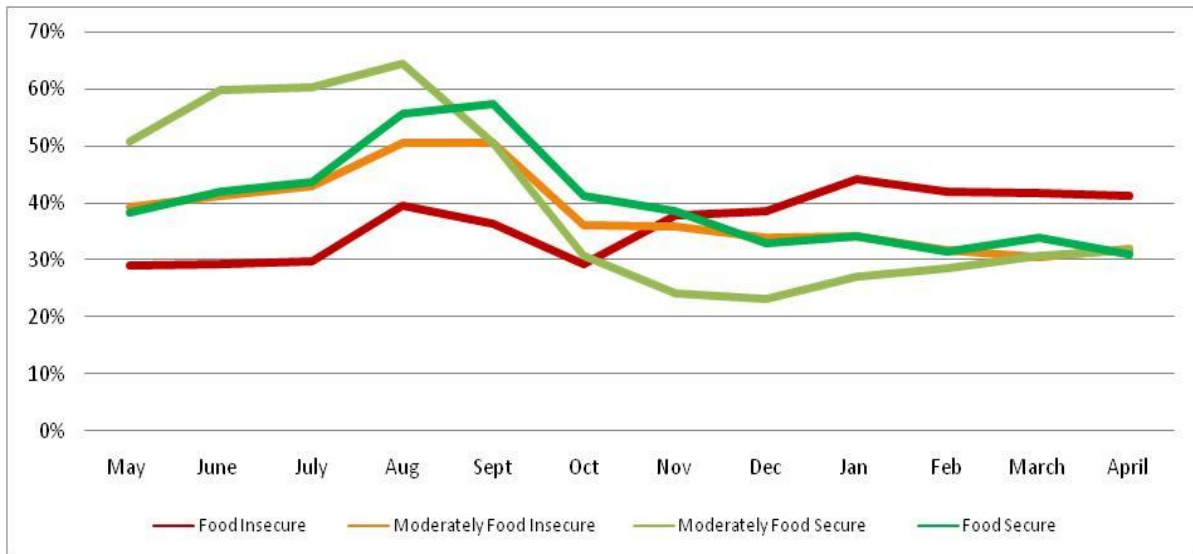


production and drought are more prevalent during the lean season, while high prices had little seasonality. The lean period (April/May to September/October) correspond to the hottest months, with food and water prices rising, and fewer job opportunities. School fees also have to be paid in September<sup>19</sup>.

**Figure 15: Proportional and Seasonal differences in perception of being unable to satisfy household food needs.**

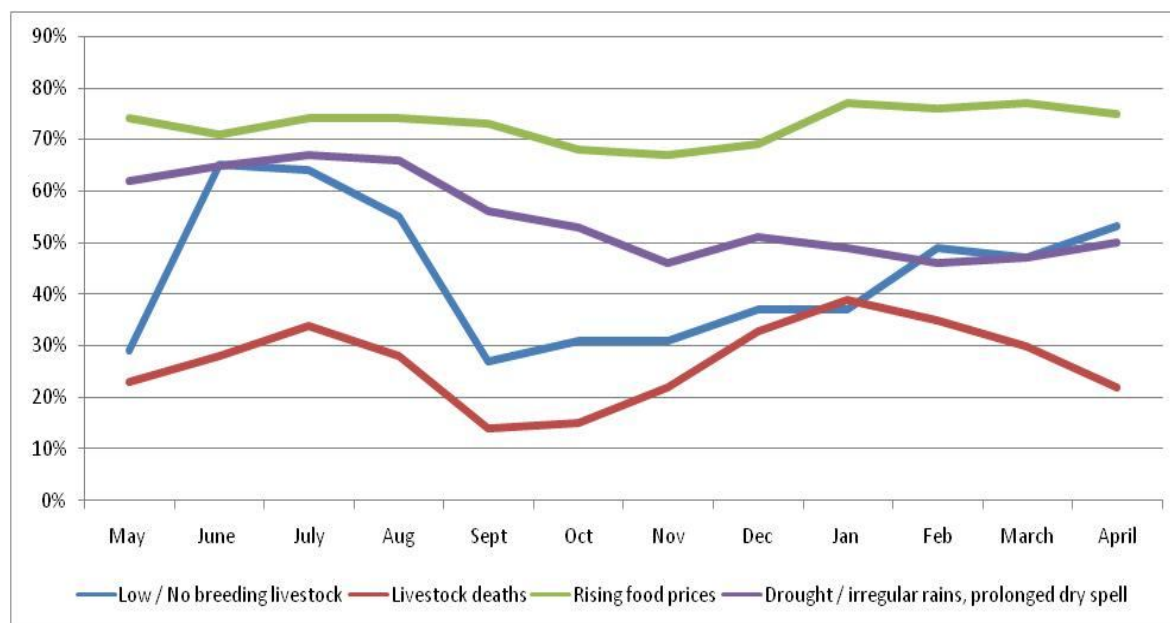


**Figure 16: Proportional and Seasonal differences in expenditures between Food Security Profiles**



<sup>19</sup> Information gathered from Djibouti food security and nutrition specialists from UN, NGOs and governments.

**Figure 17: Seasonality of main shocks**



## 6 PRIORITY OF ASSISTANCE

The main basic priority of assistance<sup>20</sup> reported by households was the receipt of food (42%), followed by access to water (14%), the receipt of money (10%), followed by health service provision and income generation (8% each).

Although all food security profiles stated food as their first priority, a higher proportion of food insecure households (46%) requested it than the food secure (37%). Access to water was mostly requested by the food insecure and the moderately food secure. The request for health related issues and for income generating activities were similar across profiles. There were also differences across livelihoods and districts. Access to water was much more requested from households living in the Northwest livelihood zone, in Obock and Tadjourah district. Health assistance was mainly in the Northwest livelihood zone. Lighting was mainly requested in Arta, and cash in Dikhil and Arta. Food, cash and water were all mainly requested during the lean season from May to September.

Key informants were also asked about the types of assistance they felt should be prioritized in their community. The emphasis was however on development assistance, with no choice of answer referring to food assistance, except in the treatment of malnutrition. In this context and by including all three main priorities, the choice of answer most stated were 1) improving access to and the amount of water available and 2) Construction of health centers. These were followed by construction of school infrastructures, income generating activities, livestock restocking and micro-finance projects. These priorities should be taken into account when designing Food for Work and other development projects.

## 7 CONCLUSION AND RECOMMENDATIONS FOR RESPONSE OPTIONS

The profiling of food security was done using the same approach as in 2009 and 2010. The 2011 rural EFSA distinguished the following four food security groups:

1. Food Insecure (≈36,200 people),
2. Moderately Food Insecure (≈24,500 people),

<sup>20</sup> The main priorities combined the first and second priorities through a multi-variate analysis.

3. Moderately Food Secure - at risk (≈12,700 people)
4. Food Secure (≈17,600 people)

Although the population sampled in the EFSA is from village, predominantly sedentary, it is acknowledged that part of the nomad population may also be present at time and the upper range of the population is thus used to guide intervention.

**Table 9: Estimate of the rural sedentary population per food security profile**

Food Security Clusters	Estimate Population Affected	Mean Percentage Affected	Population Range	
			Lower	Upper
<b>Food Insecure</b>	<b>33,200</b>	<b>42%</b>	<b>30,300</b>	<b>36,200</b>
<b>Moderately Food Insecure</b>	<b>21,500</b>	<b>27%</b>	<b>18,600</b>	<b>24,500</b>
<b>Moderately Food Secure</b>	<b>9,800</b>	<b>12%</b>	<b>6,800</b>	<b>12,700</b>
<b>Food Secure</b>	<b>14,600</b>	<b>19%</b>	<b>11,700</b>	<b>17,600</b>
<b>Total</b>	<b>79,100</b>	<b>100%</b>	<b>75,900</b>	<b>82,300</b>

**Food Insecure** households have a very poor consumption pattern – made of cereal, oil and sugar. In addition, they owned the least number of assets and total expenditure per person per day is 80 DjF (about \$ 0.45 USD per person per day). Of this total, 77% of total expenditure goes on food. On average about 12% of the food consumed comes from relatives and the community and another 10% comes from food assistance. Food insecure households stated having difficulties feeding their family almost twelve months of the years. Food insecurity appears to be chronic with poor access to food all year around. The food insecure households are also statistically more likely than households in the other food security profiles to be burdened with the care of ill or/and disabled persons. Food insecure households are less likely to earn an income from a salary, pension, or a small business. However they are more likely to rely on gifts, begging, sales of charcoal and sales of livestock as a main source of income. Significantly more food insecure households (56%) also stated they had witnessed a decrease in their income compared to the previous year which was more than any other food security profile, indicating greater vulnerability in earning for the food secure profiles.

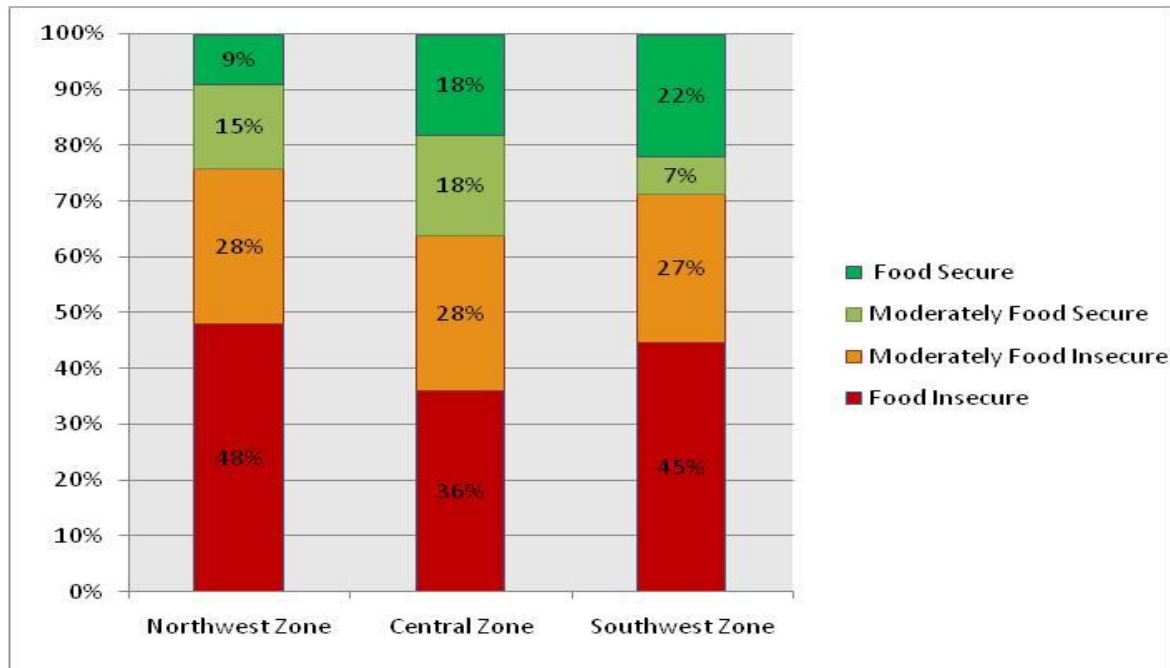
In comparison, the **Moderately Food Insecure** households seem to be in a transient situation, with difficulties to provide for their families higher during the lean season (starting April/May up to September). Their average expenditure is higher than that of the Food Insecure households, but still very low at 3,390 DjF per person per month or 113 DjF per person per day (0.65 USD per person per day). These households also have fewer assets than the food secure profile, although the difference is small. They are involved in many various income activities of which none is dominant. On average 9 % and 6% of their food is sourced from gift and food aid respectively. These households will be more difficult to target as fewer distinctive characteristic describe the profile.

The **Moderately Food Secure** are characterised by a relatively high reliance on own production, with 30% of their food, namely milk, meat and to a lesser extend pulse coming from their own production. The consumption score is high at 66 and well above the level of an acceptable consumption. It shows the impact own production, namely milk, have on household consumption. Total monthly expenditure is also higher than the national average at 4,150 DjF per person or (just below 0.80 USD per capita per day), remaining below the 1 USD/per person/per day. Although household consumption is currently acceptable, there is a concern that if the drought conditions persist, food from own production could reduce drastically, and that a proportion of this group could become moderately food insecure.

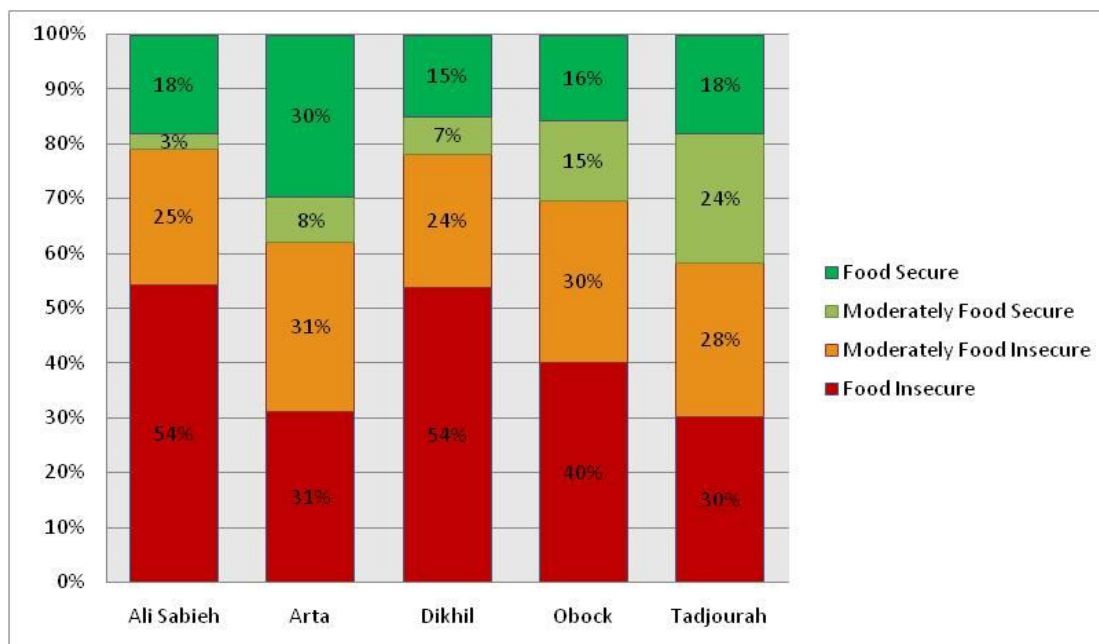
The **Food Secure** households are much more likely to earn a salary, live from a pension or have small business than any other food security profile. Their total monthly expenditure is just above 7,000 DjF per person or 233 DjF per person per day (1.32 \$ USD per person per day). They use significant fewer coping strategies than any other profile and barely rely on gift (1%) and own production (2%) as source of food.

Data was also analysed to assess differences between the five regions. In terms of Food Security, the central zone has a lower proportion of food insecure households than the other two livelihood zones. There are also less food secure households in the Northwest zone than the Central and Southeast zones. The differences are statistically significant ( $P>0.05\%$ ). This also corresponds to the recent FEWSNET update which identifies the same zones of concern that is the entire Northwest zone and part of the Southern zone. In terms of districts, there is a higher proportion of food insecure in Dikhil and in Ali Sabieh, this difference is significant between Dikhil and the three following districts: Obock, Tadjourah and Arta. The district of Tadjourah, followed by Obock, have the highest proportion of moderately food secure households, that is household depending on own production to eat. This means that the impact of drought conditions should be particularly monitored in these two districts

**Figure 18: Proportion of food security profiles per livelihood zones**



**Figure 19: Proportion of food security profiles per district**



As stated in the executive summary, the lack of access to milk and milk products for most of the food insecure and moderately food insecure households directly affects consumption and food security level. However, the root causes of food insecurity in rural Djibouti appear to be structural poverty. This is illustrated by very low productive and non productive asset holding, low income levels, and absence of job opportunities in rural areas. The lack of access to services such as education and health aggravate this situation. In the last two years, this chronic situation has been exacerbated by high international food prices and very poor rainfalls. The study suggests that the combination of structural poverty and recurrent shocks (high food prices and poor rainfalls) has lead to abnormal livestock sales amongst part of the food insecure and moderately food insecure in 2011.

In short, the food security situation in rural Djibouti has remained similar to 2010 and continues to be very critical. Most of the households interviewed had received assistance in the last six months which may have contributed to maintaining a similar food security situation despite the continuing drought conditions and high food prices. As the situation as not evolved from the 2010 EFSA, similar recommendations are provided.

1. **Continue to provide unconditional transfer during the lean period for the food insecure and the moderately food insecure** to improve access to nutritious food and to diminish the risk of household selling/losing more productive assets such as livestock.
2. **Unconditional transfer for the food insecure should remains at least for the next 12 months**, as food insecure households have shown little signs of recovery and have important difficulty in accessing food all year around. Nonetheless, at the same time high priority must be given to finding, together with the government of Djibouti and the humanitarian community longer term solution to chronic food insecurity, including the possibility of establishing a national safety net.
3. **Seasonal conditional transfer of food during the Hagaa season ( October to April)** for the Moderately Food insecure households that includes a training or/and work components. Project related to improving access to and the amount of water available, building health centers and school infrastructures, increasing access to income generating activities, livestock restocking and micro-finance were seen as priorities by community leaders.
4. **Ensure that long term activities in the Country Development Programme compliment the operation by supporting education, technical adult training, and nutrition intervention.**
5. **Encourage the targeting of relief aid to the most food insecure** in each community based on the targeting criteria stated in this and prior EFSA.
6. **As per recommended in the urban EFSA, protect the population against international food price surges** by promoting the development of safety net systems, fiscal policies and/or grain/food reserves that can be activated when the situation becomes critical. Close monitoring of the prices of a nutritional and culturally acceptable food basket is also essential;
7. **At the same time as relief is provided, promote longer-term investments in education and job creation to enhance work force capacity and ultimately reduce unemployment and reliance on unsustainable livelihoods.**

## 8 BIBLIOGRAPHY:

Banque Centrale de Djibouti, Rapport Annuel 2009.

Brass, Jennifer, 2008, The political Economy of Livestock Policy: The Case of Djibouti, IGAD LPI Working paper No. 02-08.

Briend A, Bari A., 1989, Breastfeeding improves survival but not nutritional status. *European journal of clinical nutrition*.

DISED, 2009, Resultats preliminaire du 2ieme recensement de la population et de l'habitat. Ministere de l'economie et des finances et de la planification charge de la privatisation. Direction de la statistique et des etudes demographiques.

DJIBOUTI **Urban** Emergency Food Security Assessment, WFP, October 2008

Djibouti Livelihood Zone In-depth Emergency Food Security Assessment, WFP, September 2006.

Djibouti Food Security Outlook Update, May 2011, FEWSNET

Economist Intelligence Unit. May 2008. *Country Report: Djibouti*. EUI: London.

Fassil Kebebew, Diress Tsegaye, Gry Synnevag. Traditional Coping Strategies of the Afar and Borana Pastoralists in Response to Drought. DCG Report No. 17, 2001.

FAO (2004) Human Energy Requirements: Joint FAO/WHO/UNU Expert consultation report.

Government of Djibouti. March 2004. Poverty Reduction Strategy Paper.

Government of Djibouti, December 2007, Rapport Final, Enquete Djiboutienne a Indicateurs Multiples.

High Food Prices in the Eastern, Central and Southern Africa: Assessing Impact and Tracking Progress towards Meeting the CFA Objectives, WFP, 2008.

High food prices impact varies widely, Oxford Analytica, 7th December 2010

<http://www.dj.undp.org/abtdj.html>

<http://www.imf.org/external/french/np/country/notes/djiboutif.htm>

<http://www.africaneconomicoutlook.org/fr/countries/east-africa/djibouti/>

<http://www.fao.org/gIEWS/countrybrief/index.jsp>

<http://www.fao.org/gIEWS/english/gfpm/index.htm>

[http://www.boursereflex.com/actu/2010/12/21/le\\_prix\\_du\\_sucres\\_au\\_plus\\_haut\\_niveau\\_depuis\\_30\\_ans\\_nouveau\\_sommet\\_du\\_cafe](http://www.boursereflex.com/actu/2010/12/21/le_prix_du_sucres_au_plus_haut_niveau_depuis_30_ans_nouveau_sommet_du_cafe)

Hernandez M. A., M. Robles and M. Torero (2010): Fires in Russia, Wheat Production, and Volatile Markets, Reasons to Panic? IFPRI, August 6. Accessible sur: .

IMF (2010): Primary Commodity Prices. Accessible sur:  
<http://www.imf.org/external/np/res/commod/index.asp>.

Kalton et al, 1996, Handling missing data in survey research, *Stat Methods Med Res*.1996; 5: 215-238

Milanovic, Branko, "QAT EXPENDITURES IN YEMEN AND DJIBOUTI: AN EMPIRICAL ANALYSIS" World Bank, 2008

MSF, 2009, Enquete sur l' etat nutritionel la couverture vaccinale et la mortalite retrospective a balbala, Dibouti-Ville,

MSF,2010, Enquete sur l' etat nutritionel la couverture vaccinale et la mortalite retrospective a balbala, Dibouti-Ville,

UNICEF, 2009, State of the World's Children

UNICEF, 2009, Tracking progress on child and maternal nutrition

UNICEF,2006, Multi indicator cluster survey-Djibouti.

USAID: FEWS NET Programme. October 2004. *Djibouti Livelihood Profiles*.

USAID: FEWS NET Programme. September 2010. *Djibouti Food Security Alert*.

USAID: FEWS NET Programme. October 2010. *Djibouti Food Security Alert*.

USAID: FEWS NET Programme. November 2010. *Djibouti Food Security Alert*.

WFP, March 2005, Etude de la Vulnerabilite a la Securite Alimentaire, Djibouti

WFP, September 2006, Djibouti Livelihood Zone In-depth Emergency Food Security Assessment, WFP: Rome

WFP, December 2007, WFP/UNICEF Nation Joint Nutrition Survey, Djibouti

WFP, May 2008, Rapid Emergency Food Security Assessment, Djibouti

WFP, 2008, Djibouti national market profile

WFP, Draft, Technical Guidance Sheet, Food Consumption Analysis, Calculation and use of the Food Consumption Score in Food Consumption and Food Security Analysis.

United Nations Development Programme. 2008. Human Development Report 2008: Fighting climate change: Human solidarity in a divided world. New York: United Nations, Palgrave-McMillan.

<http://hdrstats.undp.org/en/countries/profiles/DJI.html>

UNDP 2009 Human Development Report- Djibouti.

[Http://hdrstats.undp.org/en/country\\_fact\\_sheets/cty\\_fs\\_DJI.html](Http://hdrstats.undp.org/en/country_fact_sheets/cty_fs_DJI.html)

World Bank 2009. International Development Association. Country Assistance Strategy for the Republic of Djibouti. Report No 47273-DJ. March 30, 2009

## ANNEX 1: CALCULATION OF FCS AND FOOD WEIGHTS

As indicated in the VAM guidelines: “When creating a composite scoring system for dietary diversity (with or without the added dimension of food frequency), the choice of weights is obligatory and subjective. Weights are typically constant across analyses in order to have a better degree of standardization of the tool. ... The guiding principle for determining the weights is the nutrient density of the food groups. The highest weight was attached to foods with relatively high energy, good quality protein and a wide range of micro-nutrients that can be easily absorbed.”

The following weights were used for the calculations:

**Table 10: Weights used to calculate dietary diversity**

Food groups	Weight	Justification
Main staples	2	Energy dense/usually eaten in larger quantities, protein content lower and poorer quality (PER <sup>21</sup> less) than legumes, micro-nutrients (bound by phytates).
Pulses	3	Energy dense, high amounts of protein but of lower quality (PER less) than meats, micro-nutrients (inhibited by phytates), low fat.
Vegetables	1	Low energy, low protein, no fat, micro-nutrients
Fruit	1	Low energy, low protein, no fat, micro-nutrients
Meat and fish	4	Highest quality protein, easily absorbable micro-nutrients (no phytates), energy dense, fat. Even when consumed in small quantities, improvements to the quality of diet are large.
Milk	4	Highest quality protein, micro-nutrients, vitamin A, energy. However, milk could be consumed only in very small amounts and should then be treated as condiment and therefore re-classification in such cases is needed.
Sugar	0.5	Empty calories. Usually consumed in small quantities.
Oil	0.5	Energy dense but usually no other micro-nutrients. Usually consumed in small quantities
Condiments	0	These foods are by definition eaten in very small quantities and not considered to have an important impact on overall diet.

Given that sugar and oil are eaten almost daily in the urban households sampled in Djibouti the cut off points used to categorise dietary diversity (see figure below) were set at higher ranges, as recommended by VAM when sugar and oil are extremely predominant in diet.

**Table 11: Establishing Dietary Diversity categories**

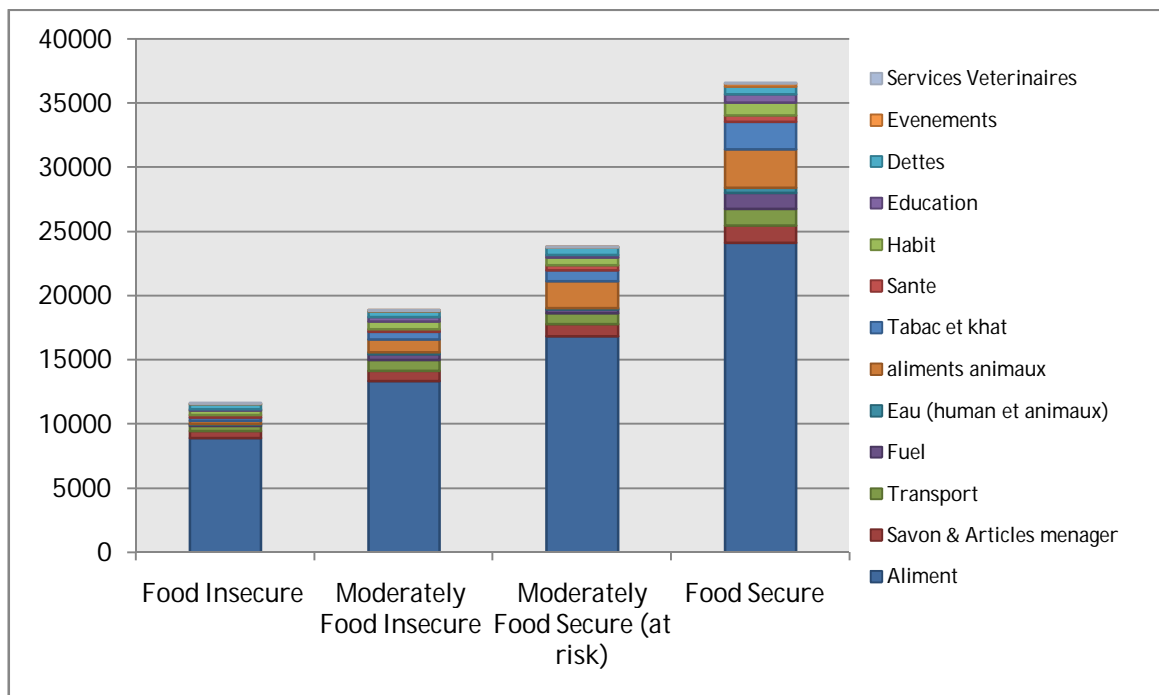
FCS	Profiles
0-28	Poor
28.5-42	Borderline
> 42	Acceptable

<sup>21</sup> PER Protein Efficiency Ratio, a measure of protein quality of food proteins.

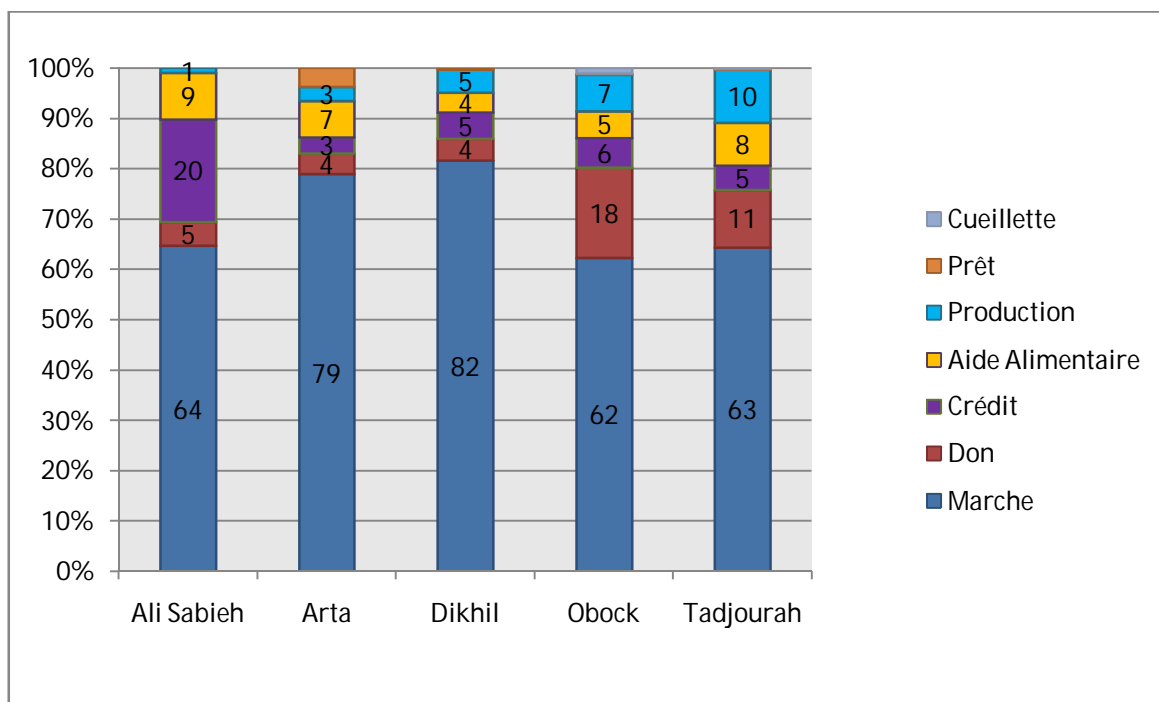


## ANNEX 2: ADDITIONAL FIGURES AND TABLES

**Figure 20: Total household food and non-food monthly expenditures per Food Security Profile**



**Figure 21: Proportion of food source by District.**



**Figure 22: Breakdown of expenditures on food across consumption profile**

