

# SOMALIA LIVELIHOODS



## KAKAAR-DHAROR PASTORAL LIVELIHOOD ZONE BASELINE ASSESSMENT



**Technical Series Report No. VII 59**

May 28, 2015



**Food Security and Nutrition  
Analysis Unit - Somalia**

*Information for Better Livelihoods*



#### Technical Partners



#### FSNAU Funding Agencies



## ACRONYMS

FSNAU	Food Security and Nutrition Assessment Unit
IPC	Integrated Food Security Phase Classification
MCH	Maternal and Child Health
FAO	Food and Agriculture Organization
SWALIM	Somalia Water and Land Information Management
IDP	Internally Displaced People
Kcal	Kilo calories
SoSh	Somali Shilling
PPPd	per person per day
BLAF	Baseline Livelihoods Analysis Framework
HEA	Household Economy Approach
FEG	Food Economy Group
DFID	Department For International Development
SLF	Sustainable Livelihood Framework
PIPs	Policy, Institutions and Processes
FGDs	Focus Group Discussions
ToT	Terms Of Trade
FEWS NET	Famine Early Warning Systems Net work

## ACKNOWLEDGEMENT

FSNAU would like to acknowledge the special contributions from Puntland Government staff (FSNAU focal points), for the administrative, technical and logistical support they provided in conducting the baseline assessment.

A sincere note of appreciation goes to Ahmed Mohamed Mohamoud (FSNAU Baseline and Livelihood Lead Analyst), Ahmed Jibril Tawakal (FSNAU Assistant Livelihood Analyst) , Charles Songok (FSNAU Junior livelihood Analyst), FSNAU Food Security Field Analysts (Diyire Roble, Nur Moalim, Mumin Osman Mumin, Abdulbari Abdulkadir) and the Puntland Government Focal points (Mohamed Shire Abdi and Ali Ahmed Omar) for their assistance in conducting fieldwork, data analysis and delivery of quality outputs.

Utmost gratitude also goes to FSNAU Technical Support Team for the time and effort spent in preparing this report. Special thanks to FSNAU Data Systems Team Manager, Kamau Wanjohi; Data Processor, Mary Peter; and GIS Specialist, Alex Koton. The authors acknowledge the nutrition information provided by the Nutrition Manager, Ahono Busili and the layout input provided by the publications team consisting of the Graphics Assistant, Catherine Kimani and Publications Officer, Barasa Sindani.

Finally, special thanks to FSNAU Food Security Chief Technical Advisor, Daniel Mola, for his technical review, guidance and overall supervision of the baseline assessment.

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## EXECUTIVE SUMMARY

In November 2012, the Food Security and Nutrition Analysis Unit (FSNAU) conducted a baseline assessment in the Kakaar-Dharoor Pastoral livelihood zone. The purpose of the exercise was to measure the extent, depth, and the underlying causes of vulnerability to livelihoods and food insecurity in this livelihood zone.

**Livelihood Zone Description:** The Kakaar-Dharoor Pastoral livelihood zone covers an area of approximately 24 382 square kilometers across *Iskushuban*, Qandala, Qardho, Las Qorey, Ceerigaabo and Ceel Afweyne districts in Sanag and Bari Regions in northeastern Somalia. The topography of the livelihood zone undulates with highly eroded hills, barren mountain peaks, shoulders, ridges, saddles and valleys. There are four seasons in the Kakaar-Dharoor Pastoral livelihood Zone: the dry *Jilaal* season (January to March), the wet *Gu* season (April to June), the dry *Hagaa* season (July to September), and the wet *Deyr* season (October-December). Mean annual temperatures range between 24 °C and 28 °C in Bossaso and Alula, but drop to 20 °C and 28 °C in the Golis Mountains. Sub-surface flows along the seasonal streams (togas), groundwater, and springs, shallow and deep aquifers are important sources of water. The vegetation is scarce and less diversified; it consists of evergreen trees, shrubs and acacia trees along the seasonal stream banks.

### Main Findings

**Wealth breakdown:** Households in Kakaar-Dharoor pastoral livelihood zone are categorized into: Poor (30%), Middle (50%) and Better-off (20%). The Poor own 60-80 sheep/goats and 3-4 camels; the Middle wealth group has 120-160 sheep/goats and 12-15 camels; while the Better-off have 250-300 sheep/goats and 30-40 camels. In the reference year, the number of sheep/goats declined by six percent across all wealth groups at the end of the reference year, due to increases in sales, slaughter or death, while Camel herd size increased by 17 percent and 12 percent for the Middle and Better-off wealth groups, respectively.

**Seasonality:** During the wet seasons (Gu and Deyr) surface water and pasture availability for livestock production improves, thereby increasing livestock reproduction and productivity. Medium to high water and pasture availability prevailed in the reference year (October 2011 to September 2012). Livestock conception, kidding, lambing and calving was high in the Gu and Deyr seasons. Milk availability was low in the first half of the reference year (October 2011 to March 2012, Deyr and Jilaal) but increased milk supply was observed during April to August 2012 (*Gu* and *Hagaa* of the reference year). These variations are attributable to either range land conditions or high calving during that period. More camel calved in the last half (April to September 2012) of the reference year increasing milk supply compared to the first half (October 2011 to March 2012) but again decline of milk supply during Hagaa and Jilaal seasons are mainly due to increased outmigration of livestock. On the other hand, livestock sales increased during the peak rainy periods due to improved livestock body conditions following good water and pasture availability, high demand triggered by repayments of carryover debts. Other factor that influence livestock prices are Eid and Hajj religious festivals which shift from one year to the next according to the Islamic calendar. Food prices peaked in August 2012 (towards the end of the monsoon season when imports are limited due to reduced shipping activities on account of the rough navigation conditions on the high seas) thereby negatively affecting access to food. Livestock (camel, sheep and goats) migrations are mainly influenced by availability of pasture and water and insecurity (clan alliances and conflicts) as follows: Dharoor (Gu), Sool (Hagaa), Golis-Karkaar (Deyr) and Karkaar-Guban (Jilaal). Human and livestock diseases increased in December 2011-January 2012 just after the Deyr season of the reference year. Due to the poor road network, pack animals (donkeys and camels) are used as a means of transport. Frankincense production is not a major income earning activity and is only practiced in isolated areas within the livelihood zone in *Insku-Shuban* District.

**Livelihood Assets:** As the sustainable livelihoods approach is people centered, it seeks to get a deep understanding of people's assets and their capacity to convert a range of assets with the help of positive influences of other sustainable livelihood elements to achieve positive livelihood outcome. In the case of Karkaar-Dharoor, livestock (goat/Sheep and camel) are the primary asset with capabilities that people derives their means of living and livelihood security. The major vegetation coverage is savanna and herbaceous interspersed with shrubs and acacia species. The main water sources are communally owned shallow water pans and wells, followed by private Berkads.

The vast majority of this livelihood are polygamous (2 wives) consisting of 8-10 household members. Their education and health services are limited due to poor infrastructure and insufficient medical supply. The food security and nutrition analysis in the reference year indicated an improving trends (Oct'11 to Sept'12). The area is physically vulnerable – hence most roads are seasonal and in rough condition, due to its nature of terrain system. Resulting, high transportation costs for the commodity supply.



## Somalia Livelihoods

However, communication system in most pastoral zones has been improving. Mobile phones are widely used for getting information in various aspects. Social support including religious gifts (Zakat & Sadaqa) is a form of asset flow from the relatives and better-off wealth groups to the poor households.

### Livelihood Strategies

**Sources of Food:** The primary food sources are market purchases, own production from livestock (milk and meat) across all wealth groups and some relief food (humanitarian assistance) among the Poor. Poor households purchase the largest portion of the food they consume (84% of the total kilocalorie needs). The average diet of Poor households is composed of cereals such as rice and wheat flour (46%), non-staple items such as sugar and vegetable oil (38%). Additionally, the Poor also consume livestock and livestock products (5%) and the food consumption gap or deficit (11%) is met through relief food aid. The Middle and Better-off households were able to fully meet their minimum dietary energy requirement (100%). In fact, Better-off households consume more (115 percent of their minimum dietary energy requirement). For the Middle wealth group, staple food contributes 47 percent of dietary energy intake. This is supplemented with sugar, vegetable oil, cowpea and dates which contribute about 40 percent of the dietary energy intake measured in terms of kilocalories or kcal). In the reference year, the Poor had access to two milking camels and 25 lactating goats. Out of the total milk produced by these livestock, 34 percent was consumed and the remainder was sold. Livestock products (including sheep/goat meat) contributed 13 percent of the total food needs. Average cereal consumption for Better-off households was 1 284kg during the reference year; 816kg among households belonging to the Middle wealth group; and 600kg among Poor households. Sugar is one of the most important non-staple items and considered an important element in the diet across all wealth groups. Other essential foods such as cowpeas, cooking oil and dates contribute to household energy needs, though purchased in minimal quantities.

**Sources of Income:** The major income sources for the Poor are livestock and livestock products sales. Poor households earned 57 percent of their cash income (Somali Shilling-Sosh 25 800 000) from the sale of 20 sheep and goats and Sosh 4 100 000 from the sale of 200 litres of fresh goat milk out of 270 liters produced in during Deyr 2011/12 whereas milk production during GU 2012 season in the reference year was insignificant. The very low milk production during Gu 2012 might not necessarily be true for all Gu seasons but it is good to note it within the context of the reference year. Poor households also get additional income from loans in cash and gifts from relatives or from the Better-off, which marked 15.5 % or SoSh 7 040 000 in the reference year. Livestock product sales (mainly milk) contributed 26 percent and livestock sales contributed 63 percent to the income of the Middle wealth group. The group has access to remittances, which contribute additional income. Similarly, the Better-off wealth group earns major income from livestock and livestock product sales (87%) as well as from trading activities (13%).

**Expenditure patterns:** Purchase of staple food represents about 31 percent, 29 percent and 30 percent, respectively, of the total household expenditure of the Poor, Middle and Better-off wealth groups. The main staple foods purchased are imported red rice, wheat flour and sorghum. The three wealth groups spend a significant proportion of their annual income (24%, 26% and 28%, respectively) on non-staple foods (sugar, vegetable oil, etc). Water purchases (for livestock and human) account for about 14 percent of the total expenditure for the Middle wealth group and but not significant for the Poor. Expenditure on other items including clothes, gifts, household items, livestock inputs, social services and tax account for less than 10 percent of the total expenditure for the Better-off. Household items account for 7 percent, 8 percent and 9 percent of the total expenditure for the Poor, Middle and Better-off respectively.

**Major hazards and constraints:** Persistent drought, civil insecurity and conflict, market disruptions, human and livestock diseases, environmental degradation and gulley erosion, poor education and health facilities represent the major hazards and constraints in the Daharoor pastoral livelihood zone.

### Conclusions

Based on assessment findings, the primary asset (livestock herd sizes) for the Kakaar-Dharoor livelihood zone indicated a decreasing trend; particularly the number of goat/sheep owned by poor households has declined by 26 percent compared to the baseline conducted in 2000. Moreover, in the reference year the number of sheep has gone down by six percent (compared to the end of the reference year) across all wealth groups. This is mainly due to increased off-take in terms of livestock sales depicting the continuous loss of herd sizes.



All wealth groups in this livelihood are highly dependent on market purchase as their primary food source using income obtained from livestock sales, especially goat/sheep. Hence the poor households spend about 60 percent of their annual income, mainly on imported foods to meet the largest portion of their food intake. Most poor households are unable to meet the minimum energy requirement for survival by their own means even during the reference year, though still at acceptable range. This is ascribed to persistent chronic food insecurity from recurrent droughts, insecurity and lack of effective government and functional institutions. The root of this problem stem from excessive reliance on narrow livelihood asset base and limited livelihood diversification, which has compounded poor households' resilience, due to intermittent drought shocks thereby increasing pastoral destitution and shifts to sedentarization, as well as overexploitation of the natural resources, resulting in environmental degradation and desertification.

### Recommendations

- In order to reserve the drastic reduction to their primary livestock asset (goat/sheep declined by 26% since 2000), re-stocking programme should target poor wealth groups.
- Encourage pastoralists to use depressed areas and streams for grass growing instead of focusing on marginal crop cultivation; train pastoralists on how to store grass harvest for use in the dry period.
- Community level livelihood diversification, including through traditional handicrafts such as collection of palm leaves for mat-making, baskets and improve marketing of their products.
- Provision of micro credit and revolving funds to small groups (women, youth etc) for engaging in income generating activities such as milk/ghee, skin, and livestock trade.
- Provision of cash for work programs for rain water harvest and sanitation practices for both human and livestock consumption, through construction of water pans, earth dams and diversion of running water from the upper parts to low-lying areas for long retaining water and improvement of rangeland conditions
- Extend livestock services (animal health services) to the livelihood zone by increasing access to livestock inputs (drugs) and training community animal health workers.

### Monitoring key indicators

Households within the Karkaar-Dharoor livelihood are vulnerable to mixed inter-mittent hazards. Livestock rearing, particularly goats and sheep are an important asset this livelihood depends upon. They obtain about 70% of their annual income from the sales of livestock and livestock products, while 56% of the yearly income is spent on food purchase. Hence, the combination of decline in livestock prices and escalated food prices in which they are heavily depend can severely affect food access and rest on undesirable livelihood outcome. Therefore, seasonal rainfall performances, food and livestock prices are the key indicators to monitor for early warning before the situation is deteriorated. Livestock diseases, migration pattern and insecurity are also serves as threats to livelihood food security, and basically need to monitor.

# 1. INTRODUCTION

## 1.1 Background information

Livelihood baseline assessments are important in understanding household access to food and income as well as expenditure patterns (Chambers and Conway, 1992). Baseline assessments use participatory rapid survey techniques to gather data and generate useful information to help understand how the most vulnerable live. Such information is critical to profiling the status and changes in common (community or public) and household assets, shifts in livelihood strategies, shocks that increase vulnerability to livelihood and food insecurity, and coping mechanisms. In food security analysis, baseline information provides an analytical basis for identifying key indicators for livelihood and food security monitoring. Ultimately, baseline assessments inform and influence programming, policy and development processes that respond to shocks, reduce vulnerability and build resilience.

In November 2012, FSNAU conducted a baseline assessment in the Kakaar-Dharoor Pastoral livelihood zone. The purpose of the exercise was to measure the extent, depth, and the underlying causes of vulnerability to livelihoods and food insecurity. The objectives of the baseline assessment were to:

1. Investigate the socio-economic characteristics and asset holdings of different wealth groups in the livelihood zone;
2. Assess the vulnerability factors (persistent shocks and hazards) and how these influenced the strategies adopted for pastoral livelihood survival;
3. Determine the coping strategies employed by wealth groups and identify changes in livelihood strategies and/or wealth ranking in the pastoral livelihood system;
4. Identify the main problems and priorities for addressing livelihood and food insecurity within the livelihood zone;
5. Establish a baseline to inform future livelihood and food security monitoring, analysis and reporting.

This baseline report describes the Kakaar-Dharoor Pastoral livelihood zone (rainfall pattern, pasture and water resources, linkages to neighboring zones); historical timeline and seasonality; market analysis. The report also discusses livelihood assets, livelihood strategies, and the coping/response mechanisms employed by households. The findings are useful in designing timely and appropriate interventions and long-term development and policy planning.

## 1.2 Baseline Analytical Approach (Methodology)

For Kakaar-Dharoor Pastoral Livelihood baseline assessment, a combination of FSNAU's expanded baseline livelihoods analysis framework (BLAF). The BLAF approach integrates concepts of both the Household Economy Approach (HEA) (FEG, 2008) and the Sustainable Livelihoods Framework (SLA) (DFID, 2000), as can be seen in Table 1.

This approach focuses on how households in different wealth groups obtain their food, generate their income and organize their expenditure patterns, including asset holding.

**Table 1: Integrated HEA and SLA Framework**

	HEA Baseline				HEA Outcome Analysis		
	Step 1	Step 2	Step 3		Step 4	Step 5	Step 6
HEA Process	Livelihood Zoning	Wealth Breakdown	Food, Income Expenditure Quantification	+	Problem Specification	+	Coping Capacity/ Response Strategies = Scenario Outcome
	→	→	→		→	→	→
SLF Core Areas	Vulnerability/ Context	Livelihood Assets & Policies, Institutions, Processes (PIPs)	Livelihood Strategies & Policies, Institutions, Processes (PIPs)		Policies, Institutions, Processes (PIPs) & Shocks/Trends (under Vulnerability Context)	Livelihood Strategies & Livelihood Assets & Policies, Institutions, Processes (PIPs)	Livelihood Outcomes

Before conducting the baseline survey, FSNAU team organized a pre-fieldwork training workshop in Garowe and held consultations with Puntland Government Focal Points, FSNAU food security field analysts (technical staff) as well as a representative from a local non-governmental organization. Discussions were held on how best to survey frankincense production, security and accessibility in the areas (as this influenced the selection of villages to be surveyed). Based on these discussions 10 villages were purposively selected for the survey.

During the fieldwork, focus groups discussions (FGDs) with community representatives were organized with community leaders in selected villages. The FGDs concentrated on historical timelines, seasonality and livestock migration patterns in 'bad' and 'good' years. Proportional piling was used to categorize households into Poor, Middle and Better-off wealth groups, based on their livestock assets and family size. From this wealth categorization exercise, representative households were mobilized from each wealth group and focus group interviews were conducted. In total, 9 community representative interviews and 26 community-leader focus group interviews were conducted in all of the surveyed villages.

## 2. LIVELIHOOD ZONE OVERVIEW

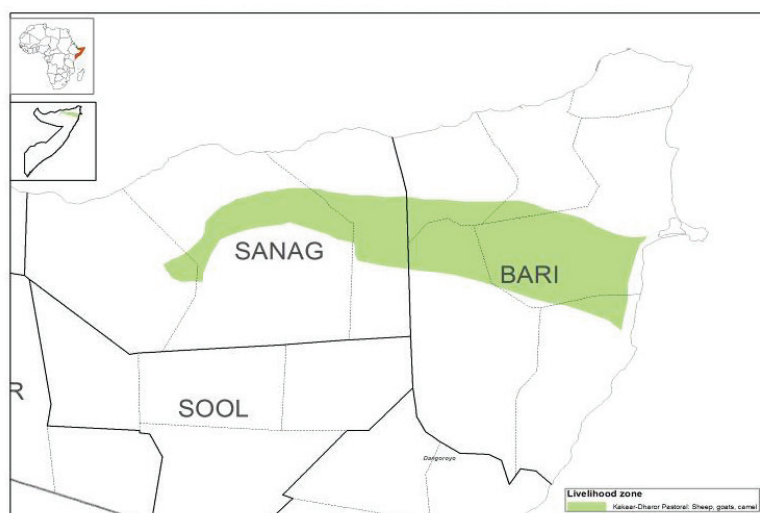
Kakaar-Dharoor Pastoral livelihood zone covers an area of approximately 24 382 square kilometers, traversing Ishkushuban, Qandala, Qardho, Las Qorey, Ceerigaabo and Ceel Afweyne districts in Sanag and Bari Regions in northeastern Somalia. The topography of the livelihood zone mainly undulates with highly eroded hills, barren mountain peaks, shoulders, ridges, saddles and valleys. The slope gently undulates in the south western part of the livelihood zone ( $5^{\circ}$  -  $16^{\circ}$ ) but slopes towards the Indian Ocean and flattens ( $0^{\circ}$  -  $1^{\circ}$ ) in Gebi valley, which is mainly composed of alluvial plains, with the areas towards the south dictated by Hills and Mountain foot ridges towards. The topography is flat to the East and towards the delta plains of the coast.



*Landscape features*

The livelihood zone receives bimodal rainfall: *Gu* (April-June) and *Deyr* (October-December) seasons. There are also two dry seasons in this zone: *Jilaal* (January-March) and *Hagaa* (July-September). Around the Gebi valley, a flood-washed area, minimal rainfall is received annually, but in the hilly and mountainous areas rainfall is normally higher. In the December to February period Hays rains are normally received along the coast. Mean annual temperatures range between  $24^{\circ}\text{C}$  and  $28^{\circ}\text{C}$  in the areas around Bossaso and Alula. Relative humidity ranges between 50-55 percent. The soils in the livelihood zone are mainly composed of four types: (a) Calcisols and Gypsisols (these soils have low moisture and low nutrient value); (b) Fluvisols which are prone to flooding (Sanag-Bari border), and Leptosols, Regosols and Calcisols (which are characterized by stoniness, limited root depth and low moisture availability). Most of the drainage basins in the northern regions are ephemeral.

**Map 1: Location of Kakaar-Dharoor pastoral livelihood zone in Somalia**



## 3. HISTORICAL TIMELINE AND SEASONALITY

### 3.1 Historical Timeline

The historical timeline describes the major events that occurred in the Kakaar-Dharoor livelihood zone recently. For this baseline study the historical timeline considered the period from October 2011 to September 2012. The timeline provides a broader understanding of the climatic, socio-political and economic events in the livelihood zone. Prior to conducting the baseline assessment, discussions were held between FSNAU Baseline Lead Analysts and Food Security field analysts, Puntland Government Focal Points, and key resource persons from non-governmental organizations operating in Kakaar-Dharoor pastoral livelihood zone, in addition to a review of market trends. From these discussions, October 2011 to September 2012 was decided as the reference year for the baseline assessment. Although the *Deyr 2011* and *Gu2012* seasons were characterized by normal and below normal rains, respectively, the *Deyr* season was characterized by normal pasture and water conditions which sustained good livestock body conditions. In addition, the livelihood was characterized by normal migration, normal coping strategies, reduced debts, and good Terms of Trade (ToT).

**Table 2: Historical Timeline**

Year	Season	Seasonal performance	Events	Effects	Responses
2012	Gu	2 (Poor)	Below normal rains	Poor pasture	Normal migration
2011	Deyr	3 (average)	Good rains	Good pasture Good water conditions Good livestock body conditions Good TOT	Normal coping strategies Increase in saleable animals Reduced debts Normal migration
	Gu	2 (Poor))	Below normal rains	Poor pasture Poor livestock body conditions Poor livestock prices Poor TOT	Abnormal migration Seeking social support Seeking loans Water trucking
2010	Deyr	1 (Very Poor)	Drought	Livestock death Poor TOT/Livestock prices High cereal prices	Abnormal migration Seeking social support/loans Water trucking
	Gu	2 (Poor)	Below normal rains	Poor pasture & water conditions Poor livestock body condition Low sellable animals	Abnormal migration. Seeking social support/loans
2009	Deyr	2 (Poor))	Below Normal rains	Poor pasture & water conditions Poor livestock body condition/prices	Abnormal migration Seeking loans/social support
	Gu	3 (average)	Normal Rains. Locust outbreak	Average water and livestock body conditions Poor pasture and browsing due to locust outbreak	Normal migration Average TOT
Notes:					
5 = A very good season for livestock production (e.g. due to good rains, little disease, etc)					
4 = A good season or above average season for livestock production					
3 = An average season in terms of livestock production					
2 = A poor season for livestock production					
1 = A very poor season for livestock production (e.g. due to drought, livestock disease, etc.)					

The *Gu* 2011 season recorded below normal rains, which led to poor pasture, water availability, poor livestock body conditions, poor livestock prices and poor ToT. In response to these, pastoral households increased abnormal livestock migration, intensified social support (seeking loans) and water trucking. This was a slight improvement from the very poor performance of the *Deyr* 2010 season, which was a drought period that increased livestock deaths, reduced ToT and livestock prices and triggered high cereal prices. To cope with this very bad season, pastoralists engaged in abnormal migration to areas beyond the livelihood zone, sought social support and loans and intensified water trucking for livestock production.

The *Gu* 2010 season received below normal rains which led to poor water, pasture and poor livestock body conditions. These, in turn, reduced the number and value of saleable animals. The poor performance increased abnormal migration, and loans and social support were sought by households. The *Deyr* 2009 season received poor rains which translated into poor pasture and water availability. This deteriorated livestock body conditions, which resulted in a reduction in the value (price) and number of saleable animals. As a result, pastoral households engaged in abnormal migration and increased loan and social support seeking. However, *Gu* 2009 season received normal rains, although the season was also characterized by locust infestation. As a result, average water and pasture conditions, livestock body conditions, as well as normal livestock migration and average ToT prevailed during the season.

### 3.2 Seasonality

#### *Climate and availability of rangeland resources*

In the reference year the the *Deyr* rains commenced in September 2011 and ceased in November 2011 while *Gu* season started in April 2012 and ended in June 2012. Two peak rainfall periods were experienced in October 2011 and May 2012. During the wet periods, surface water and pasture availability for livestock production improved, thereby enhancing livestock body conditions and productivity. As a consequence, medium to high water and pasture availability prevailed during most of the reference year.



Figure 1: Seasonal calendar of critical activities in Kakaar-Dharoor pastoral livelihood zone

Seasons and months	JILAL			GU			HAGAA			DEYR		
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainfall				Low	H	M			M	H	Low	
Pasture Availability	Low				M	H	M	Low	M	High		
Water Availability	M	Low		M	H	Medium		Low	M	High		M
Livestock Conception				Low	High		Low		Low	High		
Livestock kidding/lambing/calving				Low	High				Low	High		Low
Milk Availability	Low			Low	High		M	Low	M	High		M
Livestock Sales					High				Low	High		
Livestock Migration							M	High		Low	H	M
Food prices						Low	M	High				
Livestock Diseases	H	Low										H
Human Diseases	M											H
Social support		M	H			M		High		High		
Seeking credit		M	High	M				High				

Note: H (High); M (medium); L (Low)

### Livestock production

Water and pasture availability are key determinants of livestock production. Livestock conception, kidding, lambing and calving was high in October–November during the *Deyr* 2011 season and in May–June during the *Gu* 2012 season. Milk availability was also high in October–November 2011 and in the May–June 2012 and, but declined during *Jilal* and *Hagaa* seasons due to increased outmigration of livestock. Similarly, livestock sales increased during the peak rainy periods due to improved livestock body conditions, following good water and pasture availability and high demand (due to the *Eid* and *Hajj* festivities). Food prices peaked in August 2012 due to the high sea tides (Monsoon winds) that limited sea transport resulting in low supply. This affected access to food due to insufficient incomes needed for food purchase.

Throughout the four seasons, migration (of family members, camels and shoats) was confined within the Dharoor area due to availability of water and pasture within the livelihood zone. However, in bad seasons (poor or failed rains), coupled with insecurity, camels and shoats migrated to Dharoor (*Gu*), Sool (*Hagaa*), Golis-Karkaar (*Deyr*) and to Karkaar-Guban (*Jilal*). Human and livestock diseases increased in the period December 2011–January 2012 during the reference year.

### Social support seeking

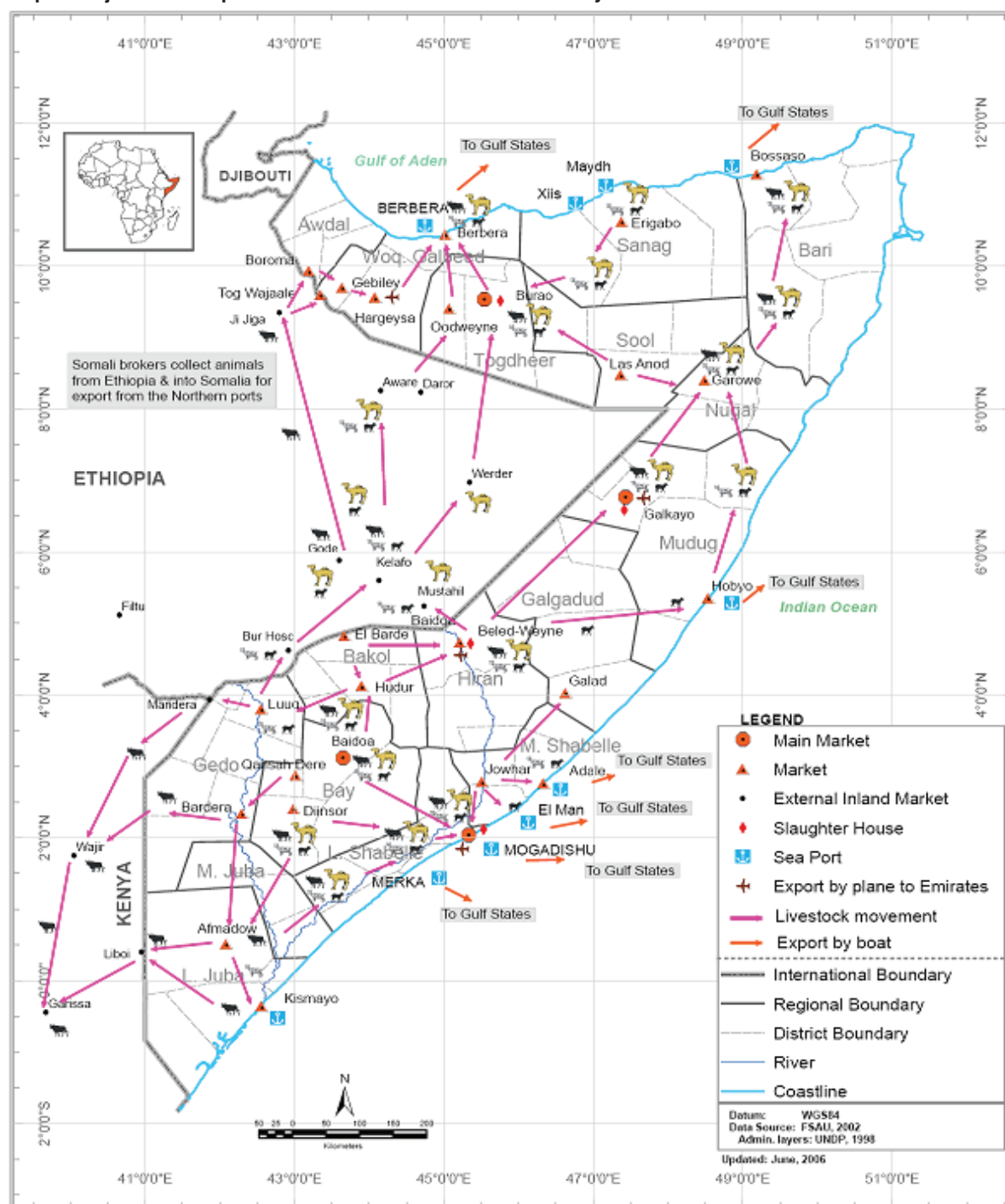
Seeking of social support and credit is a key coping strategy for most poor and lower middle households. This strategy tends to be used intensively during times of stress.

## 4. MARKET ANALYSIS

This section of the livelihood baseline report discusses the characteristics of livestock markets, which is the major source of income. Additionally, the prices of essential staple and non-staple commodities are also analyzed in order to understand expenditure patterns of wealth groups in the livelihood zone. This analysis will help define major livelihood strategies and ToT during the reference year (October 2011 to September 2012) for Kakaar-Dharoor pastoral livelihood zone. Data used for market analysis was derived from monthly market monitoring conducted by FSNAU/FEWSNET in the Kakaar-Dharoor pastoral livelihood zone.

Trade in livestock and livestock products is an essential socio-economic activity for the communities in the Kakaar-Dharoor Pastoral livelihood zone. Local and export quality goats, sheep and camels are the main species traded in the major markets of the livelihood zone. These market points serve as the centre for the supply and purchase of essential food and non-food items. Major market locations are Bosasso and Iskushuban. On the other hand, Export quality livestock from the livelihood as well as from other areas beyond the Kakaar-Dharoor livelihood zone are shipped at the port of Bosasso to Saudi Arabia and to other gulf states. Livestock prices are influenced by Islamic festivals (*Eid* and *Hajj*) and by other external factors, for example livestock body condition which is linked to rainfall. Other factors which affect local livestock prices include exchange rates (Somali currency against the United States Dollar) and the level of external demand in Gulf markets.

Map 2: Major markets points in Somalia that are monitored by FSNAU/FEWSNET.



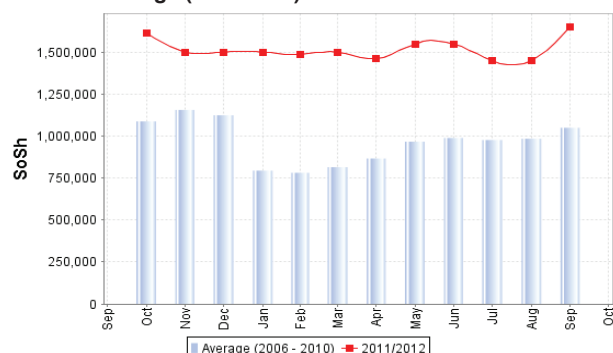
#### 4.1 Livestock Prices

##### Goats (local and export) and sheep prices

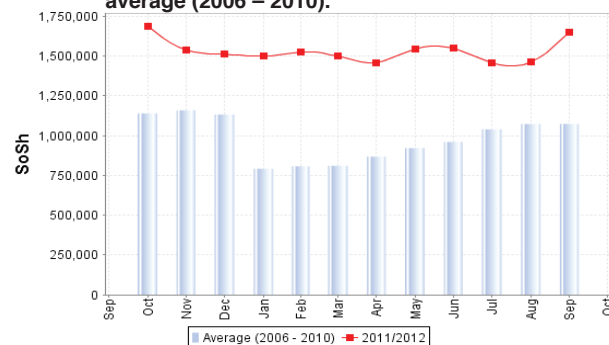
Despite limited fluctuations, the prices of local and export quality goats and sheep were above the 5-year average and remained relatively stable in the reference year. Average prices for the reference year for both quality (goat local and goat export) and sheep export were Sosh 1 508 860, Sosh 1 518 300 and Sosh 1 509 090 respectively. Compared to the corresponding 5-year average of Sosh 965 551, Sosh 967 34 and Sosh 870 653 (or 156%, 157% and 173% percent of the 5-years averages, respectively). The increase in prices indicates the improved value of livestock normally during the <sup>1</sup>Hajj season at a time when more goats/sheep are exported (export quality) to Saudi Arabia while an additional more local quality livestock is sold and consumed in the local towns, resulting in increased prices during these periods. The fluctuations in livestock prices in Kakaar-Dharoor livelihood (recorded by FSNAU) can be compared with the baseline seasonal calendar (modeled by community members) during the assessments.

<sup>1</sup> Pilgrimage to Meccah in Saudi Arabia-Holy sites for the Muslim communities observed annually.

**Figure 2: Average local quality goat price in the reference year (October 2011-September 2012) Vs, 5- year average (2006-2010).**



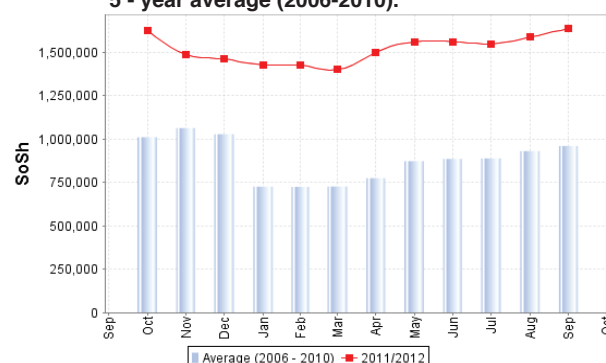
**Figure 3: Average Export quality goat price in the reference year (October 2011-September 2012) Vs, 5- year average (2006 - 2010).**



### Camel local quality

Local quality camel prices in the reference year were higher than the 5-year average (2006-2010). During the reference year, the average monthly prices for camel were Sosh 16 284 100 while the 5-year average was Sosh 7 370 000. This means that camel prices in the reference year were 221 percent of the 5-year average. The big margin in camel prices between the two periods can be attributed to low camel supply to the market in the reference year as pastoralists prioritize restocking over selling due to the livestock losses experienced by camel herders during the previous years (seasons) of droughts. Camel which is considered a capital asset by the pastoralist of Kakaar-Dharoor is only sold to offset accumulated debts or for important family functions such as weddings or for paying expensive medical bills. The baseline assessments data analyzed based on HEA revealed that only the Better-off and some of the Middle households of Kakaar-Dharoor pastoral livelihood zone sold camel during the reference year. This is also consistent with FSNAU market monitoring data for the livelihood zone.

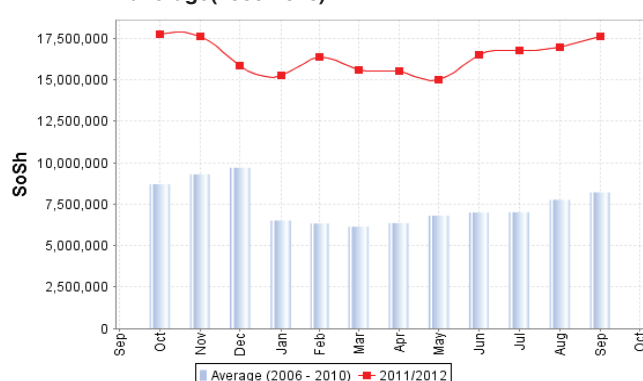
**Figure 4: Average sheep export quality prices in the reference year (October 2011-September 2012) Vs, 5- year average (2006-2010).**



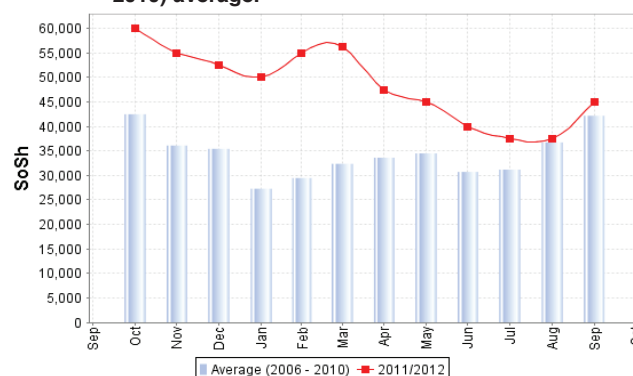
### 4.2 Milk Prices

Livestock products (milk) are a key source of income in the Kakaar-Dharoor pastoral livelihood zone. Pastoralists supply goat and camel milk to the main towns of Bossaso and Iskushuban. Pastoral households gather at designated trading points to sell and collect goods before they are transported to the main towns. In the reference year the average price of fresh camel milk was Sosh 47 390 compared to the 5-year average of Sosh 33 580. This represents an increase of 41 percent from the 5-year average milk price. Low milk prices were observed in the months of May 2012 up to July 2012 within the reference year. This can be attributed to increased milk availability during the *Gu* 2012 seasons which was again below average normal seasons in terms of rainfall however, this situation might have been redeemed by high camel calving that increased the number of milking livestock or even due to some other factors like migration pattern. On the other hand, the highest prices were recorded in the months of September and October 2012 due to the negative effects of the dry *Hagaa* season that resulted in reduced milk production due to low pasture and water availability that prevailed before the onset of the *Deyr* rains. In summary, milk prices are mostly determined by the levels of milk production in relation to demand and milk production therefore affects supply to the major markets and prices in these markets.

**Figure 5: Average local camel price in the reference year (October 2011-September 2012) VS 5-years average(2006-2010)**



**Figure 6: Average fresh camel price in the reference year (October 2011-September 2012) VS 5 year (2006-2010) average.**





### 4.3 Staple and other food Prices

The most important staple cereals purchased by households in Kakaar-Dharoor pastoral livelihood zone are imported red rice and wheat flour followed by other food items such as sugar, tea leaves, and vegetable oil. The purchasing power of households is linked to wealth groups and to their income levels, which are mostly determined by the number of saleable herds and milk production, livestock body conditions and existing market demand for livestock and livestock products. The prices of imported food items in Kakaar-Dharoor livelihood zone are affected by fluctuations in the exchange rate, variations in international prices, fuel, transportation costs, and seasonality among other factors.

#### Imported Red Rice

The average price of imported red rice for the reference year was Sosh 21 700 which was 38 percent higher compared to the five-year (Sosh 15 770) average. The highest rice prices were recorded in the period April - May 2012 which declined during the *Hagaa* season (August-September 2012). The *Hagaa* season is usually associated with high prices due to the Monsoon effects on sea transport. The observed decline in red rice during the *Hagaa* season could be associated with trader's importation of large quantities before the monsoon.

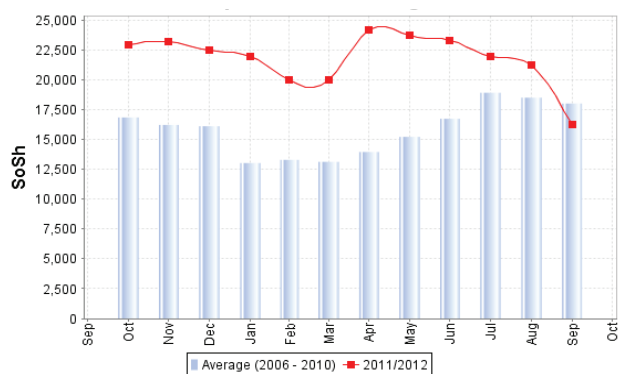
#### Wheat Flour

The average prices of wheat flour for the reference year were Sosh 19 740 which was 34 percent lower compared to the five-year average (Sosh 14 720). The price of wheat flour in the reference year was higher than the five-year average. High prices in the reference year were experienced during the *Hagaa* season which is a normal phenomenon due to the monsoon effects. However wheat flour prices were lowest in February and March 2012 due to increased imports during the *Jilaal* season as well as increased imports by traders who exported livestock to the Gulf States during the *Hajj* and were returning with commercial items on their way back.

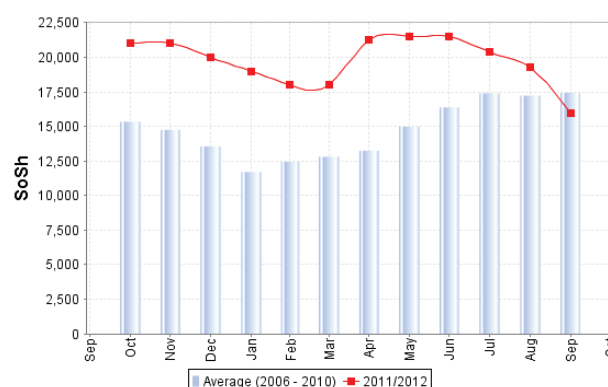
#### Other Food Items (Sugar and Vegetable Oil)

The prices of sugar and vegetable oil in Kakaar-Dharoor livelihood zone are affected by similar trends as discussed above. The average prices of these commodities in the reference year were Sosh 26 660 and Sosh 49 980 respectively. This is 59 percent (Sosh 26 660) and 66 percent (Sosh 30 190) higher than the 5-year average.

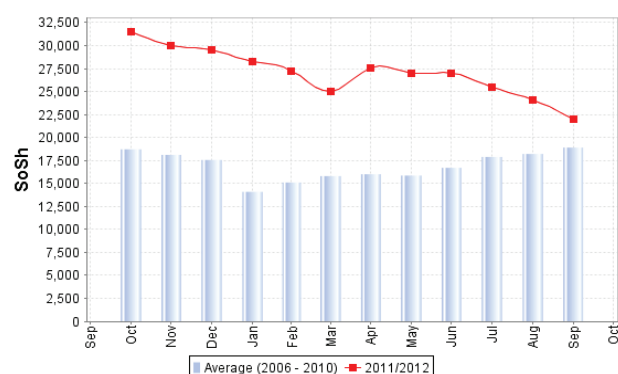
**Figure 7: Average rice price/kg in the reference year (October 2011-September 2012) Vs, 5- year (2006-2010) average.**



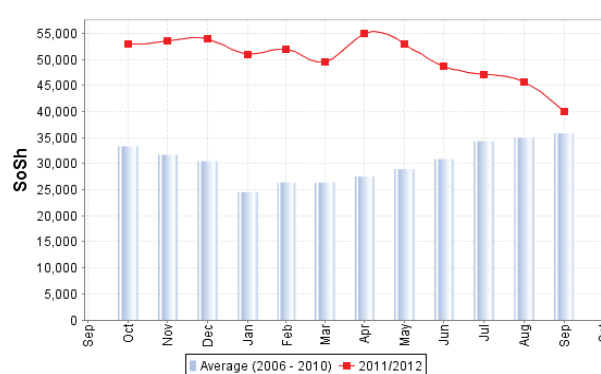
**Figure 8: Average W/flour price/kg in the reference year (October 2011-September 2012) Vs, 5- year (2006-2010) average.**



**Figure 9: Sugar Average Sugar price/kg in the reference year (October 2011-September 2012) Vs, 5- year (2006-2010) average.**



**Figure 10: Vegetable Oil •Average Vegetable Oil price/litre in the reference year (October 2011-September 2012) Vs, 5- year (2006-2010) average**



#### 4.4 Terms of trade.

The Terms of trade (ToT) between local quality goat and imported red rice remained stable at the beginning of the reference year, but rose steadily during the third quarter of the reference year. Hence, reflected slight increase in 6 % according to five year average (from 66.5kg/Lgoat to 70.5kg/Lgoat)).

**Figure 11: TOT Goat Local Quality TO Imported Red Rice**



Average TOT value between local quality goat to imported red rice in the reference year (October 2011-September 2012, Vs. 5- year (2006-2010) average.

## 5. LIVELIHOOD ASSETS

This section presents the main livelihood assets that the households in different wealth groups in the Kakaar-Dharoor pastoral livelihood zone have access to and utilize. The assets described include both communal (public) and individual (household/domestic) assets.

### 5.1 Natural Capital

#### *Rangeland resources*

The dominant type of vegetation in the livelihood zone include savannah and herbaceous, interspersed with shrubs and acacia species along the seasonal streams (*wadi*). The savannah grasslands are used by pastoralists for livestock grazing, although these resources are declining.

#### *Access to water resources*

Shallow wells provide the main sources of water for pastoralists followed by *berkads*. The shallow wells are owned communally but the *berkads* are privately owned, mainly by the better off. Water from *berkads* is the main source for water and is an important source of income for Better Off households during the dry season. It is often provided to households on credit. Boreholes are prone to breakdowns and often yield low water production. Water prices increase significantly during drought periods, while the willingness to share this precious resource among sub-clans decreases, resulting in conflict over water usage and resources. Unregulated construction of *berkads* for commercial purposes disrupts traditional management of grazing lands and often results in overgrazing in areas around water points.



*Rangeland conditions, Insku-Shuban District, April 2012.*

### 5.2 Human Capital

Human capital includes labour, skills, education, health and knowledge which directly influence livelihood choices and food security outcomes.

#### *Household Size*

The sizes of households and the structure of families in Kakaar-Dharoor Pastoral livelihood zone vary across the three wealth groups. Poor households tend to be monogamous, while most of the Middle (1-2 wives) and Better Off (2-3 wives) are mostly polygamous. In terms of household size, the Better Off have about 10 household members, while Middle and Poor households are composed of approximately 8 and 6 persons, respectively.

### Access to Education

Pastoral households in Kakaar-Dharoor livelihood zone have access to two educational systems: the traditional Koranic school system and the modern educational (non-Koranic) system. Almost all pastoralists access Koranic education. Formal primary to secondary education is limited to large settlements and urban towns. Formal education is accessible to the Better Off and some Middle wealth groups because they have the resources to educate their children. Often, nomadic families send their children to large villages or towns to stay with relatives in order to ensure access to education. Middle and Better Off families send their children to urban areas where schools are better equipped, more stable, and provide quality education. There is however very limited access to formal education in vast pastoral rural areas.

### Food security, health and nutrition

The *Post Gu 2012* analysis estimated that 7 percent of the population in the livelihood zone was in **Crisis (IPC Phase 3)** while the nutrition analysis presented a **Serious** situation (Global Acute Malnutrition-GAM rate of 13.9 %), representing an improvement from the nutrition situation during the previous season due to improved milk access, better dietary diversity and increased humanitarian intervention. The *Post Deyr 2011/12* nutrition analysis showed a **Critical** situation ( 15.2 % GAM) with an estimated 15 percent of the population (or 9 000 people) in acute food security **Crisis (IPC Phase 3)** . In the *Post GU 2011* analysis 18 000 people or 29 percent of the total population of the livelihood zone was classified in **Crisis** (IPC Phase 3) while the nutrition analysis presented a **Serious** situation ( 12.2% % GAM) due to improved access to milk.

**Table 3: IPC progression in Kakaar-Dharoor pastoral livelihood zone**

Livelihood Zone	Estimated Population by Livelihood Zones	Stressed (IPC Phase 2)	Crisis (IPC Phase 3)	Emergency (IPC Phase 4)	Total in Crisis and Emergency as percent of Rural population
GU 2012	58615	13000	4000	0	7
DEYR 2011/12	58615	9000	9000	0	15
GU 2011	63215	5,215	18 000	0	29

## 5.3 Social Capital

### Institutional Support

Although households in Kakaar-Dharoor pastoral livelihood zone do not have sufficient access to formal institutional support, some local institutional support structure includes local administration and leadership structures, religious groups, government institutions, non-governmental organizations, UN agencies. These institutions provide opportunities through which pastoralists draw support and resources in the form of relief interventions during times of shock.

### Religious assistance (zakat and sadaqa) and Gifts

Religious assistance in the form of *zakat* and *sadaqa* is provided through a religious obligation which encourages people to support each other. *Zakat* is an obligatory gift given to the poor while *Sadaqa* is normal gift, which is voluntarily paid. The Better-off wealth group normally assists Poor households through *zakat*. These systems are a way of balancing social-economic stratification and provide a means to mitigate potential social conflicts. Social support in this form ranges from giving cash/livestock gifts or *zakatul fitr* (a special form of *zakat* which is obligatory to every Muslim at the end of the month of *Ramadan*) to providing food to needy community members. *Zakat* is received in cash from well-off relatives in urban areas or from the Diaspora.

### Community relations and Kinship

This form of social support (known in Somali as *Kaalo*, *Xoologoys*, *Maal*, *Gadiid/Cellis*) is based on friendship or “neighborhood”. Households in need may ask support from neighbors, even during normal times. This support is often a reciprocal agreement between households. Access to this type of support is pegged on ‘*belonging*’ to the community. Kinship (*Diyo*, *Qaraan*, *Irmansi*) or blood ties are based on the community’s understanding that group resources are often managed on a corporate basis. Assets flow from the Better-off to the Poor, depending on the resources of the former and the needs of the latter.

### Remittances

External and internal remittances are a key source of social support in the pastoral livelihood. Remittances provide key options to cope during drought (bad) years or to invest by restocking livestock assets following losses incurred in a drought year. In addition to financial support to typically better off relatives, remittances from the Somali Diaspora generally provide

financial assistance to members of the extended family throughout the year. Remittances often increase during crises.

#### 5.4 Physical Capital

The physical capital discussed below includes housing, access to water, sanitation, road network and telecommunication services.

##### *Housing structures and settlements*

Most pastoralists in the livelihood zone live in traditional Somali huts made of rudimentary materials (poles and ropes) and covered with either grass, reeds or polythene bags. Most of these houses are temporary and are clustered in pastoral settlements or villages and reflect a nomadic or quasi-sedentary lifestyle.

##### *Transport Infrastructure*

The livelihood zone has very poor road infrastructure. In most of the livelihood all weather roads link the villages to rural markets. Most of the footpaths or tracks used are mainly used by pack animals (donkeys or camels). Due to the nature of the terrain in this pastoral livelihood zone, access by motorized vehicle is also limited.

##### *Access to other essential physical infrastructure*

Health facilities in the livelihood zone are generally lacking. Mobile phones provide the main telecommunication infrastructure to send information on rainfall and availability of pasture, outbreaks of clan-based conflicts, migration, and marketing of livestock and livestock products and on the security situation.

##### *Markets*

Market networks are critical resources for the local economy. Petty traders thrive in the main towns and in the rural markets and support local communities during seasonal economic fluctuations or during prolonged drought. Markets also support employment opportunities such as wholesale, petty trade and casual labour (portering). During the drought, markets provide necessary commodities for the survival of vulnerable households.



*Poor transport systems*

#### 5.5 Economic Capital

The economic capitals in this section include livestock, access to loans and credit, wealth, seasonality and expenditure.

##### *Livestock production and ownership*

Camels, goats and sheep are the predominant species reared and are a symbol of wealth. Despite the variations in livestock holdings across the different wealth groups, the contribution of livestock to household income and food is significant in the livelihood zone. Camels are the most important animals for nomadic pastoralists. Productive female camels produce large quantities of milk for both consumption and sale, while pack camels are the principal means of transporting water in the dry season. Livestock and livestock products sustain household food security.



*Livestock assets*

##### *Access to credit*

Most Middle and Better-off households have access to credit, especially during drought years. This debt is normally unconditional and is paid back when normal pasture and water availability lead to improved livestock body conditions which result in better prices. This improves incomes and enhances the ability to repay debt.

##### *Seasonality and expenditure*

In Kakaar-Dharoor pastoral livelihood zone, seasonality is critical in linking pastoralists to casual labour opportunities in the urban or in the coastal areas. In the dry seasons (*Jilaa* and *Hagaa*) economic opportunities decline and the pastoral households temporarily send active members to earn from other livelihood activities in the urban or in the coastal areas. These linkages are so common and frequent that in most of the cases households hardly spend any time together during the year. The two dry periods are normally associated with low expenditure patterns but improved livestock production in the *Gu* and *Deyr* seasons tend to be associated with increased expenditure on essential and non-essential food and non-food items.



**Table 4: Linkages between Kakaar-Dharoor pastoral livelihood and other livelihood systems**

Pastoral-Main Town linkages	Market-towns provide markets for livestock and livestock products (milk, ghee) as well as for bush products (charcoal and firewood). Some Better-off households in the main towns own livestock in rangeland areas close to the town. Through this they employ herders, hence they provide an income or food source. Main towns provide labour opportunities to pastoral households in drought years. Main towns provide storage for hides/skins from the pastoral areas and for imported bulk cereals. Main towns are also a source of credit for pastoral households.
Pastoral-Coastal linkages	Pastoralists travel to the coast for the off-season (Xhays?) rains (in January and February?). Coastal areas provide markets for pastoral produce and a source of food/non-food items. Provides casual labour opportunities within fishing communities. During bad years (drought) pastoralists in rural areas, close to the coastal areas migrate to fishing settlements for labour and self-employment.
Abroad (Diaspora)	Linkages abroad are sustained by connections with Somalis in the Diaspora and usually involve remittance transfers

## 6. WEALTH BREAKDOWN

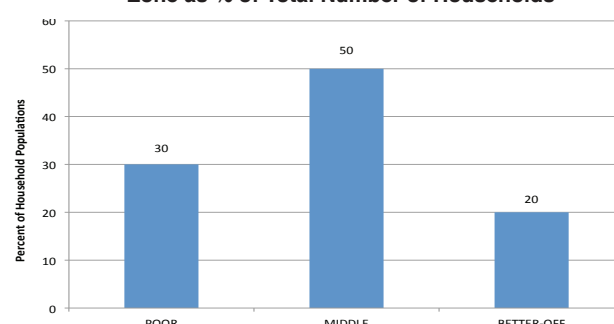
### 6.1 Wealth characteristics

A wealth category is defined as a group of households within the same community who share similar capabilities, opportunities and engage in similar activities to exploit the different food and income options in a particular livelihood zone (DFID, 2000). In this study wealth is defined as a relative term (FEG, 2008). In the Kakaar-Dharoor livelihood zone the criteria for wealth breakdown is defined by community members/key informants based on asset ownership, through which the population can be divided into different wealth groups. This is key to understanding the differences in households to different shocks. The level of division depends on community perception of the livelihood system. This section presents the wealth break down and wealth characteristics of different wealth groups.

**Table 5: Summary of wealth group characteristics**

		Poor	Middle	Better off
Gender of Main household heads		Male headed		
Number of wives		1	1-2	1-2
Average household size		5-7	7-9	10-11
Livestock asset	Goats	35-45	80-100	160-180
	Sheep	25-35	40-60	90-110
	Camel	3-4	12-15	30-40
Other	Donkey	1	1-2	3-4
	Berkad (water well?)	-	-	1
Gender Roles in decision making on sale of assets	Livestock	Both	Both	Both
	Livestock product	Both	Female	Both

In the Kakaar-Dharoor livelihood zone households can be divided into Poor (*Sabool*), Middle (*Dhadhaxaad*) and Better-off (*Ladaane*) wealth groups. Wealth in each group is primarily determined by family structure and livestock holding of shoats (Goat/Sheep), which are the dominant species in this livelihood. This is followed by camels (owned by most wealth groups) although it has limited contribution to the Poor household's livelihood strategies. On average the Poor own 60-80 sheep and goats (of which 58 percent are goats and 42 percent are sheep) and 3-4 camels. The Middle and Better-off wealth groups have larger holdings: on average, 120-160 sheep and goats (of which 64 percent are goats and 36 percent are sheep) and 12-15 camels are owned by the Middle wealth group and Better-off households own an average of 250-300 sheep and goats (of which 64 percent are goats and 36 percent are sheep) and 30-40 camels.

**Figure 12: Wealth Breakdown in Kakaar-Dharoor Livelihood Zone as % of Total Number of Households**

Poor households represent approximately 25-35 percent of the total population, with Middle and Better-off households representing 45-55 percent and 15-25 percent, respectively. There are also differences in family structures, as most Poor wealth group are monogamous and (have one wife), with household sizes of 6, while Middle and Better-off wealth groups have 1-2 wives with larger household size of 8 and 10 members respectively. The Better-off have larger livestock asset holdings than the Middle and the Poor wealth groups. Apart from these distinctions, local variations have been observed within the livelihood zone. The proportion of sheep and goats increases towards the western side of the livelihood zone.

**Table 6. Trends in Wealth Group Characteristics Based on Livestock Holding**

Wealth characteristics	Old baseline 2000			Current Baseline 2012		
	Poor	Middle	Better off	Poor	Middle	Better off
Goats	70-120	120-250	250-375	60-80	120-160	250-300
Sheep						
Camel	5-10	10-25	25-35	3-4	12-15	30-40
Cattle	0	10-15	15-20	-	-	-

**A comparison of livestock holding between the livelihood baseline conducted in Kakaar-Dharoor in 2000 and the current (2012) baseline indicates a decreasing trend across all wealth groups. Particularly the number of goat and sheep owned by the Poor wealth group has declined by 26 percent when compared to the previous baseline of 2000. This is due to increasing off-take (sold, died, slaughtered etc) and low recovery spaces resulted from frequent droughts since 2003. The building up of the environmental degradation also accounted among the causes.**

## 6.2 Herd dynamics

The tables below present livestock herd dynamics for different wealth groups in the reference year. The table outlines herd off-take (the number of livestock sold, dead, slaughtered, lost or stolen) against numbers born during the year. Variations are evident by wealth group and by species. On average, the number of sheep declined by six percent at the end of the reference year due to increases in sales, slaughter or death. Goats remained unchanged because of increased birth rates against off-take. However, camel herd dynamics increased by 17 percent and by 13 percent for the Middle and Better-off wealth groups, respectively, due to limited off-take (number of camels sold).

**Table 7. Sheep and Goats Herd Dynamics During the Reference Year**

	Poor		Middle		Better-off		Average herd growth across all wealth groups	
	Goat	Sheep	Goat	Sheep	Goat	Sheep	Goat	Sheep
Number at start of reference year	40	32	100	60	170	100	103	64
Adult female	20	17	50	35	80	60	50	37
No. born during the year	15	12	35	25	60	40	37	26
No. sold	11	10	20	15	24	20	18	15
No. slaughtered	2	3	12	10	14	10	9	7
No. died	1	2	7	5	6	5	5	4
No. given away	0	0	4	3	9	5	4	3
No. bought	1	0	0	0	0	0	0	0
No. lost or stolen	0	0	2	2	5	2	2	1
<b>Number at end of reference year</b>	<b>40</b>	<b>29</b>	<b>90</b>	<b>50</b>	<b>172</b>	<b>98</b>	<b>102</b>	<b>60</b>

**Table 8: Camel Herd Dynamics During the Reference Year**

	Poor	Middle	Better-off	Average herd growth for camel across all wealth groups
Number owned at start of reference year	3	12	30	15
Adult female	1	5	14	7
No. born during the year	0	2	6	3
No. sold	0	0	1	0
No. slaughtered	0	0	0	0
No. died	0	0	1	0
No. given away	0	0	0	0
No. bought	0	0	0	0
No. lost or stolen	0	0	0	0
<b>Number at end of reference year</b>	<b>3</b>	<b>14</b>	<b>34</b>	<b>18</b>

## 7. LIVELIHOOD STRATEGIES

Livelihood strategies are the result of the combination of all forms of capital available to individuals or households. Knowledge of livelihood strategies (especially how households access income) is crucial in determining the sustainability of livelihood and food security of households. This section presents sources of food and income as well as dominant patterns of expenditure.

### 7.1 Sources of Food

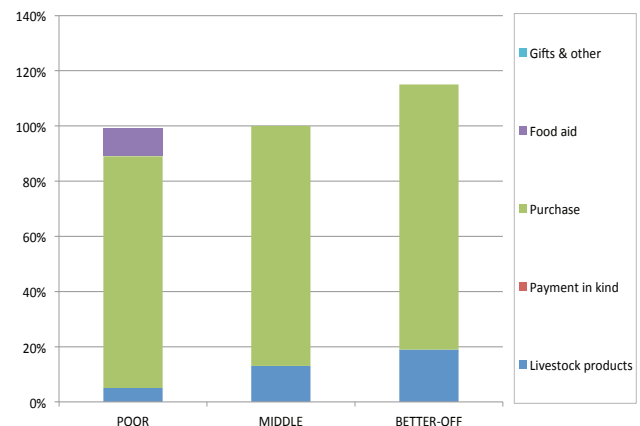
The primary food sources for all wealth groups are mainly through market purchases and followed by own production from livestock. Relief food (in-kind humanitarian assistance) is important for the Poor. Markets play an important role in access to food among the pastoral communities as it is the transaction node for imported and locally produced food items as well as for livestock sales and other activities. For the Poor wealth group food purchases represent the by far the largest sources of food and contribute 84 percent of their total calorie intake. This mainly comes from a combination of cereals such as rice and wheat flour (46 percent) and non-staple items such as sugar and vegetable oil (38 percent). The Poor also get five percent of their food from livestock products through consumption of sheep and goat meat and goat milk. However, in the reference year poor households experienced a deficit of 11 percent of the total calorie needs due to below average seasonal performance. This meant that poor households received 11 percent of their energy requirements from relief food intervention (Figure 16).

The Middle and Better-off also rely on market purchases to access food. These groups have somewhat more diversified food access than the Poor wealth group. In the reference year, the Middle wealth group achieved the minimum energy (2 100 kcal per person per day) requirement and the Better off achieved even more (115% of the minimum energy requirement).

Staple and non-staple food purchases of households belonging to the Middle wealth group represent 47 percent and 40 percent kcal, respectively, from the annual cereal consumption (816 kgs). This is comprised of rice, wheat flour and pasta, which is supplemented by non-staple foods like sugar, vegetable oil, cowpea and dates.

Livestock products, especially fresh milk, are consumed from milking 2 camels and 25 goats. Total milk production for the Middle wealth group was 1 907 litres out of which 39 percent (742 litres) was consumed, 46 percent (870 litres) was sold and 15 percent (295 litres) was spent on other uses (mainly gifts to the poor). Livestock products (including sheep/goat meat) contributed 13 percent to the total caloric intake. Cereal consumption among Better-off households was 1 284 kg compared to 600 kg among the Poor and 816 kg among the Middle wealth groups. Sugar is one of the most important non-staple food items that is considered a key dietary ingredient, which is consumed by all pastoral household members. The amounts consumed varied by season. In the wet season, milk production is high and hence low consumption of sugar, but in the dry season sugar is consumed in large quantities. Other essential foods such as cowpeas, cooking oil and dates also contributed to the household energy needs, although these items are purchased in minimal quantities. Hence the Better off wealth group obtain most of their caloric intake from purchases, followed by own production (livestock products).

Figure 13: Sources of Food

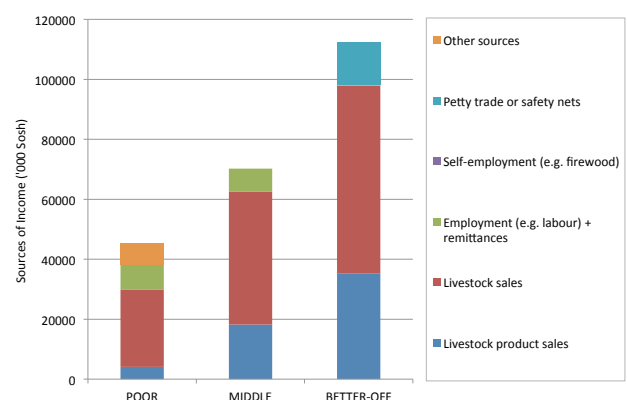


### 7.2 Sources of Income

The average annual income in the reference year for the Poor wealth group was Sosh45, 340,000. The major sources of income for the Poor include sale of livestock and livestock products. In the reference year, Poor households obtained 57 percent (Sosh 25 800 000) from the sale of 20 sheep and goats and Sosh 4 100 000 from the sale of 200 litres of fresh milk, representing 74 percent of their total annual milk production. Poor households also get additional income from loans in cash and gifts from relatives or from the Better-off, which marked 15.5 % or Sosh 7 040 000 in the reference year.

The average annual income in the reference year for the Middle and Better-off wealth groups were Sosh 60 000 000-80 000 000 and Sosh 100 000 000-125 000 000, respectively. Sales of livestock products contributed 26 percent and sales of livestock contributed 63 percent of total income for the Middle wealth group. The Middle wealth group has access to remittances, which contribute to additional income. Similarly, Better-off pastoralists receive major income from sales of livestock and livestock products (87%) and from trading activities (13%). This group can derive significant income from the sale of one local camel alone.

Figure 14: Sources of Income



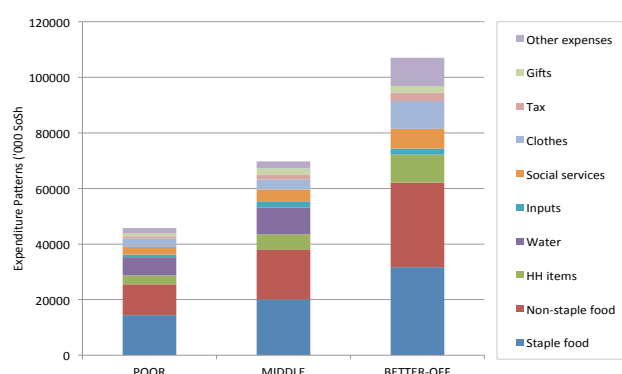


### 7.3 Expenditure patterns

All wealth groups in Kakaar-Dharoor pastoral livelihood zone depend on market purchases to obtain food. Thus markets play an important role in obtaining imported food items for the pastoralists. Consequently, about 31 percent, 29 percent and 30 percent, respectively, of the total expenditure of the Poor, Middle and Better-off households is used to purchase staple cereals. The main staple cereals purchased are imported red rice, wheat flour and sorghum. All wealth groups also spend a significant proportion of their annual income (24%, 26% and 28%, respectively) on non-staple foods such as sugar, vegetable oil and cowpeas. As a result, share of expenditure on food (staple and non-staple foods) represents a large proportion of total household expenditure.

Water purchases account for about 14 percent of the total expenditure for the Poor and Middle wealth groups, respectively. Other purchased items include clothes, gifts, household items, livestock inputs, social services and tax, which account for less than 10 percent of the total expenditure of an average household. For instance, household items account for seven percent, eight percent and nine percent of the total expenditure for the Poor, Middle and Better-off, respectively.

Figure 15. Expenditure Patterns



## 8. HAZARDS AND VULNERABILITY CONDITIONS

The main hazards affecting Kakaar-Dharoor pastoral livelihood zone are drought, insecurity/clan conflicts and environmental degradation.

### 8.1 Drought

Recurrent and persistent drought affects livestock production. Frequent droughts causes drying of water sources, hence intensifying water trucking (water prices and household expenditure on water also increase). Droughts result in livestock deaths, increased migration and family separation, reduction or lack of milk. Responses from key informants revealed that in the recent past droughts have become more frequent, prolonged and intense. This creates limited opportunities for recovery of livestock. In addition, consistent low livestock prices, resulting from poor livestock body conditions, reduced the purchasing power of pastoral households. During severe droughts livestock miscarriages occur alongside deaths of young animals. This limits the ability of poor households in meeting their minimum energy requirements. Overall, persistent droughts exacerbate livelihood, food and nutritional insecurity, as well as destitution (most are forced to settle in the periphery of main towns or in large villages where they can access casual employment or humanitarian assistance).

### 8.2 Civil insecurity and clan conflicts

Civil insecurity is a common problem which causes frequent displacement of pastoralists. Sometimes this results in death of actively income earning household members or even loss of assets. Chronic civil insecurity and clan-based conflicts affect pastoral migration, disrupt trade and increase the cost of essential food items. Clan based conflicts occur regularly due to disputes over control of and access to rangeland resources for livestock production.

### 8.3 Environmental degradation

Environmental degradation is an endemic problem contributing to the loss of rangeland resources. In the recent past, increasing vulnerability resulting from changing climatic conditions and lack of proper land and water resource management systems has pushed pastoral households to engage in unsustainable coping strategies such as cutting of bushes and forests for charcoal production. Loss of vegetation modifies micro-climatic conditions, impairs the ecological productivity of the land and predisposes the land surface to erosion risks. This unsustainable trend is increasingly being exacerbated by the pressures from pastoralism. Moreover, uncontrolled construction of *berkads* for commercial purposes results in overgrazing around water points. These practices are contributing to the buildup of endogenic factors that impair the resilience of the ecosystem that supports the pastoral livelihood system and depletes the water table.

#### 8.4 Market disruptions

Clan conflicts and tensions disrupt trade flow and market access. These shocks increase the prices of essential food and non-food items, making them unaffordable. In some cases, conflicts further increase the costs of accessing essential items. These predispose households to food insecurity by reducing their purchasing power. Households in the Kakaar-Dharoor pastoral zone are highly vulnerable to any factor which causes major market disruption.

#### 8.5 Human and livestock diseases

Frequent outbreaks of livestock diseases in the dry seasons affect livestock production. Tick-borne diseases deteriorate livestock body conditions and reduce the value of livestock and the income generated from these sources. Common livestock diseases include internal parasites (*Gooriyan*), diarrhea (*Shuban*), lumpy skin disease and respiratory diseases.

### 9. COPING STRATEGIES

Food insecurity is typically associated with seasonal and long-term negative trends that inhibit food access. The ability to cope, respond and recover from shocks among pastoral households is a function of livestock asset holdings. In most cases, the Better-off wealth group and some (Upper) Middle wealth group have more assets and diverse income sources which enable them to recover faster from devastating shocks than the Poor households.

In drought (bad) years, Poor households in the Kakaar-Dharoor pastoral livelihood zone increase livestock sales, intensify social support and seek loans as well as casual labour opportunities. Social support is normally received in the form of remittances or in cash and in the form of in-kind support from Middle and Better-off relatives and friends living in urban areas or in the Diaspora. When conditions worsen Poor households migrate to IDP camps where they can access humanitarian assistance. Increasing the sale of livestock contributes to assets depletion which has negative implications on the ability of households to recover from shocks.

The Middle wealth group, owing to their better livestock holding compared to Poor households increase livestock sales in times of stress (drought). Some of them seek more social support and loans which they repay when a near-normal situation resumes. Other Middle wealth group households seek remittances from relatives in the Diaspora or in the main towns. While these coping strategies are primarily sought to survive the hard times, some of these strategies, including charcoal burning and obtaining credit, are unsustainable and increase household debt levels.

During drought (bad years), the Better-off wealth group increases livestock sales while some intensify trading activities and seek loans, credit and remittances in order to meet basic food and non-food needs of the household.

### 10. CONCLUSION AND RECOMMENDATIONS

#### 10.1 Conclusion

Baseline assessment findings indicate that the primary asset (livestock herd sizes) for the Kakaar-Dharoor livelihood zone indicated a decreasing trend compared to the previous baseline. Particularly the number of goat/sheep owned by the Poor wealth group has declined by 26 percent when compared to the previous baseline of 2000. Additionally, in the reference year the number of sheep has gone down by 6 percent (beginning of the reference year compared to the end of the reference year). This is mainly due to increased off-take in terms of livestock sales depicting the continuous loss of herd sizes due to recurrent droughts.

The Kakaar-Dharoor livelihood is highly dependent on market purchase as the primary food source for all wealth groups using income primarily obtained from livestock sales, especially sheep and goats. Hence Poor households spend about 60 percent of the annual income, mainly from the livestock and livestock product sales on staple and non-staple food purchases in order to meet the largest portion of their minimum dietary energy requirement (84 %). This tells us that most Poor households are unable to meet the minimum energy requirement for survival by their own means even during the reference year. This is ascribed to persistent chronic food insecurity resulting from recurrent droughts and insecurity. The root causes of this problem stem from merely high degree of reliance on narrow asset base and limited livelihood diversification among poor households. This has often compromised the Poor household's resilience, due to intermittent drought shocks and lack of livestock recovery spaces - leading to increased pastoral destitution and shifts to sedentarization, as well as overexploitation of the natural resources, resulting in desertification and environmental degradation.

Access to basic services such as health and education in Kakaar-Dharoor livelihood zone is poor and limited to the semi urban areas. The roads to the interior parts of the livelihood are in deplorable condition while charcoal production is

threatening the existence of the pastoral livelihood.

## 10.2 Recommendations

In order to improve the well-being of pastoralists in the Kakaar-Dharoor livelihood zone the following development priorities and interventions are proposed:

- In order to reserve the drastic reduction to their primary livestock asset (goat/sheep declined by 26% since 2000), re-stocking programme should target poor wealth groups.
- Encourage pastoralists to use depressed areas and streams for grass growing instead of focusing on marginal crop cultivation; train pastoralists on how to store grass harvest for use in the dry period.
- Community level livelihood diversification, including through traditional handicrafts such as collection of palm leaves for mat-making, baskets and improve marketing of their products.
- Provision of micro credit and revolving funds to small groups (women, youth etc) for engaging in income generating activities such as milk/ghee, skin, and livestock trade.
- Provision of cash for work programs for rain water harvest and sanitation practices for both human and livestock consumption, through construction of water pans, earth dams and diversion of running water from the upper parts to low-lying areas for long retaining water and improvement of rangeland conditions
- Extend livestock services (animal health services) to the livelihood zone by increasing access to livestock inputs (drugs) and training community animal health workers.

## 10.3 Early warning indicators

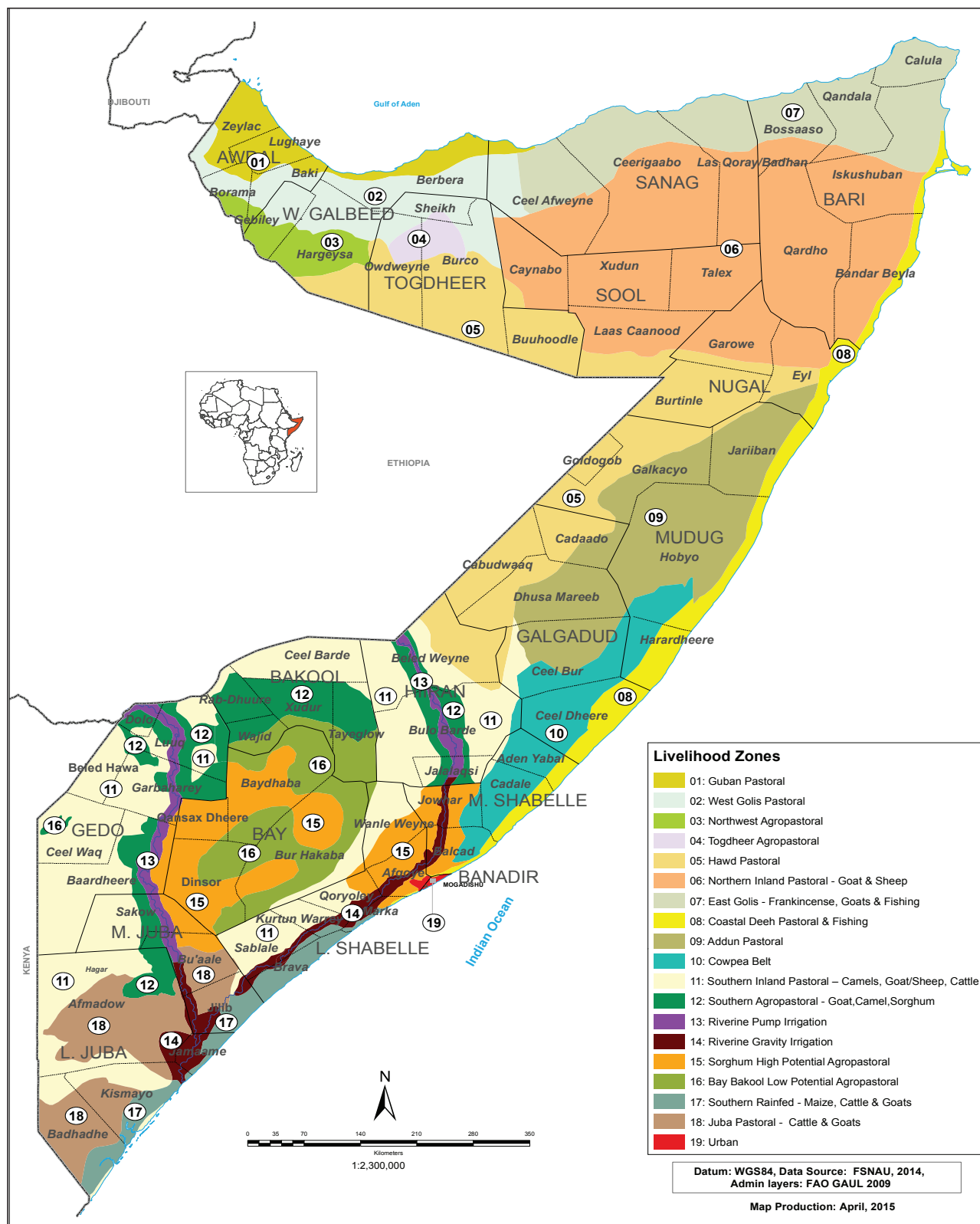
The following key indicators have been identified as early warning indicators for Kakaar-Dharoor Pastoral Livelihood Zone:

1. Poor seasonal rainfall performance
2. Abnormal livestock migration patterns
3. Occurrences of human and livestock epidemics
4. Increasing livestock deaths
5. Prevalence (number of people affected) of human diseases
6. High staple and non-staple food prices
7. Abnormal migration of households/people

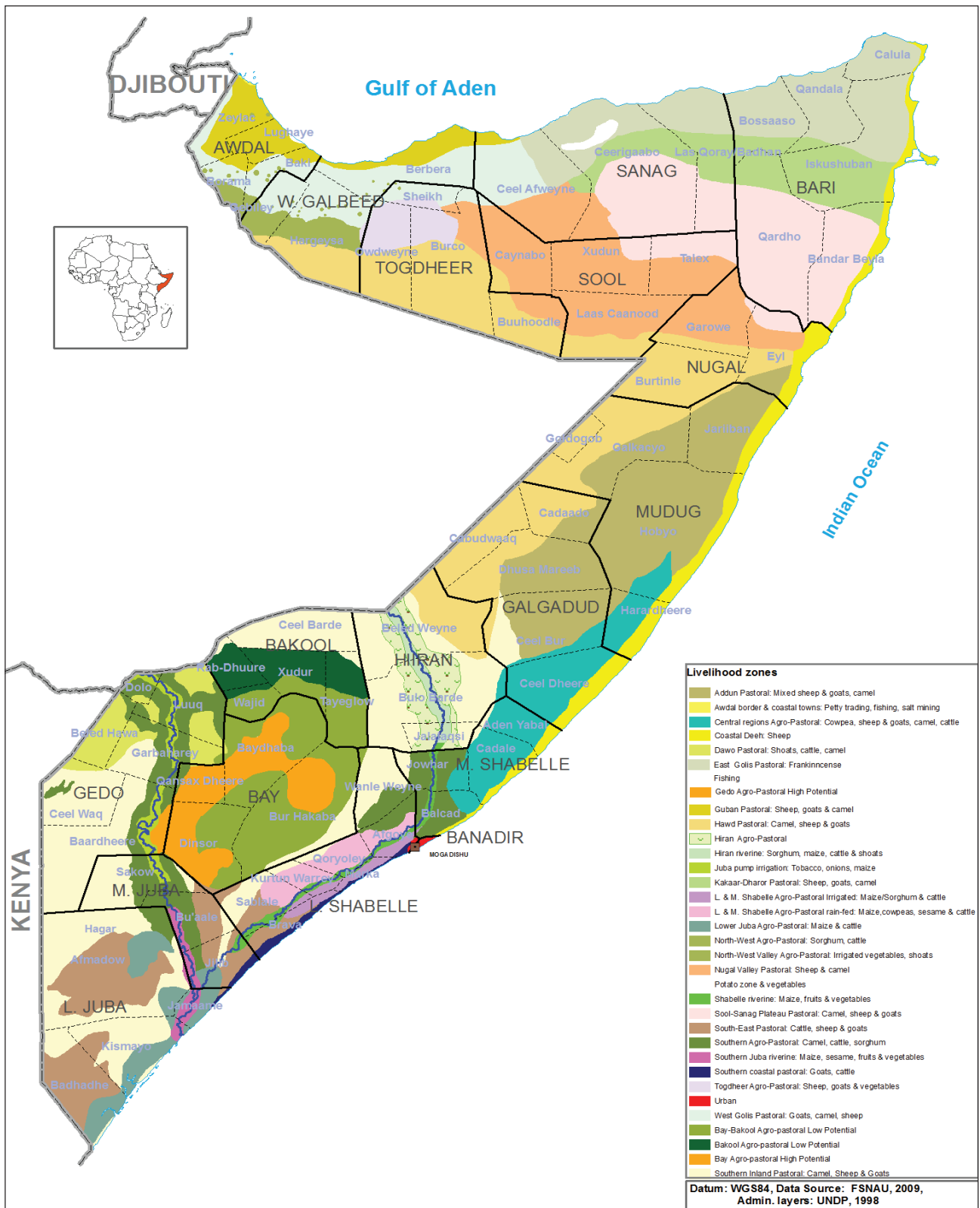
# Annexes

## Annex 1: Somalia Livelihood Zones

### A) Map 3: Somalia Livelihood Zones May 2015 (Revised and Updated)



B) Map 4: Somalia Livelihood Zones in use from 2009 - 2014



**Annex 2: RURAL INTERVIEW FORM 4: WEALTH GROUP (HH REPRESENTATIVE) INTERVIEW**

District	Livelihood Zone	Village
Wealth group	Reference year	Type of year
Interviewers	Date	Number of interviewees Men                  Women

**Procedures**

1. **Introduce** team and explain objectives of the focus group interview.
2. Check that the focus group is made up of people from the **wealth group** you requested – ask them individually to briefly describe their land, livestock, and/or sources of income.
3. Explain **reference year** and ensure interviewees refer to reference year throughout rest of interview.
4. Gather information about the **typical household** in this wealth group (e.g. nuclear, extended, polygamous etc.), its size and composition (a), and prepare an **asset profile** for the reference year (b) and (c).

**1). HOUSEHOLD/FAMILY SIZE AND COMPOSITION**

Number of people living/eating at home daily (include dependents)						
Household type:	Polygynous:	[ ]	No. of wives:	[ ]		
	Monogamous:	[ ]				
Number at formal school				Total	Male	Female
Number at Koranic school						

**2). LAND HOLDINGS PROFILE**

Land owned: rainfed		Land cultivated - rainfed (owned +/- rented, loan)	
Land owned: irrigated		Land cultivated - irrigated (owned +/- rented)	
Local unit for measuring land			
Who are the main breadwinners in the household?		Male	Female

**3). LIVESTOCK ASSETS**

Livestock type	Total number at the start of the reference year		
	Owned	Manage	Total
Camel			
Cattle			
Shoats			
Donkeys			

**4). LIVESTOCK PROFILE** (remember to include loaned animals)

Livestock Type:	Camels	Cattle	Sheep	Goats
No. owned at start of reference year				
No. mature (Adult) females				
No. born during year				
No. sold during year				
No. slaughtered				
No. died during the year				
No. given away (zakat, etc)				
No. bought				
No. lost or stolen				
No. received				
No. exchanged during year				
No. at end of reference year				

**5). OTHER COMMENTS ON THE HOUSEHOLD AND ASSET PROFILE**

Are there any other productive assets (include number of donkeys, horses, mules, poultry, bee hives, trees, ploughs, shop, Barkat and any other assets)?



**6). LIVESTOCK PRODUCTION (milk, butter, meat, eggs)**

Consumption and sale of milk, milk products & eggs	# of milking animals (reconfirm from pg 1) (a)	Season	Length of lactation (in days) (b)	Average milk production per animal per day (c)	Total production per season = (a) x (b) x (c)	Quantity sold or exchanged (note skim or whole)	Price per unit sold	Cash income	Who makes decisions on livestock product sales?	Other use (e.g. gifts, payment for labour)	Balance consumed (note skim or whole)	% of annual kcal needs
									Husband   Wife**			
Camel milk		Wet Dry										
Camel butter OR ghee*												
Cow milk		Wet Dry										
Cows butter OR ghee¹												
Sheep milk		Wet Dry										
Sheep butter OR ghee*												
Goats milk		Wet Dry										
Goat butter OR ghee*												

Consumption and sale of meat (from own livestock) and of honey	# of animals slaughtered	Meat per carcass (kg)	Total meat (kg)	Sold or exchanged	When sold?	Price per unit sold	Cash income	Who does the sale of meat	Other use (e.g. gifts)	Balance consumed	% of HH kcal needs
								Men   Women			
Camel											
Cattle											
Goat											
Sheep											
Honey											

\*\* You can interchange husband/wife with men/women depending on the setting

**QUESTIONS ON MILK, MILK PRODUCTS AND MEAT SALES:**

Who normally decides on sale of milk, milk products, meat? Men, women or both? \_\_\_\_\_

Does it make a difference whether the animals belong to the woman or the man? \_\_\_\_\_

**7). INCOME FROM SALE OF LIVESTOCK**

SALE OF LIVESTOCK (e.g. camels, cows, goats, sheep, chickens)	Total Sold	When?	Price per unit sold	Cash income	Who makes decision on livestock sales?	
<b>REMEMBER TO SEPARATE LOCAL AND EXPORT SALES</b>					Men   Women	
Camels - export						
Camels - local						
Cows - export						
Cows - local						
Goats - export						
Goats - local						
Sheep - export						
Sheep - local						
Chickens						
Donkey						
<b>Other income from livestock:</b> e.g. livestock rental, oxen fattening, hides, eggs						
<b>TOTAL Income =</b>						<b>TOTAL % kcals =</b>

**QUESTIONS ON LIVESTOCK SALES:**

Who normally decides on sale of livestock? Men, women or both? \_\_\_\_\_

Does it vary by livestock type (camels, cattle, shoats)? \_\_\_\_\_

Does it make a difference whether the animals belong to the woman or the man? \_\_\_\_\_





**11). FOOD RELIEF/FOOD ZAKAA / FOOD GIFTS / FOOD LOANS / TARGETED FEEDING**

[illegible]

## 12). WILD FOODS AND GAME

[illegible]

### 13). CASUAL LABOUR / EMPLOYMENT /

[illegible]

**14). OTHER FOOD SOURCES (e.g. stocks carried over from previous year)**

Commodity	Quantity	Where are the stocks stored?	Other use	Other use	Balance consumed	% of HH food needs

**15). CASUAL LABOUR / EMPLOYMENT /**

[illegible]

**16). SELF-EMPLOYMENT / SMALL BUSINESS / TRADE**

[illegible]

**17). OTHER CASH INCOME SOURCES – GIFTS / LOANS / REMITTANCES IN CASH**

[illegible]

**SUMMARY OF REFERENCE YEAR SOURCES OF FOOD AND CASH INCOME****SOURCES OF FOOD**

	Crop production	Livestock production (milk/meat)	Purchase and exchange	Labour exchange	Relief	Gifts/ Zakat, I	Wild foods	loan and borrowing	Other	TOTAL
Calculated (%)										

**SOURCES OF CASH INCOME**

	Sale of crop production	Sale of livestock and livestock products	Labour, employment and remittances	Self-employment, small business, trade	Other income (loan)	TOTAL
Calculated (cash)						

**15. EXPENDITURE PATTERNS:** Obtain quantified information on the main expenditure items for a typical household in this wealth group in the reference year (remind participants of the specific year you are interested in). Some categories are suggested below. Remember to ask about **seasonal variations** in expenditure.

**NOTE:** This section should not be completed in every wealth group interview because it is very time consuming. Two interviews with the poor wealth group and one each with the middle and better off should be sufficient.

Main Expenditure Categories	Typical Annual Amount Spent			
	Quantity (unit) purchased [a]	Frequency purchased [b]	Price per unit [c]	Total [a] x [b] x [c]
<b>Main food items</b>	à	copy total from	page 4, section 7	
Other food item:				
Other food item:				
<b>Household items</b>				
Tea/coffee				
Salt				
Soap				
Kerosene/paraffin				
Grinding of grain				
Water for humans				
Firewood/charcoal				
Utensils/pots				
<b>Inputs</b>				
Livestock drugs				
Salt for animals				
Water for animals				
Land rental				
Ploughing				
Seeds				
Tools				
Fertilizer				
Pesticides				
Agricultural labour				
Livestock investment				
Other inputs				
<b>Social services</b>				
School (fees, uniform, etc)				
Medicine				
<b>Other expenditure</b>				
Clothing				
Clan taxes				
Gifts/Zakaa				
Cigarettes/tobacco				
Khat				
Transport				
Festivals				
Other				

EXPENDITURE TOTAL (REMINDER: cross check with total income) à

**Expenditure on which of these items can be reduced in a bad year? By how much (quantify)?**

**16. THE SITUATION IN A BAD YEAR (INCLUDING COPING STRATEGIES):** How does the situation in a bad year compare to the reference year? Consider differences in **each** source of food and income (quantified changes in amounts) from the reference year and summarize below. Compare quantities from the same period in the reference year and in the bad year (e.g. compare wet season with wet season or dry with dry). Specify which year in the past is being referred to in order to quantify coping strategies.

Source of Food or income	QUANTITY in reference year	Who in the household performs the task	QUANTITY in bad year	Who in the household performs the task
Example: firewood sales	1 bundle per week		2 bundles per week	
Firewood or charcoal sales				
Grass sales				
Agricultural labour				
Labour migration				
Labour exchange (payment in food)				
Petty trade				
Camel sales				
Cattle sales				
Shoat sales				
Milk and butter sales				
Wild foods				
Stocks				
Gifts				
Remittances				
Other				
Other				
Other				
Other				
Other				

**17. If this group is a good source of information, and if there is enough time, you can complete a short WEALTH BREAKDOWN (see Community Level Interview format).**

--

**18. See your NON-FOOD checklist for additional questions you may want to ask this wealth group.**

--

**29. DEVELOPMENT PRIORITIES:** What are the constraints and mid-term priorities to strengthen food security?

Men	Women	Boys <15 years	Girls <15 yrs
1.	1.	1.	1.
2.	2.	2.	2.
3.	3.	3.	3.
4.	4.	4.	4.
Constraints:	Constraints:	Constraints:	Constraints:

**QUALITY OF INTERVIEW (confidence of informants, knowledge of area, consistency of information, etc):**

(Footnotes)

1 Formulas: Camels and goats: kg butter/ghee = litres milk x 0.049; Cows: kg butter/ghee = litres milk x 0.04; Sheep: kg butter/ghee = litres milk x 0.098

4 Checklist: construction, brick making, skilled casual labour (e.g. carpentry), salaried employment, domestic work, livestock herding, pension, remittances).

5 Checklist: agricultural labour (clearing fields, preparing land, planting seeds, weeding, harvesting, threshing), construction, brick making, skilled casual labour (e.g. carpentry), salaried employment, domestic work, livestock herding, pension, remittances).

6 Checklist for self-employment: collection of firewood, charcoal, grass, handicrafts. Checklist for small business and trade: petty trade, trade, rental/hire, kiosks and shops.

**Annex 3: COMMUNITY REPRESENTATIVES INTERVIEW FORM: GENERAL TOPICS & WEALTH BREAKDOWN<sup>1</sup>**

District:	Livelihood Zone:	Village:	
Date:		Population number:	
Interviewers:	Number of participants	Male:	
		Female:	

**Procedures:**

1. **Introduce** team and explain **objectives** of the assessment.
2. Ask the community leaders or representatives to give you an **overview** of the situation in the community.
3. Explain the reference year that for which we are collecting data.

**SECTION A: HISTORICAL TIMELINE**

NB: Include **positive events** as well as **periodic or intermittent hazards**.

A periodic or intermittent hazard is one that affects crop or livestock production in <u>some but not all years</u> :				
<input type="checkbox"/> Insecurity – political tension/conflict	<input type="checkbox"/> Insecurity – clan conflict	<input type="checkbox"/> Border closure		
<input type="checkbox"/> Drought	<input type="checkbox"/> Frost	<input type="checkbox"/> Wind	<input type="checkbox"/> Epidemic crop disease	<input type="checkbox"/> Wild Animals
<input type="checkbox"/> Flood	<input type="checkbox"/> Hail	<input type="checkbox"/> Crop Pests	<input type="checkbox"/> Epidemic livestock disease	<input type="checkbox"/> Market events

Year	Seasonal Performance (1-5*)	Event(s)	Effects	Response: What did people (households) do themselves to cope with the problem, disaggregate by gender if applicable? Was there any outside assistance?
2012	Deyr			
	Gu			
2011	Deyr			
	Gu			
2010	Deyr			
	Gu			
2009	Deyr			
	Gu			
2008	Deyr			
	Gu			
2007	Deyr			
	Gu			

\* **Classify** each season as follows:

5 = an excellent season for household food security (e.g. due to good rains, good prices, good crop yields, etc); 4 = a good season or above average season for household food security; 3 = an average season in terms of household food security; 2 = a below average season for household food security; 1 = a poor season (e.g. due to drought, flooding, livestock disease, pest attack) for household food security

Please rank the three main <b>chronic hazards</b> affecting households in this area. (Note: A chronic hazard is one that significantly affects crop or livestock production almost every year.)		
1.	2.	3.

**SECTION B: LIVESTOCK MIGRATION****Livestock Migration Pattern in an Average Year (e.g. the reference year).**

What were the species and composition of the migrating herd (e.g. dry camels and dry shoats)	
Where do animals move to in different seasons?	Gu
	Hagaa
	Deyr
	Jilaal
Who in the household moves with the migrating animals?	

On the map provided, draw a map illustrating the pattern of migration in this type of year

**Livestock migration pattern in a Recent Bad Year**

Why was the pattern of migration abnormal?	
What were the species and composition of the migrating herd (e.g. dry camels and dry shoats)	
Where do animals move to in different seasons?	Gu
	Hagaa
	Deyr
	Jilaal
Who in the household moves with the migrating animals?	

On the map provided, draw a map illustrating the pattern of migration in this type of year

**SECTION C: SEASONAL CALENDAR**

**Select** the most important food and income acquisition strategies from the following list and indicate their timing – by shading – in the table below. Make sure you have covered all the main food and income generating activities of the poor.

SEASONS	JILAAL			GU			HAGAA			DEYR		
MONTHS	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Rainfall												
Main crops grown for consumption												
Main crops grown for sale												
Livestock (Milk) production/availability												
Livestock sales												
Supplementary feeding												
General distribution												
School feeding												
Local labour (e.g. on farms)												
Off-farm employment (e.g. brick-making)												
Labour migration (where to?)												
Collection & consumption of Wild foods/Game, by type												
Timing of Food purchases												
Cereal prices (highest/lowest)												
Annual 'hunger' season (Timing)												
Mining (Peak periods)												
Hunger period												
Harvesting												
Crop pests, Insects and Diseases												
Human diseases (malaria, diarrhea, etc)												
Livestock diseases												
Food consumption months												
General trade activity												
Cereal prices increase/decline												
Animal movements												

**NOTE:** For crops, indicate the timing of the following: LP (land preparation); P (planting); CG (consumption green); H (harvesting)

Indicate variations in access with arrows: → to indicate peak access and ← to indicate minimal access

Wealth groups: local definition and names						
Wealth group name (English)						
Main household heads	a) Male headed					
	b) Female headed					
No. wives per husband (if polygynous society)						
Average household size (- Minus those living away + Plus those from other households)						
Rainfed land owned						
Irrigated land owned						
Land cultivated (owned +/- Rented/loaned land)	Rainfed					
	Irrigated					
Main crops grown for sale						
Main crops grown for food						

## SECTION D: WEALTH GROUP DESCRIPTIONS AND BREAKDOWN

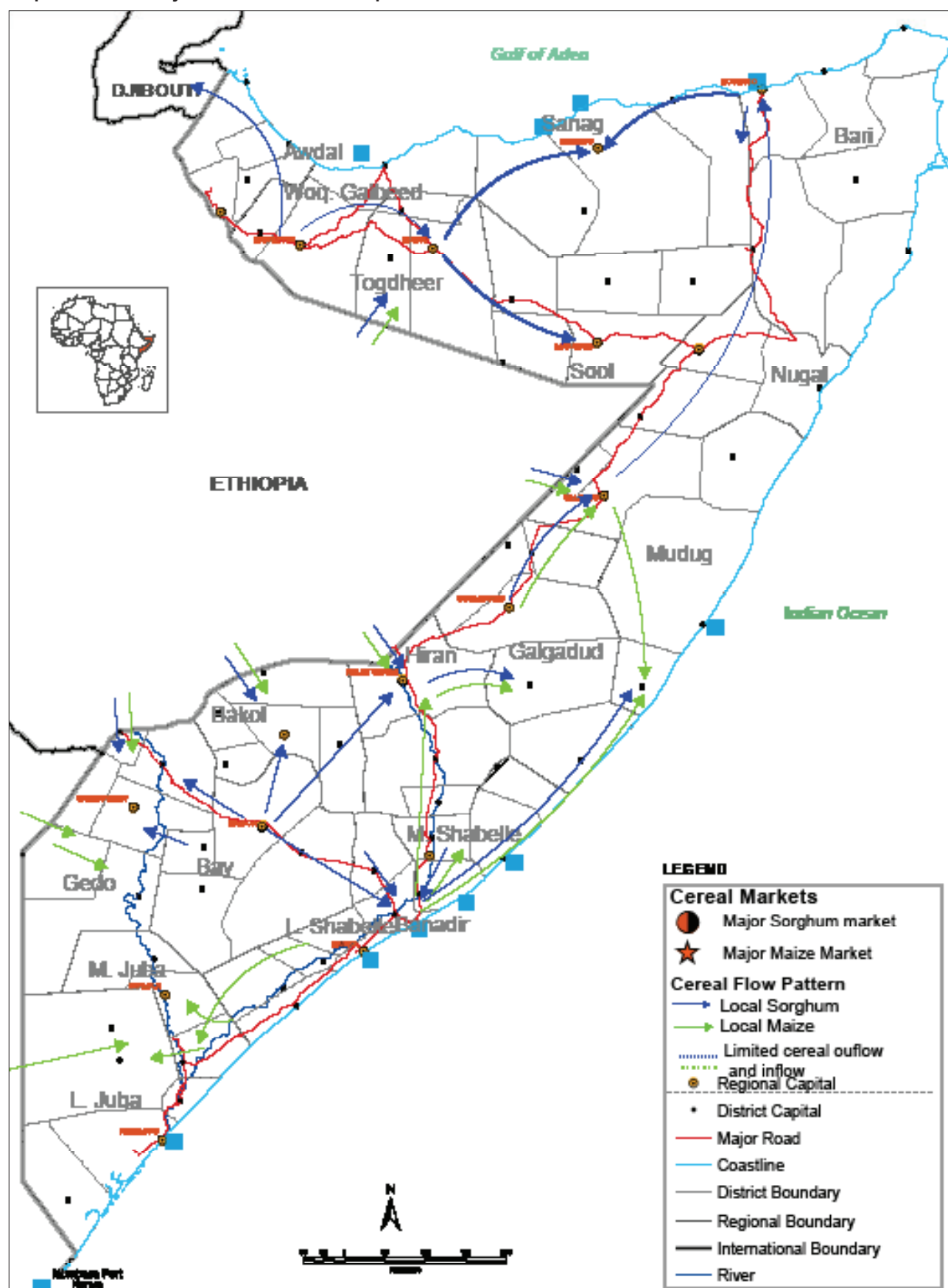
<b>Who are the primary carriers</b> for crops (for food and sale)?					
<b>Who are the primary</b> decision makers for livestock and livestock product sales (within household)?					
<b>Main</b> decision makers for livestock and livestock product sales (within household)?		1. Male 2. Female 3. Both	1. Male 2. Female 3. Both	1. Male 2. Female 3. Both	1. Male 2. Female 3. Both
<b>Livestock</b>	Camels owned	Total (range)			
		Prod. Females			
	Cattle owned	Total (range)			
		Prod. Females			
		Plough oxen			
	Goats owned	Total (range)			
		Prod. Females			
	Sheep owned	Total (range)			
		Prod. Females			
	Livestock loaned (under what type of arrangement?)				
Other livestock:					
Other livestock:					
Other causes of differences in production (e.g. quality of land, access to irrigation, labour, agri. inputs etc)					
Other productive household assets (e.g. ploughs, irrigation, trees, hives, equipment, shops/kiosks)					
Main <b>sources of cash income</b> , ranked					
<u>Checklist of cash income sources:</u> 1. Livestock sales 2. Agricultural labour 3. Other casual labour (e.g. construction) 4. Paid domestic work		5. Social support (remittances/gifts/zakat) 6. Firewood collection or charcoal burning 7. Collection and sale of wild foods 8. Mining		5. Crop sales 6. Vegetable sales 7. Petty trade (small-scale trade) 8. Trade (large scale) 9. Small business 10. Transport (e.g. taxi, pick-up)	
<b>Months of consumption</b> from own harvest					
<b>Bad year</b> response strategies. <i>Specify by different strategies</i>					
<b>Schooling levels</b> attained	Boys:				
	Girls:				
% of households in each wealth group (proportional piling)					
Main <b>constraints</b>					
Development <b>priorities</b>					



## ANNEX 4: FOOD COMPOSITION TABLES (kcal per kg of food)

<b>Cereals</b>	<b>kcal</b>	<b>kg/d</b>	<b>Sugars</b>	<b>kcal</b>	<b>kg/d</b>
Barley	3390	0.62	Sugar	4000	0.53
Maize, white, whole	3630	0.58	Soft drinks, commercial	450	4.67
Maize meal, refined 60-80%	3600	0.58			
Maize, green	1230	1.71	<b>Meat, Poultry, Eggs</b>		
Millet flour	3650	0.58	Beef, mod fat	2350	0.89
Millet, whole grain	3630	0.58	Beef, lean	2020	1.04
Oats	3880	0.54	Goat meat	1450	1.45
Rice, parboiled, lightly milled	3540	0.59	Eggs	1580	1.33
Sorghum	3550	0.59			
Sorghum flour	3530	0.59	<b>Fish</b>		
Teff, whole grains	3450	0.61	Fish, dried	3090	0.68
Wheat, whole	3440	0.61	Fresh fish	950	2.21
Wheat flour	3480	0.60			
Pasta	3420	0.61	<b>Milk</b>		
			Milk, whole, cow	640	3.28
<b>Roots, Tubers and Stems</b>			Milk, skimmed, cow	340	6.18
Cassava flour	3420	0.61	Milk, whole, sheep	1080	1.94
Cassava, fresh	1530	1.37	Milk, whole, goat	710	2.96
Plantain, ripe, raw	1280	1.64	DSM vit A-enriched	3550	0.59
Irish potato, raw	750	2.80			
Sweet potato, pale raw	1140	1.84	<b>Oils and fats</b>		
Taro	1130	1.86	Butter	7450	0.28
Yam, flour	3170	0.66	Ghee	8280	0.25
Yam, fresh	1040	2.02	Margarine	7650	0.27
Enset	2000	1.05	Sunflower oil	9000	0.23
<b>Grain legumes</b>			<b>Other</b>		
Beans, dried	3390	0.62	Beer, local	350	6.00
Cowpeas, dried	3400	0.62	Honey	2860	0.73
Lentil, dried	3390	0.62			
Soya bean, dried	3820	0.55	<b>Blended foods</b>		
			CSB/WSB corn/wheat		
<b>Nuts and seeds</b>			Soya blend	360	5.83
Groundnut, dried	5790	0.36	Soy fortified cornmeal	392	5.36
Groundnuts, fresh	3320	0.63	High protein biscuits	464	4.53
Pumpkin seeds (no coat)	6100	0.34	Protein-enriched ration	450	4.67
<b>Fruit</b>			<b>Vegetables</b>		
Baobab, ripe, raw	2800	0.75	Leaves, dark green	480	4.38
Banana, ripe, raw	1160	1.81	Leave, medium green	280	7.50
Citrus	530	3.96	Leaves, light green	230	9.13
Mango	630	3.33	Pumpkin	360	5.83
Avocado	1650	1.27	Onions	480	4.38
Papaya	390	5.38	Tomatoes	200	10.50
Apple	610	3.44			

Map 5: Somalia: Deyr 2011 Local Cereal Map



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### (Footnotes)

1The Integrated Food Security Phase Classification (IPC) is a set of tools and procedures to classify the severity of food insecurity using an widely accepted five-phase scale. At the area level, it divides areas into the following phases: IPC Phase 1=Minimal; Phase 2=Stressed; Phase 3=Crisis; Phase 4=Emergency; and Phase 5=Famine.

# The Information Management Process

## Gathering & processing

- FSNAU has a unique network of 32 specialists all over Somalia, who assess the food security and nutrition situation regularly and 120 enumerators throughout the country, who provide a rich source of information to ensure a good coverage of data.
- Food security information is gathered through rapid assessments as well as monthly monitoring of market prices, climate, crop and livestock situations.
- Baseline livelihood analysis is conducted using an expanded Household Economy Approach (HEA).
- The Integrated Database System (IDS), an online repository on FSNAU's official website [www.fsnau.org](http://www.fsnau.org), provides a web-based user interface for data query, data import and export facilities from and into MS Excel, graphing, spreadsheet management and edit functions.
- Nutrition data is processed and analyzed using the Statistical Package for Social Sciences (SPSS), EPIInfo/ENA and STATA software for meta-analysis.
- FSNAU developed the Integrated Phase Classification (IPC), a set of protocols for consolidating and summarizing situational analysis. The mapping tool provides a common classification system for food security that draws from the strengths of existing classification systems and integrates them with supporting tools for analysis and communication of food insecurity.

## Validation of Analysis

- Quality control of nutrition data is done using the automated plausibility checks function in ENA software. The parameters tested include; missing/flagged data, age distribution, kurtosis, digit preference, skewness and overall sex ratio.
- Quality control of food security data is done through exploratory and trend analysis of the different variables including checks for completeness/missing data, market price consistency, seasonal and pattern trends, ground truthing and triangulation of data with staff and other partner agencies, and secondary data such as satellite imagery, international market prices, FSNAU baseline data, etc.
- Before the launch of the biannual seasonal assessment results (Gu and Deyr), two separate day-long vetting meetings are held comprising of major technical organizations and agencies in Somalia's Food Security and Nutrition clusters. The team critically reviews the analysis presented by FSNAU and challenges the overall analysis where necessary. This is an opportunity to share the detailed analysis, which is often not possible during shorter presentations or in the briefs.

## Products and Dissemination

- A broad range of FSNAU information products include, monthly, quarterly and biannual reports on food and livelihood insecurity, markets, climate and nutrition, which are distributed both in print and digital formats including PowerPoint presentations and downloadable file available on the FSNAU site.
- Feedback meetings with key audiences enable us to evaluate the effectiveness of our information products. We constantly refine our information to make sure it is easily understandable to our different audiences.
- FSNAU has also developed a three year integrated communication strategy to ensure that its information products are made available in ways appropriate to different audiences including, donors, aid and development agencies, the media, Somalia authorities and the general public.

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