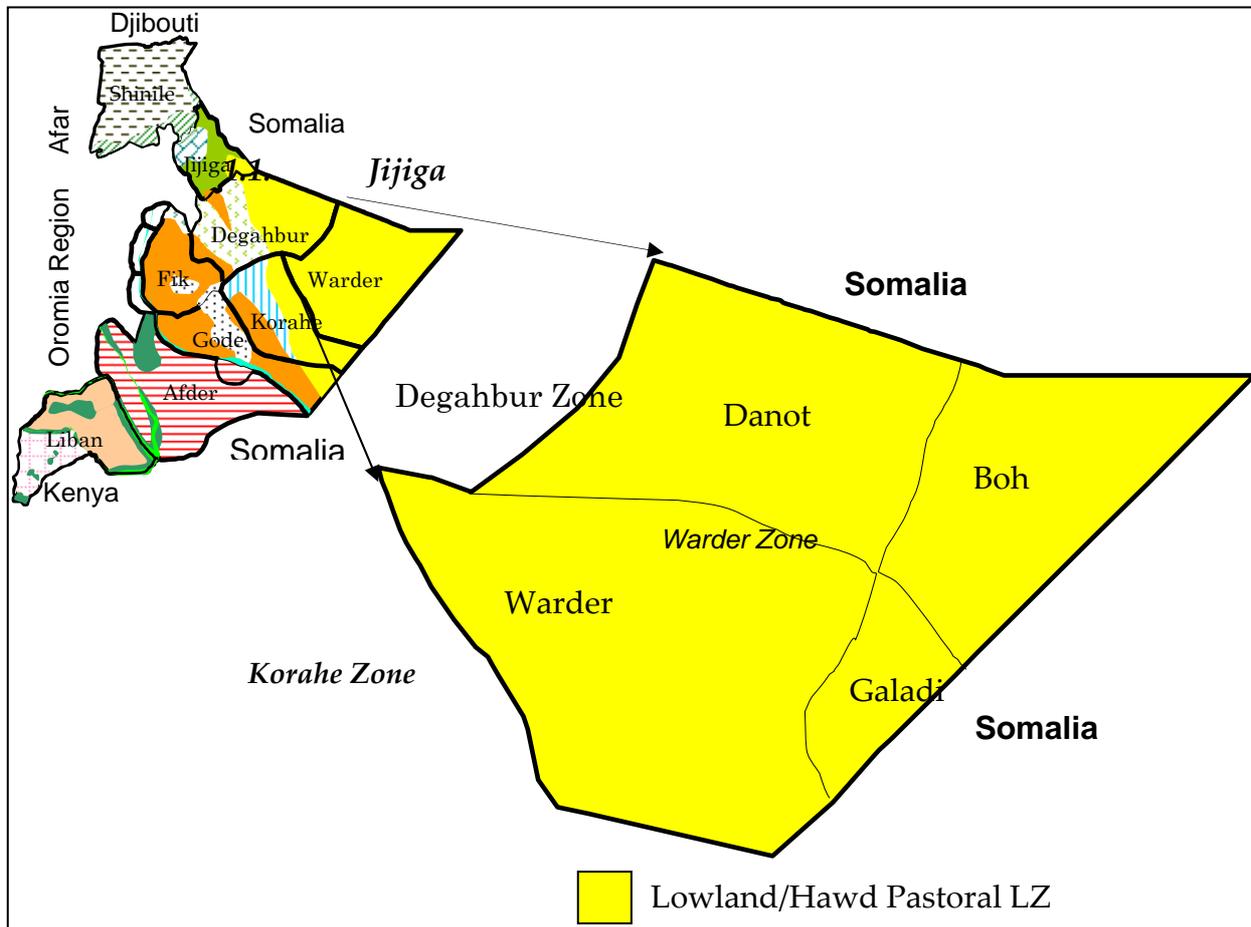


Lowland Pastoral Livelihood Zone

(Camel, Shoats and Berkad dependent)

Warder Administrative Zone, Somali Regional State, Ethiopia

(LZ also found in Korahe, Degahbur and parts of Gode Zones)



An HEA Baseline Study By SC (UK), DPPB, and Partners, October 2001

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Terms and Acronyms

ACF	Action Contra le Faim
<i>Berkad</i>	Artificial, often cemented, sub-surface water reservoirs
<i>Deyr</i>	Rainy season between October and December
DPPB/D	Disaster Prevention and Preparedness Bureau/Department
ECHO	European Commission Humanitarian Office
LZ	Livelihood Zone
FS/EW	Food Security Monitoring/Early Warning
<i>Gu</i>	Rainy season between early April and June
<i>Hagaa</i>	Dry season between July and September
HCS	Hararghe Catholic Secretariat
<i>Jilaal</i>	Hot dry season between late December and March
OFDA	USAID Office for Foreign Disaster Assistance
OWDA	Ogaden Welfare and Development Association
OWS	Ogaden Welfare Society
PCAE	Pastoralist Concern Association Ethiopia
SC-UK	Save the Children-UK
SC-USA	Save the Children-USA
SNRS	Solmali National Regional State
WFP	UN-World Food Programme
<i>balleys</i>	Natural depressions in the landscape
<i>qumbe</i>	A camel skin container to store ghee
<i>foox</i>	incense

1. Executive Summary

This Livelihood Zone (LZ) is pastoral, with camel and shoats being the predominant animals. Cattle are spread throughout the zone, but are found in high numbers only in limited areas in the east. This is a very large LZ¹ and can be generally defined as incorporating the *hawd* ecological area of SNRS (and neighbouring Somalia). One of the features of the *hawd* is the lack of permanent water sources. Livestock sales are highly linked to the Gulf export market, through northern Somalia. Local marketing opportunities are poor, for meat and milk sales, given the lack of significant urban settlements. Due, in part, to the lack of milk marketing options milk consumption meets about fifty percent of annual food needs. The relative isolation and small urban settlements in this LZ means that land degradation, a growing and serious concern in some areas of the *hawd*, particularly north-western areas, is not yet a problem. This LZ was relatively less affected in the 1999/00 drought, compared to regions to the south and west, but has been facing increasingly difficult times due to the extremely poor *gu* 2001 rains.

The years 1994 to 1998 were generally normal to good, with no very bad years, allowing high levels of livestock reproduction and sales. Conditions deteriorated from late 1998 when the benefits of the El Nino rains had been reversed by the poor 1998 *gu* and *deyr* rains. Although livelihood conditions were poor in 1999 and 2000, they were not as serious as the situation in the south and west, and with the predominance of goats and camels (drought resistant species), livelihoods are very resilient in this LZ. However, the slow decline since late 1998 was accelerated by the very poor *gu* rains of 2001 in Warder zone in particular. The livestock ban imposed by the Gulf States worsened this situation. For this study, 1998 was chosen as the reference year.

Livestock is the major determinant of wealth. Camel ownership is particularly important as good numbers of camels give great strength and flexibility in terms of food security and livelihood options.

The major sources of food are livestock products (milk, ghee) and purchased cereals (rice and wheat flour) and sugar. The main source of income is livestock sale, particularly for the export market.

The timing and intensity of the *gu* and the *deyr* rains and the livestock export demand from the Haj determine the seasonal cycles of migration, consumption and expenditure. The hardest season is the long dry *jilaal* season, when livestock condition and production is low, movement levels are high (between water and pasture) and household needs (expenditure) are high for food, water and labour).

The Major risk factors are prolonged dry conditions resulting from rainfall delay or failure, and livestock market disruptions (like the livestock import embargo by the Gulf States). In bad years, pastoralists would take the following steps as coping strategies:

¹ The research for this LZ was carried out in Warder Zone. A similar research was carried out among this group in Korahe Zone by ACF. The livelihood pattern in eastern and North-Eastern Degahbur Zone is also similar.

Increased livestock sales, increased slaughter of own animals, reduction of expenditure on non-essential items and increased migration.

Summary – Current Situation (October 2001)

This LZ has been seriously affected by the recent extreme failure of the *gu* 2001 rains, combined with the huge loss of livestock earnings from the Gulf livestock ban (imposed in September 2000). Livestock ownership levels are still considered healthy in most areas although further investigation is required in some areas to clarify the impact the recent rain failure. No destitution has taken place over the last few seasons. The impact of the current *deyr* rains in recovery are crucial. The receipt of food aid appears to be providing an important contribution to food, given the other negative factors.

2. Introduction

2.1 *Purpose of the study*

In the past there has been a chronic scarcity of socio-economic baseline information in Somali Region, which has made it very difficult for decision makers (Government, aid agencies and donors) to make decision on both short-term and long-term interventions. On occasions, such as the 1999/2000 drought, this inability to make quick decisions has had catastrophic consequences for the people of the Region. In an attempt to prevent such occurrences in the future, a project aimed at improving the Food Security Monitoring and Early Warning (FS/EW) capacity of the Region was established. This project is a joint effort by Save the Children–UK (SC-UK) and the Disaster Prevention and Preparedness Bureau (DPPB) of Somali National Regional State (SNRS), Ethiopia². The objective of the pilot phase of the project was to collect baseline information on livelihoods and develop a workable model for food security monitoring that will be built into government structures throughout the Region in Phase II

This report is one of 13 other Household Economy baseline assessment reports that have been produced by the project, during the periods of September-October 2001 and January-March 2002. Participating organisations in these baseline assessments included: DPPB (together with all DPPD offices), SC-UK, WFP, SC-USA, ACF, HCS, PCAE, OWS, OWDA and Al-Najah Charity. The baseline exercise comprised of classroom training, three weeks of fieldwork and one week of analysis and write-up.

Based on a reference or typical year, baseline reports were compiled for households belonging to the specific Livelihood Zone (LZ). The reports provide both qualitative and quantitative information on the normal mode of survival and the vulnerabilities of the different livelihood groups found in the Region, as well as information on how they respond to crises. These reports supply decision makers with useful information to make informed decisions, which will facilitate timely and appropriate responses and prevent possible disasters. The information also sheds light on longer-term food security issues and can therefore help in the planning of development initiatives.

2.2 *Methodology*

The Household Economy Approach (HEA) has been used as the assessment and analysis tool for the baseline studies. This Approach provides a rapid food security assessment technique and has been used by SC-UK for a number of years in parts of Africa and Asia. For a brief introduction to the Household Economy Approach please refer to Appendix 9.1. For further details refer to “The Household Economy Approach: A resource manual for practitioners” by John Seaman, Paul Clarke, Tanya Boudreau, and Julius Holt.

² The Food Security Monitoring and Early Warning (FS/EW) Project, in Somali Region, Ethiopia, is a joint undertaking by Save the Children – UK and the Regional Disaster Prevention and Preparedness Bureau. USAID/OFDA and ECHO fund the pilot phase (Year 1) of the project. Additional financial support was received from SC-Canada and WFP. Partners in the baseline exercise included: WFP, ACF, SC-USA, HCS, PCAE, Al-Nejah Charity, OWDA, LVIA, and the Government Bureau of Livestock Environment and Crop Development.

3. Background

3.1 *Warder Zone*

Warder Zone is located in the eastern ‘horn’ of Somali National Regional State (SNRS) and is one of the nine zones in the Region. Warder is bordered by Mudug, Galgaduud and Sool Regions of Somalia to the east and north, Degahbur and Korahe Zones of SNRS to the west and southwest respectively. The Zonal population is almost entirely pastoral and belong to the lowland pastoral Livelihood Zone. There is a very small urban population that lives in the Zone, which depends mainly on livestock trade and other businesses.

The Lowland/Hawd pastoral LZ covers the entire Warder Zone. This LZ also stretches further southwards where it borders the Korahe/Fafan Valley Agropastoral LZ³ to the east and northeast. The LZ covers all of Warder Zone, Eastern and northeastern Degahbur Zone (Aware and Gashamo districts) and northeastern and southeastern portions of Korahe Zone (Shilabo, parts of Kebridahar and Dobowein districts). The LZ also extends to neighboring regions of Somalia (Somaliland and Puntland).

Sub-clans from the larger Darod clan of the Somali dominate the LZ. Some Issak clan families also inhabit areas along the border with Somaliland.

The population moves seasonally between water points and in search of better pastures. The economy is mainly based on camels and shoats. Cattle are scattered across the LZ. The area is semi-arid, relatively rich for browsing, but also with plains suitable for grazing.

Most of the LZ is isolated because of the poor infrastructure and because the zone is very vast. The markets are more linked with Somliland and Puntland rather than with the rest of Ethiopia.

Isolated market and is very much inter-linked with Somaliland and Puntland.

Very poor infrastructure

3.2 *Agro Ecology, Geology, & Water*

Soil/Vegetation

This LZ is part of the wider Hawd eco-zone (see map 1). The area is a plateau, characterised by thick browsing vegetation cover – bush, woodland – with localised grazing areas. The majority of the LZ contains red sandy soil, known as *ciid*, which is known to be rich in ferrous oxide and is very sandy and absorbs water quickly. This limits the run-off water and therefore gully formation and land degradation are lower. The water table in most of the Hawd is very deep, making it very difficult to exploit underground water resources. Therefore *berkads* and natural depressions (*balleys*) are the

³ The Baseline study for this LZ was done by ACF in early 2001. The report can be obtained from them.

most important water source in this ecozone. The area receives about 150-200mm of rain annually.

In the areas around Buuhodle (bordering Somalia), there is grazing land available and therefore all four species (camel, cattle, goats and sheep) are found, but cattle and sheep are in higher numbers.

There are strong indications of environmental degradation in western border areas where population is higher. Examples are found around Gashamo and the refugee camps and villages along the border (Hartisheikh, Abokor, Rabaso and Daror). Localised degradation is also found in parts of Boh and Galadi where there is a high *berkad* network. On the overall, however, it is believed that the hawd in SNRS is not as environmentally degraded as that of Togdheer and N.W. Region of Somaliland⁴.

3.3 Population

The vast majority of the populations of Korahe and Warder zones are pastoralists, while in Degahbur a higher proportion is agropastoralists. There are two types of pastoralists in Korahe and in Degahbur. Those inhabiting to the east of the Fafan agropastoral LZ are mainly camel, shoat pastoralists – the type described in this report. There is an another pastoral group that neighbour Korahe agropastoral LZ to the west, and these mainly keep cattle and shoats with only few camels. In Degahbur, the Pastoralists living to the east of Degahbur agropastoral LZ⁵ are similar to Warder pastoral, while those to the west of the agropastoral areas of Degahbur and Degahmadow, are similar to Fik pastoral.

Based on this the proportion of the population in the districts covered by the Lowland/Hawd pastoral is summarised in the table below:

Table 1: Proportion of the population under different LZ within Warder, Degahbur and Korahe Zones

Zone/Districts	Urban	Lowland/hawd pastoral	Cattle/shoat and other pastoral groups)	Agro-pastoral
WARDER ZONE				
Danot	0-5%	95-100%	0	
Warder	5-10%	90-95%	0	
Boh	0-5%	95-100%	0	
Geladin	5-10%	90-100%	0	
KORAHE ZONE				
Shekosh	0-5%	75-90%	0	10-20%
Kebri Dehar	10-15%	35-45%	15-25%	20-30%
Doboweyn	0-5%	5-10%	25-30%	60-65%
Shilabo	5-10%	90-100%	0	
DEGAHBUR ZONE				
Gashamo	5-10%	90-95%		
Aware	0-5	85-95%	0	5-10

⁴ FSAU/FAO Somalia reports serious long term land degradation in the Togdheer and N.W. Region of Somaliland, which is associated with proliferation of berkads and villages and year-round grazing.

⁵ For Degahbur Agropastoral LZ, see separate baseline report. Copy available from SC-UK or Regional DPPB

Degahbur	5-10%	5-15%	15-25%	60-65%
Degahmadow	0-5%	0	35-45%	55-65%

3.4 *Infrastructure & Social Services*

Infrastructure

The area has very poor infrastructure and is one of the most remote in SNRS. There are very few education and health facilities. There are 20 schools in the region with only one secondary school in Warder zone. The urban areas are very small and often not more than medium sized villages. The transport and communication facilities are very poor with few major roads connecting major district centres to one another. There are no telecommunication facilities and electricity supply (not 24-hour) is restricted to district centres.

Water Sources

The Hawd eco-zone is characterised by the lack of permanent water sources associated with a very low water table that makes it very difficult to use underground water. Historically, the only permanent sources of water in the vast Hawd area were the deep, ancient hand dug wells found in Warder district, known as the seven Dollos. The Hawd used to be (50 years ago or more) a wet season only grazing area, due to the lack of permanent water, and herds in the dry season would either go to the Dollos or the Nugal valley of Toghdeer and Sool regions in Somalia/Somaliland. The distance between these two permanent water sources is 300-400kms. In the last 50 years man-made water sources such as boreholes and *berkads* (private, concrete water reservoirs) have been made, which have increased access to water but also disrupted old patterns of migration in the ecozone.

In a few locations of this vast LZ some boreholes have successfully been sunk in recent times and the most important of these are located in the eastern districts of the LZ-Boh, Geladin, Shilabo, and WalWal (Warder district). Out of 10 such boreholes, six were functioning at the time of the survey.

The Dollos

There are about seven Dollo grazing areas found in Warder district, at Warder, Welwel, Ubatale, Garlogubay, Yucub, Afyerado and Wafdug. Dollos, translated as ‘the place of last resort’, are natural depression areas, where many wells were dug a long time ago. These wells are 30-40m in depth. Usually the water is extracted manually (by hand), generating employment as it is an arduous job. The exception is in Walwal and Warder where pumps are used. The Dollow wells are reputed to be several thousand years old!

Small depression areas, where water can still be found after the rainy season, also requiring some digging, are found at Shilabo, Awaare, Higlale, Balli-koshin and Lasshole.

Natural *balleys* are also spread around the LZ. There are three natural balleys in the Warder town vicinity (Baliad, Gafoo, Aado 30 km north of Warder); two natural balleys are in Danot district (Marsin, Siro and Aado); There are one each in Gashamo (Daror)

and Shilabo (Dambad), Waraas in Far-hareri village, eastern Danot. These large depression areas hold water and moisture for months after the rains. They are known locally as 'haroorin'.

Markets and Marketing

Food and non-food imports

The import of non-food items comes mainly from Bosasso, via Las Anod or Galkaio, while food items come from Burao and Hergeisa. All these towns are in Somalia, showing the heavy interdependency between the LZ and neighbouring livelihood groups in Somalia. From within Ethiopia commodities brought in to the area are sorghum and maize, from Koraha and Gode agropastoral and riverine areas. Sesame oil and cowpeas often come from southern Somalia. The local market for livestock is small with the local urban centres consuming a small number of camel and shoat meat. The Ethiopian military provide important local market for cattle, especially in Boh, Kebridehar and Warder towns.

Markets

The district and zone capitals are the major local markets for buying and selling most commodities.

All the main markets of livestock supply destinations in Somalia, which normally subsequently export them. Sheep and Goat markets are:

Warder, which supplies Burao, Galkaio, Burasho;

Danot, which supplies Burao market in Somalia;

Boh and Galadi which supply Borkayo and Borasho in Somalia;

Shilabo, which supplies Beledweyn and subsequently Mogadishu;

Kebridahar which supplies Hergeisa, Burao for export Arab states and to Djibouti for consumption. Camel that are exported are normally 5-6 yrs old. They go to Hargeisa and Burao markets.

Before the ban big traders some from Somaliland used to buy several thousands at a time from the main markets. Locally there are small traders who supply these bigger traders. Livestock for sale/export is usually trekked or taken by trucks, depending on the season and the demand. The highest export demand is during the Muslim Hajj season and also the Holy month of Ramadan.

As far as commodity (food and other items) imports are concerned the same sources that take livestock are those that bring foodstuffs, as most of the imported food items (sugar, rice, wheat flour, and household items) are all imported via Bossaso or Berbera ports in northern Somalia. In the interior of the LZ there are no main market centres and transportation gets more expensive as one moves further inland away from the border.

Currency

The Somali Shilling is the main medium of exchange although some Ethiopian Birr is also used.

3.5 Other Activities in the Zone

Gums and resins

Some parts of the LZ have gums and resins like incense (*foox*) and the resin from *Acacia Senegalensis* (locally *cadaad*). These are collected in normal years but the collection is expanded in bad years.

Wild foods

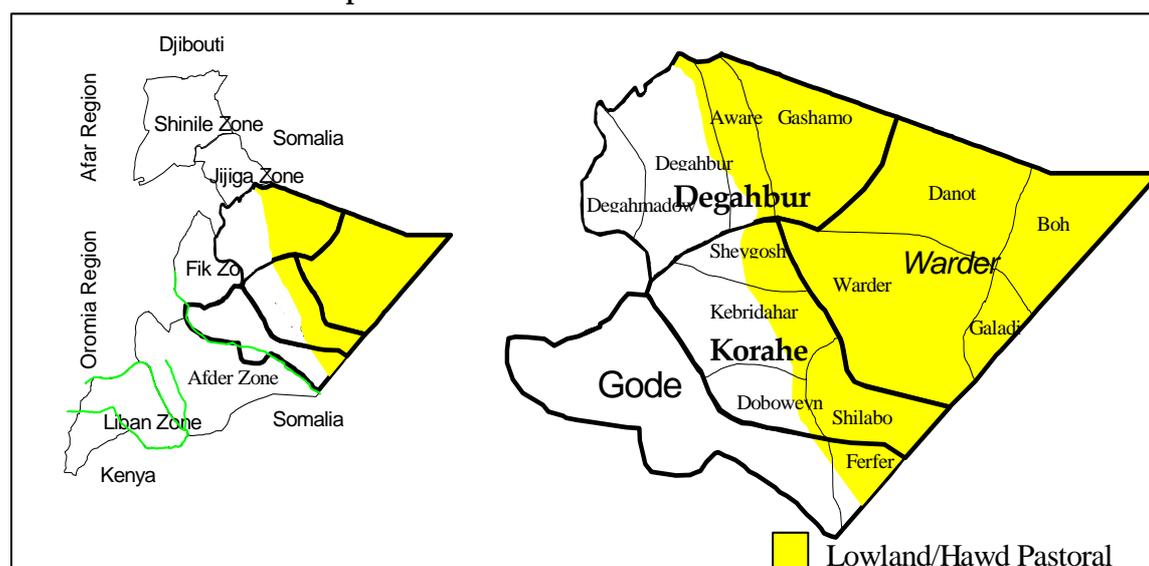
Wild foods are important in many parts of this zone. These include, *yicib* (*Cordia* spp)- which is an edible nut; *Hohob* – small edible fleshy seed; *Gocoso* - a hard crust oil nut. Wild foods are collected and used in a normal year, especially by the poor. In a bad year, the collection is increased and by more households. *Hohob* and *Yicib* can significantly increase the income and food potential for the household. Honey collection for food and income is a normal activity, but only in a few areas.

3.6 Livelihood Zones in the Administrative District

Defining Livelihood Zones

Central to the Household Economy Approach is the concept of Livelihood Zones (LZ). Different populations live by very different means depending on their ecological environment, their assets, culture, skills etc. Some may depend primarily on livestock or fishing, others on agricultural production. Because of rainfall, soil type or marketing possibilities, some areas will be suitable for cash crops (such as cotton or tobacco) and others will produce only cereal staples. As a result of these different circumstances different population groups will adopt different approaches for survival. A group or population that obtains its food and income sources from a broadly similar combination of means and that have similar response to shocks is known as a Livelihood Zone (LZ).

Map 1 – the Lowland Pastoral Livelihood Zone



4. Food Economies

4.1 *The Livelihood Zone*

Population

(Refer to seasonal calendar for details)

Households are mainly monogamous. Poor households comprise of 5-7 members. The middle household constitutes on an average around 8 members – father, mother, one grand parent (usually mother of father) and 5 children. On an average a rich household have 10 members – father, mother, grand parents, 6 children and one visitor. The better-off and middle household hire labour as and when needed for herding and watering animals.

Men would be involved in *berkad* and house construction and charcoal making (for households who deal in these). The man is responsible for the management of the camel herd, although the eldest son has a key role and will be solely responsible when he is away with the camel herd.

The mother and the eldest daughter are responsible for firewood collection, milk sales and management of proceeds there from, and fetching water. Herding of shoats is usually done by children but can sometimes be done by the mother.

Variations within the LZ

There are more grass plains in the eastern side of the LZ than the western side. Although the LZ is largely *berkad*-dependent for water, there is a higher concentration of *berkads* in the south of Boh and northern Geladin. Where the *berkad* concentration is higher there is a higher presence of cattle. In the south western part of the LZ (where it borders with Fafan Valley Agropastoral), there is more cattle as well. These groups may benefit from cattle exports to Kenya, when the gulf market fails.

The central part of the LZ is more isolated as it is far from border areas with a very poor roads network. The central and eastern areas of the zone have a lot of wild fruits.

Herds of the pastoralists east of Korahe zone are mostly composed of camels and shoats whereas the herds of the pastoralists closer to Kebri Dehar have more cattle. In the eastern part of the zone, there exists a category of herders that keeps large herds of shoats (300 to 500 heads per household) and no other animals.

Links with other LZ

Given the vast size of this LZ, large areas have no close link with any other LZ as most of the area is pastoral. This applies particularly to Warder Zone. On the Korahe side, the crop production of the Fafan valley and the Korahe plains in Dobowein, will allow some exchange of livestock or cash for local cereals. In DegahburZone also, a similar exchange exists with the agropastoral areas. Other links are mainly in trade – buying and selling livestock, foodstuffs and household commodities. Livestock is sold to various destinations in Somalia and in return it imports these other commodities.

4.2 Historical Timeline

Selection of the Reference Year

Household food economy analysis considers many different ways of recalling years. There are “traditional” years, “production” years and “consumption” years and the “reference” year.

In coming up with Historical timelines, the *deyr* season (which starts in October) is used as the start of the Somali traditional year. The traditional Somali year therefore spans across two Gregorian calendar years, starting with the *deyr* (October) and ending with the *hagaa* (September).

Household food economy analysis ranks years using the traditional system of recall (the *deyr* season followed by the *gu* season for each traditional year) – since this is how people recall the past – but focuses on a “consumption year” for discussions with communities on how they lived during the year. This year is taken as the “reference year”. It runs for 12 months from the time of major food production (the *gu* rains) through to just before the following *gu* rains (i.e. the end of the long, dry *jilaal/qorahxeed* or *jilaal* season). The “consumption” year therefore covers two Gregorian calendar years. Household economy interviews (with representatives from each wealth group) gather information about a specific year, and this provides a “benchmark” or set of reference values and behaviours against which to compare any other year.

The “reference” year chosen for review is one which is within recent memory (since production and prices will have to be remembered) and which was neither very good nor very bad (extremes can be misleading when we are trying to describe a livelihood system). For convenience we will call this year the “normal” year, but this should not be interpreted necessarily as being either “frequently-occurring” or “typical” as is often the case in agricultural societies. A “normal” year from a pastoral perspective might be a year where there is adequate rainfall in terms of intensity and distribution, livestock production is adequate in both seasons, animals and milk fetch good prices and grain is not too expensive. There is little migration or little insecurity. It could be argued that this description represents a “good” year than an “average” year. For this reason it is often more useful to talk of a “reference year” which allows us to describe typical households in a particular year.

For information on the Traditional Somali Calendar System please refer to Appendix 9.2.

Table 2 - Historical Timeline Lowland Pastoral LZ

Year	Deyr	Gu	Comments
2001		1	Gu: Very poor gu rains, especially in Warder zone. High out - migration levels.
2000	1	2	Gu: Poor rains, heavy migration from Korahe to Warder. Imposition of Gulf livestock ban (September). Devaluation of Somali Shilling. Large food aid distributions from May/June. Deyr: Very poor rains.
1999	2	1	Gu: Very poor rains. Start of drought conditions. Deyr: Very poor rains in west. Near normal rains in east – Boh and Geladin – resulting in large in-migration.
1998	3	3	Gu: Poor rains though near normal conditions due to impact of previous El Nino rains. Livestock ban imposed in February. Deyr: Normal rains. Livestock ban ended in September.
1997	5	4	Gu: Very good rains and conditions.

Year	Deyr	Gu	Comments
			Deyr: Heavy, good El nino rains. No serious flooding or diseases.
1996	3	4	Gu: Normal rains and conditions. Deyr: Near normal rains and conditions.
1995	2	2	Gu: Slight below normal rains and conditions. Relatively high camel mortality due to coughing disease – ‘guduf’? Deyr: Below normal rains and conditions. Better rains in eastern areas.
1994	2	3	Gu: Normal rains and conditions. Deyr: Slightly below normal rains

The timeline constructed during the field research suggests that the 3-4 years prior to the drought of 1998-2000, the years had been good, suggesting that livestock reproduction and herd sizes must have been good. It is thought that where Korahe and Gode very seriously affected in the 1999 drought, Warder and Degehabur were less so. However very poor rains in Warder (and neighboring areas of Somalia) in the *gu* of 2001 have been seriously worsening conditions there since – heavy livestock and human migration and water trucking has been taking place. Animals from Warder and neighbouring Somalia had concentrated in Gashamo in eastern Degehabur Zone, and Shilabo in southern Korahe, following the poor 2001 *gu* rains. The 2001 drought was combined with the detrimental impact of the livestock ban and the devaluation of the Somali Shilling. Warder areas are particularly reliant on the Somali Shilling and the exports of livestock to the Gulf.

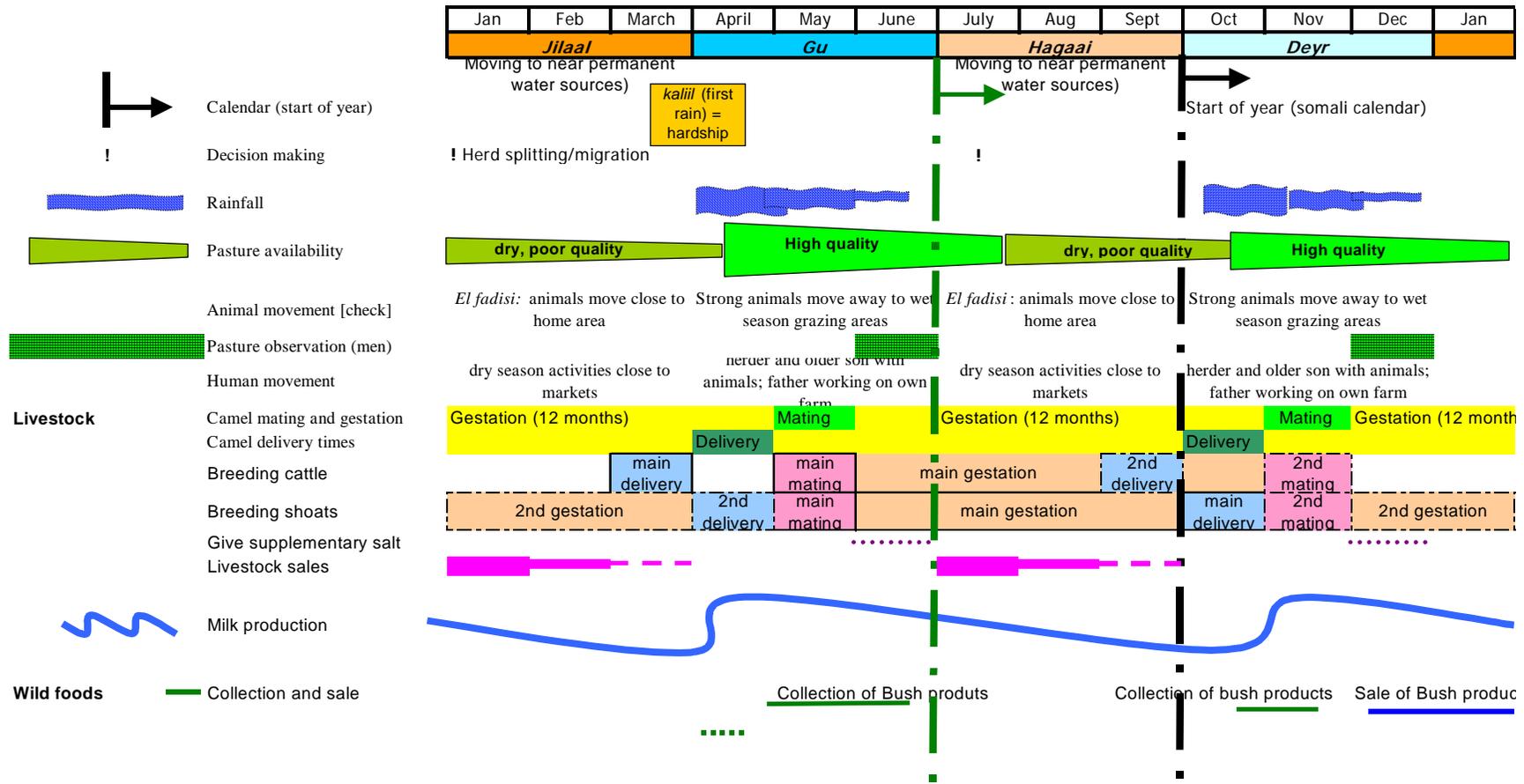
The reference year- 1998

Discussions with the community and within the team decided that 1998 could be used as an appropriate reference year. Although *gu* and *deyr* rains were below normal overall conditions were considered normal as the previous *deyr* rains maintained water, livestock and pasture conditions at normal levels. Although a livestock ban was in place, it was only a partial ban and occurred in the off-peak livestock export season.

4.3 Seasonal Calendar

Figure 1 - Seasonal Calendar for Lowland Pastoral LZ

Season Calendar: Flood recession/rainfed agro-pastoralists: cattle, sheep, goats (Gode zone)



4.4 *Other information particular to the LZ*

Access to Land and Water

Land is communal. There are home villages or areas that do not change, but herd migration takes people in to the wider areas of the sub-clan and clan. Mobility may be constrained when moving in to other clan areas only if there are ongoing conflicts between the two clans. Normally different clans would allow other clans in to their areas and in fact welcome them, as next year they may need to move into the areas inhabited by the current year 'guests', depending on the performance of the rains.

Livestock

Livestock Composition

Camel and shoats are the dominant in this vast LZ. Cattle are found throughout but are in general sparsely distributed. Areas where cattle are concentrated are south of Boh and north of Galadi, where grassy plains and numerous *berkads* are found. Also in Korahe zone, close to the Fafan valley, particularly in Shilabo, cattle are relatively common. Where cattle are found, sheep outnumber goats. Livestock is the backbone of the economy and the entire population's livelihood largely depends on livestock products and cash income from livestock sale.

The marketing of livestock is very linked to northern regions of Somalia (Somaliland and Puntland) and therefore to the Gulf. Livestock exports are routed through Burao and Hargeisa, to Berbera. Traders from Somalia come to the Somali Region and buy livestock and smaller traders from SNRS are also involved in taking livestock to Somalia, in order to sell to the larger traders there. Other markets of importance for livestock trade are Galkaio, Buhoodle and Abudwak, which are transit markets for supplies to Bosasso and Mogadishu ports in Somalia. The impact of the livestock ban is therefore very severe for this LZ.

Livestock Movements:

The livestock movement in a normal year is characterized by shoats moving within a radius of 20 – 30 km from the homestead, staying nearer to the water points. This radius overlaps with neighbouring villages and clusters. Camels on the other hand move further away than the shoats, up to 50 – 60 km away. This movement will also depend on local distribution of rainfall and the distance between browsing/pasture and water points. Herds are more scattered during the wet season and are concentrated around water points during dry seasons.

Normally, in the peak 2-3 months of either rainy season all livestock stay with the core family. As conditions become drier, the pack camel/s and some lactating camels stay with the core family and the remaining herd (*Horowein*) are driven away to distant areas for better browsing/pasture areas. Small ruminants and cattle also remain with the core household.

Milk Production

In a typical year, camels lactate all year round and the yields are, on average, 2-4 cups per day during the rainy season, and 1-2 cups per day during the dry season. One cup is

equal to 0.75 litres. Due to the lack of marketing opportunities in much of this LZ, the possibility of milk sales is very limited. As a result most of the milk is consumed or given away as gifts. The poor, who tend to move less than other groups, and remain around settlements, are able to sell a relatively small amount of milk. This is usually in the morning and is used to whiten the tea. The middle households may also sell some milk when they gather their livestock around *berkads*/settlements during the dry season.

Goats provide milk mainly during the rainy season, producing an average of 1 *bikhad* (0.25 lit) per day. Sheep are rarely milked. Cattle provide an average of 2-4 cups (1.5-3 lit.) of milk per day during the rainy season and insignificant amounts of milk during the dry season.

Out of a typical herd of shoats in this LZ, 60-70% are goats, out of which about 30-40% will be lactating in the rainy season. Out of this proportion, half of the lactating animals will be used for milk for the household while the other half is usually left for the goat-kids.

Table 3 - Summary of Daily milk yields

	Quantity per day ⁶	No. of months In the Rainy Season	Quantity per day	No. of months In the Dry season
Per Camel	3 cups (2.25 litres)	5	1.5 cups (1.2 litres)	7
Per Goat	1 glass (0.25 litres)	3.5		-
Per Cow	3 cups (2.25 litres)	3.5	1 cup (0.75 litres)	4.5

Ghee Production

Ghee is produced by the middle and better-off groups in the wet seasons. Due to their smaller herd sizes the poor can only generate enough milk to produce ghee in good years when milk production is high and livestock are in good condition. In some areas of Warder zone and Korahe zones of this LZ, given the lack of marketing opportunities, a lot of milk is available for ghee production. Cattle and goat milk are the main sources of ghee, as opposed to camel and sheep milk. Camel and sheep milk however can be used to supplement or increase the volume of milk towards the end of rainy seasons when less cattle or goat milk is available. A minimum of 6-8 litres of milk is necessary for the process of ghee making to take place. In fact a cocktail of milk is sometimes used to produce the ghee.

Ghee production is higher in the areas of the zone where cattle are found, such as in the eastern areas of Warder zone and in Korahe zone. It requires 3-4 hours to 'agitate' the milk so that the butterfat separates from the milk; this is done by women. The butter is collected in a container and then every 4-7 days is cooked to clarify it to produce ghee. The ghee is then stored in camel skin container called *qumbe*. Traditional preservative and aromatic plants are added to aid storage.

⁶ Local measures for milk were converted as follows: 1 cup = 0.72 lt, 1 glass = 0.25 lt, 1 koobo = 0.6 lt/kg

A typical middle or better-off household can produce 30-40kgs of ghee in a normal year. About 20 litres of goat milk and a little more of cattle milk is required to produce 1kg of ghee. Ghee produced on Fridays is often given to the poor as a gift. Ghee has an important nutritional input for children and whenever it is prepared they would usually be given a small portion of the freshly prepared ghee. As well as being consumed during the rainy season and stored for the dry season, ghee from Warder zone is sold in Bosasso, Burao and Las Anod in Somalia. 1kg of fresh ghee is sold for \$2-3 in the *gu*, Hagai and *deyr* seasons, and often for more in the *jilaal*.

4.5 Wealth Breakdown

In this pastoral LZ livestock ownership (camel and shoat ownership) is the key determinant of wealth. *Berkads* are another important asset.

Table 4 - Wealth Characteristics

	Poor	Middle	Better – off
Hh size	5 – 7 (6)	7-9 (8)	8-11 (10)
Animal holding	Shoats: 55 – 90 Camels: 7 – 10 Donkey: 1-2 Pack camels: 1	Shoats: 90 – 130 Camel: 40 – 55 Pack camels: 1-2 Donkeys 1	Shoats: 100 – 200 Camels: 70 –100 Pack camels: 2-4
Other Assets		1 <i>Berkad</i> (mainly in eastern areas)	1-2 <i>Berkads</i> (mainly in eastern areas)
Labour employed		0-1 labourers employed in the dry season, especially to assist livestock watering	1-2 labourers employed in the dry season, especially to assist livestock watering.
Activities / income	-Sell small livestock -Sell livestock products Petty trade: -Collection of wild fruit -Collection of firewood Daily labour: -construction and maintenance of <i>Berkads</i> and livestock watering.	-Sell livestock -Sell livestock products -Sell water from <i>berkad</i> (in eastern areas)	-Sell livestock -Sell livestock products -Sell water from <i>berkads</i> (in eastern areas) Irmansi?

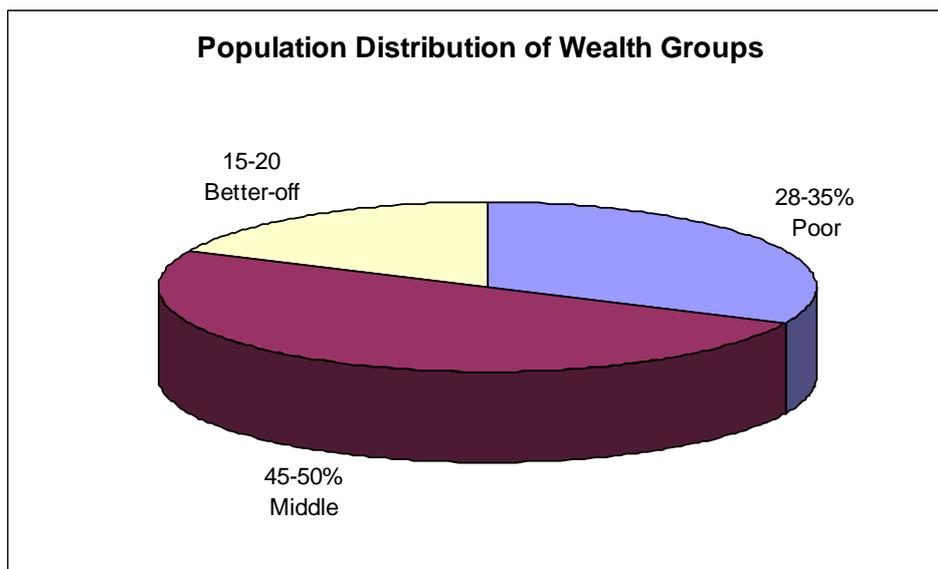


Figure 2 - Wealth Groups in Lowland Pastoral LZ

The groups are interdependent upon each other on various ways; the better – off depend upon the poor group to a large extent for supply of labour; the rich and middle group give gifts (milk and ghee) to poor households. Apart from gifts such as cash and ghee, the better- off and middle households give *Hirsi*, *Maal* and *Zakah* to the poor households.

Households in the middle and better - off wealth groups would usually have one or more relatives abroad. Remittances sent by such relatives are useful both in normal times and in bad years (when remittance seeking increases). The poor do not usually have relatives outside the country. The remittances could be part of the reason why some households are wealthier.

4.6 Food Sources in the Reference Year

Normal Year

During a normal year the source of food for all the three groups is similar though the proportions are different. The food sources that are common for the three groups are; purchased food – cereal, sugar and oil and livestock products – milk, ghee, meat and skimmed milk. Wild fruits are also consumed particularly by the poor households but consumption is not widespread in normal years. The pattern of consumption of the available food varies according seasons. During the wet seasons (5 months) the portion of milk consumption is more then the dry seasons. The ghee consumption pattern also varies and is related to the lactating months of the goats – more in the wet season. Although meat is available, consumption of meat on regular basis is not observed often. Meat consumption is mostly during festivals, holidays and in honour of guests - which, is only few times a year.

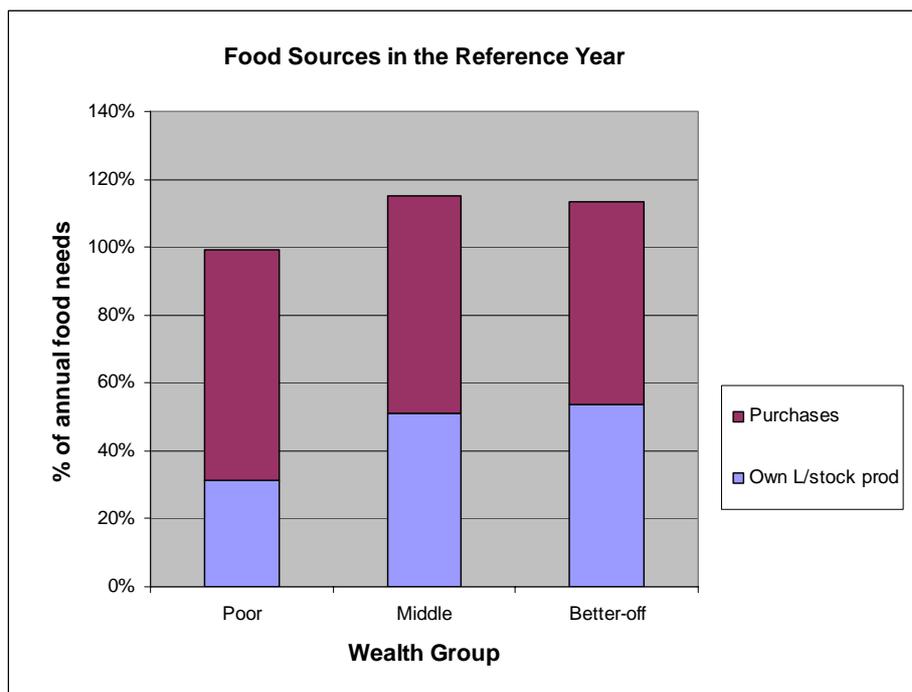


Figure 3 - Food Sources for all Wealth Groups in Lowland Pastoral LZ

Poor Households

The poor households get a major chunk of their food from purchased cereals (rice and wheat flour), that constitute around 40 – 46% of their annual food needs. On a day more rice (0.8kg) is consumed than wheat flour (0.5kg). Wheat flour consumed for breakfast as *anjera*. Livestock products contribute to around 23 – 34%. Out of total milk produced 75% is consumed and 25% is sold. Sugar contributes around 15 – 20%, which is around ½ kg per day primarily used for making tea. The rest of the food needs are supplemented by oil 5 – 7% and gifts 3 – 6%, which include 20 – 40 kg of cereal, mostly during the holy month of Ramadan). During the wet seasons when the production of milk is higher, the poor receive *Hirsi* (gift milk) from middle and better – off households. On Fridays (the Muslim holiday) the poor also receive some quantity of ghee as gift.

Middle Households

The main source of food for the middle households comes from livestock products (50 – 55%). An estimated 90% of all the milk produced by middle households is consumed and the rest is sold. All the goat milk produced is used for making ghee out of which 1/3rd is consumed, some sold and some given as gift to poorer households. On an average 7 – 10 shoats are slaughtered for consumption purpose, which is usually during festivals, holidays and on arrival of guests. Purchased cereals – rice, around 1 kg per day is consumed through out the year and wheat flour is mainly consumed during the dry seasons is estimated around ¾ of a kg per day that contributes to around 25 – 30% of the annual food needs. Sugar consumption is around 15 – 20% varying between ¾ to 1 kg per day used mainly for tea. Oil consumption constitutes around 3 – 5%.

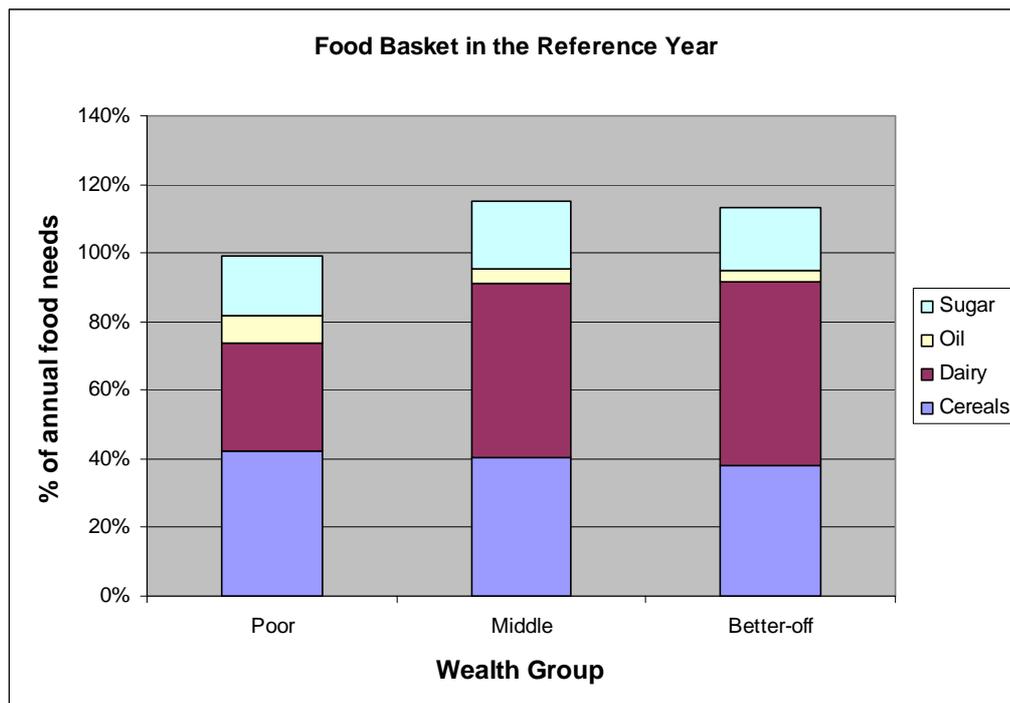


Figure 4 - Food Basket for all Wealth Groups in Lowland Pastoral LZ

Better off Households

The sources of food for the better - off household are quite similar to that of the middle households. The main source of food is from livestock product (45 – 55%). During the 7 months of the dry season the household consumes all the milk produced. Where as during rainy season when the milk production is higher out of the estimated 18 – 21 litres produced per day 10 – 14 litres are consumed and 5 – 7 litres are given as gift to poorer households. Like the middle households all the goat milk produced is used for making ghee, out of the total ghee produced an estimated 60% is sold, 30% consumed and 10% is given as gift. Skimmed milk is also consumed and given as gift. Meat consumption is mainly during festivals; holidays and arrival of guest, on average-10 – 14shoats are slaughtered per year. Purchased cereal mainly rice and wheat flour accounts for about 35 – 40% of the estimated food need, the consumption pattern is similar to that of the middle household. Nearly 1 kg of sugar is consumed per day attributing to 15 – 18% of annual food need. Lastly, 4 – 6% of their annual needs are supplied by oil.

In comparison almost all the three groups have similarity in sources of food. However, poor households are more dependent on purchased cereals, than the middle and better – off households, who are more depended on livestock products. As poorer households have lesser number of livestock, they are more depended on purchased cereals. Gift from middle and better – off households is one of the key sources of food for the poorer households. The middle and better – off have more or less similar food consumption pattern. The middle households have slightly higher (around 5%) from livestock products, this difference may be because of the difference in household size.

4.7 Income Sources in the Reference Year

Normal Year

The source of income for all the three groups is more or less similar. However, there is some distinguishable difference between the poorer households and the middle and better – off households; but there is not much difference between the middle and better – off households. Income sources are directly related to asset and livestock holding. The poor household have less livestock thus lower income from livestock sources. The middle and better–off, hold greater numbers of livestock and assets like *berkads*, most of them have additional access to remittance income from relatives residing abroad. Seasonal variations in income flow is notable, income from milk sale goes up during the 5 months of wet season, especially for poor households. Income from livestock sale, and in some areas water sale for the middle and better–off, and wild fruit sale by the poor increase during the dry seasons.

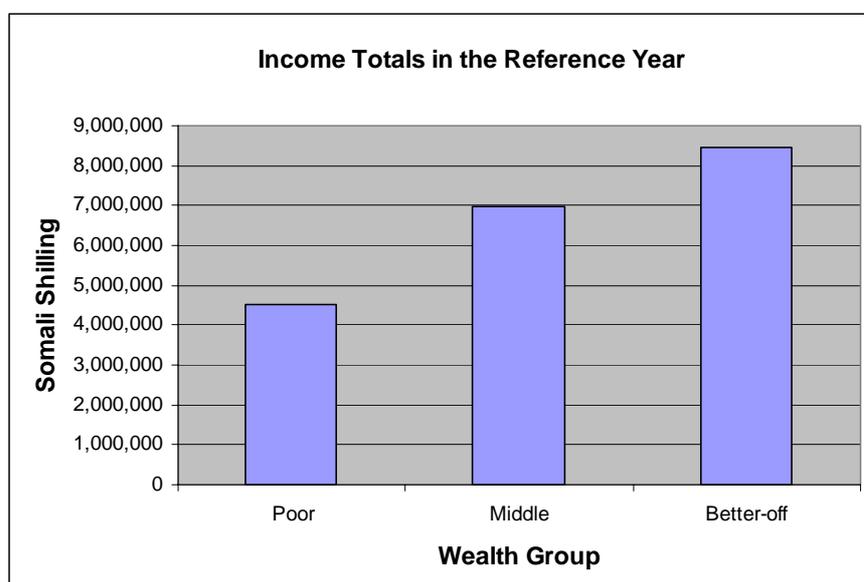


Figure 5 - Income Totals for all Wealth Groups in Lowland Pastoral LZ

Poor Households

The income sources for poorer households come from four major sources i.e. livestock sale (17 – 22%), milk sale (20 – 30%), firewood sale (20 – 25%) and labour (15 – 25%). Some income is also earned through wild fruit sale (6 – 12%) and cash gift (2 – 6%) from better – off and middle households. They sold around 5 – 8 shoats (3 local and 3 export quality) on average per year. An estimated 90 – 100 labour days are available in a year, which is spread out through out the year. The available work is mainly related to construction of *berkads* and houses. Nearly 2 donkey loads of firewood is collected and sold. Loans are taken from season to season, for e.g. loan taken in *jilaal* is paid back during *gu* but no correct estimation could be attributed to the amount that is taken as loan.

Middle Households

Majority of the household income for the middle group is from livestock sale (45 – 55%), every year one camel is sold usually in the dry season or when the market is high. 6 – 8 export quality shoats and 4 – 6 local quality shoats are sold on average in a year. An estimated 2/3rd of the total ghee produced is sold, this contributes to about 4 – 8% of the middle’s annual income sources. Much of the milk produced is consumed and an estimated 10% is sold which accounts for 7–11% of the household income. The milk sale varies according to seasons, more milk is sold during the rainy season than the dry season. Income from sale of water contributes to nearly 6 – 10% of the income but sale of water sale is limited to *berkad* areas. Income from remittance and saving sums up to around 25-30% of the total household income, remittance is mainly from family members working abroad.

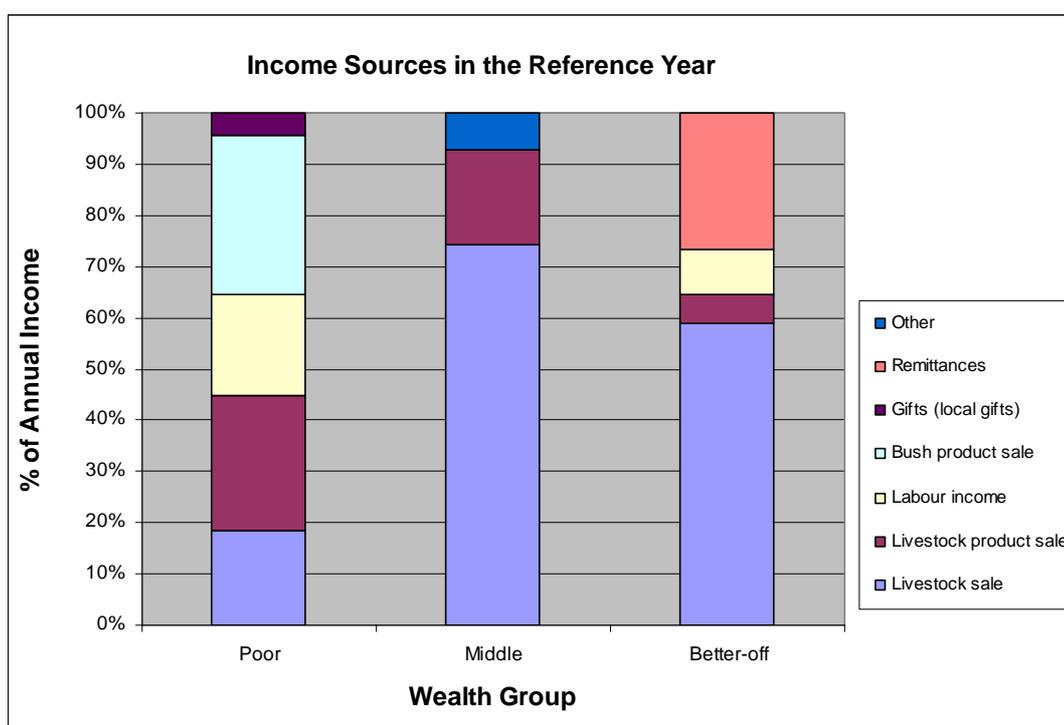


Figure 6 - Income Sources for all Wealth Groups in Lowland Pastoral LZ

Better off Households

Sources of income for the better of households are quite similar to the middle households. Like the middle households, the better – off households earn much of their income from sale of livestock (55 – 70%). Around 60% of the ghee produced is sold, which accounts for about 6 – 10% of the income, water sale (1 – 4%) mainly in *berkad* areas. The next major contribution to household income is from remittances and savings. Remittances are mostly received from family members settled or working abroad.

All the three groups are largely depended on livestock sale as the main source of income. The major difference is noted is that poor households resort to labour, firewood collection and sale and wild fruits as important source of their annual income. It was seen that a considerable percentage of the better – off and middle household’s income is from remittance and saving, where as that option does not exist for poorer households.

4.8 Expenditure Patterns in the Reference Year

Normal Year

There is notable variation in the cash expenditure patterns of the three groups. Expenditure patterns are related to livestock holdings, asset possession and the household size of each of the wealth groups. The expenses of each group increase with increase in wealth. The pattern of expenditure varies on seasonal basis with more expenses being incurred during the dry seasons. Milk production falls during the rainy seasons, resulting in more cereals purchased for consumption in dry season.

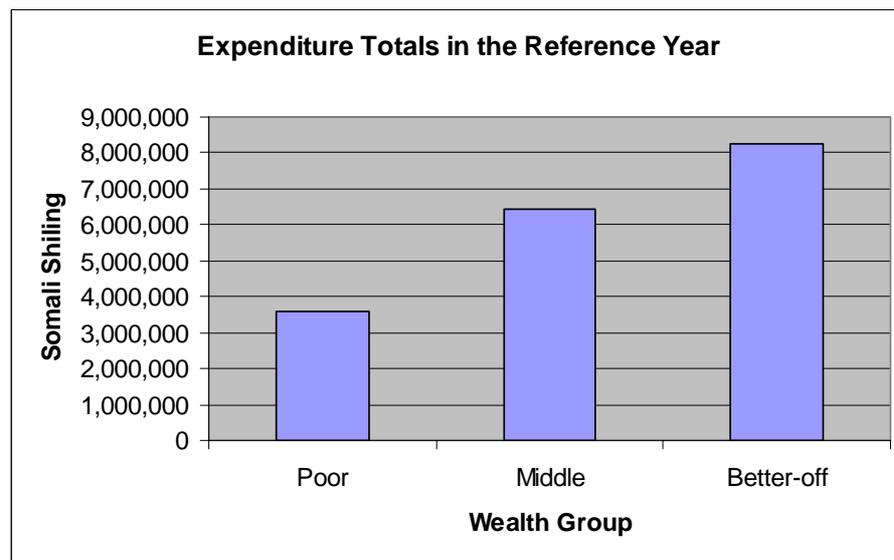


Figure 7 - Expenditure Totals for all Wealth Groups in Lowland Pastoral LZ

Poor Households

As discussed earlier, the poorer households with less animals have less access to food from livestock products, so they spend a large sum, around 55 – 65% of their income, on buying food items (cereals, sugar and oil) for daily consumption. Apart from food items, the poor household spends nearly 10 – 20% of their income on clothes, which is mostly bought during festivals. The other significant expenses are related to livestock cost at 5 – 15%, this includes livestock drugs and salt. Approximately 3 – 5% of household expenses are used for human health and soap. In *berkad* areas water cost for watering livestock account for 5 – 20% of poor household's income. Other noticeable expenses were Koranic school fees, taxes and tea.

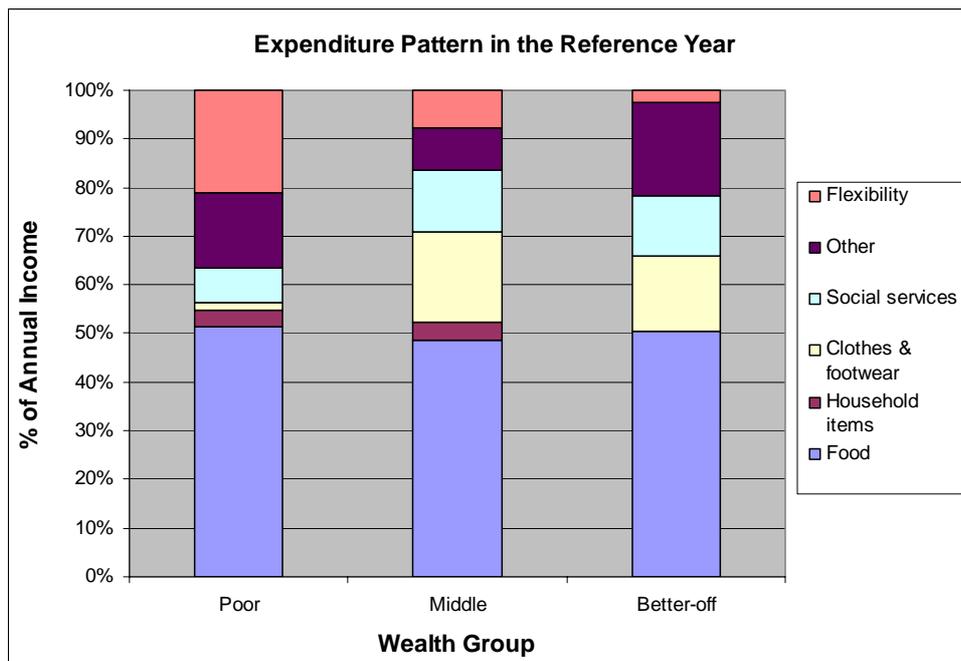


Figure 8 - Expenditure Pattern for all Wealth Groups in Lowland Pastoral LZ

Middle Households

The biggest expenses of the middle households is the expenditure on food, this constitutes 40 – 45% of their income. Food items are purchased through out the year however the purchase of cereals increases in the dry seasons. The expense on clothes stands at around 18 – 24% of their income; clothes are usually purchased twice a year during festivals. Livestock costs include livestock drugs, salt and labour hired for watering livestock in dry seasons. The cost livestock represents is 5 – 15% of their income. Middle households usually employ 0 – 1 people during a normal year to mind animals or water them. As the number of children is higher for the middle households, 2 children attend Koran school, and clan tax obligations are also higher. Expenses related to fees and taxes represent around 10 – 15% of their income. During normal years particularly in the rainy season, the middle households contribute some cash as gifts (4 – 6%) to poorer households. Household expenses covering soap and expenses on human health sums up to nearly 4 – 8% of the total expenditure. Expenses on tea (2 – 4%) are incurred through out the year, this increases during the dry seasons.

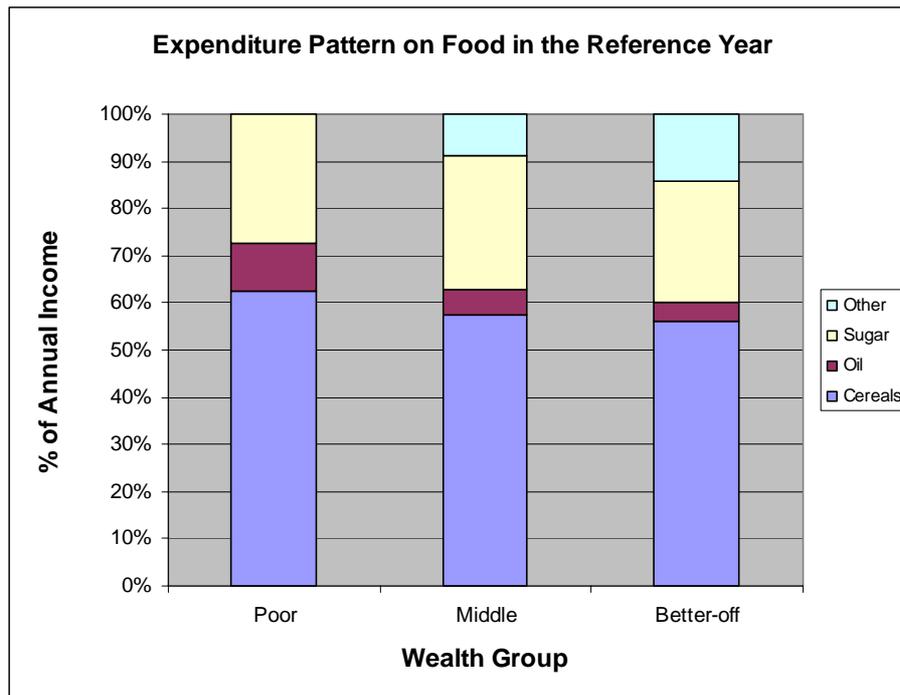


Figure 9 - Proportional Expenditure on Food for all Wealth Groups in Lowland Pastoral LZ

Expenditure – Better-off

Expenditure patterns of better-off households are quite similar to that of the middle households. As the better off household’s asset possession, livestock holding and household size is higher then the other two groups, expenses are higher. They have the same expenses as the middle households, but the amount spend on each post is higher, except on food items. Expenses on food items represent 40 – 45% of the total expenditure with relatively more expenses on purchasing cereal during the dry seasons. Other notable expenses are on clothes (15 – 20%); livestock costs (10 – 15%); household expenses (8 – 10%); fees and taxes (8 – 12%); labour (4 – 6%); gift (4 – 6%) and tea (3 – 5%).

In summary, the major difference between the three groups is mainly in terms of the amount spend on purchase of food items, the poor households spends the maximum of its income on purchase of food items. The middle and better-off households employ labour for watering and herding of livestock, whereas for members of poor household labour is a source of income. Expenses on clothes for poorer households is around half of that of the better – off and middle. There is no expense for the poorer households on gifts as they are the gift recipients. One aspect that is common among all the three groups is the seasonal variation witnessed in the expenditure pattern.

4.9 Current Situation

Most of this LZ was not as badly affected as other parts of the SNRS in the 1999/2000 drought. However, the *gu* of 2001, in Warder zone in particular, was extremely poor. Approximately 65% of the zone did not receive significant quantities of rain at all. Combined with the livestock ban, imposed in September 2000, and the difficulties of 1999/2000, the situation was of serious concern during the assessment period (September

2001) which was towards the end of the dry *hagaa* season. The LZ was looking to *deyr* 2001 for hope.

One other problem was the inflation associated with the frequent devaluation of the Somali shilling with respect to the dollar and Ethiopian birr. This badly affects the purchasing power of pastoral groups in the short run, mainly because imported commodities (like rice, sugar and wheat flour) respond quickly to the devaluation – quickly increasing in prices – while locally produced commodities, like milk, livestock products and livestock, only do with after some time. This devaluation is caused by unplanned importation of paper money by merchants in Somalia.

Over 65% of Warder zone grazing area missed the last *gu* 2001 rains. Three major migrations took place as a result: from Boh and eastern Danot people and livestock moved to Do'omo in Warder and the Hawd of Las Anod, Sool region Somalia; from Warder and Geladin there was a large movement to Shilabo, where ACF carried out water trucking prior to the *deyr* rains. From western Danot people and livestock moved to Gashamo in Degahabur zone. Combined with these natural factors has been the Gulf livestock ban, imposed in September 2000. On the positive side, relief food that has been distributed in relatively large amounts has mitigated the worst affects mentioned, so far.

No abnormal deaths took place in Warder zone in 1999/00, but high in-migration and resultant pressure on resources did take place, causing a deterioration in conditions since then.

Herd size has been reducing significantly due to water, pasture shortage, disease and abnormally high off-take.

The major times of livestock stress and loss have been:

In the *jilaal* of 2001, following poor *deyr* 2000 rains. At the end of this *jilaal* and the beginning of the *gu*, when animals were already weak but had to make further stressful movements due to the failure of that *gu* livestock losses were high. The end of the following *Hagai* (2001) and the heavy initial *deyr* rains in eastern areas saw many losses, particularly for herds that were in Las Anod and stayed locally, in Boh and Geladin. In contrast most livestock that had moved to Shilabo were in reasonably good condition prior to the *deyr* rains.

Camel losses are estimated at 15-20% over last 12 months. High death of pack camels, especially in Boh, have taken place. This has necessitated continued water trucking, even after the initial rains, as people were not able to move water themselves. Camels that died also included lactating animal, both mother and calf. More animals than usual were slaughtered. Cattle losses are estimated at 40-55%, and 20-35% for small ruminants.

Although losses have not been extreme, animal health and quality are poor. Recovery will take time. In local parlance, '*Sima*' affected everyone, explained as a situation that makes everyone the same – all animals were unproductive, there was no value in animals (no matter how many or few were owned).

A good *deyr* would lead to livestock health recovery in 1-2 months, but the ongoing Ban means income levels are very low.

Currently 30-35% of food needs are met from own production, compared to 50% normally (for middle households). For the poor they are getting 15-18% of their food needs from their livestock production compared to 20-25% normally. Food aid is estimated to be meeting 40-45% of daily needs.

Middle household income from livestock sales alone is down by 65%, and by 35% for the poor.

5. Vulnerabilities, Risks & Coping

Vulnerabilities

Households within this Livelihood Zone are vulnerable to the following:

- Drought – intra and inter-annual rainfall variation and low rainfall, resulting in pasture and water shortages;
- Livestock disease outbreaks in the face of very limited veterinary services;
- Market shocks, like the livestock export ban – reliance on one major export market (the Gulf)
- Lack of income diversification, such as milk sales and other alternatives;
- Poor government services – extension, veterinary and other social services are almost non-existent;
- Poor infrastructure – communication and transport facilities are very poor;
- Little presence of NGOs and humanitarian agencies;
- Isolation, resulting high prices of imported commodities on which the LZ relies heavily.

Risk Minimising strategies

Risk minimisation strategies sometimes may vary by wealth group. These include:

Diversification of herds (species)

Owning a variety of animal species is part of the pastoralist strategy, with different species efficiently exploiting the different resources available in semi-arid and arid lands. Splitting of the camel herd in drier times is one way of maximising the natural resources available. This splitting is a normal occurrence with the camels separated into, some of the lactating animals and pack camels, kept with the household (together with the sheep and goats). The remainder of the camel herd (*horowein*) is taken further away to distant areas known as *aftin* – where cattle and sheep can't reach.

In very difficult times sheep and goats may also be divided, as they eat different vegetation. The goats are taken to *xaab* - abundant areas – this is where dry leaves have gathered around and under trees and bushes. Sheep and cattle are taken to *dumaa* areas – where dry, broken grass has gathered around and under shrubs.

Gaban-Kahor – (“throwing away” the newborn to save the reproductive and lactating mother) is usually done for lambs, kids and calves when they are born in a dry season or a particularly bad rainy season.

Migration

‘Following the clouds’ is an indication of the mobility of the pastoralist, who is able to move his major asset to places where conditions are best, and where livestock can move between pasture/browse and water.

Diversification of income sources

Since the poor have limited asset levels they minimise risk by diversifying their income generating activities in normal and bad years to reduce the need to sell animal assets.

They collect gums and resins, bush products, and are more likely to undertake labour for others if they need to.

Managing Resources

- Only sheep reproduction is managed by the herders, as the ewe is very vulnerable if it gives birth twice a year. Sheep are managed to give birth at the beginning of the *gu*, and only once a year, even the 5 month gestation period could mean two births per year. Mid-November is mating time. All other animals reproduce according to the climate and natural conditions.
- Animals are moved around during the rainy season to prevent overgrazing and depletion of pasture.
- Milk is converted to ghee to enable use in a future time. Ghee is therefore preferred since it has a longer shelf life than butter.
- Camel Slaughter: The slaughter of a large camel is often practiced at the beginning of the *jilaal* season in order to provide supplementary, nutritious food for this long dry period, when energy needs are high and milk availability low. The type of animal that would be slaughtered is usually an older female just past her reproductive age and that has been fattened for this purpose. Usually a household would have to have a minimum of 15 camels to slaughter one for the dry season. A slaughtered camel would initially provide fresh meat for 2-3 days. Then the meat would all be fried/boiled and the fat extracted from the bone marrow, the hump and the abdominal area. From a live weight of 400kg 50kg would be consumed fresh, 150kg would consist of the bones and offal and 250kg would be first quality meat. 35kg of fat could be obtained. The meat is cut into small pieces and stored within the fat. Kilocalorie conversion calculations show that such an exercise would provide about 40-50% of daily food needs for a household of 7 for the 3 months of the dry season.

Bad Year Coping

Animal Sales

In a normal year the poor sell between 6 and 8 shoats. In a bad year they could sell another 6 shoats or a camel. In a very bad year they could sell 6 shoats and a camel without damaging the long-term reproductivity of the herd.

Change in Food consumption and Cutting expenditure

- Households can switch from rice and wheat to cheaper cereals
- Switching from sugar to cheaper cereals is an option
- Increasing the sales of milk from consuming it maximise the kilocalories available to the household
- Meal adjustments can be made, prioritising breakfast and supper and taking sugary tea at mid-day
- Foregoing the purchase of clothes and other non-essential for a time

Splitting the household

- Men and boys could migrate with the herd if sufficient lactating camels are available.
- Children could be sent to urban relatives or richer pastoral relatives to reduce expenses and the consumption burden on the household

Wild food consumption

Used in a normal year and increasingly collected in a bad year, *Hohob* and *Yicib* can increase the income and food potential for the household

Incense and Gums

Collected in a normal year and expanded in a bad year, *foox* (incense) and the gum *xabag cadaad* (*acacia senegalesis*) are available in the areas.

Self employment

Self employment constitutes an important coping strategy for the poor. Activities include:

- collecting and selling construction materials – construction poles
- firewood collection
- grass collection

Livestock movements in a bad year

No clear cut migration patterns exist in a bad year as this depends on where the rains have fallen.

However some of the more regular areas visited in difficult years are:

- To areas close to the Dollos of Warder district
- Shilabo district in southern Korahe zone often has good water and pasture reserves
- The Nugal valley in Sool region of northern Somalia is an area of permanent water, accessible to households that reside in border areas
- Degahabur is another area of good water availability

Community funded water trucking to areas of good pasture is practiced. This may be either to fill *berkads* or a newer phenomena is to truck water to *Aftin* areas (areas far from water sources where pasture is relatively untouched), where water is stored in water bladders or small pits are dug and plastic sheeting used to keep in the water. These pits are covered with sticks to stop animals drinking freely.

6. Recommendations

6.1. *Recommendations*

- Proliferation of *berkads* causing environmental deterioration (see also article by Sugule & Walker, on introduction of cattle).
- Provide soft loans for pastoral groups in order to benefit during the dry season when livestock prices are very low and it does not make economic sense to sell.
- Assist in marketing livestock to prevent negative effects of livestock bans;
- Improve the management of natural resources – especially grazing and water resources;
- Promote milk marketing (UNA, an international NGO in Puntland is trying to do this);
- Improve social services like, animal health, extension services, human health services, transportation and communication infrastructure and education. This will expand production possibilities and strengthen coping strategies.

7. References

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8. Appendices

8.1. HEA Methodology

*The Household Economy Approach*⁷

The Household Economy Approach helps to provide a detailed picture of the many ways that households meet their food and income needs in a 'normal' year and the many strategies they employ to lessen the consequences of crises (selling or consuming assets, migration for employment, eating wild foods, etc.). It therefore provides a picture of the household economy and its relationship to markets and employment opportunities.

produce a coherent picture about how people live and the options open to them in a normal year

identify the types of risk which households are vulnerable to

give an estimate of the likely effect of a 'shock/hazard' on household income

explore the extent to which coping strategies can cover a household's deficit

identify which population groups are most at risk of not coping with change

predict the likely impact of a range of intervention options and identify the most effective in reducing short-term and long-term vulnerability

HEA is useful for answering the question "what constraints prevent households from prospering", or "what will be the effect of a "shock" or combination of shocks, on the economy of various types of households in different Livelihood Zones?" It provides analysis that can be used both for prediction and to make more informed interventions. The approach is reproducible and incorporates sufficient mechanisms to cross-check information internally for users to be confident of the validity of findings and subsequent recommendations. It can be used in a rapid or a comprehensive form, depending on the question of study, time and money available.

This approach is participatory in nature and does not follow conventional statistical sampling methodology. The method employs RRA tools such as seasonal calendar, time line, normal year, proportional piling, pair wise ranking and so on. Interviews focus on groups that represent specific Livelihood Zones. Within this zone interviews are held with representative key informants and wealth groups (socio-economic groups). The approach is based on the understanding that it is the quality of the information collected that is important rather than the number of interviews conducted. However, every attempt is made to ensure that the information collected is representative. Thus site selection is done in coordination with technical officials at Regional, Zonal and District levels.

A typical Household economy baseline assessment includes the following steps:

⁷ For any additional questions please contact Suleiman Mohammed the Early Warning and technical coordinator for Save the Children's food security project in Jijiga, Ethiopia. Telephone +251 5 752775/6/7 or send an email to ewtc.jijiga@telecom.net.et. Alternatively visit the Save the Children (UK) website www.savethechildren.org.uk/foodsecurity.

Step 1: Identifying Livelihood Zones (LZ)s and populations

The first step therefore is to identify population groups within which most households obtain their food and cash by broadly similar combinations of means (known as a livelihood zone, food economy area, group or zone). A Livelihood Zone may be at one extreme a refugee camp and at the other a large part of a country.

Step 2: Identifying Wealth Groups and a 'reference' year.

As it is not possible to investigate and generalise across all households, we gain insights into the lives of representatives from the major wealth groups identified by key informants; usually the 'rich', 'middle', 'poor' and 'very poor'. A profile is developed of the distribution of wealth which will relate to land and/ or livestock holdings, household labour availability, income generating activities, asset ownership and so on. These characteristics are identified by the community themselves and thus vary per LZ.

This profile usually portrays the household economy in a 'reference' year. While in reality years vary. In order to allow for comparisons to be made when conditions are significantly different, a 'reference' year is chosen which is relatively 'normal' or 'typical'. This reference year is also referred to as the 'baseline' year⁸.

Step 3: Describing Household access to food and cash income

Within each LZ we need to understand how typical households access their food and other income and how this varies for each wealth group. This information is obtained by interviewing groups of women or men from each wealth group who identify the various options households employ to secure access to food. These will explore all possible sources of food. In order to purchase food and other basic needs such as health & education, income is derived from various sources, and all are explored. Information is also gathered on all household expenditure.

For each of these three areas, food production, cash income & expenditure, the information is displayed in graphs which illustrate the current situation and show us the options available to each wealth group. Estimates are made of the extent to which a household can expand each option in times of stress. All these interviews are about the previously identified 'reference year'.

Multiple interviews are conducted and information is triangulated to ensure internal and external consistency. For instance, payment for labour reported by labourers should tally with payment rates given by employers.

Step 4: Understanding links to markets

Most households in most parts of the world depend in some way on the marketplace to obtain some of their food. The 'better-off' may increase the value of their crops by specialising production or selling when their value is highest, the poor may be obliged to sell crops directly after harvest and purchase later using income from employment.

⁸ The term "baseline" is used differently than how it is understood in monitoring longitudinal change. It is, rather, a set of reference information which can be compared with similar information gathered at a future time.

Without an understanding of 'normal' links between households and markets in procuring both food and cash income it is not possible to understand options open in times of crisis. The interviews clarify which markets are of greatest importance and therefore where observed price changes (e.g. staple food prices) or reduced access (e.g. due to hostility) will have greatest impact on households in a given LZ.

Step 5: Clarifying risk-minimising strategies and potential coping strategies

Poor households are constantly aware of the risks to their livelihoods and income and to a large degree anticipate and prepare for this. When broadly predictable, (such as in semi-arid areas where rainfall and crop production alter greatly from year to year) successful strategies will include storing crops and accumulating livestock in years of surplus production, and increasing use of wild foods and selling livestock and other assets in shortfall years. In years of extreme 'shock' other strategies may be available such as sending members of the household to fish, to find employment further a field, to increase the collection of firewood or claiming customary kinship support. As most of these are an extension of the usual coping mechanisms of the poor, interviewees are able to identify the options most likely to be pursued first.

Understanding these options is crucial to understanding how households will manage in a given change and what kind of support is necessary for them to access their food and cash income.

8.2. Note on Somali Traditional Calendar

Somali communities, mark their traditional years by giving them names that correspond to the days of the week; years are known as Monday year, followed by Tuesday year, etc, and after the seventh year (i.e. Sunday), the cycle begins again with Monday. Years with the same name would be differentiated by a nickname related to a major event (droughts, floods, war, regime change, epidemics, etc), that took place during particular year; for example *Arbaca Shuba* (meaning the “Pouring Wednesday”) referred to the el-nino year of 1997/98, which was a Wednesday year. Whereas year names are the same across all Somali groups, nicknames may be different in the different agro-ecologies and geographic locations, as events affecting them will be different.

In coming up with Historical timelines, the *deyr* season (which starts in October) is used as the start of the Somali traditional year. The traditional Somali year therefore spans across two Gregorian calendar years, starting with the *deyr* (October) and ending with the *hagaa* (September)

The Somalis use two types of calendar years (i.e. two ways of counting years). It is very important for researches studying production, seasonal related areas among the Somali, to distinguish these two calendar types because the Somali community uses them for different purposes⁹.

1. The *nairus* or *naurus* calendar: This calendar is related to the movement of the sun and other celestial bodies and therefore is used to determine seasonal patterns. The calendar year is kept orally with incredible accuracy and followed closely by the rural communities, particularly pastoralists, as it determines when to expect rainfall, and whether or not to move livestock to different location. This type of year is exactly the same as the Gregorian year (i.e. has 365 days) but does not start with January. The beginning of the year is marked by ‘the positioning of some star(s) into specific locations in the sky’, known as *kalawereega nairuuska*. This usually coincides with start of the *deyr* rainy season for most Somali groups and is marked in a variety of ways by some rural communities. The *nairus* year is divided into four main seasons in the most Somali inhabited areas – *deyr*, *jilaal*, *gu*, and *hagaa*. *Deyr* and *gu* are rainy seasons while *hagaa* and *jilaal* are dry seasons.

The number of days in each of the seasons in the *nairus* year are numbered, each about 90, although with some seasons (like the *hagaa*) being a few shorter and others slightly longer. The total number of days would then fit in exactly with the Gregorian calendar days. Therefore the start of the seasons is normally easily identified with a specific Gregorian date like *Gu* (the main rains) starts around 12-14 April in most of the Somali inhabited areas (except the *karan* belt). Similarly the other seasons start at specific dates (*hagaa* in July, *deyr* in October, and *Jilaal* in January).

⁹ The order in which the season will appear in the assessment will depend on how a given community identifies their ‘consumption’ year. Therefore a reference year could start in the *jilaal* season followed by the *gu*, *hagaa* & *deyr* or in the *gu* followed by the *hagaa*, *deyr* & *jilaal* etc.

There are parts of the Somali inhabited areas that have slightly different seasonal patterns, but still use the *nairus* system to keep track of the seasons. These are the northern part of Somali Region (Jijiga and Shinile Zones), the northwestern part of Somalia (mainly Woqooyi Galbeed, Awdal and parts of Sanaag Regions) and Djibouti. These areas do not receive *deyr* rains but instead receive *gu* (or *diraa'*) and *karan* rains.

2. The Islamic Calendar (Lunar Calendar) – This calendar uses the moon's movements instead of the sun's movement. The number of months is 12 but the year is normally around 355 days. This calendar started with the migration of Prophet Mohamed and his followers from Mecca to Madina, which marked a turning point in the history of the Islamic faith, and is therefore known as *Hijriya* (Migration) calendar. The Somali have local names for each of the Islamic months 'or moons' (but this names differ slightly among the different geographic locations) and they use these months for all religious obligations, rites and worship – like fasting, *zakat*¹⁰ payment, *Hajj*¹¹, etc.

¹⁰ *Zakat* is the obligatory payment by wealthier Muslims to poorer ones, once their wealth (usually savings or assets) reaches a specific threshold known as *nisaab*. *Zakat* is 2.5% of savings; 10% of rainfed crop harvest; 5% of irrigated crop harvest; one shoat for every the first 5 camels owned, etc.

¹¹ *Hajj* is a compulsory pilgrimage to the *Ka'ba* (the first house of worship established by prophet Abraham), at least once in a lifetime for Muslim individuals who can afford the journey while still being able to maintain their families.