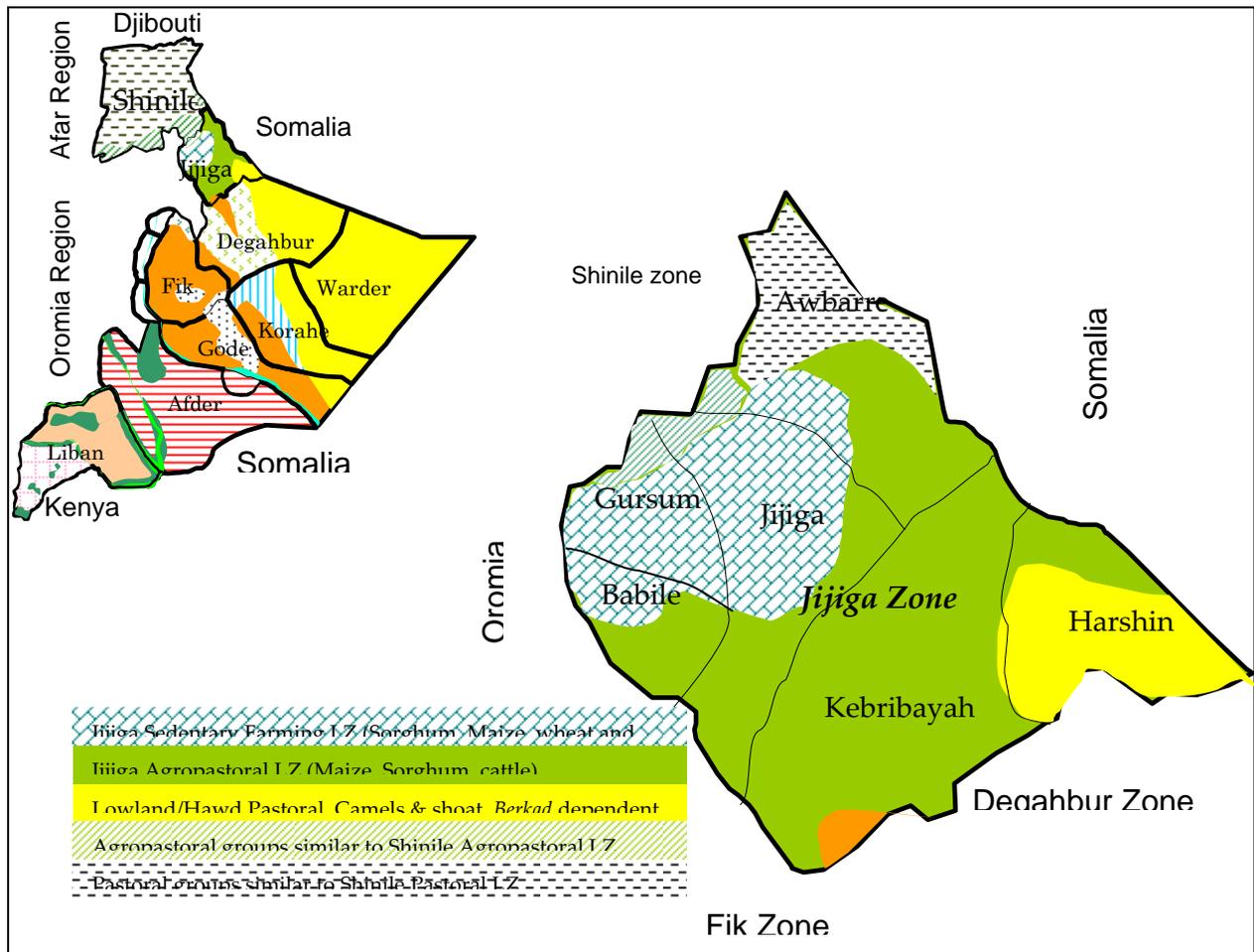


Jijiga Sedentary Farming Livelihood Zone

(Sorghum, Wheat and Cattle)

Warder Administrative Zone, Somali Regional State, Ethiopia



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>baahagab</i>	Poor wealth group
<i>baahagal</i>	Middle wealth group
<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
<i>hanshar</i>	coffee husks
HCS	Hararghe Catholic Secretariat
<i>Jilaal</i>	Hot dry season between late December and March
<i>konda</i>	Flax
OFDA	USAID Office for Foreign Disaster Assistance
OWDA	Ogaden Welfare and Development Association
OWS	Ogaden Welfare Society
PCAE	Pastoralist Concern Association Ethiopia
<i>roon</i>	Better off wealth group
SC-UK	Save the Children-UK
SC-USA	Save the Children-USA
<i>Shumburo</i>	Chickpeas
SNRS	Somali National Regional State
WFP	UN-World Food Programme

1 Executive Summary

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), Ethiopia¹. 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.

¹ 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 *Livelihood Zones in the Administrative District*

Defining Livelihood Zones

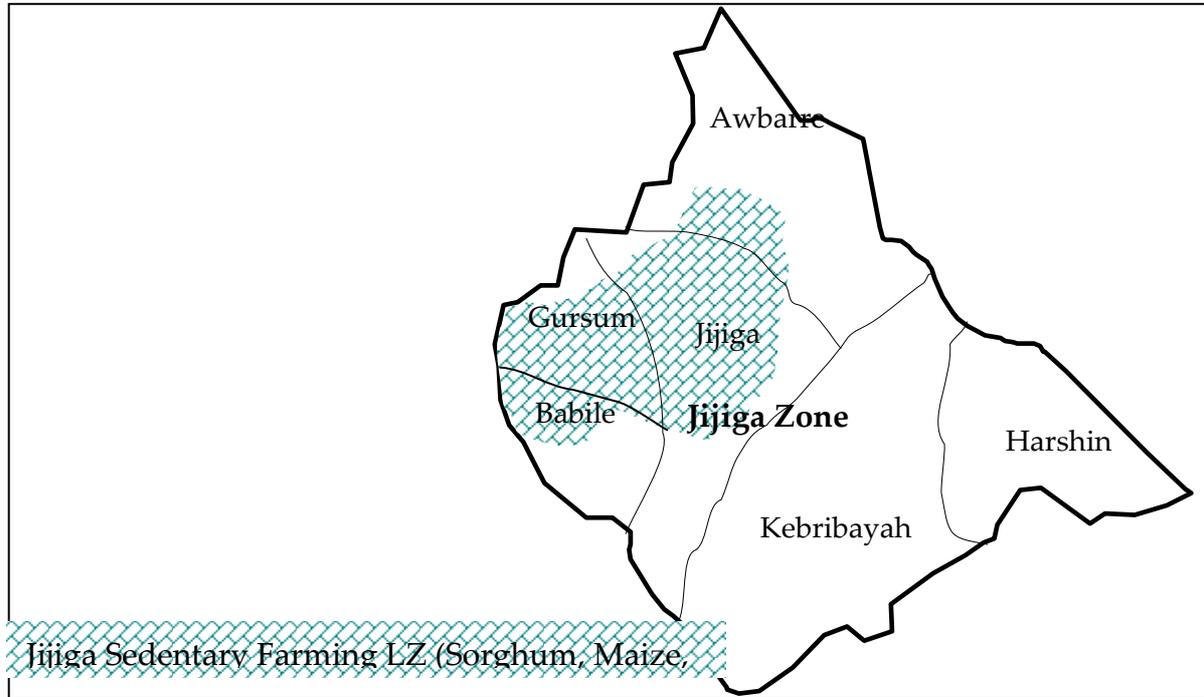
Central to the Household Economy Approach is the concept of Livelihood Zones (LZ). Different populations live by very different means depending on their ecological environment, their assets, culture, skills etc. Some may depend primarily on livestock or fishing, others on agricultural production. Because 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).

4 Food Economies

4.1 The Livelihood Zone

Location/Coverage

Map 1 – Jijiga Sedentary Farming LZ



Jijiga administrative zone can be divided into three separate Livelihood Zones (LZs) sedentary agriculturalists, agro pastoralists and pastoralists. As an administrative zone, it borders Shinile administrative zone to the North, the Hararghe highlands of Oromia Region to the West, Dagahabur to the South, and Somalia to the East. The LZ consists of both highland areas (around Chinahsan) and lowlands (around Lafa Ise)².

There are no permanent rivers running through the LZ. However Fafan River, which is seasonal passes through parts of the LZ between Jijiga and Babile. Other valleys that are important for grazing and that carry water during rainy seasons are Jerer and Dakhata valleys.

Variations within the LZ

The only difference noted within the LZ is towards the higher land (West towards Chinahsan) land holdings are smaller compared to the Eastern side of the LZ (Banka area). Not surprisingly, in the West, land available for grazing is limited as most is devoted to cultivation. This is reflected in herd sizes, which are larger in the East. While these differences exist, they were not large enough to warrant a separate LZ

² The highlands of Somali region must be understood within their context (eg; the altitude difference between the kolla (lowlands) and the dega (highlands) is not the same as that witnessed in the Northern Highlands of Ethiopia.

Links with other LZ

Markets

There are a number of markets available to households within this LZ. The main items traded within the LZ include cereals (sorghum, maize, and wheat), livestock (mainly oxen for export), and shoats. Small quantities of minor crops are also traded in these markets (oil seeds, pulses, vegetables, and so on). However, the latter account for a small amount of the overall volume traded. Importantly, households rely on different markets for the sale and purchase of specific items. Likewise, all markets do not react the same way in times of stress. Following is a description of the different markets accessed by those residing within this LZ.

Jijiga

Jijiga market is a source of crop produce and all species of livestock (both export and local qualities). Cereals are supplied to this market by the LZ as well as by the neighbouring agro pastoral LZ of Jijiga administrative zone, and the Highlands of Hararghe. It is also one of the main destinations for the sale of firewood, charcoal, and serves as a source of labour opportunities. It supplies Hartasheik (zone) and Berbera (Somalia) with livestock and grain (primarily sorghum maize, and wheat).

Even in a bad year Jijiga market is fairly stable in relation to supply and prices. However, seasonal fluctuations can be expected.

Hartasheik

This market is a source of grain (sorghum, wheat, and maize) and livestock (primarily oxen for export to Berbera and the Gulf States (primarily Yemen). It is supplied by Jijiga agro pastoral, pastoral, and sedentary LZs, Chinahsan, Babile, Fik, Degahabur, North Gode, and parts of Korahe. It also supplies Berbera with livestock for export (cattle, shoats, and camels) and grain to Northern Somalia.

In a bad year, the market experiences large fluctuations in response to export price changes and supply of cereals.

Chinahsan

This market is primarily an oxen market supplying mainly Jijiga and Hartasheik. It is also a secondary market for chat and is supplied by East Hararghe and serves as a collection point before the chat is sent to Hargheisa and Somalia.

In a bad year, prices do not fluctuate much.

Babile

Babile is also primarily an oxen market supplied by Hararghe, Fik, and Dakhata and Jerer Valleys. It exports oxen to Hartasheik and Jijiga. Finally, it serves as a source of groundnuts, which are produced locally.

In a bad year, prices remain fairly stable with some seasonal fluctuations. Fluctuations are affected by export prices.

Dire Dawa – grain items

Dire Dawa is a major grain market. Grains from both Jijiga Sedentary farming and Oromia farmers are sold in this market. It is a big market for livestock because there is a big demand for meat. However, it is not a transit market for livestock export and therefore least important as a livestock

market for this FFZ. Contraband items (imported via Djibouti or Somaliland) also find a good market in and are readily available in the Dire Dawa market.

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.

The following chart summarises the ranking of the last ten years within the LZ. This exercise was carried out with key informants in each area visited during the assessment. During these discussions key informants were asked to provide a description of the rainfall during both the *dira'* and *karan* rains. Thus, what is recorded below is an overall rating for both. Any unusual events that could affect household food security were also explored and recorded. Based on this information, informants were then asked to provide an overall rating for the year (above average, average, poor, very poor) . Importantly, in some years the rainfall may have been favourable but other events resulted in a poor year. While in other years major events which one would have assumed would negatively affect food security, the impact was minimal.

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

Table 1 - Historical Timeline Jigiga Sedentary Farming LZ

<i>Year</i>	<i>Year name</i>	<i>Comments</i>
2001 to 2002	<i>Sabti</i> Saturday	Poor <i>2 refugee camps closed (Dharwanaji , Tefere Ber)</i>
2000 to 2001	<i>Jimce</i> Friday year	Poor <i>Army worm outbreak in plains</i> <i>Lack of rainfall</i>
1999 to 2000 –	<i>Khamiis</i> Thursday year	Average <i>No main event</i>
1998 to 1999 -	<i>Arbaca</i> Wednesday year	Average <i>Average rainfall</i> <i>Locust attack in March (planting season)</i>
1997 to 1998	<i>Talada</i> Tuesday year	Above Average <i>El Nino year, Above normal rainfall</i> <i>Birds attacked crops – controlled through spraying</i>
1996 to 1997	<i>Isniin</i> Monday year	Very Poor <i>Very Poor rainfall</i> <i>Very high prices for crop</i> <i>Residue (head after threshing – 10 birr per 50 kg bag). Low prices for camels (300 birr)</i>
1995 to 1996 –	<i>Axad</i> Sunday year	Average <i>Normal rainfall</i>
1994 to 1995	<i>Sabti</i> Saturday year	Poor <i>Poor rainfall</i>

The year chosen as the reference year (normal year) for this baseline report is 1999/2000. This year was chosen for a number of reasons. Firstly, it was rated as an average year and is representative of the most frequently occurring year within this LZ over the last 10 years. Secondly, because it was a recent year, key informants could easily recall details required in a HFE baseline. Thirdly, as an average year of production it serves as a good reference for comparison in the event of a shock.

4.3 Seasonal Calendar

Within this LZ, there are two main seasons: Gu (wet season) and *Jilaal* (dry season). Within the Gu there are three sub seasons: *dira'* (late March - late May), *Hagaa* a (late May - late July), and *Karan* (late July - late September). The *Jilaal* (late September - late March) can be further divided into two sub seasons: *deyr* (late September - late November) and *kalil* (late November - late March).

The LZ is dependent upon the *dira'* rains (mid March – mid June) and the *Karan* rains (mid July – mid September)³. The *Karan* rains are normally heavier than the *dira'*. Both sets of rains are equally important for cultivation and maturation of crops, availability of water, and regeneration of pasture for livestock.

Although not common, there are some years when the LZ receives *Deyr* rains instead of *karan* rains⁴. These rains are normally not considered favourable as they have both a negative impact upon the long maturing varieties that should be at a flowering stage during this period and upon pasture. In a year such as the current year, when both the *dira'* and *karan* rains have failed, households will of course try to take advantage of the *deyr* rains and cultivate short maturing varieties. In such a year, the overall impact would of course be lower yields⁵.

Pasture and Fodder Availability

In a normal year, pasture is regenerated with each set of rains. This regeneration takes place within two weeks of the onset of rains. Thus, pasture is normally available April - July and August- December. This is supplemented by crop residues during two key periods. The first comes from the stalks of the short maturing maize crop (available from May-July) and is given primarily to the milking cows and oxen. The second comes from the crop residues from the second harvest. This is in two forms : (1) stocks which are stored as fodder during harvesting of main crops (used Jan-March) and (2) livestock are allowed to graze on remains from the field after harvesting takes place (Oct.-Nov.). March is the most difficult month in relation to pasture and fodder availability.

Water Availability

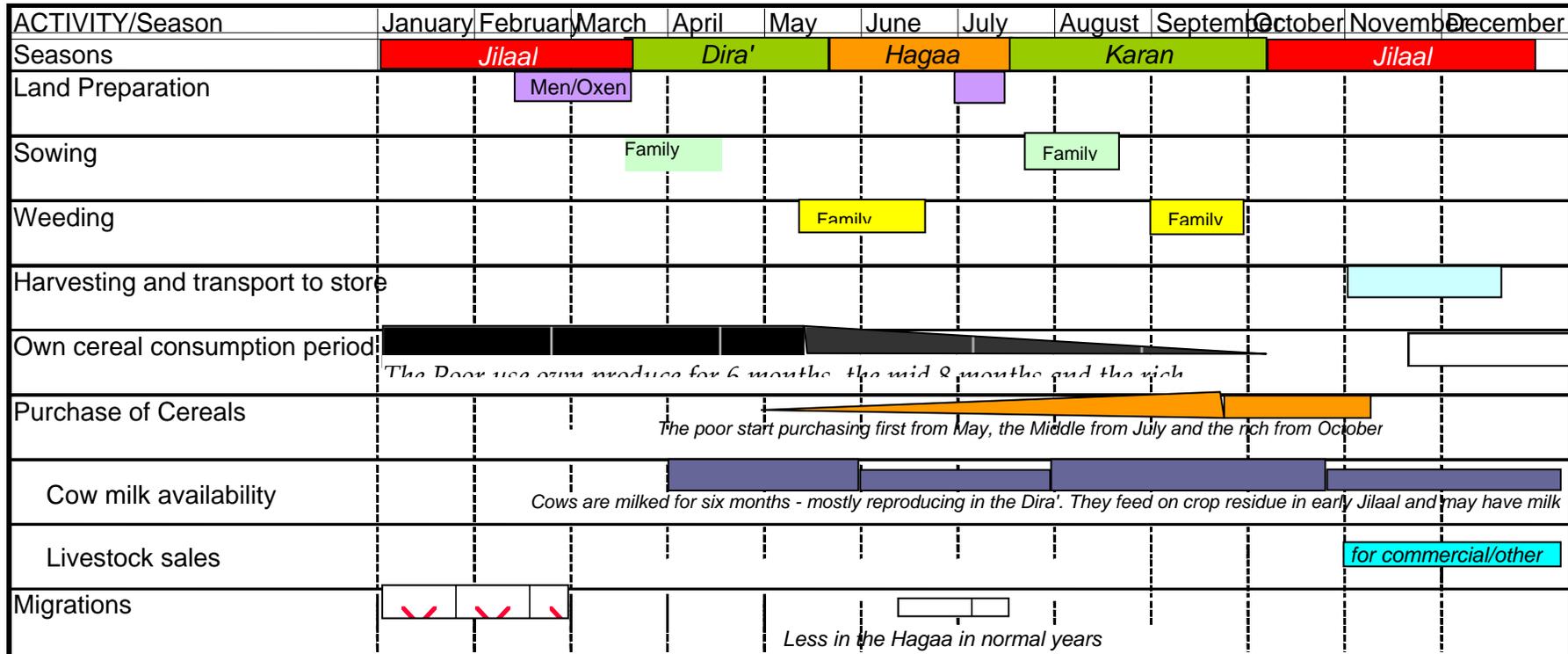
In a normal year, there is enough water available to support both human and livestock populations. Thus, households residing within the LZ will not migrate out of Jijiga Zone in search of pasture in a normal year. Both the Fafan and Jerer valleys (which run through the western part of Jijiga Zone) provide grazing when the dry season is prolonged.

³ The only exception is in the south of Babile District which receive *Deyr* rains ((mid September – mid November). The Northern part of the administrative District receives the same rainfall as described above.

⁴ Key informants reported this to have happened once in the last five years.

⁵ This would require monitoring at X time – to assess to what extent households have managed to cultivate utilising these unusual rains and how the overall yield compares to that produced in a normal year.

Figure 1 - Seasonal Calendar for Jijiga Sedentary Farming LZ



4.4 *Other information particular to the LZ*

Crop production

Cropping Patterns

The soil found within most of the LZ is a black clay soil that is relatively fertile and retains moisture. This has a positive contribution to overall agricultural yields in an average year of rainfall. The only exception is in Babile District where some sandy soil can be found and is used for the cultivation of groundnuts. Agriculture is entirely rain fed within the LZ and highly vulnerable to years of inadequate rainfall.

In contrast to other areas of Ethiopia, landholdings are not a constraint within this LZ. Land is inherited through ones father and households belonging to all wealth groups reported having similar landholdings. The difference between wealth groups comes with the area that can be cultivated. Thus, the better off households are in a unique position because they possess the resources to cultivate wider areas.

Households within the LZ are settled on hillsides and cultivation takes place in the surrounding plains. The main crops cultivated with the *dira'* rains include long maturing varieties of sorghum and to a lesser extent maize. While groundnuts are cultivated in Babile District, the proportion of households involved in this cultivation are a minority when compared to all those residing within the LZ.

The most important crops for consumption are planted in April, households begin consuming green harvest in late June and harvested in November. The same plot of land is used for cultivation during each season. In a normal year, the majority of land will be devoted to long maturing varieties during the *dira'* season and a small portion will be set aside for cultivation during the *karan* rains.

The main crops cultivated during the *karan* rains are of a short maturing variety and include: wheat, barley, and to a lesser extent maize. Chickpeas (*shumburo*) and flax (*kondar*) are also cultivated during this season in small amounts.

A number of additional crops are cultivated in small amounts such as: peas, oats, lentils, irish and sweet potatoes, onions, garlic, and chat. While some of these foods contribute to household consumption the total calorific contribution is insignificant. Importantly, some also serve as a source of cash income.

Agricultural Production

The following chart is a summary of the agricultural yields obtained by households belonging to each wealth group in a normal year. The yields reported are those after threshing and do not include what is eaten green from the field. The amount of seed set aside for each crop has been recorded along with what is given away by the rich (*zako*) and what is sold. Finally, the total amount saved for consumption by the household is recorded.

Table 2 - Crop production Figures and Land use

Rich							
Total no of kodis = 25-35							
Type of Crop	Kodis Cultivated	Yield/ <i>kodi</i> Quintals ⁶ (Q)	Total Output (Q)	Seed set aside (Q)	Other (<i>Zako</i>) (Q)	Sold (Q)	Consumed (Q)
Sorghum/ Maize	20	1.4	28	2.5kgs/ <i>kodi</i> 0.5 Q	2 Q	12.5	11
Wheat/ Barley	10	1.6	16	10kgs/ <i>kodi</i> 1Q	1 Q	10.75	3.25
Groundnuts	7.5	2.5	18.75	13kgs/ <i>kodi</i> -1 Q	1 Q	15.75	1
Middle							
Total no of kodis = 15-20							
Type of Crop	Kodis Cultivated	Yield/ <i>kodi</i> Quintals (Q)	Total Output (Q)	Seed set aside (Q)	Other (<i>Zako</i>)(Q)	Sold (Q)	Consumed (Q)
Sorghum/ Maize	10	1.4	14	0.25 Q	1Q	7.75	5
Wheat/ Barley	4	1.6	6.4	0.40 Q	0	2.5	3.5
Groundnuts	6	2.5	15	0.78 Q	1 Q	12 Q	1Q
Poor							
Total no of kodis = 5-10							
Type of Crop	Kodis Cultivated	Yield/ <i>kodi</i> Quintals (Q)	Total Output (Q)	Seed set aside (Q)	Other/(<i>Zako</i>)(Q)	Sold (Q)	Consumed (Q)
Sorghum/ Maize	5	1.4	7	0.125 Q	0	2.8 Q	4
Wheat/ Barley	2.5	1.6	4	0.25 Q	0	1.75	2
Groundnuts	2.5	2.5	6.25	0.325 Q	0	5.93	0

In Babile District groundnut production replaces wheat and barley. Thus, in those areas where barley and wheat are cultivated, groundnuts are not. Additionally, although a number of minor crops are cultivated the contribution is not significant enough to be included below. Thus, the crops reported are the main crops that are common to all households belonging to the different wealth groups.

Ploughing Arrangements

As in most agricultural communities, there are a number of arrangements that exist to ensure all households are able to plough and cultivate some land. Of course, the better off groups have an advantage over others due to their resources.

The most common agreement within this LZ is called, '*Guus*' and is used by all. In this case, the owner of the land provides food and chat in exchange for one days on farm labour. While all wealth groups use this method, the labour and area that can be covered is related to what can be provided. Thus, it is not surprising that the better off groups have higher expenditures related to *guus* and thus cultivate wider areas.

Two other agreements exist, but are less common. The first is referred to as, '*iskaashi*'. This is an agreement between the better off and poor through which all initial inputs are provided by the rich (ploughing with oxen and seeds) in return for half of the total production. In this agreement, the poor are responsible for all agricultural related activities following this initial input such as: weeding, threshing, and harvesting.

Another agreement is referred to as, '*kiro*'. In this agreement the better off pay an advance sum to rent the land of the poor. The amount paid is normally 200 birr per *kodi*.

⁶ A quintal (Q) is equivalent to 100 kgs.

In contrast to the previous agreement, the rich are responsible for all inputs (ploughing, seeds, labour related to weeding, threshing, and harvesting).

Finally, there is also a system to assist those households who are both labour and asset poor referred to as , 'gargar'. This normally takes place on Fridays and all able bodied members of the community participate to plough and cultivate the land for this minority of households.

Livestock

Livestock Movements in a bad year

In a bad year of rainfall, those households with livestock will move to the closest grazing areas based on clan preferences. Thus, those residing in the Western and Central part of the LZ will migrate to the Fafan, Dhakato, and Jerer Valleys for pasture. Those residing in the North Eastern part of the LZ will move to Borama in Somalia and Dambal (Shinile Zone). All will compete for resources with households residing in adjacent LZs⁷. In more severe situations, movement is to the Southeast and across the border into Somalia. Decisions pertaining to who, from the household moves with animals as well as the type of animals which move is based on the severity of the situation. Generally, the young and lactating animals will remain behind until the situation requires that they move.

4.5 Wealth Breakdown

The main determinants of wealth identified by the community are oxen, labour, and area of land cultivated⁸. Based on these criterion, three main wealth groups were identified: rich (*roon*), mid (*baahagal*), and poor (*baahagab*). The differences between assets owned by owned by households belonging to each of these wealth groups are outlined below.

⁷ Households dependent upon the Fafan , Dakhata, and Jerer Valleys for water and pasture, include those residing in Shinile, Deghabur, Fik, and Northern Gode administrative zones (mainly in bad yrs but also in normal years for Jijiga Zone).

⁸ Key informants said the household who has one ox (*gar*) has breakfast, while those who have two oxen (*qindi*) are able to have breakfast and lunch.

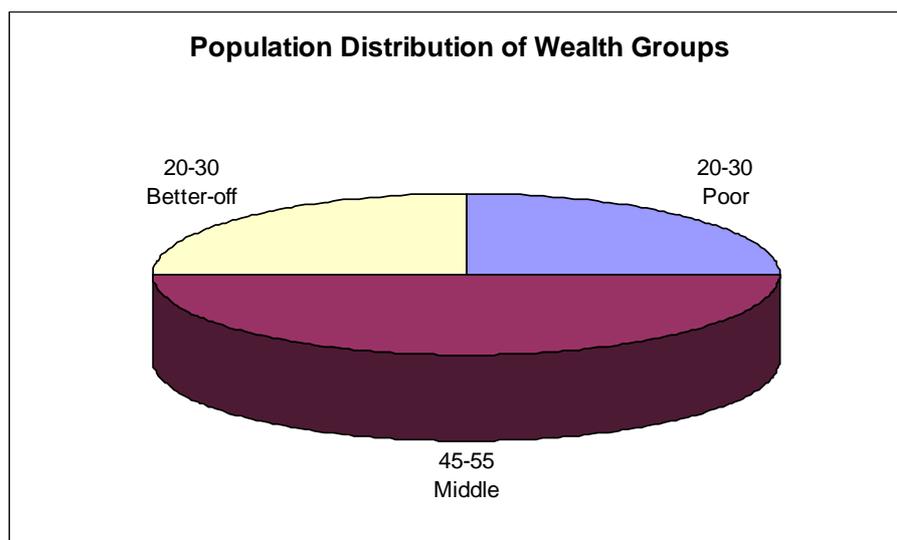


Figure 2 - Wealth Groups in Jijiga Sedentary Farming LZ

Table 3 - Wealth Characteristics

Wealth Group name & vernacular name	Poor <i>baahagab</i>	Middle <i>baahagal</i>	Better off <i>Roona</i>
Characteristics			
number of wives			
Household size	6	6	7
LIVESTOCK			
Owned Shoats	2-3	5-10	10-15
Borrowed Shoats			
Female Shoats			
Male Shoats			
Lactating Shoats	0-1	2-3	3-5
Owned Cattle	1-2	4 – 6	8-12
Borrowed Cattle			
Female Cattle			
Male Cattle			
Ox(en)	0	1	2
Lactating Cow(s)	0 – 1	1 – 2	2-4
Owned Camel(s)			
Borrowed Camel(s)			
Female Camel(s)			
Male Camel(s)			
Lactating Camel(s)			
Pack Camel(s)			1 or
Donkey(s)/Ass(s)	1	1	1 or
Mule(s)/Horse(s)			
LAND			
Land owned			
Land borrowed/rented for cultivation			
Total size of land cultivated ⁹	5-12 <i>kodi</i>	13-22 <i>kodi</i>	23-40 <i>kodi</i>

⁹ For types of crops cultivated in area land need to describe this in section in section on land cropping patterns

Wealth Group name & vernacular name	Poor <i>baahagab</i>	Middle <i>baahagal</i>	Better off <i>Roon</i>
Characteristics			
Rainfed area			
Irrigated area			

Area cultivated is reported by number of *kodis*. Importantly, the figures reported are not total land holdings but the area cultivated. Households may only cultivate part of their total land holdings. In addition to agricultural land, they will also own some land used for grazing of the herds. The latter varies throughout the LZ increasing in overall size as one moves East towards Lafa Isse, and also in the mountainous areas of the LZ towards Babile.

Based on the above assets, it is clear that the assets owned by rich households result in the ability to cultivate wider areas and thus gain higher agricultural yields. Thus, wealth in this LZ is a direct result of agricultural activities and subsequent production. This is unique when we compare it to other LZs within the Region.

4.6 *Food Sources in the Reference Year*

Poor

As the poor do not have oxen, the majority depend upon *guus* to cultivate their land. As this is only one days work and the amount they are able to spend on *guus* related expenditures is limited, it is not surprising that the area of land cultivated is much smaller for this group, as are overall yields.

Instead of consuming all of their agricultural production, poor households will normally sell some of their produce to cover their debts (credit related to agricultural inputs: primarily seeds and *guus* related costs) following the harvesting period. It is at this time that prices are at their lowest. Thus, the returns gained from sale of own crops are limited for this group. They are then forced to purchase cereals at a later date when prices are at their highest to cover their food requirements.

Gifts received from the rich households come in two forms: milk and grain. While the amount of milk given through *zako* is not significant in terms of its calorific contribution, the amount of cereal is (roughly 3 quintals of grain in a normal year)¹⁰. This is a significant contribution covering 25% of poor households annual food requirements. In a bad year, this *zako* will be withdrawn resulting in an immediate deficit of 20 % in food income. In such a year, roughly 5% could still be expected through small contributions from relatives.

¹⁰ *Zako* is the local terms for alms which is given to the poor by rich households.

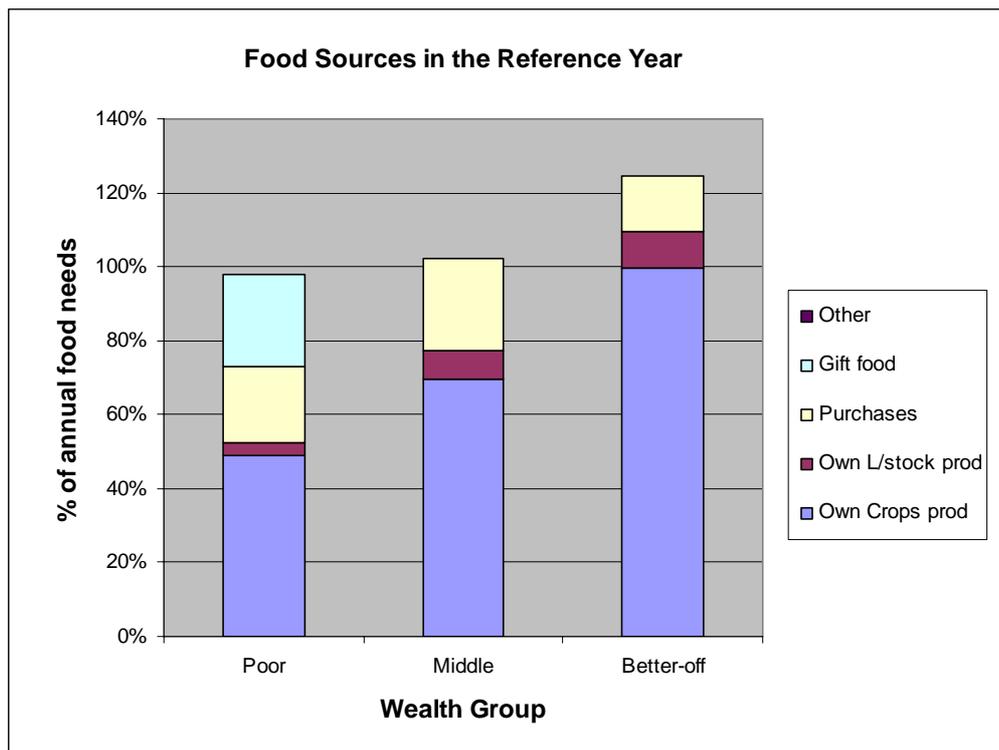


Figure 3 - Food Sources for all Wealth Groups in Jijiga Sedentary Farming LZ

Middle

In addition to paying for *guus*, the middle households benefit from the ownership of one oxen. They often pair up with others from the same wealth group to carry out agricultural activities. As a result, their overall production is roughly half of that produced by the rich households. This is again to the number of *kodis* cultivated (15-20).

For this group, the purchase of cereals (sorghum and maize) covers what annual food requirements cannot be met through own production. Sugar is also purchased and is important both in terms of its calorific contribution and socially.

Lower herd sizes also result in lower milk yields. However, in contrast to the rich households, this group reported household consumption of both goats and cows milk. Goats milk is considered particularly important for children. Thus, the rich households reported leaving the goats milk for the children. Whereas the mid reported sharing amongst all household members. Thus, goats milk has only been calculates as a source of food income for mid households. Thus, the contribution from milk is similar to that of the rich.

In a bad year, this group could sell their milk instead of consuming it. This is only possible in a year where the milk yields were not negatively affected by the availability of water and pasture. Generally, the returns for milk are much higher and households would then be in a position to purchase grain for consumption.

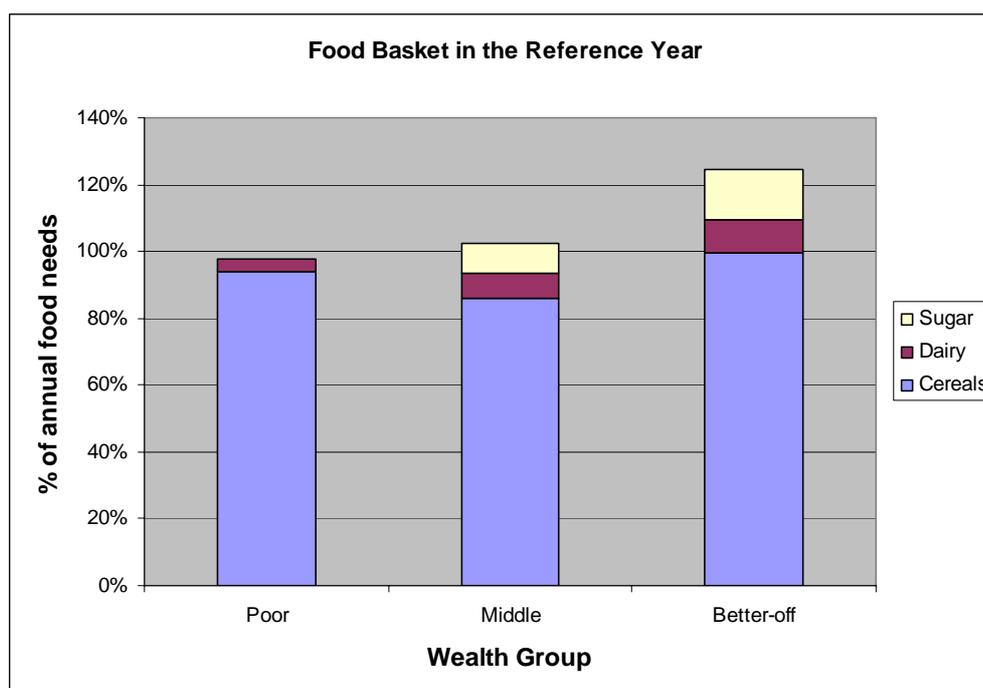


Figure 4 - Food Basket for all Wealth Groups in Jijiga Sedentary Farming LZ

Better off

As mentioned above, the rich are distinguished from others due to their ability to cultivate much wider areas (25-35 kodis) and thus reap higher agricultural yields. In addition to being able to pay the most for *guus* related activities (300 birr each time), the rich take advantage of their pair of oxen to get the most out of their land¹¹. They also have larger households as they can expect to support at least two dependents throughout the year¹². These individuals are normally relatives and add to the labour pool of rich households.

The end result is that rich households are able to cover roughly 85-95% of their household's annual food requirements through their own crop production. .

Although they have larger herds as compared to the other wealth groups, holdings are small compared to other LZs within the Region. The main reason for this is because the amount of grazing or pasture land is limited (most is devoted to cultivation). This has an impact upon the contribution of milk to annual food requirements, which is relatively

¹¹ A small minority are in the position to rent tractors from town to plough their land. This group would of course have even higher yields than what is reported here for the rich.

¹² Key informants reported that the majority of households within this LZ have 1 wife. However, up to ¼ of the rich were estimated to have 2 wives. Importantly, key informants stressed that each household would be treated as an independent economic unit. Also important is the fact that wives are not treated equally. Thus, assets would differ between the first and second wife making it very complicated to group the wives separately. Based on all of the above, the households we are referring to are the man, wife, and his children (a second wife and her children would be treated as a separate household and could actually belong to another wealth group).

low as compared to other LZs. Additionally, only ½ of the milk obtained by rich households is consumed. The remaining is either sold or given as gifts to the poor¹³.

Roughly 10-15 % of the food needs for the rich are covered through the purchase of sugar which has a high calorific contribution.

In contrast to the other groups, in a normal year, rich households consume slightly more than the minimum 1900 k/cal requirements.

As mentioned previously, the rich are required to give alms tax (*zako*) to the poor. The tax is generally 10% of rainfed agricultural production (for each major crop) and is limited to those who have produced more than 10 quintals (Qs). Importantly, there is some flexibility. Thus, even if a household produces 9 or 10 Qs they may still feel an obligation to pay *zako*.

In a normal year, rich households produce enough grain to serve as a buffer in the event of a poor year. Thus, as mentioned above, they will hold on to their more valuable grains until they know the prospect of the coming years harvest. If it is good, they will sell and invest the money¹⁴. In a bad year, there is a large enough buffer to see them through the year with a significant decrease to cash income. However, when faced with a second poor year, these households would have great difficulty covering their food requirements.

4.7 *Income Sources in the Reference Year*

Poor

As compared to other groups, the poor have a limited set of options for obtaining cash income. As mentioned above, the sale of agricultural production provides them with some cash income. However, their overall production is much less as compared to the middle and poor households. They obtain the lowest prices for their crops due to the timing of their sales (see activity calendar). The other income earning options available to poor households require high labour inputs and gain low returns, especially in a bad year when competition increases and wage rates decline.

In a normal year, the LZ provides seasonal labour opportunities to poor households between March and May. Most poor households would have one member (male) involved in agricultural labour activities during this period (2 days/ week) when land preparation and planting are conducted. The requirements for labour during the harvesting and threshing period, also provides agricultural labour opportunities for those residing in the neighbouring agro pastoral LZ of Shinile.

¹³ Households have access to milk for 6 months. However, the milk given as gifts to the poor is only for 3 months of the year and is a small amount (0.25 litres day out of a total of 6 litres per day).

¹⁴ This investment can be through the building of additional birkads, or through social obligations to hhs belonging to other wealth groups within the community, or higher expenditure on non food items, etc...)

In a bad year, members of poor households would be amongst the first to migrate in search of labour opportunities. They could find work as livestock herders in the nearby agro pastoral and pastoral LZs. Households would first try to find work in the Fafan and Dhakato Valleys, which are closer in proximity. Depending on the situation they could go further to Harshen and Kebre Baya. The other option would be to migrate to urban areas in Ethiopia (Jijiga) and in bordering Countries of Djibouti and Somalia (Bossaso, Hargheisa, and Borama) where a number of wage earning activities can be found. Labour activities include construction, hotel work, porters in ports, and daily construction for the males. Women can serve as maids in private homes and find work sorting frankincense in Bossaso.

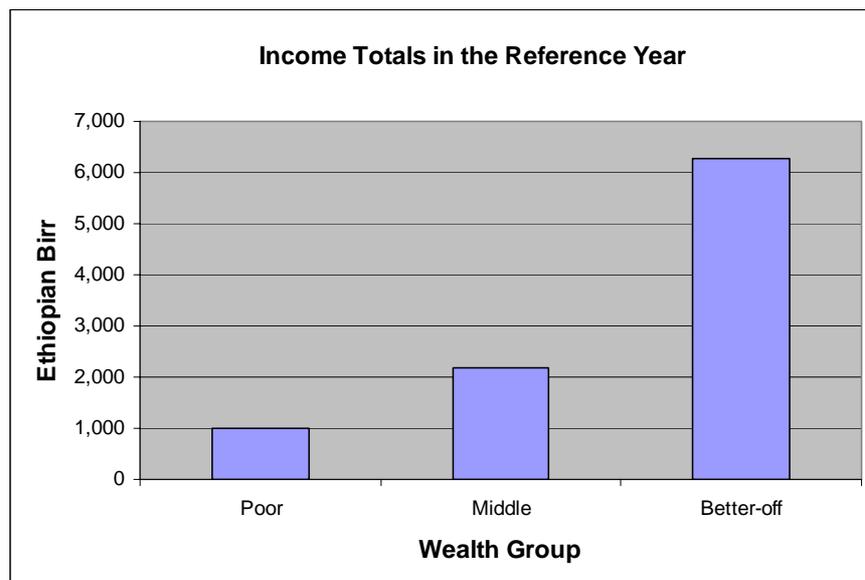


Figure 5 - Income Totals for all Wealth Groups in Jijiga Sedentary Farming LZ

Middle

The highest contribution to cash income for middle households comes from the sale of milk, followed by own crops. As with the poor, middle households usually sell their crops during the period when prices are less favourable, thus they do not gain as much as potentially possible. They also devote a small portion of their land to chat production, which is considered a cash crop and an important source of income. The total amount gained through livestock sales is limited due to low herd sizes. In a normal year, the middle will only sell 2 shoats around the time of ID (see activity calendar).

Finally, the middle use their donkeys to transport firewood to the towns and rural market centres. While men are involved in the collection of firewood, it is the women who hold the responsibility of selling it. In a normal year, most middle households would have one member involved in this activity 2 times per week during the above period. This income option is only available to households during the dry season months (mid Dec- mid March).

In a bad year, middle households would try to expand normal year income options similar to the poor. Thus, they may involve more household members in collection and sale of firewood or send members off in search of labour opportunities. In contrast to the

poor, they also have some flexibility due to their asset base and could sell at least 2 shoats before affecting the balance of their herds. However, the amount of flexibility is limited.

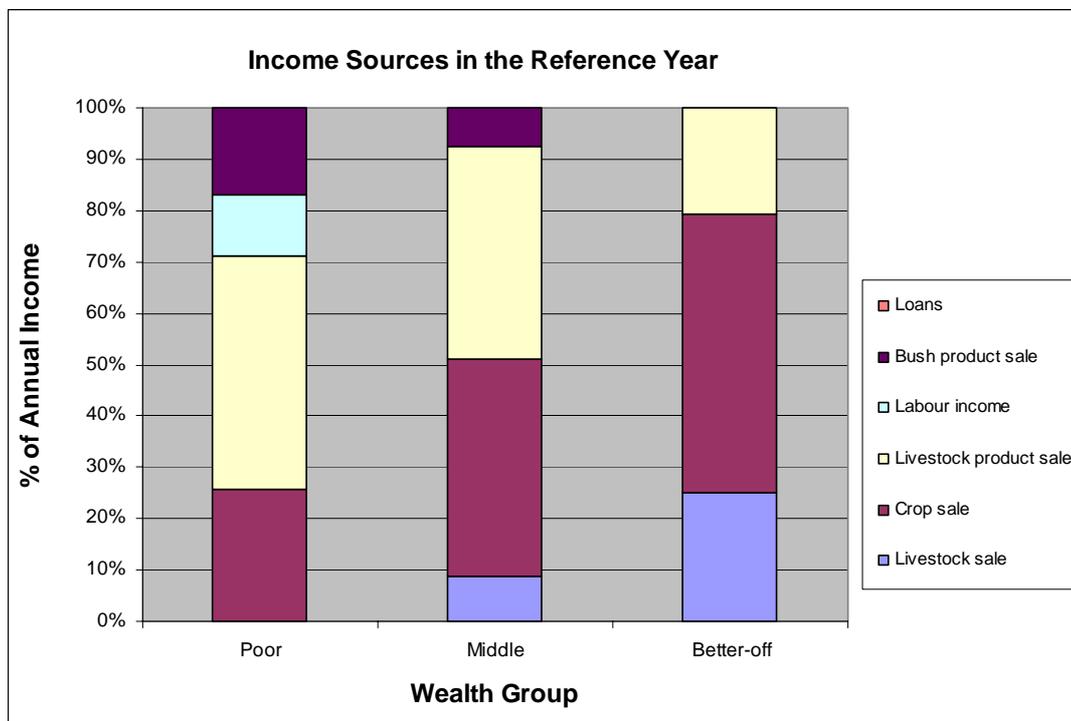


Figure 6 - Income Sources for all Wealth Groups in Jijiga Sedentary Farming LZ

Better Off

The total cash income gained by rich households is significantly higher than that obtained by other groups.

The majority of cash income is through the sale of agricultural production and more specifically through the sale of own crops (roughly 1/3). The rich are in a unique position to devote wider areas to the cultivation of wheat and barley and are able to sell these grains at a time when prices are at their highest (*see activity calendar*). Importantly, these households will sell their maize and sorghum first and wait to see the prospect of the next harvest before selling their wheat and barley.

The sale of animals can be divided into two categories: sale of oxen and sale of shoats. The first involves fattening up oxen (5-6 yrs. old) each year which are sold between Jan. and March). This period is the best time to sell because of Id when the demand for slaughter is high. There is also a demand at this time due to agricultural activities. With cash income gained, households will then purchase a smaller ox during the same period (3-4 yrs. old) at a lower price. The total amount of cash income gained through this transaction is 1200 birr in our reference year¹⁵.

¹⁵ Livestock ban imposed will affect price.

The sale of shoats is done during the same period by rich households. In a normal year, rich households will sell an average of 4 shoats at 95 birr each.

The area of land devoted to the cultivation of chat by rich households is roughly 7 kodis. Chat is produced two times a year. The yield is generally higher in April/May due to distribution of rainfall. It is difficult to estimate yields per hectare as it depends to some extent on the age of the bush. They begin to produce after 5-6 years. Key informants estimated that in April/May households can harvest 65 *murtuf* and another 50 in August/Sept. when rainfall is less.

Finally, the rich do not use their pack animals in income earning activities. Rather, these animals enable households to collect water, firewood, transport harvest home, etc.

The effects of an initial poor year of production could be absorbed by this group due to their high agricultural yields in a normal year. However, in the event of a second poor year, households will need to expand their income options. This will be more difficult for this group as most of their income is normally gained through the sale of agricultural production, livestock, and by products.

4.8 *Expenditure Patterns in the Reference Year*

Poor

Roughly 40% of total cash income obtained by poor households is spent on purchase of food (cereals). The remaining 60% is spent on non food items. Of the latter, 45% is spent on clothes for household members. While the percentage may seem high, the total amount of cash spent on clothes is only 150 birr a year for the entire household. The remaining cash is spent on household items which include: coffee husks (*hanshar*), salt, soap, and kerosene. Unlike the better off households, the poor are unable to spend on education or guus related expenditures.

In a bad year, expenditures on non food items could be reduced by minimising expenditure on clothes, replacing kerosene with firewood collected by household members, and completely stopping any purchase of soap.

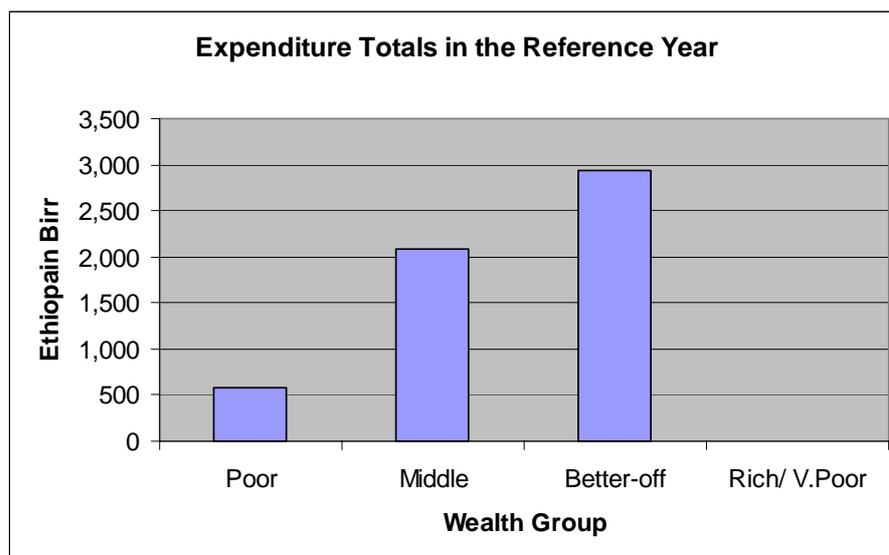


Figure 7 - Expenditure Totals for all Wealth Groups in Jijiga Sedentary Farming LZ

Middle

Roughly 25 % of middle households cash income is spent on essential food items. The remainder is spent on non food items. Non food expenditures for the mid include: household expenses, clothes, education, and *guus*.

The amount spent on household expenses is similar to that spent by poor households. However, the majority of non-food expenditure is for clothes and *guus* related activities. The latter requires expenditure upon sugar, chat, tea, and food. This is done thrice a year during key agricultural periods (*see activity calendar*). The middle spend 200 birr each time for the commodities required. Importantly, mid households can afford expenditure on education, which is roughly 70 birr annually for one child¹⁶.

In a bad year, the mid could make similar changes to their expenditure patterns as the poor by minimising their expenditure on clothes by 1/2, replacing kerosene with firewood, stopping purchase of soap, terminating *guus* related activities (which do not exist in a bad year), and paying for education fees when the situation improves.

¹⁶ It is assumed most households would have only 1 child in school. The fees include 1 birr every Thursday per child and 5 birr for every 5 chapters completed of the Koran (Juzu). There are a total of 25 chapters to be completed.

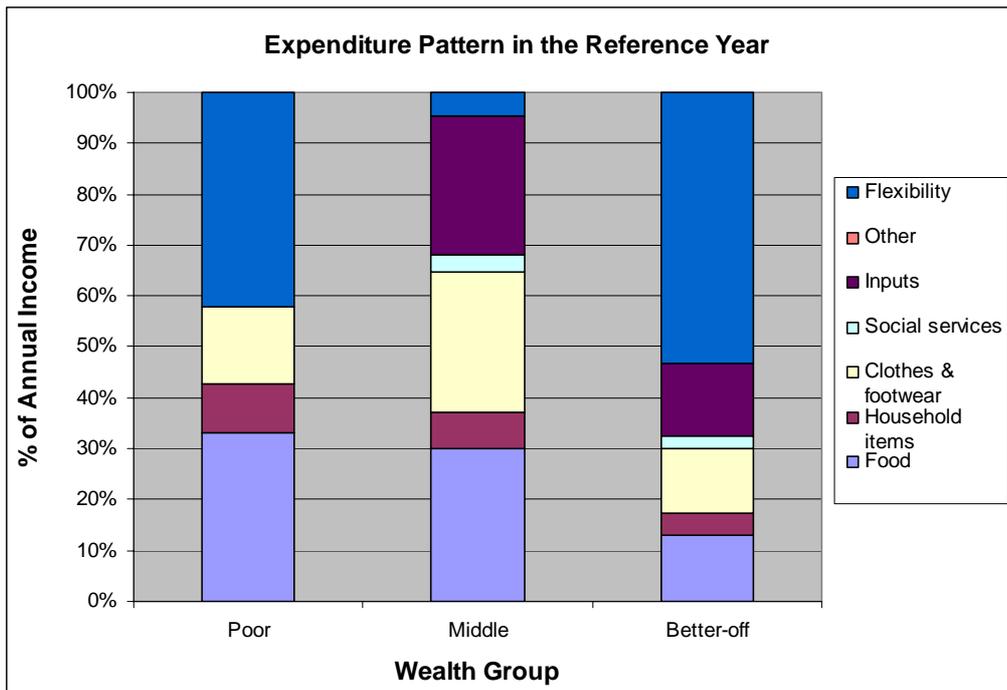


Figure 8 - Expenditure Pattern for all Wealth Groups in Jijiga Sedentary Farming LZ

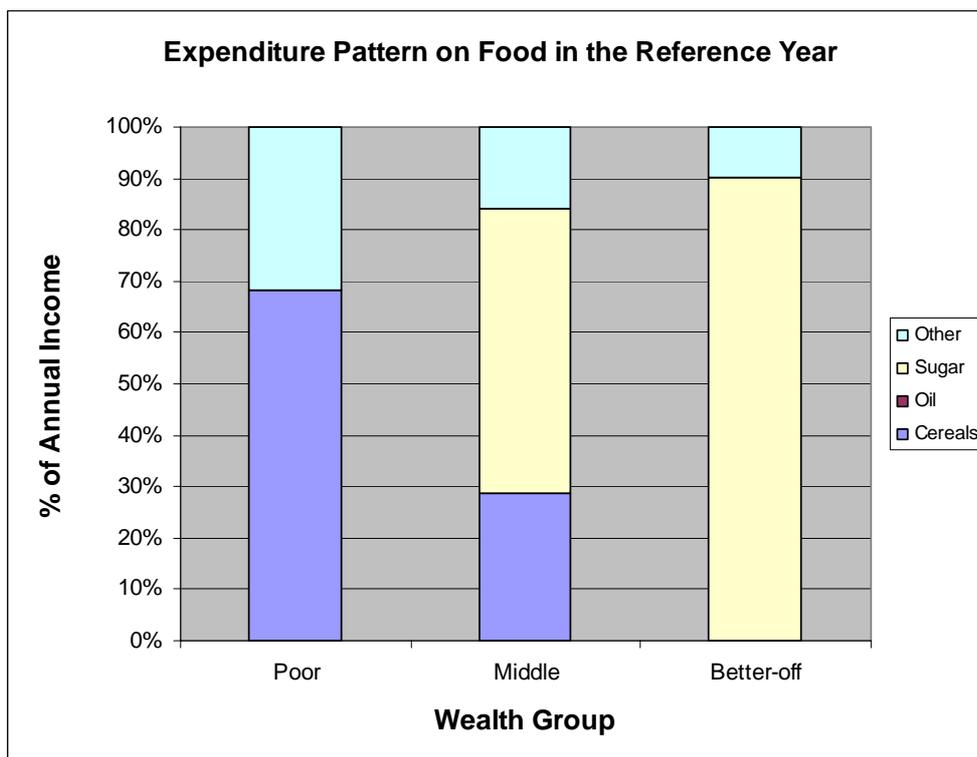


Figure 9 - Proportional Expenditure on Food for all Wealth Groups in Jijiga Sedentary Farming LZ

Better off

The categories of expenditure for rich households are similar to those reported by middle households. The difference is in the amount spent for each category. For example, the rich spend more money on clothes but have to cover the needs of another

two individual household members. Likewise, they cover the education costs of two children instead of one and pay more for *guus* related activities. Additionally, they are able to purchase more under household expenses than those belonging to the mid and poor households.

However, even with this expenditure, they have significant savings in a normal year (roughly 3000 birr). It was reported that these savings are not in the form of stored grain, but rather converted into cash and invested back into the community. Importantly, the social support network is very strong within this community. Thus, it is not difficult to believe that some of these savings will go towards support of the poorer households.

As mentioned above, rich households will be able to absorb the hardships brought by a poor year of rainfall (which would affect agricultural production and livestock). This group has the most flexibility related to cuts in expenditure. The areas that they can minimise are similar to that reported for mid households. However, a difference would exist in the value of cash spent on items such as clothes given the normal expenditure and the number of household members.

5 Vulnerabilities, Risks & Coping

Vulnerability to drought

Each wealth group would be affected by a drought in different ways and to different extents.

Due to high agricultural production in a normal year, rich households are able to deal with a poor year of production. Although they would experience a significant loss of cash income, they would be in a position to cover their own food requirements as well as assist others within the community to some extent. However, the level of vulnerability to a second year of poor production is very high as this group are highly dependent upon agricultural production for the majority of their food needs as well as cash income. Likewise, in contrast to other wealth groups, rich households have less developed coping strategies when faced with stress. For all of these reasons, we would be very concerned about this group of households in the event of 2 consecutive poor years.

Poor households are also very vulnerable to a shift that affects the rich households. Importantly, they are dependent upon the rich for gifts (in the form of *zako*). As mentioned previously, in the event of a second poor year, the rich would withdraw this support resulting in an immediate deficit of roughly 20%. The ability for this group to cover this deficit along with a deficit resulting from their own crop failure would be difficult as most of their income options are labour intensive and are subject to a reduction in wage rates when there is high competition.

Middle households would be able to cope with a first year of drought better than the poor, but the overall impact of the choices made would require analysis.

Vulnerability to environmental constraints

Delayed rains

Because households are dependent upon long maturing varieties of sorghum and maize, they are very vulnerable to '*hamaday*' which is a frost that comes some years in October/November. This requires close monitoring as it can highly affect overall yields.

Pests

Due to the dependency upon agricultural production, households belonging to all wealth groups are also vulnerable to pests outbreaks which occur some years. These include locusts, birds, and army worm (the latter being the most common).

Conflict

As noted in the historical time line, these groups are vulnerable to clan conflict which has occurred in three of the last ten years. This conflict can result in an inability to plant, looting of stores, etc..., all of which have a negative impact upon household food security.

Vulnerability to price fluctuations

The distribution of relief food can have a negative impact upon overall market prices. Thus, interventions should be well planned to avoid normal crop selling periods. The

poor and mid groups are most vulnerable to market fluctuations following the harvest period (Oct - Dec), while the rich would be vulnerable to fluctuations between March and June.

Risk Minimising Strategies

There were a number of risk minimising strategies identified by wealth groups during this assessment.

- As mentioned above, the **poor** devote more of their cultivated land to lower value cereals (more sorghum and maize as opposed to barley and wheat). This is for 2 reasons. Firstly, these crops are generally higher yielding. Secondly, it is less risky to take advantage of the first rains instead of banking on the arrival of the karan rains. The better off groups are in a better position to diversify their crops, and as a result have higher earnings from the sale of own crops.
- The **better off** and mid keep fodder after the harvest instead of selling it right away. They will then release it in *Jilaal* for the animals. Those who have sufficient fodder will gain income from the sale following this period.
- The rich hold on to their crops until they are able to see the prospects of the coming harvest. Thus, if the prospects are poor, they will hold onto their stocks for household consumption instead of selling for cash income.
- The better off groups will sell cattle when the situation worsens and keep cash. This is because the cattle are the first of the herds to suffer in a drought and they can do more with cash in such a situation.
- All groups reported praying to Allah as a risk minimising strategy. This illustrates how strong religion is within this community.
- Some reported seeking support from those within the community with special powers over the elements to minimise particular risks. For example, some may pay the, ' bird man' who will ensure that the birds do not attack his crops.

6 Indicators to monitor

The levels established in the reference year can be used as a yardstick for the performance of the following indicators. Some are more important than others; for example, livestock indicators are less important in this LZ compared to crop indicators. The suggested indicators are:

- Rainfall (quantity, distribution, and timing)
- Crop condition and stage of development
- Food grain availability
- Pests and diseases
- Agricultural inputs: availability and prices
- Market prices (grain, crop residue, livestock especially oxen)
- Pasture for livestock
- Water availability
- Livestock diseases
- Labour migration
- Human health and nutrition
- Coping mechanisms (the degree of 'resorting to')
- Services (extension, vet, etc) availability

7 Recommendations

7.1 *Recommendations*

The following issues were raised as long term food security issues that warrant further discussion.

1. Although the LZ is a relatively high production area, some feel that benefits could be gained through support to research that explored ways of increasing yields through dry land farming. Importantly, any recommendations should look carefully at low cost and sustainable solutions.
2. Linked to the above recommendation, there is a need to strengthen the extension service within the Region. Although extension services exist, it is felt that they are under utilised and poorly resourced at the moment.
3. The LZ could benefit from improved market support. Three possibilities were identified but require further discussion with the concerned authorities:
 - Current Government policy should try to facilitate free trade within the Region, throughout Ethiopia, and to neighbouring Countries. Importantly, at the moment the movement of crops from surplus to deficit areas within Ethiopia itself requires improvements.
 - Relief agencies such as WFP could explore the possibility of purchasing grain locally in a good year from within Somali Region for distribution elsewhere.
 - Alternatively, surplus could be purchased by the Ethiopian Grain Reserve.
- Households reported crop losses resulting from poor grain storage facilities. However, this requires further investigation. Importantly, any recommendations should consider the local context (eg; high moisture content) and ensure that solutions build upon traditional knowledge and practice and are cost effective.

8 References

SC (SAVE THE CHILDREN) UK (2000) *The Household Economy Approach: a resource manual for practitioners*. Save the Children, London.

Famine Early Warning Systems Network; Update on Tanzania
<http://www.fews.net/current/updates/> visited 11/2003

9 Appendices

9.1 HEA Methodology

The Household Economy Approach¹⁷

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:

¹⁷ 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' year¹⁸.

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.

¹⁸ 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.

9.2 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 purposes¹⁹.

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).

¹⁹ 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*²⁰ payment, *Hajj*²¹, etc.

²⁰ *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.

²¹ *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.