Somali Regional State, Ethiopia: Livelihood Zone (LZ) Map

Source: Field Surveys conducted by SCUK/DPPB. Food Security Monitoring and Early Warning Programme – Revised 2004

Legend

- **LZ 1**: Fik Pastoral (camel, shotts, cattle)
- **LZ 2**: Shinile Pastoral (cattle, shotts, camel)
- **LZ 3**: Shinile Agropastoral (sorghum, maize, cattle)
- **LZ 4**: Shabelle Riverine (maize, sorghum)
- **LZ 5**: Lowland-Hawd Pastoral (camel, shott, Berkod-dependant)
- **LZ 6**: Degahbur Agropastoral (maize, cattle)
- **LZ 7**: Afder Pastoral (camel, shotts, cattle)
- **LZ 8**: Dawa-Ganale Riverine (maize, cattle)
- **LZ 9**: Gode Agropastoral (sorghum, cattle)
- **LZ 10**: Liban Agropastoral (maize, cattle, shotts)
- **LZ 11**: Korahe Agropastoral (cattle, sorghum)
- **LZ 12**: Filtu-Dolo Pastoral (camel, shotts, cattle)
- **LZ 13**: Korahe-Gode Pastoral (camel, shotts, cattle) being developed
- **LZ 14**: Moyale-Wayamo Pastoral (camel, shotts, cattle)
- **LZ 15**: Jijiga Agropastoral (maize, sorghum, cattle) being developed
- **LZ 16**: Jijiga Sedentary Farming (sorghum, maize, wheat, cattle)
- **LZ 17**: Harshin-Degahbur-East Pastoral (shotts, camel, cattle)

Geographical Features

Somali Region is one of Ethiopia’s largest regions. It borders Djibouti to the north, Somalia to the east and north-east, and Kenya to the south. To the west it borders Oromiya Region, to the north-west Afar Region. There are nine administrative zones: Shinile, Jijiga, Fik, Degahbur, Korahe, Warder, Gode, Afder and Liban.

**Terrain:** a combination of hilly, browse-rich (thick, thorny bush) areas good for camels and goats; and shrub / grassland / plains with grazing for sheep and cattle, and where crops may be grown (particularly near rivers). Some areas are rich in trees that produce gums and resins (eg Filtu and Dolow-Ado).

**Altitude:** ranges from 200m in the southern/central parts, to 1,800m in Jijiga Zone; medium altitudes consisting of hilly terrain and plateaux are found in parts of Liban, Degahbur, Fik and Shinile Zones.
Climate: mostly arid/semi-arid in lowland areas, cooler/wetter in the higher areas. Annual rainfall is 150 - 1,000mm per year. Temperatures range from 19°C (Jijiga Zone) to 40°C (the southern zones, particularly the Shabelle, Dawa and Ganale river basins); northern Shinile Zone gets very hot between May and August.

Permanent rivers: include the Ganale (Liban and Afder), the Shabelle (Afder/Gode border) and the Dawa (in Liban Zone, becoming seasonal in Dolo Ado District). Seasonal rivers include the Erer, Hurso and Chow rivers (Shinile Zone), the Wayb River (Ander Zone), part of the Dawa River (Liban Zone), and the Fafan, Jerer and Dakhata rivers (in Jijiga, Fik, Degahbur and Korahe Zones).

Water sources: mainly rivers, shallow/deep wells, natural ponds, berkads (artificial reservoirs) and boreholes. Shallow wells (mostly in seasonal river-beds) are found in all zones; their yields and quality decline in the dry seasons. Berkads are found mainly in the Hawd areas (Warder, eastern Korahe, eastern Degahbur and Jijiga Zone) where permanent water sources do not exist. Historical, permanent, deep wells are found in Warder Zone, particularly in Warder District. Other sources include natural depressions (balleys) which collect rain water, or hand-dug ponds. Water quality is often a problem for all sources – boreholes but are very few. Water scarcity is an endemic problem in most areas, particularly those with no permanent water points. Areas that are known for their chronic water shortages in the dry seasons are all berkad-dependent areas (see above), and most of Fik, and parts of Gode, Liban and Afder, which depend on shallow wells and balleys.

Soil fertility: high around rivers (permanent and seasonal) which flood seasonally. These areas are cultivated by agropastoralists and riverine communities. Most of the Hawd area has sandy soils which are very porous and do not support crop production. Many parts are rocky and hilly.

Seasonality in Somali Region

The region can be divided into two areas based on the seasons of the year: Shinile and Jijiga Zones to the north, and the remaining seven zones to the south. The rainfall pattern for both is bimodal but the timings differ slightly, as illustrated below:

### Wet and Dry Seasons in Somali Region

<table>
<thead>
<tr>
<th>Administrative Zones</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
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<th>Feb</th>
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<tbody>
<tr>
<td>Fik, Degahbur, Korahe, Warder, Gode, Afder, Liban (and Harshin District of Jijiga Zone)</td>
<td>Jilaa dry season</td>
<td>Go rains: Mid Apr-end June</td>
<td>Hagaa dry season: early Jul - end Sep</td>
<td>Deyr rains: (early Oct-late Dec)</td>
<td>Jilaa dry season: Jan – mid-Apr</td>
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<tr>
<td>Jijiga and Shinile Zones excluding Harshin of Jijiga Zone</td>
<td>Jilaa dry season</td>
<td>Diraa (Gu) rains: late Mar-late May</td>
<td>Hagaa dry season: late May - late Jun</td>
<td>Karen (Gu) rains: late Jul-Sep</td>
<td>Jilaa dry season: six dry months with possibility of 2-4 days hais rains in Shinile and parts of Jijiga</td>
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Livelihoods

Four generic livelihood types exist in the region: pastoralism, agropastoralism, farming (sedentary and riverine) and urban. Pastoralism is the most prevalent, comprising about 60% of the region’s rural population. Agropastoralism comprises about 25% of the total rural population, and is a mixture of extensive livestock rearing and rain-fed crop production; some may be better described as pastoralists with opportunistic farming activities – as in Fik and some parts of Liban Zone. The remaining 15% of the rural population comprises sedentary (Jijiga) and riverine (Shabelle and Dawa-Ganale) farmers. Both farming and agropastoral groups keep some livestock but farmers’ herds do not migrate and are sometimes hand-fed, only migrating with other groups if there is a severe drought. Livelihood population statistics can be found in Section 1, Part 3.

Land: all land is owned by the government and there are no title deeds, even though reference is made to individual ownership. Agricultural land tends to be inherited and individually “owned”, although it is often managed by the community or clan/sub-clan. “Ownership” may be limited near to rivers where irrigation is easier, but otherwise household capacity to cultivate is usually the limiting factor; so wealthier households
tend to cultivate wider areas. Grazing land tends to be communal, although herd migration may take people into wider areas; in Jijiga, households may own some grazing land. Land to farm salt in Afder can only be afforded by middle and better-off households.

**Crop production and agropastoralism:** maize and sorghum are the main crops cultivated. Sorghum (more drought-resistant) is predominant, particularly where water is scarce. Constraints to crop production include limited knowledge/skills, lack of agricultural inputs (e.g., appropriate seeds, draught power (oxen/tractor), tools), and difficulty in clearing land. In dry seasons crop residue is often used as fodder for livestock. In Shabelle (Riverine) sesame, cowpeas, vegetables and fruit are also cultivated; and around Mustahiil and Kelafo onions have recently been introduced by wealthier households as a cash crop (but there are high input costs). In Jijiga (Sedentary) during the short rains (Karan) short-maturing varieties are cultivated (wheat, barley, maize), and some groundnuts in Babile District; also small amounts of chickpeas, flax, peas, oats, lentils, Irish and sweet potatoes, onions, garlic, and *chat* (some as cash crops); here *Guus'* is the principal arrangement used to ensure all households are able to plough and cultivate some land. The Dawa-Ganale Riverine LZ is characterised by the “Burjuwasi” sharecropping system whereby landowners offer the large part of their land to a pump owner in return for water; the pump owner then takes on labourers (“burjuwasi”) to cultivate the land on a 50-50 sharecropping basis. In Liban Zone beans are also cultivated, and sesame, groundnuts and early-maturing (3-month cycle) maize have been introduced in some areas. Here "Goob", a system of collective agricultural activities whereby farmers assist one another, is practiced.

**Employment:** there is relatively little employment to be found outside the towns, other than seasonal agricultural labour, and sometimes livestock herding. Households may send members to seek work in towns as a coping strategy, but it does not usually generate much extra cash once living expenses have been accounted for. The major employers are the regional and federal governments, NGOs and the private sector (particularly urban services like restaurants). Overall the skilled labour force is extremely limited.

**Social services:** infrastructure – roads and access to health, education and water – is poor throughout the region.

**Water:** access to good water can be a problem, particularly in areas where permanent water sources are scarce, such as Liban, Fik, Warder, Korahe and parts of all the other zones. Shallow and deep wells, *balleyes* and ponds are largely communal but boreholes are owned by the government. Expensive dry season water-trucking is frequent in many of these parts. Tensions/fighting may break out at water points during shortages. In God-usbo (Afder) water is too salty for consumption and potable water is expensive to buy.

**Livestock and migration:** cattle, sheep/goats (shoats) and camels are the main productive livestock reared. The tables in Section 3 of Part 3 give livestock population figures for the region. Pasture surveying is common throughout the region, and it is used to inform decisions about migration. In normal and good years migration tends to be within home districts or zones, whereas poor years may result in migration across to other zones, neighbouring regions or even into Somalia, Kenya or Djibouti. Households often split in the dry season, with the harderier animals (*horoweyn*) being taken further afield to find suitable water and pasture, usually closer to rivers and boreholes. The weaker animals and part of the family (known as *haas*) would not normally migrate in normal dry seasons. Migration patterns are presented in each of the baseline reports.

**Markets and Marketing**

**Markets and marketing corridors:** different administrative and livelihood zones have their own main market towns. Most zonal capitals and district towns are important trading centres for surrounding villages/towns. However there are a number of important market towns which serve wider areas and serve as marketing hubs for livestock, food and non-food commodities. Figure 1 shows these towns, both within the region, and also across the borders into neighbouring regions of Ethiopia and also into Kenya, Djibouti and Somalia. Figure 1 also shows the six distinct destinations or transit routes for cross-border livestock and commodities for the population of Somali Region. Through these corridors also come food stuffs – rice, wheat flour, pasta, sugar - new and second hand clothes, and all types of household items: the main commodities purchased. The main commodities sold by the pastoralists and agropastoralists are livestock and to a lesser extent livestock products (milk and ghee). Lack of demand for hides and skins and the region means these are hardly sold at all. Agropastoralists also sell cereals – mainly maize and sorghum. Sesame, onions, fodder, and fruits and vegetables grown along the riverine areas are sold to neighbouring markets.
**Constraints**: the Gulf livestock ban imposed in 2000, due to reports of livestock disease, prevented livestock from being imported into the Gulf states from the Horn of Africa; since then alternative export routes have gradually developed. Internal policies with respect to cross-border trade have had a negative impact on the informal import and export trade, particularly since crackdowns intensified in late 2002.

**Trade with the rest of Ethiopia**: trade (particularly livestock sales) with the rest of Ethiopia is very limited. The interface markets with the rest of Ethiopia are Negelle, Diredawa, Meisso, Moyale and Babile, where livestock is sold for consumption in the Ethiopian highlands and as raw materials for export-oriented slaughterhouses. But the volume of trade is very small. Some maize, sorghum and other cereals are supplied into Somali Region from neighbouring areas of Oromiya through these markets also. Reasons suggested for this poor trade include the fact that there is little integration with the national-level economy (associated with poor pastoral policies): regularising trade and formation of pastoral marketing cooperatives may help address this. Also poor transport links and a lack of historical trading and understanding between such distant areas (Ethiopia’s main meat processing plants are very far from the region) cause such trading to be perceived as risky. Markets and corridors are summarised in Figure 1 below and in the table in Section 2 of Part 3.

**Figure 1 - Somali Regional State – Main livestock Markets and Marketing routes**

*Source: From SCUK/DPPB livelihood baseline studies – 2001-2002*

NB: Foodstuffs, clothing and other household items would normally flow in the opposite direction as livestock trade.
Wealth Characteristics

**Pastoralists:** wealth is generally determined by livestock holdings, particularly camels and shoats; for some groups such as the Shinile pastoralists, cattle are more important. In Warder, Korah and Degahbur, berkad ownership is important as there are very few natural water sources. The poor in all livelihood zones depend on the richer households in that they provide labour (like herding) and in return they receive gifts like zakat (religious alms), kaamo (support: usually milk or ghee) or irmansi (loan of milking animals).

**Agropastoralists:** wealth is determined principally by livestock holdings, particularly cattle, followed by land holdings. The latter is usually restricted only by the capacity of the household to cultivate the land. This is because agropastoral land is generally marginal in terms of crop production, and competition for land is not as great as in sedentary farming areas. So hectarages can be significant.

**Sedentary farmers:** wealth is mainly determined by land holdings. Among the Jijiga Sedentary farmers, oxen ownership is important, as is labour availability. Wealthy households have more assets (e.g. oxen) which enable them to cultivate more land and have higher productivity. The Dawa-Ganale Riverine area is unusual with its “burjuwasi” sharecropping system (see above); here ownership of irrigated land is important.

Food Sources

**Pastoralists:** own produced milk and ghee (the latter for cattle herders) are important foods for Somali pastoralists. However the bulk of their food is purchased cereals. Better-off households generally consume more livestock products as they have bigger herds. Milk is usually consumed in large quantities during the rainy seasons, reducing dramatically in the drier seasons with more cereals purchased to meet energy needs. Purchased staple foods include maize or sorghum, although in Warder and eastern parts of Degahbur rice is the staple. Non-staple food purchases include sugar and oil. Wealthier groups also purchase some condiments and household items. Gifts of food or milk animals (irmansi) are important food sources for poor households, who may also supplement their diet with wild food. Poorer households spend almost their entire incomes on purchasing food grains and sugar.

**Agropastoralists:** obtain their food from their own cereal (maize/sorghum) and livestock production (milk/ghee) in normal years. Since most of the agropastoral areas are marginal, harvests are usually small and do not last the whole year. Households, particularly the poor ones, usually buy cereals from the market in the dry seasons, and also buy non-staple sugar and oil. Poor agropastoral households tend to receive a significant quantity of food in gifts, mainly because of the religious obligation which requires that part of the harvest be given to the poor. Since the 2000 drought, a small amount of food aid also forms part of the diet.

**Sedentary farmers:** principally consume their own crops and milk products; they purchase non-staple foods (sugar and oil) and any shortfall of staples (mainly poor households). Poor households in Jijiga have to sell their crops immediately after harvest when prices are low as they have to repay debts; yet they purchase cereals later when prices are high.

Incomes

**Pastoralists:** the main income source for pastoral groups is livestock sales (often making up to 50% or more of all income). Poorer households usually have more diversified income sources as they have too few livestock and can ill-afford to sell them. Ghee sales, particularly for cattle-rearing pastoralists is also a source of income. Milk is sold by pastoralists only when they are near settlements or near permanent water points during the dry seasons. Normally most pastoral groups just consume their milk as access to markets is difficult. Other sources of income, particularly among the poor, are the collection and sale of construction materials, firewood, charcoal, gums and resins (as in Fik, Afder and Liban), and engagement in unskilled labour activities such as working in tea shops and livestock herding for the richer households. Again most of these opportunities are more available to those living near towns, which provide the demand. Payment for herding may be given in kind. In the drier seasons water is sold, particularly in berkad-dependent areas. Pack camel rent is an important income source in Shinile zone.

**Agropastoralists and sedentary farmers:** engage in a variety of income generating activities. Livestock and crop sales are both important, if crops do well. Poorer agropastoral households engage in more labour intensive activities for income, including, farm labour, wild products collection for sale, etc, while younger
members of these households go to nearby towns (usually agropastoral areas are nearer settlements) to work in tea shops, work as house-helps, etc. Agropastoralists may also sell fodder. Wealthier agropastoralists/farmers are able to store their grain for sale at a later date when prices are better. Jijiga sedentary farmers may sell some chat for income during the wet seasons.

In general, when pastoralists and agropastoralists want to sell their livestock, they seek out markets with better prices. However their need to sell livestock is largely determined by their need for cash. Since pastoralists have a relatively high need to purchase cereals, they tend to have higher incomes than agropastoral households of similar wealth ranking, but their expenditures would also be higher.

In some geographical areas pastoral or agropastoral households benefit from remittances sent by relatives in Djibouti, Somaliland, Jijiga and even from other countries.

**Expenditures**

For all groups and particularly pastoralists, the biggest expenditure items are staple foods. Maize, sorghum, wheat grains or rice are the main purchases depending on geographic area. Sugar is also important as it is used with tea (and porridge for children). Average households (6-8 persons) can consume up to 500g of sugar a day or more. The purchase of cereals and sugar is higher in the drier seasons when milk and ghee are scarce. Poor households in all livelihood zones spend proportionately more on food than middle or wealthier households.

Agropastoralists purchase less cereal as they consume part of their produce. Other expenditures include tea leaves, salt, payment for Koran school and clan contributions/social obligations. Expenditure on agricultural inputs and veterinary services as well as on human medicines is usually very modest, and usually by wealthier groups only. This is mainly because these services are hardly available. Where available for some fee, households prefer to use traditional medicines and techniques instead of spending money on these services.

Clothing and footwear are important expenditure items for all livelihood groups, although costs are reduced significantly by the availability of cheap second hand clothes in most areas. Torches, kerosene and detergents are also purchased, with torches more common among pastoralists and kerosene among agropastoralists. A significant amount of income is spent on chat (for men), especially by households of all livelihood groups in Jijiga and Shinile zones.

For poorer groups expenditure usually equals income, so they have little flexibility. Middle and wealthier groups may have some flexibility with which they may re-stock in good times.
# Vulnerabilities, Risks and Responses

### Key vulnerabilities

- Rainfall delay or failure and drought;
- Flooding, particularly in the riverine areas;
- Market disruptions caused by trade bans, border closures, road blockages (by rain or insecurity), crackdowns and restrictions;
- Insecurity and conflicts – inter-clan or related to claims over land ownership by different communities;
- Environmental degradation – gullies/erosion, invasive plant species;
- Poor water quality (always) and access (in dry times);
- High in-migration depleting water and pasture resources and increasing risk of diseases spreading;
- “Hamaday” or frost in Jijiga around October/November;
- Crop diseases and pests;
- Livestock diseases;
- Poor infrastructure and government services impacting negatively on people’s ability to cope with hardships;
- Isolation – high prices for imported commodities;
- Fuel supply and pump failure for irrigated areas.

### Main risk-minimizing strategies

- Pasture survey and migration
- Old/weak animals slaughtered or sold before drought
- Slaughter of new-born cattle/sheep
- Controlling breeding so as to coincide birthing with the rainy seasons (used mainly in sheep)
- Mixed cropping and varieties (drought-tolerant; early-maturing) – mainly in settled farming areas;
- Herd species diversification and splitting in dry seasons
- Water harvesting and conservation – berkads, ponds, etc
- Grain/food and fodder storage (wealthier households)
- Social support systems (kaalmo & zakaa)
- Make ghee for the dry season (mainly cattle areas)
- Increase pack animals

### Main coping strategies

- Increase livestock and livestock product sales
- Old/weak livestock slaughtered for consumption
- Labour migration to towns
- Household splitting (eg children to relatives etc)
- Seeking agricultural labour / employment
- Diversify income sources – agropastoralists have better opportunity to do so – e.g. selling bush products, labour, etc.
- Increase bush product collection and sale
- Livestock migration / herd splitting
- Minimise consumption, reduce meals and expenses
- Reduce gifts (by better-off to poor)
- Wild food consumption – option declines in drought situations
- Community-funded water-trucking to areas of good pasture
- Seeking relief assistance
- Storage of ghee until dry season when prices are higher
Long Term Food Security and Development Recommendations

**Droughts and Floods: pasture and water management**

- Improve rangeland management through eg introduction of better forage species, protection of certain areas during wet seasons, community and private grazing areas
- Construct berkads / wells in dry season reserves where pasture is available but no water, and harness rainwater (control gullies, develop dams, spread out run-off water); carry out water hygiene training.
- Monitor river levels and raise dykes to prevent unwanted floods and manage flooding for irrigation

**Livestock diseases**

- Improvement of (including access to) veterinary and extension services – including training of more vets and paravets, mobile extension and health services for livestock, and veterinary support services in every district (or at least Zone) equipped to deal with endemic and outbreaks of disease.

**Crop pests and diseases, and post-harvest losses**

- Introduce short-maturing crop varieties and treated seeds (to reduce loss to pests, diseases and moisture stress) and encourage and promote intercropping
- Expand areas under cultivation by use of animal traction
- Improve grain storage facilities and fodder storage (tied up in trees)
- Improve access to pesticides (e.g. facilitating supply to private dealers and/or farmers’ cooperatives)
- Promote better/healthier ways to store milk, ghee and meat

**Market constraints and shocks including government policy on cross-border trade**

- Establish internationally-recognised livestock health certification bodies and work towards removal of international trade restrictions
- Improvement of marketing and market information systems:
  - encourage formation of marketing cooperatives etc.
  - improve access to markets and/or establish buffer stocks for grain
  - improve market support (facilitate movement of crops from surplus to deficit areas etc.)
- In emergencies provide slaughter slabs and emergency livestock purchase with favourable prices and meat-drying facilities
- Development of grain banks with credit facilities and market support

**Conflict and insecurity**

- Maintain peace and stability through establishment of community conflict prevention and resolution mechanisms and permanent Somali-Oromo and Somali-Afar peace bodies

**Transport and communication infrastructure problems**

- Improve roads and build bridges to provide access between different parts of zones and within the region
- Provide reliable telecommunications and continuous electricity supply to at least all district headquarters

**Poor social services**

- Construct, equip and staff sufficient health centres and referral hospitals, including training health staff and establishing a regular flow of affordable medicines; stock medicines for common ailments
- Improvement of agricultural inputs through the design of appropriate extension packages
- Construct, equip and staff sufficient schools, including teacher training

**Other recommendations**

- Development of sustainable Early Warning Systems and periodic contingency planning
- Rehabilitation of internally displaced persons, pastoral dropouts and returnees
- Facilitate rural-based savings and credit systems;
- Develop irrigation in river areas through provision of pumps etc to facilitate transition to farming
- Increase diversity of animal herds (less dependence on drought-vulnerable species)