# THE PRACTITIONERS' GUIDE TO HEA

## Chapter 6: Adaptations of HEA

# 6 ADAPTATIONS OF HEA

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The household economy analytical framework can be used in a wide variety of different settings, making it both a consistent and a flexible tool. In recent years the approach has been used to assess both rural and urban populations, pastoral, agro-pastoral and crop-dependent groups and refugees and the displaced. HEA has also been used in emergency situations (where speed is usually of the essence, and a rapid and highly targeted approach is required) and more formally to strengthen national and sub-national early warning systems (in which case more time can be taken to develop 'full' baselines and to integrate these into regular monitoring and seasonal assessment activities). While the overall objective in each situation remains the same — namely, to analyse the access that different groups have to food and cash income in relation to their basic survival and livelihood needs — the details of the analytical approach vary from one context to another. In this chapter guidance is provided on the use of the approach in three different situations: urban areas, pastoral areas and the rapid assessment of emergencies.

After reading this chapter, practitioners should understand the main differences between undertaking an HEA assessment in an agricultural and urban environment. They should be able to describe the main characteristics of urban livelihoods and explain what specific assessment and monitoring modifications these differences lead to. In addition, practitioners should be familiar with the term herd composition, and be able to explain why it is crucial to know about different livestock herd dynamics before doing a pastoral assessment. Seasonality, and the role it plays in outcome analysis in pastoral areas, is also a critical learning point for practitioners, highlighted in this chapter.

*Mark Lawrence wrote the urban and pastoralist sections of this chapter; Michael O'Donnell wrote the section on adapting HEA to make it more rapid*

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## RELATED CD FILES

The CD that accompanies the **Practitioners' Guide** contains the following files relevant to Chapter 6, found in the Chapter 6 directory:

- **Annex A: Urban Interview Formats**
  - Urban Interview Format 1_Community Level
  - Urban Interview Format 2_HH Representative
  - Urban Assessment Checklist - Harare
  - Urban Assessment Checklist - Hargeisa
- **Annex B: Urban Profile Preparation Form**
  - Guidance Notes for Preparing Urban Profiles
- **Annex C: Pastoralist Interview Formats**
  - Pastoralist Interview Format 1_District
  - Pastoralist Interview Format 2_Market Trader
  - Pastoralist Interview Format 3_Community Representative
  - Pastoralist Interview Format 4_Household Representative
- **Annex D: Pastoralist Profile Preparation Forms**
  - Guidance Notes for Preparing Pastoralist Livelihood Zone Profiles
  - Blank Pastoral Livelihood Zone (2 WGs)
- **Annex E: Rapid Assessment Checklist**
  - Checklists for Rapid Assessments

## RELATED TRAINING SESSIONS

The **HEA Training Guide** provides the following module relevant to Chapter 6:

**MODULE 6: ADAPTATIONS OF HEA**

# URBAN AREAS

## Background

In recent years, HEA assessments have been conducted in urban areas in a number of countries, including Zimbabwe, Djibouti, Somaliland, Angola, Palestine, Serbia and Kosovo. These assessments have generally been undertaken for one of two reasons. Either there has been an understandable concern to learn more about the burgeoning urban population in many developing countries, and especially the conditions in the poorest areas and shanty towns. Or there has been interest in assessing needs following internal conflict (e,g. Angola, Kosovo) or urban unrest (e.g. Zimbabwe). In most cases the purpose of the work has been two-fold: to judge the level of immediate need, and to set up systems for the on-going monitoring of urban livelihoods. Some of the shocks to which urban households are vulnerable are listed for three cities in **Box 1**. These shocks vary from place to place, but all have in common the potential to affect either the cash income or the expenditure of poorer households. A particular concern in Harare – and presumably in other cities with high rates of HIV infection - is the potential effect of AIDS.

**Box 1: Shocks to which urban households are vulnerable**

**Harare (Zimbabwe)**

- Inflation: price increases (rents, electricity, bus fares)
- Formal sector job losses
- Crackdown on 'illegal' businesses in the informal sector (loss of goods, tools, capital)
- Illness or death of (or divorce from) the main income earner (often AIDS-related)
- Unexpected large expenses (e.g. funerals, medicines - again often AIDS-related)

**Djibouti**

- Changes in Government Policy affecting
  - Salaries
  - Pensions
  - Cost of food items
  - Cost of non-food items (water, electricity, schooling, etc.)
  - Migration into the city
- Variations in activity in the port and construction sectors that affect the availability of casual labour
- Variation in livestock and crop production in the areas supplying Djibouti with sorghum, meat, vegetables and *qat*.

**Hargeisa (Somaliland)**

- Exchange rate fluctuations that lead to increased imported food costs
- Decline in the construction sector (bans)
- Restrictions on trade with Ethiopia and abroad (e.g. qat)
- Restrictions on or reductions in remittances

### Main characteristics of urban livelihoods

The major difference between urban and rural areas is, obviously, the lack of access to own production and the heavy dependence on the market not only for food but also for many non-food items that are either free or can be collected free of charge in rural areas (e.g. accommodation, cooking fuel, water). This means that poor urban populations are highly vulnerable to changes in market conditions and especially to changes in the price of basic food and non-food commodities.

Another difference is the source of cash income. Regular formal employment and business are the most obvious options in an urban setting, but these tend to be the preserve of middle and better-off wealth groups. Very poor and poor households are frequently active in the (often very large) informal or 'grey' economy. At this level, casual labour, petty trade and small-scale business are the main income generating activities (**Table 1**).

**Table 1: Types of income generating activity by wealth group, Harare (2001) And Djibouti (2003)**

| | *Harare* | *Djibouti* |
|---|---|---|
| **Very Poor** | *1 income source per household:*<br>• Salary - some factory workers, security guards, domestic workers<br>• Petty Trade - e.g. vending | *1 income source per household:*<br>• Petty trade - school snacks, bread, prepared foods, vegetables, tea stalls<br>• Casual labour - dockers, construction workers, market porters |
| **Poor** | *2 income sources per household:*<br>• Salary – same activities as very poor<br>• Petty Trade - e.g. vending<br>• Home industries - small tuck shops, carpenters, welders, hair salons | *1 income source per household*:<br>• Salary/Pension - cleaners, taxi drivers<br>• Petty Trade - qat, small kiosks, meat sellers<br><br>*2 income sources per household:*<br>• Petty Trade + Casual Labour |
| **Middle and Better-off** | *1-2 income sources per household:*<br>• Salary – most private and public sector employees<br>• Business – various types, including renting out of rooms. | *1 income source per household:*<br>• Salary/Pension – most private and public sector employees<br>• Business - shops, restaurants, minibuses, qat importers/distributors<br><br>*2 income sources per household:*<br>• Skilled Casual Labour (electricians, masons) + Petty Trade<br>• Salary + Business |

Total income depends not only on the type of income-generating activity, but also the number of income sources per household. The poorest households are typically those with only one source of income. This may either be because there is only one individual able to work (e.g. many female-headed households, or many households affected by HIV/AIDS), or because the household cannot accumulate enough capital to start even the smallest of petty trade or business activities. At the other end of the scale, salaries and business activities often go together, since it is the salary that provides the capital required to start the business (or to sustain the business through a difficult patch). And business activities are often necessary to supplement the relatively low salaries on offer in developing countries, especially in the government sector. Other sources of income that should not be neglected in urban areas are pensions and social welfare payments. Where these exist, they may be the only regular source of cash income that poor households receive.

It is possible that borrowing and debt are more significant factors in an urban than a rural setting. There are two reasons for this. Firstly, there are many fixed costs that cannot easily be avoided (food, rent, water, electricity, school fees, transport etc.), and there may also be unexpected large expenditures, such as medical or funeral expenses. Secondly, there may be more chance of obtaining a loan, both because loan institutions are more active in urban

areas and because urban households can offer a better guarantee of repayment, either because they have a regular salary or because they own property that can be advanced as collateral.

Clearly, in an urban area there are fewer opportunities to grow crops or to keep livestock, but that does not mean that these activities do not exist at all. It may be quite common in some areas for people to grow a little food in a garden, allotment or other plot. Similarly, it is not unusual for a small number of animals to be kept, even if it is only a few chickens or a goat in the back yard. These should not be entirely ignored in a household economy assessment. Opportunities for own production will of course tend to increase the further one is away from the city centre, and may be quite substantial in peri-urban areas where house plot sizes may be larger and settlements may be interspersed with fields or grazing land. In these areas, vegetable production for the urban market may be an especially important source of cash income. If work is to be done in a peri-urban area, a choice will have to be made between the field method for agricultural areas (see Chapter 3) and the urban assessment method described in this chapter, or, alternatively, elements of the two will have to be combined.

Urban households may also have close links to rural relatives, especially if they are themselves relatively recent migrants from a rural area. This may result in several types of mutual assistance. Rural relatives may send food (or urban households may collect it while on visits home), while urban migrants may send gifts in cash or in kind. Or a rural relative may come to work for a better-off household as a domestic servant, or be sent to live with an urban relative while attending secondary school.

Since there are fewer year-to-year and seasonal variations affecting urban areas it may, at first sight, seem that the timeline and seasonal calendar exercises are less important for an urban enquiry. In fact this is not necessarily the case, and both exercises may yield important information on urban livelihoods.

**Box 2: Timeline of events affecting the economy of Djibouti (2003)**

| *Year* | *Month* | *Event* |
|---|---|---|
| **1998** | May | • Re-routing of Ethiopian trade from Asab to Djibouti, following war between Eritrea and Ethiopia |
| **1999** | Oct | • Second phase of structural adjustment initiated (Oct 1999-Jan 2003) |
| **2000** | Feb<br>Jun<br>Oct | • Peace accord signed ending internal conflict in north of the country that began in Nov'91<br>• Agreement signed with Dubai Port Authorities for management of port<br>• Djibouti ratifies trade accord with COMESA, ending tariffs and trade barriers |
| **2001** | Apr<br>Oct | • Djibouti closes border with Somaliland (until June 2002)<br>• Return of Djiboutian refugees from internal conflict |
| **2002** | Jan<br>Jun<br>Sep<br>Oct | • German and Spanish warships arrive in Djibouti to patrol Red Sea shipping lanes in support of US actions in Afghanistan<br>• Agreement signed with Dubai Port Authorities for management of airport<br>• Approximately 900 US troop arrive to establish base for anti-terrorist activities<br>• Tightening of border controls by Ethiopia (on-going) |
| **2003** | Jan<br>Jul<br>Sep | • Multi-party elections<br>• Foreign migrants told to leave Djibouti<br>• 70,000 – 100,000 foreign migrants expelled to Ethiopia, Eritrea and Somalia |

**Box 2** indicates the main changes affecting Djibouti City (an important Red Sea port and international military base) in the six years before an urban assessment undertaken

in 2003. Both port and military activity had increased, for a number of reasons. At the same time, structural adjustment and the privatisation of the port and airport had had significant effects on levels of formal employment and wages and, finally, the expulsion of foreign migrants in 2003 had a number of impacts (e.g. reducing competition for low-paid work, reducing demand for basic goods and services).

Seasonal variations can also be significant, and a further example from Djibouti is given in **Table 2**. The most difficult time of year in Djibouti is the summer, when maximum temperatures reach 40°C and humidity remains consistently above 50%.

**Table 2: Seasonal factors affecting expenditure and income in Djibouti City**

**Summer (May-Sep):**
- Increased electricity consumption (fans and air-conditioners)
- Increased requirement for water
- Seasonal out-migration to cooler areas (reducing opportunities for casual labour and petty trade)
- Increased fire risk in shanty towns (destruction of houses)
- Reduced opportunities for fishermen (late summer, due to unfavourable winds)

**Winter (Oct-Apr):**
- Schools open (fees, textbook and transport costs)
- Increased production in local vegetable gardens
- Post-harvest season in areas supplying Djibouti city with sorghum

## Monitoring urban food security

In rural livelihood zones there is almost always a regular seasonal cycle of production and consumption and therefore a clearly defined consumption year which typically begins immediately after the main harvest. This is the logical timeframe for analysis. The same is not true of an urban area, where seasonal variations are less marked and the timing of hazards affecting urban livelihoods is less predictable. This means that it makes more sense to monitor urban livelihoods on a regular – usually monthly – basis rather than to conduct one-off assessments once or twice a year.

**Table 3: Proposals for monitoring urban livelihoods in Djibouti and Harare**

| **Djibouti** | |
|---|---|
| **What to monitor?** | **How to monitor?** |
| Cost of a basic expenditure basket of food and non-food items | • Monthly market price surveys |
| Government policy affecting:<br>• levels of government employment and salaries<br>• the cost of food items<br>• the costs of non-food items (water, kerosene, electricity, schooling, health care etc.)<br>• migration into the city | • Media and Government publications |
| Activity in the Port and Construction Sectors | • Port statistics<br>• Construction project data |
| Livestock and crop production in areas supplying Djibouti | Information from early warning projects in neighbouring countries |
| **Harare** | |
| **What to monitor?** | **How to monitor?** |

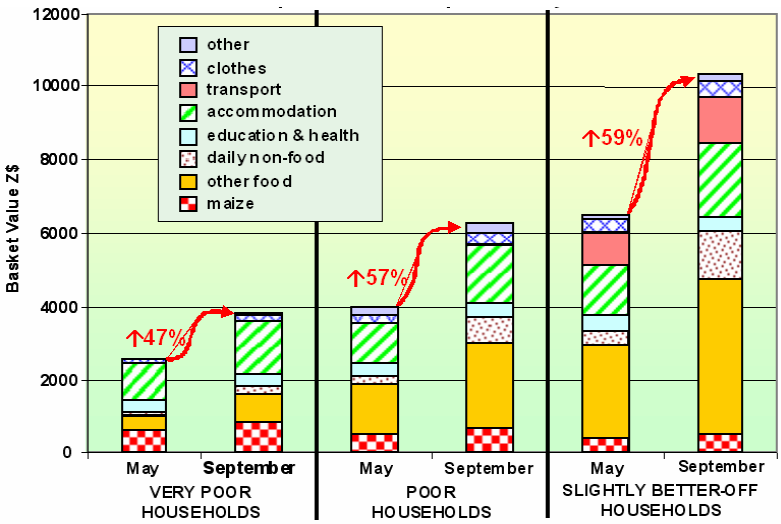
| Table 3: Proposals for monitoring urban livelihoods in Djibouti and Harare | |
|---|---|
| Cost of a basic expenditure basket of food and non-food items | • Monthly market price surveys |
| Formal sector employment and salaries | • National Employment Councils (NECs) for each industrial sector.<br>• Government gazettes, which are published periodically when new wage agreements are signed by NECs.<br>• The Zimbabwe Congress of Trade Unions (ZCTU) for information on wage agreements and changes in numbers employed.<br>• The Ministry of Labour, which monitors retrenchments and wages.<br>• The Registers of Companies and Financial Institutions, which monitor company openings and closures. |
| Informal sector incomes | • Monthly survey of incomes/profits in informal businesses |
| Indicators of 'coping' | • Non-payment of electricity and water and percent being cut off (District Offices)<br>• Non-payment of school fees (Ministry of Education or directly from a sample of schools)<br>• Malnutrition at clinics (Ministry of Health, Food and Nutrition Centre, or directly from a sample of clinics)<br>• Movement into peri-urban areas (e.g. reports from the NGO Inter-country Peoples Aid) |

Urban monitoring involves keeping track of changes in both expenditure and cash income. Monitoring expenditure involves defining an expenditure basket, usually for a poor or very

## Case Study 1 : Monitoring urban livelihoods in Harare, 2001

In 2001, rampant inflation in Zimbabwe was one of the main threats to urban livelihood security. Regular price monitoring showed substantial increases in the cost of the expenditure basket for all wealth groups. Parallel monitoring of formal sector wages showed an annual increase of 65% in the minimum wage from 2000-2001, i.e. just sufficient to cover 4 months of price inflation (see figure). The picture for the informal sector was mixed, with income from some businesses keeping pace with inflation, while others lagged behind.

**The Rising costs of household expenditure baskets September 2001 compared to May 2001**



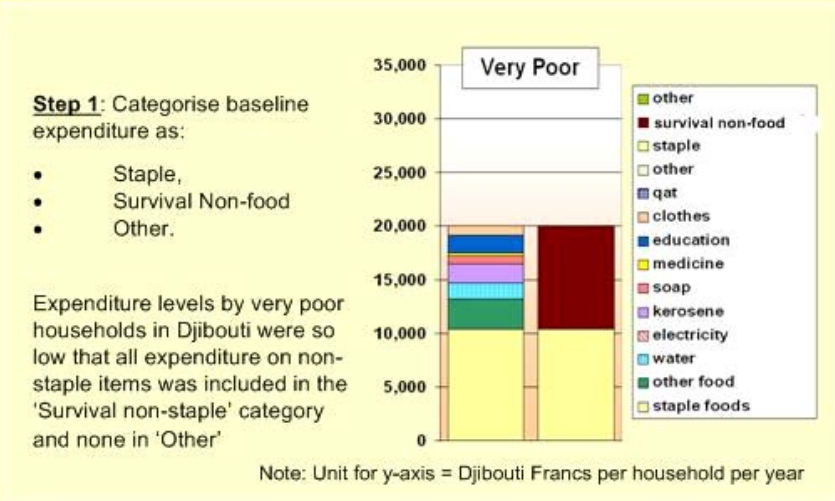

***On-going monitoring showed increasing disparities between income and expenditure throughout 2001***

poor wealth group, and then keeping track of changes in the cost of this through a system of market price monitoring. This is relatively straightforward. Keeping track of changes in cash income is much more difficult, especially as much of this income may be derived from informal sector activities. Cash income can be tracked in a number of ways. In Harare, where informal trading and business activities are especially important, it was proposed to undertake regular 'mini'-surveys, tracking incomes and profits of a sample of small-scale businesses (**Table 3**). In Djibouti, on the other hand, the proposal was to monitor the cash incomes of the poor indirectly, by tracking the amount of bulk cargo offloaded at the port and by monitoring progress with the various construction projects around the city – these activities together account for a significant proportion of local casual employment.

**Case Study 2 : Scenario of the effect of increasing kerosene prices on very poor households in Djibouti**

Scenario analysis in an urban setting is carried out in much the same way as for a rural analysis, except that there is greater focus on questions of expenditure. The basic principle is to consider the effect of the hazard on each of the baseline sources of expenditure, cash and food, and to consider ways in which households will try to cope with the problem, i.e.

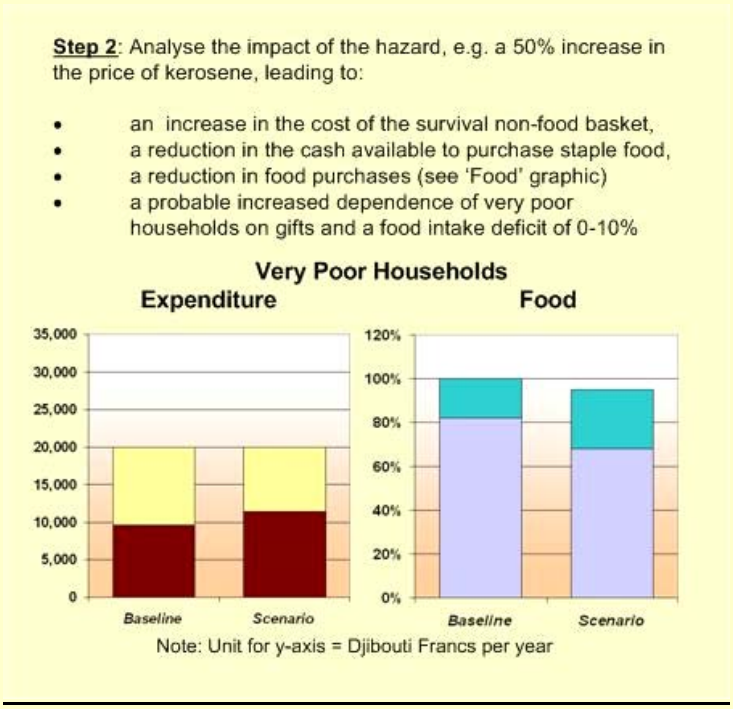
**Outcome = Baseline + Hazard + Response**




***This type of analysis and recommendations by FEWS NET convinced the government to intervene to improve the food security of poor households in Djibouti.***

*Measures taken included:*

- *elimination of the tax on kerosene,*
- *a reduction in the tax on staple foods,*
- *reductions in electricity charges and taxes for local bakers.*



### Scenario analysis in an urban context

As indicated in **Case Study 2** from Djibouti, a key step in developing an urban scenario is to establish the minimum acceptable level of expenditure on food and non-food items (the minimum expenditure basket)[1]. This represents the level of expenditure (and therefore cash income) below which some kind of intervention is necessary. It is in effect an **intervention threshold**. Clearly, there is an element of subjective judgement in defining this threshold (what really constitutes the 'minimum'?), and different thresholds can be adopted according to the objectives of the assistance programme (support to a minimum level of subsistence, more general income support, asset protection etc.). The objective in the Djibouti example was to support a minimum level of subsistence that included existing expenditure by the very poor and poor on water, education, kerosene, powdered milk etc.

## How To Do It

### Main differences from an assessment of agricultural livelihoods

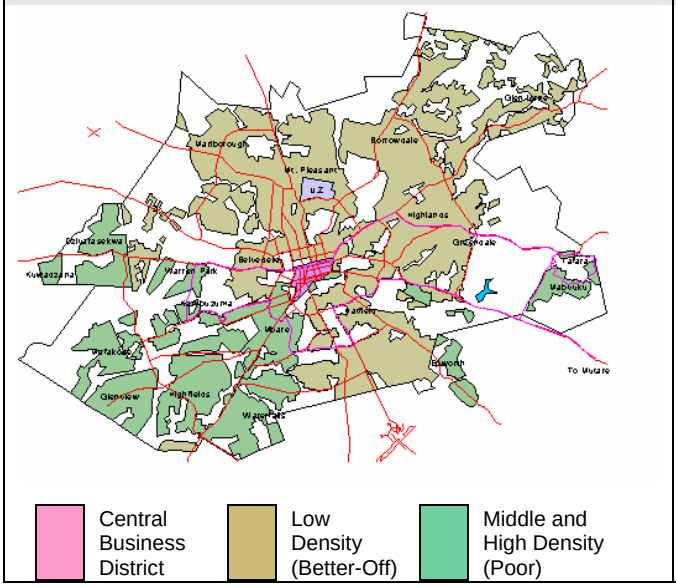
There are a number of differences between an HE assessment in an urban and a rural area.

*The livelihood zoning*

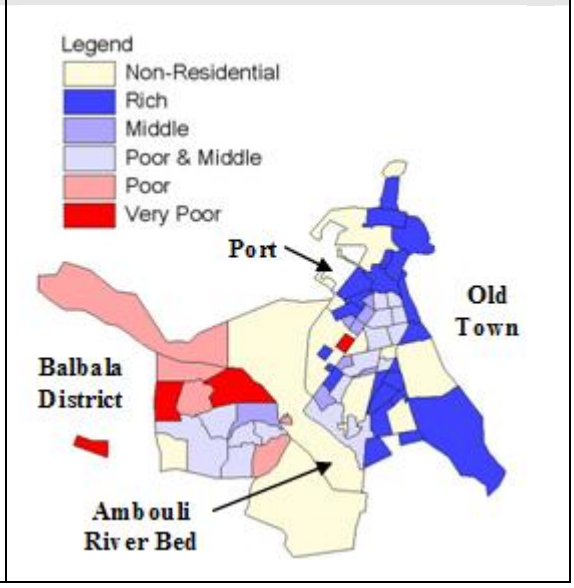
In a rural assessment, the purpose of the livelihood zoning is to distinguish between areas with different production and market characteristics, so that separate baselines can be prepared for each zone. In an urban assessment, the zoning exercise is less about defining different livelihoods than about understanding the layout of the city, developing a sampling frame and planning the fieldwork. In this case, the objective is to divide the town or city into different zones according to the wealth of the area (see **Figure 1**), so that decisions can be made about which parts to visit and which interviews to do there. Having said that, it is also

**Figure 1: Urban zoning based upon the wealth of different areas**

*Harare City and Suburbs*




*Djibouti City*




[1] Case Study 2 is based upon a 3-way split in expenditure (staple, survival non-food and other), which results in the deficit being calculated in food terms (see Food graphic). The same analysis can also be done using a 4-way

important to understand any differences in pattern of livelihood that do exist between one area and another (e.g. the port area, the red light district, the vegetable gardening district, etc.). Another important difference is between urban and peri-urban areas, given likely differences in access to own crop and livestock production, firewood, water, etc. between the two. Where there are major differences in livelihood pattern between these areas, it may be necessary to treat them as separate livelihood zones, as in a rural enquiry.

### *The enquiry at wealth group level*

In a rural setting, it is often most useful to focus on access to food and cash income for different wealth groups. This is because members of a particular wealth group generally share the same pattern of livelihood and a similar limited set of options for obtaining food and cash, pursuing much the same strategies at much the same times of year. The poor, for example, might own between ½ and 1 hectare of land on which they cultivate sorghum and beans, as well as keeping 1-2 milking cows and labouring for between 10-20 days per month on the fields of the better off during the rainy season. The relative homogeneity of rural livelihoods makes enquiry into sources of food and income the most efficient way to generate a rapid understanding of livelihoods in a rural context.

The same homogeneity within wealth groups tends not to be true of an urban setting. Here, one source of food – the market – is usually predominant and so the focus of enquiry generally shifts towards questions of expenditure and cash income. In the town, however, there is often a wider range of income sources for any one wealth group, and earnings are also less regular than in the countryside. One poor household may rely upon petty trading in prepared foods, for example, while another repairs bicycles, and a third porters in the market. Yet all three could belong to the same wealth group. One household may obtain one day of work one week, but four days the next, and so on. Overall, the heterogeneity of urban livelihoods makes it far more difficult to quickly construct an average or typical picture for any given wealth group - that is, if cash incomes are the focus of enquiry.

While cash incomes tend to be heterogeneous in urban settings, patterns of expenditure do not. Poor families tend to spend similar amounts of money on similar things, so that an enquiry into patterns of expenditure is often the most useful approach in an urban setting. There is another very important reason for focusing on expenditure in the town; urban economies are primarily market based, and many of life's essentials, often not paid for in a rural setting (e.g. accommodation, water, firewood, etc.), have to be purchased in the town. It is critical for these non-food elements to be incorporated into the urban analysis.

This is not to say that questions of cash income can be neglected in an urban enquiry. Rather the focus of the enquiry is on determining the typical amount and pattern of expenditure for various groups. Income is used primarily as a crosscheck (i.e. to make sure that it is possible to earn the amount of money said to be spent by the group or household in question).

### *The consumption year and the reference year*

These are key concepts as far as a rural enquiry is concerned, but are of less relevance in an urban setting. Because there are fewer seasonal variations, the concept of a consumption year (lasting 12 months from the start of the main harvest) has little meaning in an urban area, and the analysis can in general be prepared for any defined 12-month period. The next question is then which 12 months to choose for the reference year? The answer for

split (i.e. adding the fourth category of livelihood protection expenditure), in which case both survival and livelihood protection deficits can be calculated.)

most of the urban baselines prepared to date has been the 12 months before the current assessment. This has the advantage of being relatively fresh in people's minds and therefore easiest to remember. Having said that, there may be occasions when it will be appropriate to choose another 12-month period. Suppose, for example, there has been a very significant recent event (e.g. an outbreak of conflict or a sudden major change in economic conditions such as a tripling of fuel prices) then it is probably best to choose the 12 months before this particular shock, so as to avoid the complications of recent acute changes.

### Steps in an urban baseline assessment

The preparation of an urban HE baseline involves the following steps:

- A review of secondary sources
- An urban zoning exercise
- Community-level interviews to establish the wealth breakdown
- Household representative interviews to establish expenditure and income patterns at household level for different wealth groups
- Interviews with selected key informants to generate information on relevant related issues, including the status of the macro-economy, provision of services (water, sanitation, education, health, electricity), the prevalence of HIV/AIDS, etc.
- Analysis of field data and compilation of the baseline picture[2]

### Practical aspects (sample size and field work duration)

**Table 4** provides information on the number of interviews conducted in three different urban assessments. It also estimates the likely duration of fieldwork. The total duration of the exercise will be longer than indicated in the table if there is a need for an initial training workshop (perhaps 3 days) and at least a further day will be required to establish a preliminary zoning before fieldwork can begin. Another 1-2 days will also be needed at the end of the process for a results presentation, if required.

**Table 4: No. interviews, no. field teams and duration**

| | *Djibouti* | *Hargeisa* | *Harare* |
|---|---|---|---|
| **Number of interviews** | | | |
| Community | 29 | 40 | 30 |
| Household reps. | 75 | 60 | 115 |
| **Number of field teams and duration of fieldwork** | | | |
| No. field teams | 5 | 5 | n/a |
| Duration of field work + analysis | 17 days | 17 days | n/a |

The relatively short distances to be travelled makes the organisation of an urban assessment much easier than its rural equivalent. The household representative interviews are also quicker, which means that more interviews can be completed in a day, unless there are other intervening factors (such as the temperature in the middle of the day in the case of Djibouti).

[2]A modified set of guidance notes for completing a livelihoods profile for an urban areas are provided in **Error! Reference source not found.**

## The urban zoning exercise

The zoning exercise has to be tailored according to local circumstances. In Harare, for example, the existing zoning into areas of high-, medium- and low-density housing was adopted as it stood, supplemented by further information from key informants in employment and real estate agencies on income levels and rent levels throughout the city. In Djibouti, a combination of a preliminary mapping exercise with assessment participants plus detailed key informant interviews with arrondissement authorities were used to classify different *quartiers* of the city according to their overall level of wealth[3].

Once a preliminary zoning is available, an early decision will be required on the scope of the enquiry and which areas to include and which to exclude. In Djibouti, since the poorer wealth groups were the focus of the enquiry, it was decided to exclude the richest *quartiers*, and to visit a representative sample of the remainder (selected to include the red light district, for example, as well as *quartiers* noted for their proximity to the main markets, their access to gardens along the Ambouli River, the predominance of dock workers, the location of a particular ethnic community, etc.).

## The community level interview

### *Collecting the data*

The next step is to identify a point of entry into the community. Possible community-based organisations include church groups, residents' associations or local NGOs. Details of these can usually be obtained from local government offices, and guidance sought on which to contact (which have the closest involvement in community affairs, which are most active, etc.). The basic procedure is the same as in a rural area. A wealth breakdown is completed with a group of representatives from the community-based organisation, who are then asked to arrange interviews with small groups of informants from the different wealth groups. Arranging these follow-up interviews at wealth group level can be more difficult than in a rural setting, especially for the better-off wealth groups, who may be very busy and/or prefer to be interviewed alone. In an urban setting therefore, a mixture of group and individual interviews may have to be conducted.

An example of a community level interview form for an urban area is provided in **Annex A.**

- Timeline – to get a perspective on recent events
- Information on population and origin of residents (e.g. are they mainly recent migrants from rural areas, internally displaced, etc.?)
- Information on service provision to the area (water, sanitation and garbage collection, electricity, health and education)
- Information on types of income generating activities and rates of return on these
- Potential hazards in the coming year
- Links with other areas (rural areas, other urban areas, abroad)
- Community dynamics and gifts – information on systems of mutual support
- Wealth breakdown
- Seasonal calendar

[3] In Djibouti, the city is divided into *arrondisements*, *quartiers* and *secteurs*.

### *Analysing the results*

Deriving an overall wealth breakdown for an urban area can be difficult. This is because different results will be obtained for different areas or 'zones' (since these differ from one another in terms of wealth). **Table 5** provides a practical example (from Hargeisa) of how results from different urban zones can be combined. The basic principle is to 'weight' the results from different areas according to their population.

**Table 5: Combining wealth breakdown results from different urban 'zones'**

| Type of Area | Wealth breakdown (% households) Range and mid-point (in brackets) | | | | % total population |
|---|---|---|---|---|---|
| | Very poor | Poor | Middle | Better-off | |
| 'Mixed' areas | 0-10% (5%) | 20-30% (25%) | 50-60% (55%) | 10-20% (15%) | 85% |
| 'Poor' areas | 25-35% (20%) | 35-45% (40%) | 35-45% (40%) | 0% | 15% |
| Whole city | 5-10% | 25-30% | 50-55% | 10-15% | 100% |

Calculation of weighted average for whole city, based on mid-points:
= {(% 'mixed' areas ÷ 100) x (% total popn in mixed areas)}
+ {(% 'poor areas ÷ 100) x (% total popn in poor areas)}
e.g. for Very poor = {(5% ÷ 100) x (85%)} + {(20 ÷ 100) x (15%)} = 7.25% or range of 5-10%

However, this type of calculation is only appropriate if the definition of wealth is the same in each of the zones. This is unlikely to be true, since what is meant by 'poor' or 'better-off' in one zone can easily differ from that in another. In practice, therefore, some re-classification of the results from different 'zones' may be required before the calculations in **Table 5** can be completed. An example of what is meant by re-classification is given in **Table 6**.

**Table 6: Procedure for re-classifying household representative interviews in an urban area**

| Results from the Field | Very Poor | Poor | Middle | Better-off |
|---|---|---|---|---|
| **Interview Set 1 ('Mixed' area)** | | | | |
| Wealth breakdown | 5% | 25% | 55% | 15% |
| Total expenditure/income ('000) | 20 | 30 | 50 | 75 |
| **Interview Set 2 ('Poor' area)** | | | | |
| Wealth breakdown | 0% | 20% | 40% | 40% |
| Total expenditure/income ('000) | n/a | 20 | 30 | 50 |
| **Interview Set 2 Re-Classified** | ***Poor becomes very poor, middle becomes poor, etc.*** | | | |
| Wealth breakdown | 20% | 40% | 40% | ← |
| Total expenditure/income ('000) | 20 | 30 | 50 | ← |

This shows the results from two 'sets' of interviews (where 1 'set' consists of the wealth breakdown and associated household representative interviews from one location). In the example, it is quite clear from the total expenditure/income results (obtained from the household representative interviews) that 'poor', 'middle' and 'better-off' mean quite different things in the 'poor' compared to the 'mixed' area and that it makes sense to re-classify the results from the 'poor' area, with the 'poor' wealth group becoming 'very poor', 'middle' becoming 'poor' an so on.

### The household representative interviews

A sample household representative interview format is provided in **Annex A**, together with sample interview checklists for the Harare and Hargeisa assessments. The procedure for conducting the household representative interview is very similar to that for a rural area, except for the greater emphasis on expenditure, which is the usual starting point for enquires in an urban setting. Because there is not the same clearly defined seasonal pattern in an urban area, the simplest procedure is to ask which food and non-food items are purchased regularly each month, and establish average monthly expenditure on each of these. Once this has been done, enquiries are conducted into the major annual expenditures and when these are made (e.g. schooling, visits to rural areas, etc.). Having established an estimate of total expenditure per month (with annual expenditures included pro rata), the next step is to find out where the money comes from, and roughly how much from each source.

A decision has to be taken about which prices to use for the calculation of expenditure. If the last 12 months are being taken as the reference year, then the choice is between an average price for the year and the current price. If prices have been changing rapidly in the last year, then it may be best to take the current price as being most easily remembered – in which case it has to be borne in mind that estimated total expenditure relates more to the current month than to the year as a whole. This generally doesn't create major problems as most urban monitoring is done on a monthly basis anyway. The same consideration applies in the case of cash income, i.e. should the current rate of return be taken (e.g. current daily labour rate, current profit on petty trade, current salary), or an average for the year as a whole. Clearly, the same approach must be taken for both cash income and expenditure.

The format also includes space to record information on:

- the origin of residents and duration of residency
- Capital and assets (buildings, vehicles, working capital, livestock and land)
- Access to services (water, sanitation and garbage collection, electricity, health and education)
- Seasonality of food access, cash income and expenditure
- The role of borrowing and loans[4]
- Opportunities and constraints for the wealth group
- Community/dynamics and gifts – information on systems of mutual support

## Frequently Asked Questions

***Q: In an urban area people don't know one another so well, so isn't it difficult to find good key informants to do the wealth breakdown?***

A: It is true that people in urban areas can easily live separate lives and live less as a community, but this tends to more the case among the better-off than the poor. Poor urban

[4] When enquiring into borrowing and loans the enquirer needs to bear in mind that there is usually a strict limit to the amount that can be borrowed, and that if one loan is not repaid it is unlikely that further loans will be forthcoming. Therefore loans cannot generally be accepted as the explanation for a large discrepancy between annual cash income and expenditure, especially for the wealth group as a whole. Loans and borrowing are usually used either to a) spread the cost of a significant annual expenditure over several months, or b) to make up a short-term shortfall in cash income, e.g. towards the end of the month in the case of salaried employees. Bear in mind also that some kind of guarantee or collateral may be required in case of non-repayment, and that the better-off may therefore find it easier to borrow. Where loans are allowed to accumulate, this is often between close relatives, and the loan is more in the nature of a gift than a genuine loan.

households often live in very crowded conditions and have as much interaction with their neighbours as in a village – gifts and borrowing may be very common, for example. In practice, therefore, the differences between a poor urban area and a rural area are not that great and, with care, groups of key informants can be found that are capable of preparing a good wealth breakdown, and can readily identify potential participants for the household representative interviews. And since the household representative interviews take less time in an urban area, there is usually time to tack on a quick wealth breakdown at the end of each interview so to get more data for the wealth breakdown analysis.

***Q: If households from a particular wealth group have different sources of cash income, how is it possible to do an outcome analysis for a problem of cash income?***
A: It is true that this can create problems. However, these may not always be quite as serious as might be expected. While there may be many individual income-generating activities in an urban setting, the poor generally obtain cash income from two main categories of activity; casual labour and small-scale business or petty trade. And income from the one is often related to the other – in poorer areas a good proportion of the cash income from small-scale business/trade may be generated locally from people doing casual labour, so a downturn in casual labour will also affect the incomes of small businesses and traders. However, where this is not the case, then an alternative is to run a 'worst-case' scenario, looking at the effect of the 'problem' on households that depend entirely on the affected source of cash income. While this is less useful than an analysis for the whole wealth group (because the number of people affected may not be known), it can still shed important light on the possible impacts of a particular problem.

***Q: Why use rapid appraisal methods rather than a household survey in this setting?***
A: Urban household economy assessment is similar in many ways to a conventional household expenditure survey in that the focus is on detailed questions about recent patterns of expenditure. Provided the essential checks on food (adding up to roughly 2100 kcals per person per day) and on cash income (roughly equalling expenditure) can be incorporated there is no reason why the data should not be collected through a survey of individual households. If this can be complemented by a semi-structured enquiry at community level to get 'the story', so much the better. Community-level enquiries into local perceptions of wealth will also help in terms of dividing household survey data into meaningful wealth groups.

Using random sampling techniques to select households for interview will also help to ensure that the sample is truly representative of the population from which it is drawn. Having said that it may not be possible to use standard techniques for drawing the sample, since these require accurate population data and a complete enumeration of households in areas selected for surveying. It is very unlikely these will be available, especially for the poorer areas of a city, where the population may be transient and with many people living in unofficial or unregistered accommodation. In this type of setting more rapid sampling techniques similar to those used in a rapid nutritional survey will usually be more appropriate.

## PASTORALISTS

## Background[5]

### Main characteristics of pastoral livelihoods

Pastoralism is a livelihood system based primarily on domesticated animal production (meat, milk, blood and hides). Most pastoral groups are found in environments with low and highly seasonal rainfall, where it is impossible to graze animals all year round on the same pasture. Movement and migration are therefore essential survival strategies. Agro-pastoralists rely on a combination of livestock and crop production. They live in areas that are marginal in terms of agriculture and tend to be less mobile than pure pastoralists (because of the requirement to tend their crops). Since their crop production tends to be very unreliable livestock still constitute the essential fallback for years of crop failure.

### Movement and migration

Movement allows herders to use a variety of pastures, water points and other resources such as salt licks, and represents a sophisticated adaptation to the challenges of a risky environment. There may be various patterns of movement:

- Wet season migration away from permanent dry season water points, to allow pasture to recover around these points. At this time of year pastoralists may make use of seasonal pans, streams and rivers for water.
- Dry season migration away from the homestead to remote dry season grazing areas (e.g southern Sudan, Tanzania)
- Movements according to the pattern of rainfall (e.g. in North-east Somalia towards the coast for the *heys* rains and towards the interior for *gu*)

In the literature, pastoral systems are classified according to the type and pattern of movement. The main distinction is between pastoralists that are a) transhumant (i.e. undertaking regular seasonal movements between sources of water and pasture, e.g. from lowlands to highlands, or from coast to inland) or b) nomadic (i.e. moving long distances with no fixed pattern). Many pastoralists in the Horn and East Africa are partly transhumant and partly nomadic in that there is a regular seasonal pattern of movement in most years, with longer distance, less regular migration being reserved for very bad years.

The pure nomadic form of pastoralism is now very rare as there are many pressures towards increasing settlement and increasing market participation. Most, if not all, pastoralists now have a permanent or semi-permanent base, usually at a dry season water point, which is often also a trade centre. Even when the animals are moved, it is common in this situation for some at least of the household (usually the women, the children and the elderly) to remain in the home base while the men move with the herds. Among the factors contributing to increased settlement and market participation are the following:

- *An increased dependence on the market for staple foods.* It is very unusual these days for pastoralists to live entirely from their animal production, in the sense that milk, meat and blood very rarely provide more that 30% of dietary energy (and often much less), with the balance coming mainly in the form of grain obtained through purchase or

[5] Ref: The Global Drylands Imperative: Pastoralism and Mobility in the Drylands, UNDP, at www.undp.org/drylands/docs

exchange. There may be many reasons for this, but among the most important are probably human population growth coupled with, in many areas, a progressive loss of livestock (due most often to drought).

- *Greater dependence on the market for cash income.* Poorer herders often have to supplement their income from livestock with other informal sources of cash (e.g. casual urban labour or collection and sale of firewood and charcoal). For this they need to have access usually to an urban market, which implies a more settled existence than previously. Paradoxically, one effect can be to reduce their income from livestock even further, because of over-grazing around settlements and the increased spread of disease among livestock concentrated around settlements and water points.

  Better-off households may also choose to reduce their dependence on livestock, often diversifying into trading and other commercial activities and therefore settling at least part of the household in a trading centre or town[6].

  Sale of milk may also be an important source of cash income for all wealth groups – again this something that usually requires good access to an urban market.

- *Increasing restraints on free movement*, e.g. because of the development of irrigated agricultural schemes or the enclosure of traditional grazing areas (for ranches or to produce fodder for more settled herds). On the other hand, there are also cases of increased mobility. In a recent drought in Somalia, for example, livestock were moved from one area to another by truck – helping to ensure the survival of many animals that might otherwise have died on the journey.

One consequence of mobility is an increased risk of conflict. Tensions often exist between neighbouring pastoral groups, or between pastoralists and settled agriculturalists because of competition for scarce natural resources. In some cases, tensions may also exist because of livestock raiding between groups (e.g. in South Sudan). These tensions can be exacerbated in bad years when pastoralists migrate out of their traditional grazing areas and into other groups' territory. Often these movements are governed by traditional agreements, but sometimes they spill over into overt conflict.

### Pastoral herd dynamics

The economic rationality of pastoralists has often been misunderstood. In particular, pastoralists' herd management has been questioned, with many 'experts' claiming pastoralists let herds get too large, causing overgrazing and a failure to maximise the productivity of each individual animal. Instead efforts to build up large herds should be seen as insurance against catastrophic losses (due to disease or drought), and to generate wealth that can be converted into a variety of goods including, in many situations, bride-price.

Part of the reason for trying to build up large herds is that rates of pastoral herd growth – and therefore recovery from catastrophic loss - are relatively slow, as indicated by the data in **Table 7**. Taken as an average over a number of years, cattle and camel herds grow at only about 6% per year, whereas shoat (i.e. sheep and goat) herds grow at about 11% per year. This means that it can take very many years to recover from a severe drought – if recovery is possible at all. The number of years required to replace a 50% herd loss is indicated in the bottom row of **Table 7**. Because of these slow rates of replacement, purchase of animals nowadays represents an important re-stocking strategy for many pastoralists following a catastrophic loss.

[6] Note that pastoralists may be well-placed to engage in trade. They often have have pack animals that can be used to move trade goods and they frequently live in border areas and can participate in cross-border trade, often in contraband items.

The relatively low average rate of increase among shoats is perhaps surprising, since small stock can theoretically give birth twice a year. Such high rates of reproduction are rarely sustained however, and the average number of births per adult female under 'normal' pastoral conditions in East Africa is 1.1 per year for sheep and 1.3 per year for goats.

**Table 7. Typical herd dynamics**

| | *Cattle* | *Camels* | *Shoats* |
|---|---|---|---|
| **Total (start of year)** | 100 | 100 | 100 |
| **Breeding females** | 41 | 54 | 55 |
| **Births** | 29 | 24 | 66 |
| **Sales/slaughter** | 15 | 9 | 30 |
| **Deaths** | 8 | 8 | 25 |
| **Total (end of year)** | 106 | 107 | 111 |
| **Years required to replace a 50% loss** | 12 | 10 | 6-7 |

*Data derived from an analysis of available literature for East African pastoral herds.*

One point to note from the table is the relatively high proportion of breeding females in the herd (from 41% to 55% depending upon the type of animal). The objective of the pastoralist is generally to maximise the number of breeding females since these represent the productive core of the herd. In most situations, therefore, relatively few adult males are kept (even where they are prized for cultural reasons, as in South Sudan). Apart from the breeding females, most of the remainder of the herd are young animals so that, taking young and mature animals together, 70%-75% of the herd will be female. Most male animals are sold or exchanged as they approach maturity, with poorer herders tending to sell earlier than the better-off because of their more pressing need for money. There is little economic incentive to keep older male animals (as they do not increase in value beyond maturity) and, where the money is not needed for other items, older males may be sold and females purchased in their place. One consequence is that there tends not to be a large stock or reserve of male animals that can be sold in a bad year, and the appearance of relatively large numbers of female animals on the market can therefore be a relatively early indication of stress in a pastoral setting.

**Table 8. Reproductive characteristics of different types of livestock**

| | *Length of pregnancy* | *Length of lactation* |
|---|---|---|
| **Cattle** | 9 months | 9 months |
| **Camels** | 12 months | 12 months |
| **Shoats**[1] | 5 months | 2 months |

[1]*Sheep and goats*

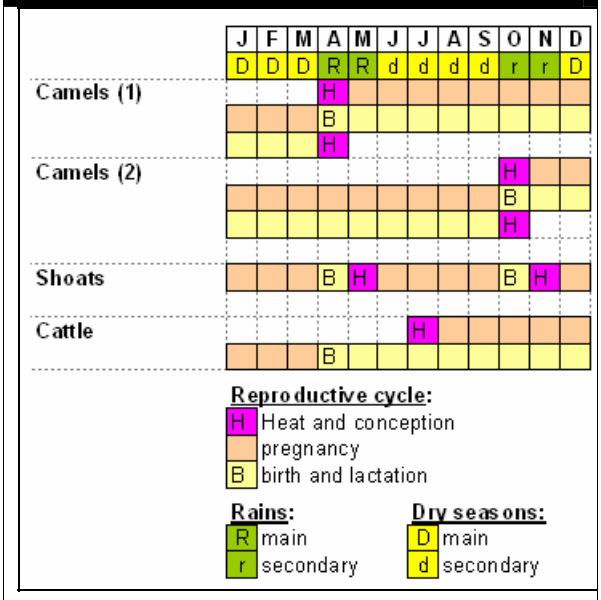
Livestock production in pastoral areas is usually highly seasonal. The exact pattern depends upon a combination of factors, including the pattern of rainfall, the reproductive characteristics of the animal (i.e. the length of pregnancy and lactation, see **Table 8**) and the extent to which reproduction is managed by the herder.

These relationships can be best understood using a specific example. In the Somali Region of Ethiopia, the main *gu* rains fall in April and May, while the secondary *deyr* rains fall in October and November (**Figure 2**). Animals usually come into heat at the beginning of the rains, when better access to water and pasture leads to an improvement in body condition.

**Camels** are represented twice in the figure, because it is likely that there will be two cohorts (or groups) of camels, those that come into heat at the beginning of *gu* (cohort 1) and those that come into heat at beginning of *deyr* (cohort 2). The *deyr* cohort will tend to be the smaller of the two because animals born in *deyr* may not survive the harsh conditions of the *jilaal* dry season, in which case the dam will tend to come into heat again at the beginning of the next *gu* (i.e. she will switch from cohort 2 to cohort 1) according to local patterns of livestock management.

The picture for **shoats** is fairly straightforward. The 6-month interval between the two rainy seasons corresponds neatly with the interval between births, and we can therefore expect that shoats will give birth at the beginning of each rainy season. Unless, that is, pastoralists exercise control over the pattern of reproduction, as Somalis do in the case of sheep, controlling breeding so that births occur once a year at the beginning of *gu*. In other settings, where the interval between rainy seasons is more or less than 6 months, the seasonal pattern of conceptions and births will not be so simple as presented here.

**Figure 2: Possible seasonal pattern of reproduction in Somali Region, Ethiopia**




Note: Actual seasonal patterns will vary

For **cattle** the picture is complicated by the 9-month duration of pregnancy (and the 18 month total for pregnancy plus lactation). This means that animals conceiving in a wet season must give birth in a dry season and vice versa. This is one of the reasons why cattle cannot be kept in especially harsh environments (since they will not conceive during a very dry season, and the chances of survival for calves born in the dry season are low). In semi-arid environments such as those in Somali Region it makes sense for cattle to deliver at the beginning of the *gu* rains, since this maximises the calf's chances of survival. For this to occur, cattle must conceive during the *hagaa* dry season, approximately 6 months after the end of the previous lactation. This requires pastoralists to exercise some control over the timing of conception (so that animals do not conceive during the *gu*).

It is often assumed that good rainfall means good milk production in a pastoral area, but in fact the situation is not quite as simple as this. This is because milk production depends not only upon current conditions (recent rainfall, current pasture and browse condition, availability of water, prevalence of livestock disease, etc.) but also upon conditions in previous seasons (which will affect the number of animals giving birth this season). This is illustrated by the hypothetical example for shoats in the Somali Region of Ethiopia given in **Figure 3.**

The situation is made more complicated by the different lengths of pregnancy of the different types of livestock. While goats may be dry (i.e. may not give any milk) for 6 months after the end of a drought, camels may be dry for at least 12 months. A timeline analysis of patterns of rainfall, conceptions and births (similar to **Figure 3**) is therefore a key tool for monitoring pastoral livelihoods.

Most pastoralists keep more than one type of animal, both to exploit the different options within a particular area and as insurance against drought or disease (since drought- and disease-resistance varies between animals, as do rates of recovery from drought).

Each type of animal is adapted to a particular environmental niche:

- camels in the driest areas,
- goats where shrubs and trees dominate,
- sheep on mountain pastures that are too rugged for cattle,

- and cattle in richer areas where open savanna provides decent grass cover and adequate water.

**Figure 3: Timeline illustrating factors influencing milk production of shoats in the Somali Region of Ethiopia**

| | *Year 1* | | *Year 2* | | *Year 3* | |
|---|---|---|---|---|---|---|
| | ***Gu*** | ***Deyr*** | ***Gu*** | ***Deyr*** | ***Gu*** | ***Deyr*** |
| **Quality of Season**[1] | 3 | 3 | 1 | 1 | 5 | 5 |
| **No.of Conceptions** | Medium | Medium | None | None | High | High |
| **No.of Births** | - | Medium | Medium | None | None | High |
| **Milk output** | - | Medium | Poor | None | None | High |

*Even though the gu rains of year 3 are good, there will be no milk production in this season as no animals conceived in the preceding deyr season.*

[1]An overall indicator of how good the season was for livestock production, bearing in mind factors such as rainfall and disease, on a scale of 1 (very poor) to 5 (very good).

In economic terms, small stock provide the 'small change' for everyday transactions while larger stock may be sold to cover larger one-off expenditures (e.g. school fees).

### Mutual cooperation and assistance

In pastoral communities there is almost always strong inter-dependence and co-operation between households. One of the reasons for this is that pastoralism is labour intensive. Each type of animal has different requirements in terms of fodder and water. Camels and goats are browsers (i.e. they consume the leaves of bushes and trees), while cattle and sheep are grazers (i.e. they consume grass). Small stock need to be watered every day, cattle every other day, and camels every three days. The requirements of keeping the herd together, managing regular movements between grazing and water as well as twice daily milking means that keeping animals requires a pooling of labour resources between households to manage the different types of stock effectively.

Mutual assistance is also important in terms of each household's survival in an uncertain and risky environment. Households that have lost many animals in a drought usually depend heavily upon assistance from within the group to help them survive and recover. And better-off households are encouraged to provide this help as an insurance strategy in case they themselves need assistance at some point in the future. This spirit of mutual cooperation and assistance operates in both bad and 'normal' years. It is very common, for example, for poorer households to 'oversell' (i.e. to sell more animals than their herd size can sustain) even in 'normal' years, and for the difference to be made up through gifts from better-off relatives. Loan arrangements are also common. For example, a breeding female may be loaned to a poor household that then benefits from the milk and may perhaps keep any offspring. Or an immature male may be loaned, in which case the poorer household may receive a share of the increase in value of the animal once it is sold. This helps spread the risk and the workload and provides poorer households with an additional source of food and/or cash income.

With the trend towards settlement and urbanisation, links to relatives in towns may also be increasingly important, both as a source of remittance income in most years, and as a source of additional gifts and loans in a bad year.

## How To Do It

The assessment of pastoral areas poses a number of challenges given the mobility of the population and the difficulty of collecting reliable information on livestock herd size and productivity. Assessments have to be carefully timed to coincide with periods when pastoralists are accessible (i.e. within reach of the assessment teams). Many pastoralists are understandably reluctant to provide detailed and accurate information on herd size. A sensitive approach is therefore required, ideally with as many built-in cross-checks as possible. These cross-checks are only possible if the assessment teams have a good understanding of some of the key issues discussed in the background section above, especially those relating to herd composition and off-take (**Table 7** and **Table 8**) and to the dynamics of milk production (**Figure 3**). This is equally important for seasonal assessment, where teams will need to fit new information into an evolving story.

### Differences between pastoralists and agriculturalists and implications for field work

What then are the differences between a pastoral assessment and the assessment of a settled agricultural population? In this section, the main differences between these two groups are summarised and the implications for fieldwork explored. More detail on the practical aspects of the fieldwork and the analysis given in the sections below on baseline field work and outcome analysis.

| **Table 9. Differences between pastoralists and agriculturalists and implications for field work** |
|---|
| *1. Greater importance of livestock than crop production* |
| This is the most obvious difference between the two patterns of livelihood. Equally obvious is the implication of a major shift in the enquiry away from crops and towards livestock. Beyond this however, most other aspects of the enquiry remain the same, so that the differences in the formats used are not perhaps as great as might have been expected. This is because many common issues have to pursued in both settings, e.g. questions relating to informal employment and self-employment, questions relating to expenditure on health and education, etc. |
| *2. Start of the consumption year* |
| In a crop-dependent setting it is usual for the consumption year to begin with the start of the main harvest and to end 12 months later at the end of the main hunger season. The same principle applies in the case of pastoralists, except that the main hunger season is usually broken by the onset of main season milk production rather than the harvesting of the first crops. Since milk production tends to increase at the start of the main rains, the consumption year in a pastoral setting usually begins at that time and runs to the end of the main dry season. In the Somali Region of Ethiopia, for example, the consumption year runs from April to March. (**Figure 2**)<br><br>The seasonal calendar analysis should also provide guidance as to the best time to undertake a seasonal assessment, which should ideally coincide with the peak seasons for births so that direct observations can be made of current production conditions. |
| *3. Changing asset levels over time* |

In a pastoral setting herd sizes are always changing. Accurately establishing herd sizes for the reference year and keeping track of changes over time are key challenges for the proper assessment and monitoring of pastoral livelihoods.

It is important to be aware that in an HEA enquiry communities may report changes in herd size in one of two ways, either as a change in the holding of each wealth group or as a change in the wealth breakdown (**Table 10**).

**Table 10: How communities may report changes in herd size over time**

| *Wealth Group* | *Poor* | *Middle* | *Better-off* |
|---|---|---|---|
| **Baseline year** | | | |
| % households | 20% | 50% | 30% |
| Average shoat holding | 25 | 60 | 150 |
| **Post-drought (Option 1):** *Losses reported as a reduction in the livestock holding of each wealth group* | | | |
| % households | 20% | 50% | 30% |
| Average shoat holding | 15 | 35 | 90 |
| **Post-drought (Option 2):** *Losses reported as a change in the wealth breakdown* | | | |
| % households | 50% | 40% | 10% |
| Average shoat holding | 25 | 60 | 150 |

If losses are reported as a change in the wealth breakdown, this creates problems when undertaking a seasonal outcome analysis, since the aim of this analysis is to track changes in the circumstances of each wealth group, not changes in the wealth breakdown itself. Procedures are suggested to avoid this type of problem in the field in the section on "seasonal assessment and outcome analysis", below.

*4. Current production depends on current and past seasons*

The relationship between current production and the quality of current and past seasons was explored in **Figure 3**. In a pastoral setting it is always a question of understanding an evolving story rather than obtaining a one-off snapshot. Methods for tracking the dynamics of livestock herds and livestock production are suggested in the section on seasonal assessment and outcome analysis, below.

Because of the complexity of pastoral production, the process in the field should ideally be one of testing a hypothesis rather than starting with a blank sheet of paper. For example, seasonal assessment teams should be provided with the available data on recent patterns of conception and therefore the expected patterns of births. This will encourage them to examine critically what they are being told and to cross-check the actual situation against what they expect to find.

*5. Choice of reference year*

Given that herd sizes fluctuate and livestock production varies so much from year to year, what are the criteria for selecting the reference year for a pastoral baseline assessment? In general, the same criteria can be applied as in an agricultural area (i.e. ideally choose the most recent complete consumption year, unless it was an especially good or bad year, or was a year in which large amounts of food or cash assistance were provided). The most important thing is to build up a clear picture of the situation in the reference year and especially to derive correct estimates for a number of key variables, including herd sizes, levels of milk production, levels of livestock offtake, and so on. Establishing these is more important than selecting a particular type of year since a key objective is to establish an accurate starting point for subsequent monitoring. However, one set of circumstances should be avoided if at all possible, and this is a year in which milk production was very low or non-existent, either because of current disease or rain failure, or because there were few conceptions in previous seasons[7]. This may include the first year of post-drought recovery.

*6. Movement and migration*

[7] The reason for avoiding this type of year is technical and relates to the way outcome analyses are carried out. In an outcome analysis, current year access = reference year access x current problem specification (%) ÷ 100 (see Section 0). Clearly, if reference year access equals zero (e.g. no milk production) there is no basis for estimating current year access.

The fact that pastoralists move and migrate complicates the definition of livelihood zones in a pastoral area. However, even purely nomadic pastoralists move within a defined geographical area (albeit large), and this can be considered to form the boundaries of their livelihood zone. The real issue is whether this area is shared with other groups and how best to handle this (*Chapter 2: Livelihood Zoning* in the Practitioner's Guide provides advice on this). In practice however, most pastoralists have a home base or clan territory, within which they have established settlements and trading centres and to which they return regularly at certain times of year. Usually this does not overlap with the home territory of another group, and can be considered as part of a discrete livelihood zone. The fact that some or all of the livestock and/or people may move out of this territory at certain times of year, or only in particularly bad years, does not preclude it being represented as a discrete livelihood zone on the map.

Establishing the nature and pattern of movement in the reference year is an important part of a pastoral baseline assessment since it provides the basis for investigating deviations from 'normal' during a seasonal assessment. During such an assessment one might ask if there have been any abnormal movements recently, and what the implications of this are in terms of livestock production (bearing in mind that movement can give access to better water and grazing than available in the home area, but can equally have negative effects as animals lose condition on the journey or they congregate in crowded grazing areas increasing chances of disease transmission, etc.). It is also important to establish the reasons for any movement (e.g. lack of water, lack of grazing) since this is critical in terms of identifying the most appropriate type of response.

*7. Mutual assistance between wealth groups*

Field teams must be aware of the importance of this and the need to explore it in full. Assistance may be provided in cash or in kind (e.g. the gift or loan of a milking animal). Another common method of providing assistance is through the 'adoption' by a better-off household of one or more poorer children. This can either be in the long-term (and is one of the reasons why better-off households tend to be larger than poorer household) or short-term, i.e. for the duration of a particular crisis.

In Muslim communities *zakat* (the religious obligation to give 1/40 of livestock or crop production or cash income to poor households) is an important form of assistance that can exist alongside other types of assistance within pastoral communities. With increasing urbanisation, urban-rural transfers are assuming greater importance in many areas.

When it comes to completing an outcome analysis for a pastoral group, an attempt must be made to answer the very difficult question of how much assistance the better-off may provide to the poor. Part of the difficulty arises from the fact that the better-off will also be affected by any hazard, which will in turn affect their ability to give. One possible approach is to estimate the amount of 'surplus' food and/or cash available to better-off households on a case by case basis, and then assume that a certain percentage of this 'surplus' is re-distributed according to need. In most pastoral settings this is an issue that merits more detailed investigation than is generally possible in a rapid baseline assessment.

## Baseline fieldwork

Sample formats for a pastoral baseline assessment are included in Chapter 6: Annex C. Where changes have been made to the standard formats for an agricultural area, these changes are highlighted in red. The main changes are also summarised below.

### *Movement and migration*

The following forms have been modified to enable the recording of information on movement and migration: Form 1 (District interview form) and Form 3 (Community interview form). Data are collected on patterns of movement in the reference year and in a recent bad year.

### *Seasonal patterns of conceptions, births and milk production*

In agricultural areas, the main focus of the seasonal inquiry is the amount of milk production. In a pastoral baseline, information should also be collected on seasonal patterns of conceptions and births. This is key information in terms of understanding the dynamics of livestock production in a pastoral area. These seasonal calendar data are collected on Form 1 (*District Interview Form*) and Form 3 (*Community Interview Form*).

### *The Herd Dynamics Timeline*

This is a tool for keeping track of patterns of conception, births and deaths over recent seasons. This is a key exercise for both a baseline and a seasonal assessment since, as has already been pointed out, current livestock production depends not only on conditions in the current season but also on conditions in previous seasons (when animals delivering now will have conceived). In the case of a baseline assessment, the exercise provides a context for understanding production conditions in the reference year. Suppose, for example, that the results of the exercise show that shoats only gave birth in one of two rainy seasons in the reference year, was this because of poor rates of conception the season, or because patterns of conception are managed by the pastoralists in this livelihood zone? For a seasonal assessment, the herd dynamics timeline provides a useful crosscheck on the current situation, and can also be used to predict the expected pattern of births for future assessments. A hypothetical example of such an exercise for Somali Region is presented in **Box 3** below. The exercise is very similar whether implemented during a baseline assessment or a seasonal assessment. This particular example relates to a *gu* seasonal assessment undertaken in 2006.

The first step in the exercise is to collect information on the performance of recent seasons, beginning 12 months before the current assessment (the season in which camels giving birth now will have conceived). Performance is here classified on a scale of 1 to 5, from very poor to very good. This provides the starting point for building up a picture of patterns of conceptions, births and deaths. For example, from the table below it can be seen that few camels conceived in the very poor 2005 *gu* season. It follows that few births can be expected in *gu* 2006, even if the 2006 *gu* rains are good. This then becomes the hypothesis to be tested during the *gu* 2006 assessment. These very poor rains were followed by an average or medium *deyr* which means that we can expect a reasonable number of camels to deliver during the forthcoming 2006 *deyr* season (the hypothesis to be tested at the time of the *deyr* 2006 assessment). And so on for the different types of livestock, bearing in mind the different lengths of pregnancy for each.

**Box 3. Example of a Herd Dynamics Timeline**

Note: The yellow-shaded section of the herd dynamics timeline is NOT included in the format used in the field. It represents the analysis that should be completed by the teams once they have completed the fieldwork, and ***in preparation for the next seasonal assessment***.

**HERD DYNAMICS TIMELINE: CONCEPTIONS, BIRTHS AND DEATHS**

| | | | Livestock Type | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Camels | | | Cattle | | | Shoats | | |
| Year | Seasonal performance (1-5*) | | Conce-ptions | Births | Deaths | Conce-ptions | Births | Deaths | Conce-ptions | Births | Deaths |
| 2006 | Deyr | | | *Med* | | | | | | *High* | |
| 2006 | Hagaa | | | | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | Gu | 4 | High | Low | | | Low | | High | Med | |
| 2006 | Jilaal | 3 | | | Low | | | Low | | | Low |
| 2005 | Deyr | 3 | Med | Med | | | | | Med | Low | |
| 2005 | Hagaa | 3 | | | High | Low | | High | | | High |
| 2005 | Gu | 2 | Low | Med | | | Med | | Low | Med | |

*** Classify each season as follows:**
5 = a very good season for livestock production (e.g. due to good rains, little disease, etc)
4 = a good or above average season for livestock production
3 = an average season in terms of livestock production
2 = a poor or below average season for livestock production
1 = a very poor season for livestock production (e.g. due to drought, livestock disease, etc.)

| **Indicate levels of conceptions, births and deaths as follows:** | **Remember that births occur:** |
|---|---|
| high | 12 months after conception in camels |
| medium | 9 months after conception in cattle |
| low | 5 months after conception in small stock. |
| none | |

Notes:
1) Data need not be collected for the cells shaded in grey, e.g. it is not necessary to collect data on births of camels during the dry season (since births only occur during the wet season). Similarly, it is not necessary to collect data on deaths during the wet season, since mortality tends to be lowest at this time of year.
2) The section of the table dealing with cattle is shaded on the assumption that conceptions and births occur once a year (in *hagaa* and *gu* respectively). If the actual seasonality of conceptions and births differs from this, then the table will need to be modified accordingly.

### *The livestock profile*

This exercise, which is conducted early on in the wealth group interview (see Form 4), is in many ways the central element in a pastoral enquiry at this level. It builds upon the results of the herd dynamics timeline (undertaken at community level) to develop a detailed picture for the wealth group of herd size and composition, and of numbers of births, deaths, sales and slaughters during the reference year. A set of reference profiles is provided in the Field Handbook that can be used to cross-check the data as it is being collected in the field[8]. The reference tables for cattle are reproduced in **Table 11.** Separate profiles are provided for herds with and without plough oxen (since many agro-pastoral groups will keep plough oxen), and for herds of different size, making it easy for the interviewer to compare the results being obtained in the field with the reference profile for a herd of similar size. The exercise also provides the logical starting point for much of the remainder of the interview. Data on the number of births provides a starting point for enquiry into milk production, while the data on the number of animals slaughtered and sold leads naturally on to enquires into meat consumption and cash income from livestock sales.

### *Patterns of cash expenditure*

There is an obvious difference in the types of input that will be purchased by pastoral compared to agricultural households, and the expenditure section of Form 4 (Household representatives interview form) has been modified to reflect this. In particular the interviewer should be aware that expenditure on water and on salt for livestock can be very significant in some areas.

[8] This does not mean that the results obtained in the field must be the same as those in the reference tables. The idea is compare the two sets of results, so that, if the field data differ from the reference table, follow-up questions can be asked to clarify the situation.

**Table 11. Livestock profile reference values from the Field Handbook[1]**

| CATTLE | Herds with Plough Oxen | | | | | | Herds without Plough Oxen | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total (start of year)** | 1 | 3 | 5 | 10 | 15 | 25 | 3 | 5 | 10 | 15 | 25 | 50 |
| **Oxen** | 0 | 0 | 1 | 1.5 | 2.5 | 4 | - | - | - | - | - | - |
| **Breeding females** | 0.5 | 1.5 | 2 | 3 | 5 | 8 | 1.5 | 2 | 4 | 6 | 10.5 | 20.5 |
| **Births** | 0.5 | 1 | 1.5 | 2 | 3.5 | 5.5 | 1 | 1.5 | 3 | 4.5 | 7.5 | 14.5 |
| **Sales/slaughter** | 0.5 | 1 | 1 | 1 | 1.5 | 2.5 | 1 | 1 | 1.5 | 2.5 | 4 | 8 |
| **Deaths** | 0 | 0.5 | 0.5 | 0.5 | 1 | 1.5 | 0.5 | 0.5 | 1 | 1 | 2 | 4 |
| **Purchase/gifts** | 0 | 0.5 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 |
| **Total (end of year)** | 1 | 3 | 5 | 10.5 | 16 | 26.5 | 3 | 5 | 10.5 | 16 | 26.5 | 52.5 |
| **Offtake (%)[2]** | 50% | 33% | 20% | 10% | 10% | 10% | 33% | 20% | 15% | 17% | 16% | 16% |

Notes:
1) These profiles are based upon available data in the literature, results obtained from numerous household economy enquiries and a computer-based model of herd growth developed by F.E.G. for different types of livestock.
2) Offtake % equals the sum of sales plus slaughters expressed as a percentage of start-of-year herd size.

### *Modified report or Livelihood Zone Profile format*

A modified livelihood zone profile format is provided in Annex D which includes suggestions for presenting the herd dynamics timeline and livestock profile data. A set of guidance notes for completing the profile are also provided.

## Seasonal assessment and outcome analysis

Outcome Analysis is the process by which information on the current hazard is combined with the household economy baseline data to project future access to food and non-food goods and services for different wealth groups. This is fully described in Chapter 4 of the **Practitioner's Guide**.

The analysis requires that the hazard be expressed in quantitative terms, e.g. milk production = 50% of reference, milk price = 120% of reference, and so on, a process known in household economy analysis as 'problem specification'. The general formula for calculating a current problem is:

$$\text{Current problem (\%)} = \frac{\text{Current year value}}{\text{Reference year value}} \times 100$$

The purpose of a seasonal assessment is to collect all the data required to prepare a problem specification for each of the most important sources of food, cash income or expenditure in a particular livelihood zone. In this section the focus is on the collection and analysis of data to define the livestock production problem. The definition of other aspects of the problem (crops, labour, prices etc.) is covered in Chapter 4.

In a pastoral setting, the key parameters of interest are a) the volume of milk production and b) the amount of income that can be generated from the sale of livestock and livestock products. There are two sets of factors to consider: 1. those relating to livestock production

and 2. those relating to market conditions and market prices. On the livestock production side, the most important factors to consider are:

- herd size,
- patterns of reproduction and
- current production conditions (grazing, water, disease, etc.).

*The livestock sales problem*

As with any source of cash income, the problem specification has both a price and a quantity component (where quantity refers to the number of animals that can be sold). In most cases, given good market access, the number of animals that can be sold varies as a function of herd size and the quantity side of the livestock sales problem can be taken to equal the herd size problem, calculated as follows:

$$\text{Current herd size problem (\%)} = \frac{\text{Herd size this year}}{\text{Herd size in Reference year}} \times 100$$

*The milk production problem*

Besides herd size, the most important factors determining milk production in the current year (or the current season) are the percentage of animals that are lactating and the average milk output in litres per animal per day[9]. These three variables can then be combined to estimate the overall milk production problem for each season, as follows:

$$\text{Milk production problem} = \frac{\text{herd size prob.}}{100} \times \frac{\text{no.milking animals prob.}}{100} \times \frac{\text{milk output prob.}}{100} \times 100$$

Methods for collecting data to define these three components of the milk production problem are described further below.

*The Herd Dynamics Timeline*

This exercise is key to understanding current production conditions in pastoral areas. An example of such an exercise is given in **Box 3**.

*The Livestock Profile*

The monitoring of herd sizes is a key activity for the seasonal assessment of pastoral areas. This is because a change in herd size directly affects the availability of milk at household level and the amount of cash income that can be derived from sale of livestock and livestock products. Accurate data on herd size can be very difficult to collect, however, partly because this can be very sensitive information (i.e. the equivalent of a direct question about cash income in an agricultural or urban setting). One approach is to repeat the wealth breakdown exercise conducted for the baseline assessment (see **Table 10)**, but this is time-consuming and requires a lot of detailed work at community level. A second approach is to use what is

[9] Duration of lactation is the fourth and final factor that could be incorporated into the milk production problem. It is however difficult to measure or predict. Given that there is a correlation between level of milk output and duration of lactation, and provided assessments are conducted at regular intervals (to check whether animals lactating last season are still lactating now), it is probably acceptable to exclude the duration of lactation as a component of the milk production problem, as has been done here.

termed here as the 20-animal (or 50-animal) exercise[10]. Instead of asking about actual livestock holdings for any given household or wealth group, the procedure is to ask about recent trends in holdings given a defined starting point (i.e. 20 or 50 livestock). Questions are then of the type, 'for someone starting the year with 20 animals, on average how many births would there have been in such and such a season?' This type of approach has a number of advantages. Firstly, it depersonalises the question (since no one individual and no one wealth group is being discussed). Secondly, the exercise can be conducted at a number of different levels, e.g. at community level, with groups of herders encountered along the road and with district-level key informants (e.g. veterinarians working for the government or for NGOs). An example of such an exercise is given below, for a *gu* (main) season assessment in Somali Region, Ethiopia.

The objective of the exercise is to collect information on changes in herd size during the past year (to update data on current herd sizes), to estimate the number of lactating animals in the current season and to estimate current milk yield. Several interviews will need to be conducted in each district and each livelihood zone.

The starting point for the exercise is the beginning of the consumption year *before* the current year, (e.g. *Gu* 2005 for an assessment being undertaken in *Gu* 2006). Data are then collected to track changes in herd size during the previous year, given a starting point of 20 animals. In the example in **Table 12**, *gu* 2005 was poor resulting in an increase in mortality compared to 'normal' and a slight reduction in livestock holdings over the year as a whole (so that the number of animals owned at the start of *gu* 2006 is 19.5, compared to the starting point of 20).

**Table 12. Example of a 20-animal Livestock Profile from a hypothetical *Gu* season assessment in Somali Region, Ethiopia**

| April 2005- March 2006 | Cattle |
|---|---|
| No. owned during Gu 2005 | 20 |
| No. breeding females | 9 |
| No. born Gu 2005 | 4.5 |
| No. born Deyr 2005 | 0 |
| No. sold during the year | 2.5 |
| No. slaughtered | 0 |
| No. died during the year | 2.5 |
| No. bought during the year | 0 |
| April 2006 – June 2006 | |
| No. owned during Gu 2006 | 19.5 |
| No. born Gu 2006 | 2.5 |
| No. lactating now | 2.5 |
| No. lactating per 100 animals | 12.8 |
| Milk yield Gu 2006 (l/day) | 2.75 |
| Typical Gu milk yield (l/day) | 2.5 |

Note:
No. owned in Gu 2006
= no. owned in Gu 2005
+ (births Gu + births Deyr + no.bought)
- (sales + slaughtered + died)
= 20 + (4.5 + 0 + 0) – (2.5 + 0 + 2.5) = 19.5

| Deyr 2006 projection | |
|---|---|
| No. births expected Deyr 2006 | 0 |
| No. lactating Deyr 2006 | 2.5+0 = 2.5 |
| No. lactating per 100 animals | 12.8 |

The next step is to collect data on the number of animals born this *gu* (2006), the number of animals lactating now and milk yields this season (see lower half of **Table 12)**.

A basic crosscheck is to check the consistency of the results with the herd dynamics timeline (see **Box 3**). In the example, the number of births in *gu* 2006 is low (2.5 compared to an expected value of 6 from the handbook), which is consistent with the low number of conceptions in 2005 (from the timeline in **Box 3**). At the same time, milk output is above the typical value for *gu* (bottom two rows of **Table 12**), which is consistent with the good rains this season.

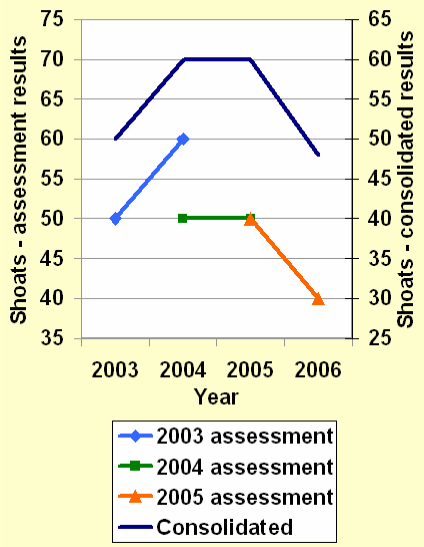
[10] The number of animals can be varied to reflect local conditions. In general terms it is best to select a herd size that is reasonably typical for the middle wealth group, e.g. 20 cattle, 50 shoats, etc. This is generally the wealth group that depends most heavily upon livestock and will be most adversely affected by a production failure (especially if the poor have diversified away from livestock production and into casual employment and self-employment).

Since *gu* is the first of two rainy seasons in Somali Region, the final step is to prepare a projection for the number of births in the second or *deyr* season. This can be done by the teams themselves, based upon information on recent patterns of conception. In our example, cattle only give birth once a year, so no further births are expected and the number of animals lactating in *deyr* will be roughly the same as in *gu*.

### *Problem specification – herd size*

Having collected the above information the next step is to develop the problem specifications for the outcome analysis. The herd size problem will be based upon the results of the 20- or 50- animal profile exercise. This is fairly straightforward in the first year after a new baseline is prepared, but becomes more complicated in second and subsequent years. This is because the results of more than one 20- or 50- animal exercise have to be combined. Probably the simplest thing is to set a starting point of 20 or 50 animals in the reference year and then keep a running total for herd size, as illustrated in **Figure 4Error! Reference source not found.**.

**Figure 4. Tracking changes in livestock holding**




Note: The figure shows how the results of three repeated '50-animal' exercises can be combined to track trends in herd size over time. In this example herd size increased in 2003, was stable in 2004 and declined in 2005. The results from each individual assessment are indicated by the three separate lines (left-hand axis) below the upper continuous line that indicates the overall or consolidated picture (right-hand axis).

Taking the cattle example from **Table 12**, suppose that, having started with 20 animals in 2003 (the reference year), by *gu* 2005 the running total for cattle has reached 21.

The estimated herd size for *gu* 2006, will then be:

21 x 19.5 (*gu* 2006 holding from 20 animal exercise)
÷ 20 (starting point for the 20 animal exercise)
= 20.5

And the herd size problem specification for *gu* 2006, compared to the reference year, will be:

20.5 ÷ 20 (the starting point in the reference year)
x 100 = 103%

One concern with this approach is that the same problem specification is used for all wealth groups in the LZ. Errors in each assessment will also tend to build up over time, so that a more detailed field exercise to verify the wealth breakdown will be required from time to time, perhaps once every 3 years.

### *Problem specification – milk output*

Continuing with the cattle example from **Table 12**, from the seasonal assessment data an estimated 12.8 animals are lactating per 100 animals in the herd, and current milk output averages 2.75 l/day compared to a typical figure of 2.5 l/day. One other figure is required to complete the problem specification - an estimate of the number of lactating animals per 100 in the reference year. This can be looked up from the results of the baseline assessment. Let us suppose that the reference value is 29 milking animals per 100. The milk production problem specification for *gu* 2006 can then be calculated as follows:

No. milking animals problem (%) = 12.8 ÷ 29 x 100 = 44%

Milk output problem (%) = 2.75 ÷ 2.5 x 100 = 110%

And the consolidated milk production problem

$$= \frac{\text{herd size prob.}}{100} \times \frac{\text{no.milking animals prob.}}{100} \times \frac{\text{milk output prob.}}{100} \times 100$$

$$= \frac{103}{100} \times \frac{44}{100} \times \frac{110}{100} \times 100 = 50\%$$

The final step in the process is to prepare a comparable milk production problem specification for the second or *deyr* rainy season. This is necessary because most outcome analyses cover the whole of one consumption year, and a problem must be specified for each rainy season, even if one of these still lies in the future. Taking our cattle example, an estimate of the number of lactating animals per 100 is available from **Table 12** (12.8) and we can assume, for the moment, that milk output will be normal for the season (i.e. 100%). Taking the herd size problem to be the same as in *gu* gives the following milk production problem for *deyr* 2006:

No. milking animals problem (%) = 12.8 ÷ 29 x 100 = 44%

And the consolidated milk production problem

$$= \frac{103}{100} \times \frac{44}{100} \times \frac{100}{100} \times 100 = 45\%$$

*Other components of the problem specification*

The process of compiling the problem specification for other components of the problem (crop production in agro-pastoral areas, informal employment and self-employment, market prices, etc.) is the same in a pastoral area as in a settled farming area. However, one component of the problem specification that the investigator should pay particular attention to concerns the pattern of expenditure and the cost of different expenditure items in a bad year. Pastoralists may face considerable increases in expenditure requirements in a crisis if, for example, they have to purchase water for livestock (and especially if the price of water increases) or have to pay for additional drugs to combat disease amongst their stock.

## Frequently Asked Questions

**Q: How is it possible to define a livelihood zone for a group that moves, frequently into other peoples' territory?**
A: Most pastoral groups have a home base or territory that they do not share with other groups. They may move out of this territory on a regular basis (i.e. during certain seasons of the year) or in bad years. The simplest way of mapping livelihood zones in a pastoral setting is to define them on the basis of the home territories occupied by groups that share the same basic pattern of livelihood.

**Q: How is it possible to define different wealth groups in a pastoral setting, when there is so much sharing of assets and resources between different types of household?**
A: While it is true that there is a great deal of mutual assistance and cooperation between households in pastoral societies, the household remains the basic (or smallest) unit at which assets and resources are managed. Livestock, for example, are generally owned by an individual household head and not by the community. He (or occasionally she) is responsible for managing his/her animals, deciding which animals to sell and when, and whether and how to arrange gifts and loans of livestock. In practice, once the concept of the wealth group is properly explained, pastoralists generally have little difficulty in preparing a wealth breakdown for their community.

**Q: Does it make sense to prepare the analysis at household level, given that households often split, the men taking the livestock to far grazing and the women, children and elderly remaining behind at the home base?**
A: Even though household do split in this way, this is usually only a temporary (often seasonal) phenomenon. This means that the situation is little different from that in a settled agricultural area from which people migrate for work on a seasonal basis. The fact that they are physically separated from other members of the household does not mean that they are no longer members of the household. Having said that, it is important to be aware that migration may mean that not all members have the same access to the household's resources (i.e. intra-household sharing may not be equal). This can be especially significant if migration separates the women and children from the milking herd.

**Q: In many pastoral areas there are two rainy seasons. Doesn't it make more sense to prepare the outcome analysis by season rather than for the year as a whole, since the whole-year analysis often involves making assumptions about the performance of the second season?**
A: Yes, in one sense it does make sense to do the analysis by season, and this remains an important area for further development of HEA in the future. However, it is also true that many of the agencies responsible for responding to problems in pastoral areas plan on an annual basis and require estimates of need by year. In order to meet that planning requirement, the current approach is to make a projection for the whole year following the first or main rainy season, and then to update this analysis after the second or subsidiary season.

# ADAPTING HEA TO MAKE IT MORE RAPID

## Background

Throughout the history of HEA, there have been demands for a more "rapid" version of the approach. In truth, classic HEA assessments are already rapid in relation to most other approaches, and were designed to obtain the information decision makers need in the least amount of time possible. However, it does tend to require a minimum amount of person-time per livelihood zone to build up a confident picture of local livelihoods against which to model potential outcomes. The typical standard per zone is 8 villages, with each village taking at least 2 days, assuming you have two 2-person teams interviewing. Thus, on average, to obtain baseline information for one livelihood zone it takes 16 team days, or 64 person-days.

Understandably, those who need information usually want to get it as quickly and cheaply as possible. Adapting HEA to meet a more rapid timeline has been done on a case by case basis, addressing specific questions and concerns in each case. No single "Rapid HEA" approach currently exists. While it is therefore not possible to produce a step-by-step guide to rapid assessments in this chapter, the accumulated experience of doing more rapid assessments has produced a variety of lessons on this subject which can serve as tips and issues for consideration. The single most important lesson is that the more rapid the HEA-based assessment, the more experienced the assessment leader needs to be.

### What is a rapid HEA assessment and when is it done?

There are times when a full HEA assessment may not be possible, and a rapid assessment of the situation is required to inform interventions. Most commonly, this occurs:

- after a rapid-onset disaster when immediate action is required;
- where there is limited access to the focus population (for example in an insecure environment);
- where a provisional assessment is needed to determine whether it is worthwhile carrying out a more detailed assessment; or
- in a slow-onset disaster (e.g. droughts) that has escalated into an emergency in the absence of an adequate response.

Rapid can be distinguished from classic HEA in two key ways:

1. The total number of person-days is fewer than the standard stated above. In practice, it is usually just one (or two) very experienced HEA practitioners who are called on to help answer the key question at issue.
2. In a classic HEA assessment, the procedure is to build the baseline first, then conduct the outcome analysis as a separate exercise; in rapid assessments, it tends to be necessary to combine all the steps into one single assessment process.

The key challenge in carrying out rapid assessments is to find the optimal trade-off between the need for faster results and the requirement to maintain the quality and reliability of the information collected. The general process is one of following the logic of the HEA framework to collect and interpret as much relevant information as possible, by whatever

means is possible in the context. No single prescriptive approach is possible or indeed desirable.

At a global level, rapid HEA assessments have been carried out in recent years after the 1999 drought in Pakistan, the 2004 tsunami in Asia, the 2005 Kashmir earthquake in Pakistan and the 2006 conflict in Lebanon. Within southern Africa, examples include assessing the effects of the floods in Mozambique in 2000, the impact of the land reform programme in Zimbabwe in 2001-02, and the impact of the 2002 drought in Malawi.

### What are the objectives of rapid HEA assessments?

Rapid HEA assessments usually have one or both of the following objectives:

(a) To collect the minimum necessary information to determine which population groups are unable to meet their minimum food and essential non-food requirements, what the extent of their emergency needs are, and what the duration of those needs is likely to be.

(b) To determine the capacity of different population groups to return to pre-hazard livelihood patterns, and make recommendations for emergency livelihood recovery programmes.

### What are the constraints involved in doing rapid HEA assessments?

The very fact that a rapid assessment approach is required tends to mean that the operational situation is not ideal. It is important for both HEA practitioners and information users to be aware of the implications of the constraints associated with the assessment circumstances. The constraints vary from context to context but can include:

- Limited physical access to the population, e.g. because of damaged transport infrastructure or insecurity
- The effects of trauma on disaster-affected populations, who may be pre-occupied by bereavement or loss of homes or assets, means that interviews are not always possible or may need to be severely curtailed
- A high pressure working environment with the requirement to produce fast results and plans for interventions leaves little time for reflection and analytical precision
- A lack of existing in-country support may mean logistical and administrative gaps if the emergency is in an area where the assessing agency has not worked before

## How to do It

### The need for experienced HEA practitioners

The most important requirement in a rapid HEA is to use highly competent staff. The more rapid the assessment, the more critical is the role of good judgment and analytical skills on the part of the practitioner. A highly experienced HEA practitioner will be able to bring to the table knowledge and understanding of rural livelihoods from different places, and will be better able to spot inconsistencies and abnormalities in information collected, and to quickly address those. As a rule of thumb, a lead practitioner for a rapid assessment should have completed no fewer than five previous full HEA assessments, including both the baseline and outcome analysis components.

It is usually desirable for at least two interviewers to work together (to allow for the minimum of triangulation between different investigators). When necessary, it is possible for a single highly experienced HEA practitioner to work with high caliber but untrained local staff or partners, and to provide them with some on-the-job coaching in HEA interview skills.

### The HEA framework & the methods

The framework for a rapid HEA remains the same as for a full HEA. This means the outcome analysis is still based on an understanding of the baseline situation of different wealth groups in different livelihoods zones, what effect a defined shock or hazard has had, and how people have responded to that hazard. The baseline picture also still refers to asset holdings, sources of food and income, and to some extent, expenditure patterns.

What differs in a context where a rapid assessment is required is (a) the field methods used will often have to be adapted to get as much information as possible in less than ideal circumstances, and (b) the total quantity of information that can be collected will inevitably be less than we would normally collect in a full HEA, and decisions have to be made about strictly prioritising information needs and about how to cope information gaps that cannot be filled.

### Using secondary and primary data

In an emergency context, where time is limited, making good use of existing secondary data is more important than ever. Secondary data will almost inevitably refer to the situation before the disaster that prompted the rapid assessment, therefore it will be of most use in giving an overview of the baseline situation. Depending on how soon after the disaster your assessment takes place, there is less likely to be secondary data available on the problem, so primary data collection in the field is likely to focus more on understanding the impact of the disaster.

Primary data collection will be important for verifying the secondary information on the pre-disaster situation, and for understanding how the disaster has affected people. In emergency contexts it is strongly recommended that rural appraisal methods are used for rapid assessments rather than structured questionnaires. This is because time and access constraints typically limit one's ability to prepare an adequate questionnaire, to sample properly, and to interview the large number of households usually needed for a representative sample. Rapid rural appraisal methods are more flexible and suited to an emergency context.

While HEA assessments often use focus group discussions, in some circumstances it will not be feasible to arrange them. For example, immediately after disasters, communities are disrupted and households are often very pre-occupied with dealing with the physical, economic and psychological effects of a disaster, and it is often not appropriate or possible to ask groups of people to take large amounts of time to assist in assessments. In those circumstances, individual household interviews have been undertaken as a substitute for focus group interviews. These are typically shorter than focus group discussions, as there is no need for different households to reach agreement. However it becomes even more important to carry out cross-checks on the information provided in individual interviews, both within and between interviews. Furthermore, one individual household interview does not substitute for one wealth group interview. It is recommended that where individual household interviews are carried out, that 3 individuals from each wealth group are interviewed in each village. Knowledgeable local people can be used to bring you to households matching the criteria for each wealth group provided in the wealth breakdown. The analyst should avoid visiting only one part of a village, and should use their analytical skills to verify whether a

consistent pattern is emerging from interviews. If there are many inconsistencies, then additional household interviews should be carried out to try to reconcile or explain those.

Chapter 6: Annex E provides a checklist of possible sources of secondary information in emergencies, and issues to consider when reviewing secondary data to understand the baseline/ pre-disaster situation. It also provides a checklist of issues for discussion when trying to understand the impact of a disaster on the household economy.

### Ways of making fieldwork more rapid

As noted above, the ultimate objective of rapid HEA assessments will be the same, in most cases, as a classic HEA assessment. Making the process faster inevitably means taking some short-cuts in how this objective is met. It is essential that any "short-cuts" in the assessment are made transparent in the report. A few common ways of reducing the time required for collecting baseline information are:

- Focus only on those whose livelihoods have been badly affected by the disaster. From the secondary data review and a basic understanding of baseline livelihoods patterns, it should be possible to deduce which wealth groups and which livelihoods activities are most likely to have been badly affected by the disaster. Whereas in classic HEA we interview all wealth groups (although often prioritising the poor), in rapid assessments field interviews should concentrate heavily on those groups worst affected by the disaster. At the same time, the links between wealth groups should emerge from this discussion, and ways to ensure these links are maintained and strengthened need to be kept in mind.
- Reduce the number of household representative interviews per zone. In extreme cases, there have been examples of rapid assessments in which information was only collected from village-level community elders and knowledgeable people, rather than talking directly to household representatives from each wealth group. The validity of this approach has only been tested informally. For example, a rapid national assessment in Malawi in 2002 used this approach, and results were found to be quite similar to those from a more in-depth survey carried out later. However, there will inevitably be a loss of precision, and there is a risk that decision-makers will not accept the results.
- Leave aside the expenditure questions in every interview. Instead, take the time to put together (with help from key informants) a minimum basket typically required by the poorest households and find out the prices of those items from markets or relevant key informants (e.g. school authorities for education costs). Your focus will then be on comparing current income levels with the cost of the survival food and non-food baskets to see whether an emergency intervention is needed.
- Focus only on the most important sources of food and expenditure. Normally in full HEAs we would try to ask about every single crop produced and every single way of making income. In rapid assessments we may limit ourselves to asking details about only those sources of food and income that contribute, say 75-85% of the total, and then getting more rough estimates of the value of the remaining items, for example via proportional piling and relating smaller sources to the size of bigger sources.

### Understanding the hazard in a rapid assessment

The likely impact of the disaster should be gauged for every livelihood activity. If we know the relative importance of each activity, then we will be able to estimate the total impact on that basis. Information for this section usually needs to come from primary data collection. However, with reasonable baseline information and with some livelihoods experience, it may be possible to make an informed guess about the effects of hazards on different population

groups which could inform a very short-term interim intervention while a longer-range assessment is carried out.

Because the sorts of contexts in which rapid assessments are carried out tend to be quite fluid, there is a greater than normal risk that predictions will become out of date quite quickly. Where there are many "unknowns" around how the situation may develop in the short-term (e.g. during a conflict situation, or in the immediate aftermath of a flood where road and market access may quickly improve, or simply where multiple agencies may be responding to needs at speed), it is recommended that analysts provide more scenario-based projections and recommendations. This can either be in the form of estimates of the effects of specific events (e.g. "if conflict resumes, then the extent of needs will increase, but if there is no conflict then the needs should be as reported here), or it may be in the form of best, worst, and most likely case scenarios. The key to useful scenario predictions is to be very clear about what variables are being taken into account in your analysis, and what their different values are under the different conditions envisaged in your scenario. That way, those variables can be monitored over time so that decision-makers can understand which scenario is actually coming to pass.

### Time frame

The length of time needed for a HEA is based on the number of zones to be covered and the number of skilled staff available. For a single zone with a single experienced HEA practitioner working with one local partner, we would expect the following approximate timescale:

- Secondary data review: 1-2 days
- High level key informant interviews (national/ district level): 1-2 days
- Village level interviews (@ 1 day per village): 4-6 days
- Report-writing: 2 days
- **Total**: 8 – 12 days (plus travel)

The time required can be reduced by using more experienced staff. The use of more inexperienced staff can increase the time required by adding in training time.

## Frequently Asked Questions

***Q: Why do a full HEA if you can just do a faster, cheaper rapid assessment?***
A. Rapid HEAs should not be a first-choice type of assessment because they require significant compromises in the level of detail collected and almost invariably also require some compromises in the reliability of the data because the reduced data-set and number of interviews means there are fewer opportunities for cross-checking the information. Also, with a standard HEA baseline, you can re-use it year after year and the short term investment in gathering baseline data pays off over the long run. However it is not recommended to re-use the baseline gathered in a rapid assessment, and therefore the return on the investment in a rapid assessment over the long term is not high.

***Q: Are rapid assessments the same as emergency assessments?***
A. In practice, yes, the vast majority of rapid assessments are carried out in emergencies. At times they are carried out in non-emergencies because of a lack of resources to carry out a full assessment. This is far from ideal however, and the rapid assessment in that situation should be used to try to leverage more funds for a full assessment.

## Further reading

Sphere Project, 2004: Humanitarian Charter and Minimum Standards in Disaster Response, Geneva: The Sphere Project