THE LINKS BETWEEN HOUSEHOLD ECONOMY ANALYSIS (HEA) AND THE INTEGRATED PHASE CLASSIFICATION (IPC)

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CONTENTS

SUMMARY

The **Integrated Food Security and Humanitarian Phase Classification (IPC)** is a system for defining the severity of a situation (from 'generally food secure' to 'famine/humanitarian catastrophe'), based upon a wide range of indicators of the impact of a hazard event on human health and welfare (e.g. mortality rate, nutritional status, etc.).

There are obvious links between 'outcome' as measured by **Household Economy Analysis (HEA)** and phase. Since HEA takes into account the many and varied economic operations of individual households, the deficits calculated using HEA relate not just to access to food, but also to a number of other key reference outcomes included in the IPC (e.g. coping strategies, dietary diversity, destitution/displacement, etc.)

All the key reference outcomes used to define phase are current, i.e. they relate to the situation now. Given the usually long lead times between defining a problem and mounting a response this is a significant problem in terms of making the IPC an effective tool for linking information to action. The question is not just what is the phase now, but what is it likely to be in 6-12 months time? At the moment, predictions of future phase are subjective and based upon 'expert' judgement. HEA provides a formal, quantitative method for predicting what phase might be reached within the next 12 months.

HEA is a method of assessing needs (whereas the IPC is a classification scheme). HEA can complement the IPC by estimating numbers of people in need, types of assistance required, amounts of assistance required, timing and duration of assistance, etc.

This paper explores the complementarities between HEA and the IPC. Readers familiar with both HEA and the IPC are recommended to read sections 1.1 and 1.4-1.7. Readers requiring an introduction to HEA will find this in Section 2.

The views expressed are solely those of the author. The ideas in this document were developed during the course of two consultant contracts with FSAU in 2005-06. Under these contracts the conceptual links between the IPC and HEA were developed and programmed into an HEA Integrated Spreadsheet for FSAU (see FSAU Technical Series Report No. V.13, Somali Integrated Spreadsheet (SIS) Manual, Chapter 3.6 "Links to Early Warning and the FSAU Phase Classification", forthcoming).

1 LINKING HEA AND THE IPC

1.1 INTRODUCTION

Since February 2004 the Food Security Assessment Unit for Somalia (FSAU) has been using and progressively developing a tool called the Integrated Food Security and Humanitarian Phase Classification (IPC). The most recent revision, dated May 2006[1], has five phases and three early warning levels. Phase defines the severity of the situation, while the early warning level defines the likelihood of a particular phase developing in the future.

The phase classification has a number of features:

a) A simple 5-level classification (from 'generally food secure' to 'famine/humanitarian catastrophe') that can be mapped to indicate the severity of the situation throughout Somalia.
b) A classification based on indicators measuring the impact of a hazard event on human health and welfare (e.g. mortality rate, nutritional status, etc.).
c) A classification that draws upon as wide as possible a range of indicators (of food security, livelihood security, nutritional status, health, mortality, water and conflict).
d) A defined list of general types of intervention appropriate to each phase.
e) The inclusion of an 'acute food and livelihoods crisis' phase. At this phase the emphasis is on saving livelihoods even though life itself may not be threatened.

Box 1: Complementarity between HEA and the IPC

How HEA complements the IPC

- There are obvious links between 'outcome' as measured by HEA and phase. Since HEA takes into account the many and varied economic operations of individual households, the deficits calculated using HEA relate not just to access to food, but also to a number of other key reference outcomes included in the IPC (e.g. coping strategies, dietary diversity, destitution/displacement, etc., see section 1.7).
- Using the terminology of the IPC manual[1], the deficits calculated using HEA can be used as direct evidence of outcome with respect to food access, and indirect evidence with respect to other measures of outcome. Taking the argument one step further, HEA can be used to estimate not just food access but overall phase.
- All the key reference outcomes used to define phase are current, i.e. they relate to the situation now, and generally provide little or no indication (early warning) of the situation in the future. Given the usually long lead times between defining a problem and mounting a response this is a significant problem in terms of making the IPC an effective tool for linking information to action. The question is not just what is the phase now, but what is it likely to be in 6-12 months time?
- The particular contribution of HEA is that it provides a formal, quantitative method for predicting (or providing early warning) of what phase might be reached in the near future (i.e. within the next 12 months).
- HEA is an assessment method (whereas the IPC is a classification scheme). It can be used to estimate numbers of people in need, types of assistance required, amounts of assistance required, etc.

How the IPC complements HEA

- Suggests a method for refining HEA results, with projected phase as an output in addition to deficit. This could be particularly useful in terms of identifying areas giving cause for concern but not yet facing a deficit.

[1] FAO/FSAU 2006. Integrated Food Security and Humanitarian Phase Classification: Technical Manual Version 1. Nairobi, FAO/FSAU Technical Series IV.11'

f) An emphasis on food security as a key outcome, but inclusion of other humanitarian concerns (e.g. water, health, civil security).

Two points should perhaps be noted in relation to the IPC:

1. It does not obviate the need to collect basic data (i.e. there is still a need to undertake nutritional surveys to assess nutritional status, household economy analyses to assess food access and so on). In fact, its relatively heavy requirement for data represents one of the main potential criticisms of the tool.
2. It is not a method for assessing needs (i.e. it does not provide answers to basic questions about numbers of beneficiaries and amounts of assistance required). Guidance is provided as to the types of intervention that might be appropriate in any given situation, but this is relatively general in nature (e.g. 'support livelihoods and protect vulnerable groups', 'urgently increase food access through complimentary interventions').

1.2 THE IPC SUMMARISED

The IPC consists of four components:

1) **The Phase Classification Reference Table** *(see page 4 of the Phase Classification Manual[1)]*. This is the central element of the tool. It consists of a table that:
   a) Lists the 5 phases (from 'generally food secure' to 'famine/humanitarian catastrophe').
   b) Defines the conditions associated with each phase. This part of the table lists the key outcomes (mortality rate, nutritional status, etc.) and cut-offs or levels to define each phase.
   c) Lists the types of intervention that might be appropriate in each phase.

   A second table of **Early Warning Levels** is also proposed. There are three early warning levels, defined in terms of the probability/likelihood of a worsening situation (alert, moderate risk and high risk).
2) **Analysis templates**. These are tables that set out the evidence to support the phase classification in a transparent manner. They guide the process of analysis and provide a record of the analysis that can be subjected to peer review.
3) **Cartographic protocols**. A set of standardised conventions for preparing phase classification maps *(see page 5 of the Phase Classification Manual[1] for an example of a phase classification map)*.
4) **Population tables**. Tables of population by administrative unit, livelihood system and livelihood type that can be used to estimate the number of people living in a particular area at a given phase.

1.3 THE PHASE CLASSIFICATION REFERENCE TABLE

Phase is based on measures of outcome in relation to lives and livelihoods (e.g. mortality rate, nutritional status, etc.). The advantage of using measures of outcome is that these directly measure the impact of a hazard event on human health and welfare.

For each outcome, cut-offs are proposed to define the phase. These are based upon internationally accepted standards. The main reference outcomes and their associated cut-offs are listed by phase in the table below.

An obvious problem would arise if all the conditions defined in the table had to be met before a particular phase could be declared (what would the phase be, for example, if mortality rates are at the level to define a humanitarian emergency, but there is no civil insecurity?). The problem does not arise, however, because the idea is not to strictly apply single indicator thresholds, but to define phase based upon the weight or convergence of evidence from all available sources. The reference outcomes listed for each phase are therefore guides – they do not all necessarily need to exist or coincide for a given phase to be declared.

Box 2: Key Reference Outcomes According to Phase[2]

Key Reference Outcomes	Phase				
	1	2	3	4	5
	Generally food secure	Chronically food insecure	Acute food and livelihood crisis	Humanitarian emergency	Famine /Humanitarian Catastrophe
Mortality rate Crude (per 10000/day) U5 (per 10000/day)	<0.5 -	<0.5 <1	0.5-1 1-2	1-2 >2	>2 -
Nutritional status Wasting Stunting	<3% <20%	3% – 10% >20%	10% - 15%, ↑	>15%, ↑	>30%
Disease	-	-	Epidemic, ↑	Pandemic	Pandemic
Food access/availability Kcals per person per day	>2100, stable	~2100, unstable	2100 via 'asset stripping'	<2100	much below 2100
Dietary diversity	Adequate	Chronic deficit	Acute deficit	<=3 food grps consumed	-
Water access/availability Litres per person per day	>15, stable	~15, unstable	7.5 – 15	< 7.5	< 4
Destitution/displacement	-	-	Emerging, diffuse	Concentrated, increasing	Concentrated, large scale
Civil security	Peace	Unstable, disruptive tension	Limited spread, low intensity conflict	Widespread high intensity conflict	Widespread high intensity conflict
Coping Strategies utilised **Coping strategies index**	- -	Insurance -	Crisis ↑	Distress ↑↑	- -
Livelihood assets - utilization	Sustainable	Unsustainable	Accelerated and critical depletion/loss	Near complete and irreversible depletion/loss	Complete loss/collapse

Notes on the table:
1) ↑ means elevated/increasing
2) Epidemic means a situation in which the number of cases of a disease is increasing rapidly. Pandemic means a situation in which a large geographical area or a large proportion of the population is infected by a particular disease.
3) The coping strategy definitions are those of MSF[3]
4) There are 5 livelihood assets/capitals = human, financial, social, physical and natural[4].

[2] Slightly modified from 'FAO/FSAU 2006. Integrated Food Security and Humanitarian Phase Classification: Technical Manual Version 1. Nairobi, FAO/FSAU Technical Series IV.11'
[3] van der Kam, S. (2000). Revised MSF Nutrition Guidelines. In Field Exchange, 10.
[4] DFID (UK Department for International Development) (2001). Sustainable Livelihoods: Guidance Sheets, London.

1.4 USING HEA TO HELP DEFINE PHASE – PHASES 1 AND 2

Phases 1 and 2 of the IPC relate to the 'normal' or general situation, in the absence of a specific hazard event. In HEA, analysis of outcome deals with the impact of a hazard, i.e. it is concerned with defining deviations from the baseline or reference year[5], not with the reference year itself. Strictly speaking, therefore, the analysis deals with phases 3 to 5 (which represent deviations from 'normal') and not with phases 1 and 2 (which characterise the 'normal' situation).

There is, however, no reason why the baseline data for the reference year should not be used to help define the phase for that year. And provided the reference year was a reasonably typical year (and not either an especially bad or an especially good year), the phase defined for the reference year can also be taken as reasonably representative of the 'normal' situation. An approach to defining the phase in the reference year - based upon HEA results - is suggested in the table below:

Box 3: Using HEA to Help Define Phase - Phases 1 and 2

Phase	Main characteristics – IPC	Main characteristics – HEA
1	Adequate food intake and dietary diversity achieved through the sustainable use of local livelihood assets. A stable situation, with low probability of either hazard or conflict.	• Reference year food intake for all wealth groups above 2100 kcals per person per day • Above average/adequate expenditure on non food goods and services by all wealth groups[6] • Above average proportion of food and cash income derived from primary production (e.g. from crops and livestock), with limited reliance on marginal off-farm activities (e.g. firewood and charcoal) • Sustainable use of local livelihood assets, judged, for example, in terms of - level of firewood cutting - fallowing of agricultural land - encroachment of agriculture onto grazing land - stocking levels of livestock, etc.
2	Borderline food intake and poor dietary diversity achieved through the unsustainable use of local livelihood assets. High vulnerability to recurrent hazards including conflict.	• Reference year food intake for one or more wealth groups below 2100 kcals per person per day • Below average/inadequate expenditure on non food goods and services by one or more wealth groups • Below average proportion of food and cash income derived from primary production, with heavy reliance on marginal off-farm activities • Unsustainable use of local livelihood assets, judged as described above

[5] HEA baseline analyses are usually prepared for a specific reference year. Most often this is a year that is considered by local informants as typical or average in relation to the recent past. The term 'normal' is avoided because of the difficulties of definition.

[6] Further work is required to define what is meant by 'adequate' expenditure on non-food goods and services. Above average means in relation to average expenditure for a region or possibly for the whole country (i.e. across a number of livelihood zones).

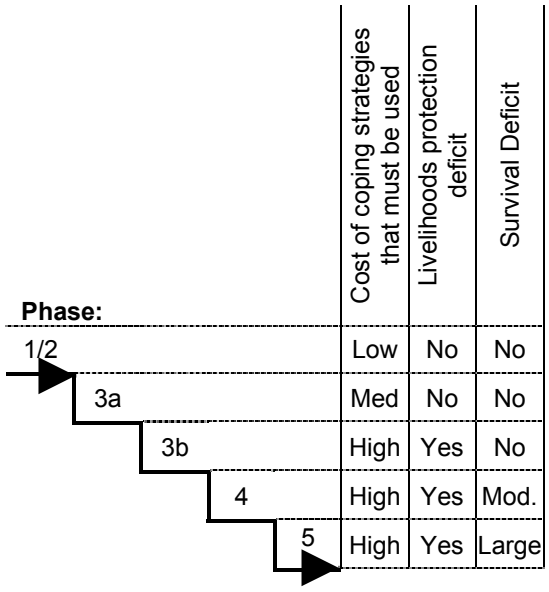
1.5 USING HEA TO PREDICT (PROVIDE EARLY WARNING) OF PHASE 3, 4 AND 5

Phase classification is about defining the severity of a particular situation. In HEA, severity is defined in terms of a) the extent to which households must draw upon the coping strategies available to them and b) the type and magnitude of the deficits that result from a particular situation[7]. A possible definition of phase, based upon HEA, is set out in Box 4. In this scheme, phase is defined on the basis of the types of coping strategy recruited (low cost, medium cost or high cost)[8], the type of deficit faced (livelihoods protection deficit or survival deficit), and (in the case of a survival deficit) the magnitude of deficit. Two sub-divisions of phase 3, the 'acute food and livelihoods crisis phase' are suggested, 3a and 3b. Further definition of each phase is given below.

In HEA, no attempt is made to model behaviour. Rather the approach is to model the options (or coping strategies) that people can draw upon to meet their minimum food and non-food needs. The greater the reserve of coping, the less likely they are to need outside assistance. The first question asked in HEA is could people cope by recruiting only low cost strategies? If yes, there is little cause for concern, and no need to modify the phase compared to 'normal' (which will be either phase 1 or phase 2).

The need to recruit medium-cost strategies signals a significant deterioration in the situation, and, should mark the start of an 'acute food and livelihoods crisis'. Provided the situation is not too severe, these medium-cost strategies can compensate for any loss of food and cash income occasioned by the hazard, and no deficit is calculated. This is represented as phase 3a in the diagram.

Box 4: Definition of Phase, based upon HEA



The next stage on the HEA scale of severity is for a *livelihoods protection deficit* to develop. At this point, households are unable to cover all of their essential expenditures on non-food goods and services (unless they start to make use of high-cost strategies[9]) but – if they prioritise household resources to this end - they can still cover their needs for survival (which includes access to 100% of minimum food needs). This is represented as phase 3b in the diagram.

The next stage is when total food and cash income are insufficient to cover the needs for survival, even if full use is made of the available coping strategies. Crossing this threshold marks the beginning of a humanitarian emergency (phase 4), which becomes a

[7] Two types of deficit are now calculated using HEA, the livelihoods protection deficit and the survival deficit. The livelihoods protection deficit is a measure of the adequacy of projected income to cover essential expenditure on non-food goods and services. The survival deficit, on the other hand, is a measure of the adequacy of projected income (food and cash) to cover the requirements for survival (see section 2.4 for further explanation of these terms).
[8] See (see Box 10 on page 16for explanation of low-, medium- and high-cost coping strategies.
[9] These high cost strategies are excluded from the HEA outcome analysis, see page 16.

famine/humanitarian catastrophe once the basic survival deficit becomes especially large (e.g. in excess of 50%, if measured in food terms).

Box 5: Using HEA to help define Phase - Phases 3, 4 and 5

Phase		Main characteristics – IPC	Main characteristics – HEA
3	**Acute food and livelihood crisis**	Exposure to a hazard results in a situation in which food access can only be maintained by turning to crisis coping strategies and the unsustainable use of local livelihood assets. Rates of nutritional wasting and mortality may be elevated.	3a) People cannot cover all of their essential expenditures on non-food goods and services ***unless*** they turn to medium-cost coping strategies to increase access to either food or cash income.
			3b) People cannot cover all of their essential expenditures ***even if*** they make full use of the available medium-cost coping strategies. At this point they face a *livelihoods protection deficit*, and are likely to turn to high-cost strategies, possibly including a reduction in food intake[10].
4	**Humanitarian Emergency**	Exposure to a hazard results in a severe entitlement gap, with use of distress coping strategies, reduced food intake, elevated nutritional wasting and mortality, and possible epidemic disease outbreak.	People cannot access their needs for survival, including 100% of their minimum food needs, even if they make full use of the available medium-cost strategies. They face a *survival deficit* and there is a high probability that high-cost strategies will be used.
5	**Famine/ Humanitarian Catastrophe**	Exposure to a hazard results in a serious failure to cope, with grossly inadequate food intake, high rates of malnutrition, epidemic disease and mortality, destitution and displacement.	People face a large *survival deficit* (e.g. in excess of 50% if measured in food terms), even if they make full use of the available medium-cost strategies. There is a high probability that high-cost strategies will be used.

Since different wealth groups recruit different coping strategies at different times and face different deficits in any given situation, an obvious question is how to integrate the results across more than one wealth group. Two relatively simple solutions are possible. The phase classification could be based on either:

a) the results for one group, the poor, since this is usually the largest group and the one that faces the highest risk of a deficit.
b) the results for the group worst affected by the current hazard, i.e. the group facing the largest deficit. It most cases this will be either the poor or the very poor but might, in certain circumstances be the middle or better-off.

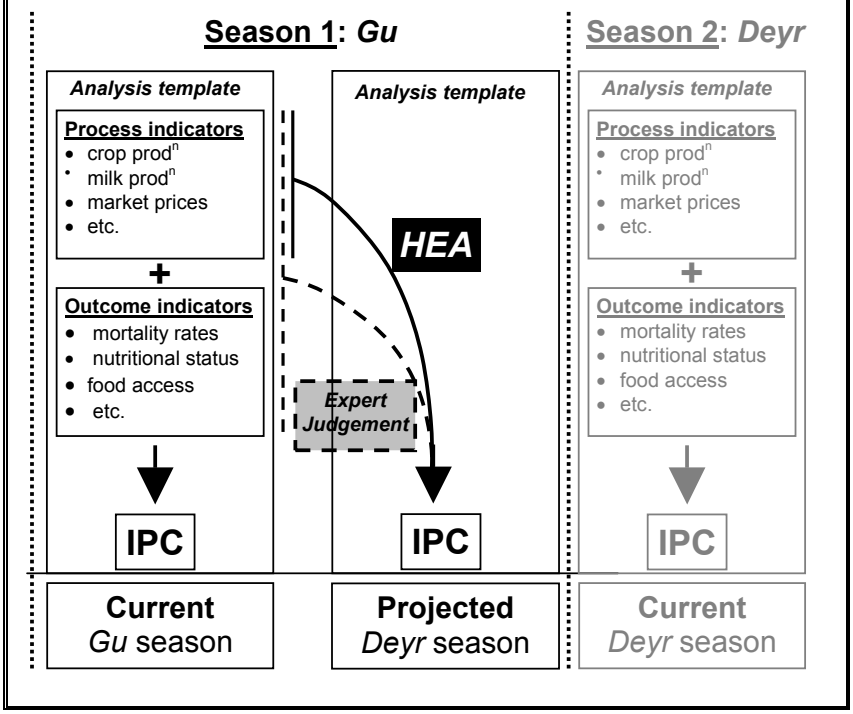
[10] Malnutrition rates may increase during this phase if food intake is accorded a relatively low priority (e.g. if people opt to reduce food intake rather than make use of other coping strategies such as increase livestock sales, migrate in search of additional labour, or cut back on expenditure on health and education).

1.6 PHASE CLASSIFICATION, HEA AND SEASONAL ASSESSMENTS

The diagram below is a possible schema for integrating HEA into the seasonal phase classification process in Somalia. The main role of HEA in this schema is to predict future phase.

The following notes summarise the main points from the schema.

Box 6: Linking HEA and Phase Classification to Seasonal Assessments in Somalia



1) Seasonal assessments are conducted twice a year in Somalia, at the end of the main ***Gu*** and subsidiary ***Deyr* seasons**. At each assessment two analyses are prepared, one of **current IPC**, the other of the **projected IPC** (i.e. the situation at the start of the next rains.

2) In determining current IPC, two types of indicator are taken into account. These are the **outcome indicators** (listed in the phase classification table) and the **process indicators**, which provide indirect or supporting evidence for the phase classification.

3) Data on process and outcome indicators are recorded on an **analysis template**, which is also used to record the process of analysis itself.

4) For the IPC projection, two methods can be used, a) **HEA** and b) **expert judgement**. The HEA method takes the data on current hazard (i.e. the process indicators) and combines this with the HEA baseline data on food, income and expenditure to project the future phase (as described in sections 1.5 and 2). The second method, expert judgement, relies upon the analysts to make a projection of future phase, based upon the current results for both the process and the outcome indicators and the analysts' local knowledge of the area in question. Clearly, this latter method is relatively subjective compared to the more objective result obtained with the HEA method. Nonetheless is it important that the HEA results should 'make sense' in the context of what local experts know and understand about a particular area.

5) The process is repeated at the time of each seasonal analysis, indicated in the diagram by Season 2: Deyr.

1.7 How HEA Captures Other Key Reference Outcomes besides Food Access and Availability

As pointed out in Section 1.1, HEA takes into account the many and varied economic operations of individual households and the deficits calculated using HEA relate not just to access to food, but also to a number of other key reference outcomes included the IPC. The following tables summarise how HEA captures these key reference outcomes, and the relationship between each outcome and the deficits calculated by HEA.

Box 7: Key Reference Outcomes Fully Captured by HEA

Key Reference Outcome	*Notes:*
Food access/ availability	***How captured:*** HEA assesses households' ability to access food and non-food goods and services, and at what cost (in terms of 'coping') – this is what is meant by 'outcome' in HEA. The availability of food is assessed through the analysis of variables such as local crop production and market prices. ***What the deficit(s) correlate with:*** The method generates a quantitative estimate of food access and deficit (if any) for groups of households living at different levels of wealth, by livelihood zone and by administrative unit.
Dietary diversity	***How captured:*** Diets may become less diverse either because production has failed (i.e. failure of one or more crops, reduction or loss of livestock production) or because purchasing power has fallen and only a limited range of foods can be purchased. Both effects are fully included in the calculation of outcome using HEA. ***What the deficit(s) correlate with:*** A reduction in dietary diversity is included in the coping incorporated into the analysis. The existence of a deficit implies a significant reduction in dietary diversity.
Coping strategies	***How captured:*** An effort is made to incorporate fully the effect of 'coping' when calculating outcome using HEA. The following types of strategy are included: a) strategies that maintain primary production in the face of a hazard (e.g. re-planting of crops, replacement of long-cycle by short-cycle crops, long distance grazing of livestock, etc.)[11], b) strategies to increase food and cash income (e.g. increased sale of livestock, collection of wild foods, sale of charcoal etc.), and c) strategies to reduce expenditure, freeing up money to be spent on essential food and non-food goods and services (e.g. reduced expenditure on beer, cigarettes, clothing, festivals, ceremonies, etc.). Note that only low- and medium-cost strategies are included in the calculation of outcome (see Box 10 on page 16). ***What the deficit(s) correlate with:*** The existence of a deficit means that low- to medium-cost strategies cannot cover food and non-food needs. Households are then likely to employ high-cost strategies.

[11] In HEA parlance, these aspects of coping are captured in the problem specification, see footnote 14.

Box 8: Key Reference Outcomes Partially Captured by HEA	
Key Reference Outcomes	***Notes:***
Mortality rate & Nutritional status	***How captured:*** There is an obvious correlation between food access, food intake, nutritional status and mortality, but HEA does not explicitly predict either outcome. This is because nutritional status and mortality result from many factors, of which food access is only one. Other factors include exposure to disease, availability and effectiveness of curative services, intra-household sharing of resources, the care environment for children, etc. ***What the deficit(s) correlate with:*** As deficits increase, mortality and malnutrition rates are likely to increase.
Destitution/ displacement	***How captured:*** Destitution and displacement result from an extreme loss of entitlement and the failure/exhaustion of all the economic options available to distressed households. HEA does not aim to predict levels of destitution and displacement. Instead the size of the deficit represents an estimate of the level of assistance required to prevent destitution and displacement. ***What the deficit(s) correlate with:*** The size of the deficit should correlate with the level of destitution and displacement. As the average deficit for each wealth group increases, so more and more individual households (usually the poorest) will fall into destitution.
Livelihood assets	***How captured:*** Within the IPC, the key concept with respect to livelihood assets is over-exploitation leading to depletion and loss of the asset. HEA seeks to assess the types and amounts of assistance required to prevent such over-exploitation. HEA considers a number of such effects, including: a) Over-exploitation of natural resources, e.g. through firewood cutting or charcoal burning b) Depletion of physical capital, e.g. through sales of tools and equipment c) Diversion of human capital, e.g. through a switch from investment of labour in own production to migration of labour to generate immediate food and cash income d) Depletion of social capital, e.g. through over-use and excessive demands on fragile ties and obligations, or through the breaking of these ties as a consequence of long-term out-migration e) Depletion of financial capital, e.g. through the liquidation of savings and through excessive sale of livestock. ***What the deficit(s) correlate with:*** The greater the deficit the greater the likelihood that strategies will be employed that lead to the depletion/loss of one or more livelihood assets.

Box 9: Key Reference Outcomes Not Captured by HEA	
Key Reference Outcomes	***Notes:***
Disease	No effort is made to predict the prevalence of disease using HEA. In calculating the expenditure deficit, however, the method does consider the extent to which available cash income is sufficient to cover on-going expenditures on health. It can also be used to assess households' ability to cover an increase in health expenditure at a time of crisis.
Water access/ availability	HEA cannot be used to predict the availability of water, but it does address the question of access in economic terms, i.e. where water has to be paid for. Payment for water is common in many pastoral and urban settings, but is much less common in agricultural areas. Where water is paid for, the HEA deficit calculation takes into account expenditure on water, and the possibility that this may increase in a crisis year.
Civil security	Civil security may be both a cause and a consequence of food insecurity. In HEA no effort is made to predict levels of civil insecurity resulting from food insecurity or from any other cause. On the other hand, where civil insecurity contributes to food insecurity, such insecurity can be considered as part of the hazard and as such can be factored into the outcome analysis[12].

[12] Conflict can have a number of effects that can be incorporated into the outcome analysis, including a) looting and destruction (of crops/seeds/food stocks/livestock/tools), b) reduced access to certain areas (markets, grazing areas or fields), c) disruption to trade and transportation and d) displacement.

2 THE HOUSEHOLD ECONOMY ANALYTICAL FRAMEWORK

2.1 THE HOUSEHOLD ECONOMY BASELINE

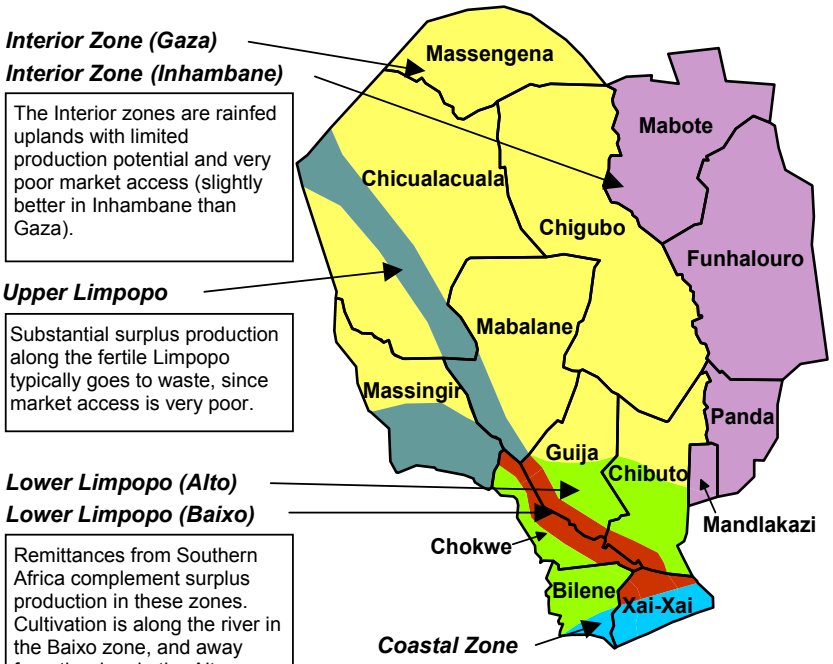
The Household Economy Approach (HEA) to analysing livelihoods and assessing food security has been used widely in Africa and elsewhere over the past decade. The basic principle underlying the approach is that an analysis of local livelihoods is essential for a proper understanding of the impact– at household level - of hazards such as drought or conflict or market dislocation. Total crop failure may, for example, leave one group of households destitute because the failed crop is their only source of staple food, while another group may be able to cope because they have alternative food and income sources that can make up the production shortfall (e.g. they may have livestock to sell or relatives living elsewhere that can provide assistance). The idea of the household economy baseline is to capture this essential information on local livelihoods and coping strategies, making it available for the analysis of hazard impacts.

A Livelihood is the sum of ways in which people make their living.

In the context of an analysis of food and non-food needs, the most important aspects of livelihood to understand are the means by which people produce food for themselves, and the means by which they obtain income to buy food and non-food goods and services from others.

A livelihood zone is an area within which people share broadly the same means of production and broadly the same patterns of access to markets.

Livelihood Zone Map: The Limpopo Basin, Mozambique
(with district boundaries)



Patterns of livelihood clearly vary from one area to another, according to local factors such as climate, soil, access to markets etc. The first step in a household economy analysis is therefore to prepare a **livelihood zone map**, i.e. a map delineating geographical areas within which people share basically the same patterns of access to food (i.e. they grow the same crops, keep the same types of livestock, etc.) and have the same access to markets and to sources of cash income. An example of a livelihood zone map based on information gathered from southern Mozambique is presented above.

In nearly all developing countries, the household is the basic unit of economic operation in rural areas in terms of the ownership of land and livestock and equipment, of stocking and consuming food, and of sharing cash income. The household is therefore taken as the basic unit of reference in household economy analysis.

Where a household lives is one factor determining its options for obtaining food and generating income. Another is wealth, since this is the major factor determining the ability of a household to exploit the available options within a given zone. It is obvious, for example, that better-off households owning larger farms will in general produce more crops and be more food secure than their poorer neighbours. Land is just one aspect of wealth, however, and wealth groups are typically defined in terms of their land holdings, livestock holdings, capital, education, skills, labour availability and/or social capital. Defining the different wealth groups in each zone is the second step in a household economy analysis, the output from which is a **wealth breakdown**.

Having grouped households according to where they live and their wealth, the next step is to generate **household economy baseline** information for typical households in each group for a defined reference or baseline year[13]. Access to food and to non-food goods and services is determined by investigating the sum of ways households obtain food and cash — what food they grow, gather or receive as gifts, how much food they buy, how much cash income is earned in a year, and how other essential needs are met with income earned.

Once this baseline is established, an analysis can be made of the likely impact of a shock or hazard in a bad year. This is done by assessing how access to food and cash income will be affected by the shock, what other food and cash sources can be added or expanded to make up initial shortages, and what final deficits emerge (see Section 2.2).

Once the baselines have been compiled, the idea is that they can be used repeatedly over a number of years - until significant changes in the underlying economy render them invalid. Rural economies in developing countries tend not to change all that rapidly however, and a good household economy baseline will generally be valid for between 5 and 10 years. What varies is the prevailing level of access to food and non-food goods and services, but this is a function of variations in hazard, not variations in the baseline. Put another way, the level of maize production may vary from year to year (hazard), but the underlying pattern of agricultural production does not (the baseline).

2.2 Predicting Future Access to Food and Non-Food Goods and Services

One objective of HEA is to investigate the effects of hazards on *future* access to food and income, so that decisions can be taken about the most appropriate types of intervention to implement. The rationale behind the approach is that a good understanding of how people have survived in the past provides a sound basis for projecting into the future. Three types of information are combined for the analysis; information on baseline access, information on hazard (i.e. factors affecting access to food/income, such as crop production or market prices) and information on coping strategies (i.e. the sources of food and income that people turn to when exposed to a hazard). The approach can be summarised as follows (see **Figure 1**):

Baseline + Hazard + Coping = Outcome

[13] The baseline or reference year can be the last 12 months or a 'normal' or typical year. In terms of data collection and the ability of interviewees to recollect details (including quantities and prices), it is usually best to choose a recent year. The most recent 12 month period is ideal (beginning at the start of the harvest for agricultural communities), provided there wasn't an unusually large amount of food aid or other assistance distributed and provided it wasn't a very good year. If any of these situations applies then it can be very difficult to understand coping strategies and it makes sense to choose an earlier year.

The output from an outcome analysis is an estimate of total food and cash income for the current year, once the cumulative effects of current hazards and income generated from coping strategies have been taken into account. The next step is to compare projected total income against two clearly defined thresholds to determine whether an intervention of some kind is required.

Figure 1: An Example of an Outcome Analysis for Poor Households from the Wolayita Maize and Root Crop Livelihood Zone in Southern Ethiopia

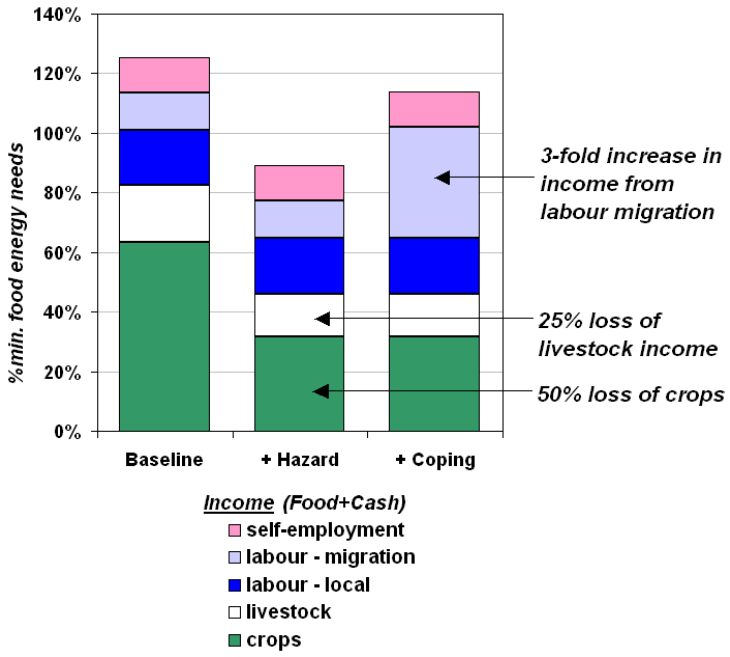
Three types of quantitative data are combined to predict outcome; data on baseline sources of food and cash, data on the hazard and data on coping strategies.

First of all, the effects of the hazard on baseline sources of food and cash income are calculated (middle bar in the chart).

Then the effect of any coping strategies is added in (right-hand bar).

The result is an estimate of maximum total food and cash income for the current year.

Note: *In this graphic, food and cash income have been added together and, in this case, expressed in food terms. (The results could also be expressed in cash terms – see* ***Figure 2****).*



The two thresholds – the ***Livelihoods Protection Threshold*** and the ***Survival Threshold*** – are described in **Figure 2**. The *Survival Threshold* is the amount of food and cash income required to ensure survival in the short-term, i.e. to cover minimum food and non-food needs. Minimum non-food needs will generally include the costs of preparing and consuming food plus any cash expenditure on water for human consumption. Shelter and clothing are also basic requirements for survival, and it may on rare occasions be appropriate to include these in the minimum non-food basket. The point to bear in mind here is that the items included in the minimum non-food basket should be those required to ensure survival in the short term. In most settled rural situations, expenditure on shelter and clothing can be forgone in a bad year, with repairs to housing and replacement of clothes being postponed until better times. Situations in which failure to spend money on shelter and clothing could be life-threatening might include war (where shelters are destroyed and clothing looted), and sudden onset disasters such as earthquake, hurricane or flood.

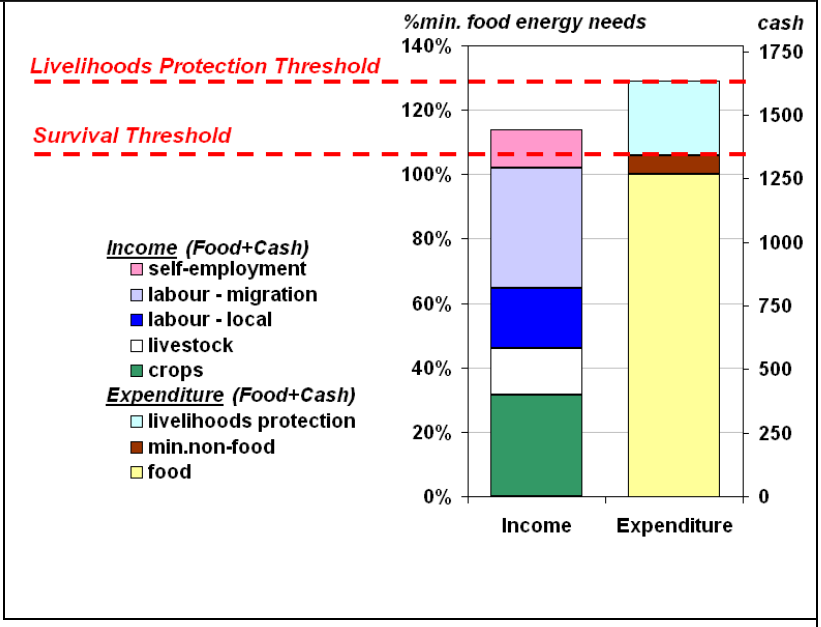
The *Livelihoods Protection Threshold* is the amount of food and cash income required to protect local livelihoods. This means a level of income that gives people the option to maintain expenditure on basic non-food goods and services at the levels prevailing in the reference year (assuming the reference year was neither especially good nor especially bad). This does not mean that people will have exactly the same standard of living as in the reference year (since the livelihoods protection basket excludes non-essential items such as beer and cigarettes), nor that they will pursue exactly the same activities as in the reference year (since the Livelihoods Protection Threshold is set at a level that assumes additional income can be generated from coping strategies). But it does mean that – provided they

Figure 2: Comparison of Projected Income against Two Clearly Defined Thresholds

Projected total income (including income from coping) is compared against two thresholds defined on the basis of local patterns of expenditure.

The Survival Threshold represents the total income required to cover:

a) 100% of minimum food energy needs (2100 kcals per person), plus
b) the costs associated with food preparation and consumption (i.e. salt, soap, kerosene and/or firewood for cooking and basic lighting), plus
c) any expenditure on water for human consumption.



Note: *Items included in categories b) and c) together make up the minimum non-food expenditure basket, represented by the brown bar in the expenditure graphic.*

The Livelihoods Protection Threshold represents the total income required to sustain local livelihoods. This means total expenditure to:

a) ensure basic survival (see above), plus
b) maintain access to basic services (e.g. routine medical and schooling expenses), plus
c) sustain livelihoods in the medium to longer term (e.g. regular purchases of seeds, fertilizer, veterinary drugs, etc.), plus
d) achieve a minimum locally acceptable standard of living (e.g. purchase of basic clothing, coffee/tea, etc.)

prioritise these items – people can continue to spend similar amounts of money on inputs and on health and education as in the reference year.

Besides these essential non-food goods and services, the *Livelihoods Protection expenditure basket* can also contain a number of items that – while not absolutely essential for survival – can nonetheless be considered essential in terms of sustaining a minimum locally acceptable standard of living. It is usually quite easy to identify these items through discussions with local key informants. Tea and sugar, for example, are considered essential among Somalis, and it is appropriate to include these in the Livelihoods Protection basket in Somali areas. For highland Ethiopians, on the other hand, tea and sugar will be replaced in the Livelihoods Protection basket by coffee and berberi (a mix of spices based on chilli pepper). Clearly, the exact composition of the Livelihoods Protection Basket will vary from livelihood zone to livelihood zone, depending upon local circumstances. This applies not only to items such as tea and coffee, but also to inputs (e.g. veterinary drugs in pastoral areas verses fertilizer in agricultural areas) and to health expenditures (e.g. expenditure on anti-malarials in lowland but not highland areas).

Another important point about the *Livelihoods Protection Threshold* is that, as defined here, it is set relative to local conditions rather than relative to international standards, such as Sphere. This is an area for further debate and further work, i.e. should the *Livelihoods Protection Threshold* be set relative to international standards, and if so, which standards should be adopted for those items not covered by, for example, Sphere (which does not include standards for firewood or for fertilizer, for example)?

2.3 ANALYSING COPING STRATEGIES

It is not usual to include every possible coping strategy in the calculation of outcome. This would have the effect of minimising and almost certainly under-estimating the need for assistance as measured by the deficit[15]. Instead, only those strategies that are appropriate responses to local stress are included. In this context, appropriate means both 'considered a normal response by the local population' and 'unlikely to damage local livelihoods in the medium to longer term'. In a pastoral setting, for example, it is usual to increase livestock sales in a bad year. This is an appropriate response to economic stress - provided the increase in sales is not excessive. Similarly, in many agricultural areas, it may be usual for one or more household members to migrate for labour when times are hard. Provided the response is not pushed too far (i.e. too many people migrating for too long a period of time), this can also be considered an appropriate response to stress. In HEA, therefore, the most important characteristic of a coping strategy is its cost, where cost is measured in terms of the effect on livelihood assets,

Box 10: Type of Coping Strategy[14]

Low Cost *(included in outcome analysis)*

- Reduced expenditure on non-essential items (beer, cigarettes, ceremonies, festivals, expensive clothing, meat, sugar, more expensive staples, etc.)
- Harvesting of reserve crops (e.g. cassava, enset)
- Consumption rather than sale of any crop surplus

Medium Cost *(included in outcome analysis)*

- Increased sale/slaughter of livestock (sustainable)
- Intensification of local labour activities
- Short-term/seasonal labour migration
- Intensification of self-employment activities (firewood, charcoal, building poles, etc.)
- Increased remittance income
- Increased social support/gifts
- Borrowing of food/cash
- Sale of non-productive assets (jewellery, clothing, etc.)
- Collection of wild foods

High Cost *(excluded from outcome analysis)*

- Unsustainable sale/slaughter of livestock
- Long-term/permanent migration (including distress migration of whole households)
- Excessive sale of firewood/charcoal (e.g. because of its effect on the environment)
- Sale/mortgaging of productive assets (land, tools, seeds, etc.)
- Prostitution
- Reduced expenditure on productive inputs (fertilizer, livestock drugs etc.)
- Reduced expenditure on health and education
- Reduced expenditure on water
- Decreased food intake

[14] Note that some strategies usually included in lists of coping strategies are not included here, e.g. strategies that maintain primary production in the face of a hazard (e.g. re-planting of crops, replacement of long-cycle by short-cycle crops, long distance grazing of livestock). This is because in household economy analysis these aspects of coping are captured in the 'hazard'. Replanting of crops and replacement of long- by short-cycle crops are captured through the crop production 'problem' and the effects of long-distance grazing are captured through the livestock production 'problem'.

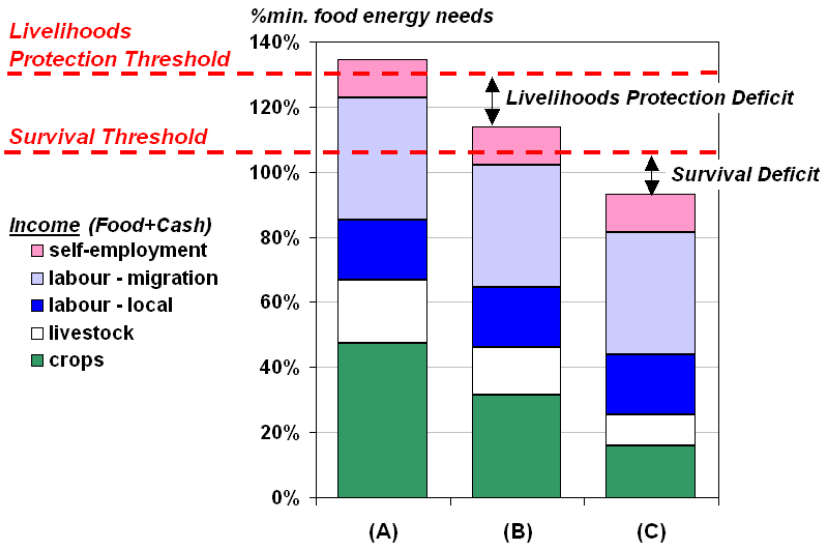
[15] This is because the inclusion of a strategy in the outcome analysis has the effect of reducing the deficit, effectively delaying any intervention until that strategy has been fully utilised. It would not, for example, make sense to include the sale of ***all*** livestock in the outcome analysis, as this would delay intervention until all livestock had been sold – rendering pastoral households destitute, for example. Likewise it makes no sense to include undesirable stress-induced activities such as prostitution in the calculation of outcome, since this would reduce the estimated assistance requirement by an amount equivalent to the income that can be earned from prostitution.

on future production by the household, and on the health and welfare of individual household members. The table presents a basic categorisation of coping strategies according to cost. Note that cost is not just a function of the type of activity, but the extent to which it is utilised (as in the livestock sale and labour migration examples described above).

Figure 3: What it Means if Total Income Falls below One or Other Threshold

The figure compares three different situations, of progressively greater severity and urgency.

(A) – No deficit: In this situation, total income (including income from low and medium-cost coping strategies) is sufficient to ensure basic survival and to protect existing patterns of livelihood. There is therefore no pressing need for an emergency intervention.



(B) – Livelihoods Protection Deficit: Total income is no longer sufficient to cover the cost of survival plus the expenditure required to protect local livelihoods, and an intervention of some kind is required to cover the deficit. At this level, local people can still cover expenditure on survival (including the consumption of 2100 kcals per person per day), provided they accord these needs a high enough priority. In other words, people should not have to go hungry at this level[1], although they will have to resort to other high-cost strategies including a reduction in expenditure on productive inputs, on health and on education. The primary objective of intervention at this level is to protect livelihoods, both in the current year and for the future.

(C) – Survival Deficit: At this level, total income is insufficient to cover the cost of survival, even if full use is made of all the available low- and medium-cost coping strategies, and all the money usually used to protect livelihoods is switched to the purchase of staple foods. It is very probable that people facing this type of deficit will go hungry, unless they resort to other undesirable high-cost coping strategies (see **Box 10** for a description of these). The primary objective of intervention at this level is to protect health and life in the short-term.

[1]Although they may opt to do so, if, for example, not increasing livestock sales or not migrating for labour has a higher priority than maintaining food intake.

2.4 How HEA Helps Address Core Decision Maker Questions

If total income falls below one or other threshold, this implies the existence of a deficit and the need for an intervention of some kind. HEA helps to distinguish clearly between situations according to their severity and urgency. The existence of a *Livelihoods Protection Deficit* (see **Figure 3**) indicates the need for interventions to protect livelihoods, while a *Survival Deficit* indicates the need for an intervention to ensure survival in the short term.

There is a range of options that can be used to fill a deficit, from food and cash transfers, through non-food interventions to market price interventions (see **Figure 4**). Information on patterns of local livelihood (collected during the household economy fieldwork) will help to identify the most appropriate intervention in any particular situation. The only point to bear in mind in relation to the

type of deficit is that the intervention selected must be commensurate with the scale and urgency of the problem. There is little point, for example, in proposing a distribution of soap to fill a survival deficit. Something much larger in scale will generally be required, which will usually mean a distribution of food or cash, or a market intervention on a relatively large scale.

The output from a Household Economy analysis is quantitative. That is HEA provides quantitative estimates of how many people will face a deficit, how big that deficit is, and therefore the scale of intervention required to address the problem. Besides answering the critical question of how much?, HEA also generates answers to the other core questions posed by decision-makers in relation to emergency interventions (see **Box 11**).

Box 11. How HEA Helps Address Core Decision Maker Questions

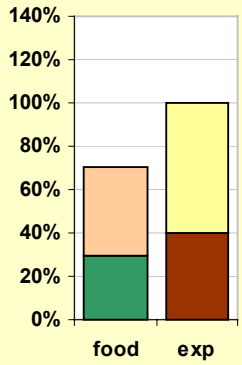
Core question	*How HEA helps answer the question*
WHO	***Wealth breakdowns*** help group the population in a way that shows who will be most affected by different shocks.
WHAT	***Livelihood strategy identification, description and quantification*** (Food, income, expenditure) shows what can be done to support existing livelihoods, and, just as important, what might harm them.
HOW MUCH	***Outcome analysis*** determines what kinds of gaps will be left in the event of a shock or multiple shocks. This leads directly to an analysis of how much help is needed.
WHERE	***Livelihood zoning*** helps group people in a way that allows you to see where affected populations will be.
WHEN and FOR HOW LONG	***Outcome analysis***, combined with careful use of seasonal calendars, provides a basis for determining when different types of assistance are needed and for how long.

Figure 4: How HEA Helps Identify a Broad Range of Interventions

Deficits may be Addressed via a Range of Interventions

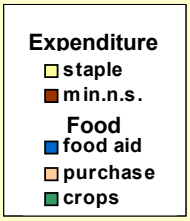
The basic measure of outcome in a household economy analysis is the deficit. If there is a deficit then an intervention of some kind is required. As this figure shows a range of interventions can help 'fill' the deficit, protecting food security and livelihoods at household level.

The Outcome Analysis – The Starting Point for Identifying Appropriate Interventions



The graph provides an example of a household economy outcome analysis for a defined group of households (e.g. the poor from a particular livelihood zone). In this case, poor households are facing a deficit equivalent to 30% of annual food needs.

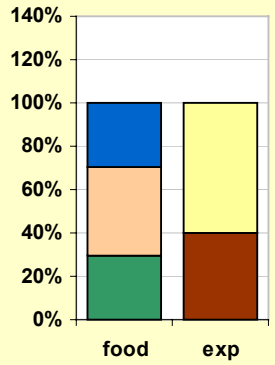
LEGEND



The ***left-hand bar*** illustrates food access, as a percentage of minimum annual food energy needs.

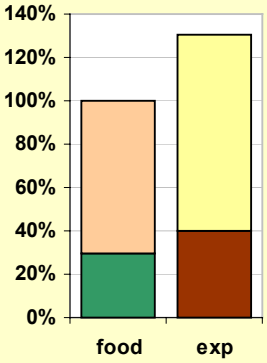
The ***right-hand bar*** shows the pattern of cash expenditure, expressed as a percentage of baseline. (Note: staple = staple food, min.n.s = minimum non-staple expenditure, or the sum of expenditure on minimum-non food items plus livelihoods protection.

A Food Intervention



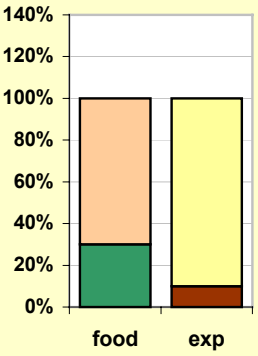
Free food or food-for-work is one option for filling the deficit, but there are others…

A Cash income intervention



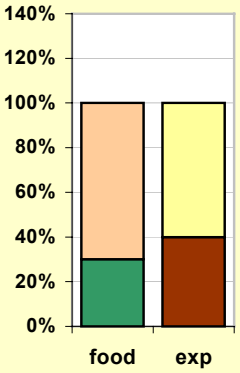
If cash income is increased, the deficit can be filled through increased purchase. The intervention may be direct (i.e. in the form of cash) or indirect (i.e. through support to one or more income generating activities).

A Non-food intervention



In a crisis, households must purchase more than just food. They also need to pay for items such as water, seeds and inputs for the next production season, school fees, etc. Provision of these items can free up cash to increase food purchase.

A Market price intervention



Increasing prices often cause reductions in food access in a crisis. Measures to stabilise food prices (e.g. the release of food from government grain reserves) can help to increase household food purchasing power, thus filling the deficit.