



...: **emergency** needs assessment branch

Desk Review:
*Identification of methods
and tools for emergency
assessments to
distinguish between
chronic and transitory
food insecurity and to
evaluate the effects of
various types and
combinations of shocks
on these different
livelihood groups*

**Institute of Development
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Identification of methods and tools for emergency assessments to distinguish between chronic and transitory food insecurity, and to evaluate the effects of various types and combinations of shocks on these different livelihood groups

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The opinions and views contained in this desk review reflect those of the author(s), and do not necessarily reflect the views of the World Food Programme.

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EXECUTIVE SUMMARY

Definitions and concepts

Chronic and transitory food insecurity refer to the time dimension of food insecurity: chronic food insecurity is a long-term or persistent inability to meet minimum food consumption requirements, while transitory food insecurity is a short-term or temporary food deficit. An intermediate category is cyclical food insecurity, such as seasonality. Despite being conceptualised in terms of duration, definitions of chronic and transitory food insecurity rarely specify time periods. Another source of ambiguity relates to the *temporal* and *severity* dimensions of food insecurity. Although ‘chronic’ and ‘transitory’ are linked together, implying different durations, ‘transitory’ is often used to imply ‘acute’, with the corollary assumption that ‘chronic’ equates to ‘mild’ or ‘moderate’ food insecurity. To avoid this source of confusion, this paper recommends (and uses) ‘moderate’ and ‘severe’ to describe the severity of food insecurity, and ‘chronic’ and ‘transitory’ to describe the temporal aspect.

Accurate information on the depth or severity of food insecurity – the magnitude of the food gap – is more important and urgent in an emergency programming context than the duration of food insecurity. Because of this fact, and in an attempt to resolve the confusion between duration and severity, this paper favours a 2x2 classification of food insecurity: *moderate chronic* (e.g. chronic hunger); *severe chronic* (for instance, using high infant mortality and child mortality rates as proxies); *moderate transitory* (e.g. the annual ‘hungry season’ in tropical agriculture); and *severe transitory* (food crises).

‘Vulnerability to food insecurity’ is often defined as a distinct concept, although this is tautologous, since ‘food insecurity’ not only describes situations where current food intake is inadequate, it also incorporates the possibility that future food intake will be inadequate. Vulnerability analysis is, however, essential for understanding changes in food security, and for triggering an Emergency Food Security Assessment (EFSA).

Problems with using transitory food insecurity to trigger EFSA

Transitory food insecurity refers to changes in food security status – a sudden (‘often precipitous’) decline in the ability to meet subsistence needs. If indicators of transitory food insecurity are to be used to trigger an EFSA, this raises significant methodological challenges, including: (1) the need for *baseline* data as well as current data, for purposes of comparison; and (2) the need to identify *cut-offs* or thresholds to determine the significance of a deterioration in status.

There is also a significant risk that aid allocations might be distorted, in two directions. Firstly, a relatively minor fall in food security indicators could trigger a disproportionate humanitarian response. An example is the case of Bosnia in the early 1990s, when a population with good pre-conflict food security status and strong coping capacity received more donor assistance per capita than conflict-affected populations in Africa at the same time. Secondly, a ‘*severe chronic*’ food insecurity situation could receive inadequate donor attention, because without a visible change in status indicators no EFSA or appeal process will be triggered. This possibility is best described by Bradbury’s phrase, the ‘normalisation of crisis’ – a scenario whereby a very high but persistent baseline level of chronic food

insecurity becomes ‘acceptable’, while a sharp rise from a lower baseline level (e.g. of global acute malnutrition and severe acute malnutrition) generates a massive aid response. In 2002, for instance, a humanitarian intervention in one Southern African country was triggered by a rise in malnutrition rates from 2.5 percent to 5 percent, but routine nutritional surveillance in Somalia that reported 13 percent malnutrition produced no donor reaction, as this level was considered ‘normal’ for Somalia.

Linkages between different dimensions of food insecurity

The notion of ‘transitory food insecurity’ as a sudden collapse from adequate to inadequate food intake ignores the reality that there are strong negative synergies between chronic and transitory food insecurity, and between moderate and severe food insecurity. A major risk factor for severe food insecurity is being ‘moderately chronically’ food insecure before a transitory shock.

Transitory-to-chronic linkages: Chronic poverty and food insecurity are often the products of a series of ‘short, sharp shocks’ – for example, a sequence of droughts with insufficient recovery periods in between. Repeated transitory shocks can set up ‘food insecurity ratchets’, forcing households to dispose of their asset buffers and productive assets to survive, until they fall below a minimum ‘asset threshold’ and face destitution as well as heightened vulnerability to famine.

Moderate-to-severe linkages: Most people who are vulnerable to food crises already subsist in marginal environments on the edge of survival, such that a relatively minor shock can fatally compromise their ability to cope. Slow-onset processes (e.g. rising HIV-prevalence or land pressure) can push households ever closer to the edge. When the causes of food insecurity are political (e.g. conflict-related), famine conditions may be deliberately inflicted on certain groups.

The concept of ***composite food insecurity*** is introduced, to address this reality of overlapping and multiple vulnerabilities. Severe food insecurity tends to affect (disproportionately) people who are already chronically food insecure, so ‘composite food insecurity’ applies to households that are chronically vulnerable at the best of times, and are also susceptible to periodic food shocks. In this sense, ‘vulnerability to food insecurity’ is a misleading concept – relatively few households are food secure most of the time but vulnerable to becoming food insecure some of the time; rather, there are many chronically food insecure households that are vulnerable to a deterioration of their status – from ‘moderate chronic’ to ‘severe chronic’ food insecurity. Since ‘severe chronic food insecurity’ is not sustainable for extended periods of time, it is a temporary or transitory state before those affected either die from hunger-related causes or are assisted to return to moderate food insecurity – or, ideally, to achieve food security.

Programmatic responses

WFP has developed three categories of response to food insecurity:

- (1) *Emergency Operations* (EMOPs) address critical episodes of *severe food insecurity*;
- (2) *Protracted Relief and Recovery Operations* (PRROs) address rehabilitation needs; and
- (3) *Development Operations*, including *Country Programmes* (CP) address longer-term problems of *chronic food insecurity*.

WFP has been criticised for not setting clear criteria for (i) moving from one programme category to another, and (ii) exiting from CPs. In some cases (e.g. Mozambique), all three kinds of programme have been running simultaneously with different population subgroups, with potentially confusing results. A recent evaluation of WFP's Enabling Development Policy in Mozambique concluded: "In chronically food deficit areas there is a clear risk that dependency is created by the project in the absence of exit strategies and an analytical basis for a vision of how food insecurity could be tackled in the long term."

An innovative attempt to separate chronic from transitory food insecurity programming is the Productive Safety Net Programme (PSNP) in Ethiopia. The PSNP builds on the insight that food insecurity in Ethiopia is partly transitory and short-term, and partly structural and long-term. Even in good rainfall years, 4-5 million Ethiopians depend on food aid, but this number rises to up to 12-13 million in drought years. Accordingly, the PSNP divides the food insecure population into two groups. The 'unpredictably food insecure' will continue to be the beneficiaries of annual appeals, and will receive emergency assistance as needed. However, the 4-5 million 'predictably food insecure' have been taken out of the annual emergency appeal process and are receiving social transfers, often in the form of cash, that are intended to contribute to market development and economic growth. A significant feature of the PSNP is the introduction of an exit strategy. Within five years, these chronically food insecure households are expected to 'graduate' out of their dependence on external assistance. While there are concerns about whether cash transfers alone will be sufficient to reverse the cycle of impoverishment and structural vulnerabilities in the highlands – especially given the evidence for deteriorating food security and rising destitution in Wollo and elsewhere – the PSNP is commendably ambitious in its objectives and design.

Possible methodologies for Emergency Food Security Assessments

This section of the paper reviews several methodologies that have been designed to assess the food security status of a population, which can be implemented and analysed quickly to produce robust information to inform emergency food security programming. Methodologies are selected for their ability to provide indicators that are 'SMART' – specific, measurable, accurate, reliable and timely. The methodologies reviewed here include:

Dietary diversity: The number of different food items consumed is a simple but robust indicator of the quality and quantity of a household's diet (a 1 percent increase in dietary diversity is associated with a 1 percent increase in per capita consumption). A study in Haiti clustered households into 'low', 'borderline' and 'high' dietary diversity, and identified several characteristics (e.g. experiences of hunger, or coping strategies) that differentiate chronic from transitory food insecurity.

Coping Strategies Index (CSI): The CSI was designed by CARE to provide a rapid assessment of a household's current food security situation. Four categories of coping behaviour are measured. Monitoring fluctuations in the index can give a rapid indication of shifts in food security status. Studies have shown that "the CSI accurately reflects current food security status and is also a good predictor of future food security status".

Household Economy Approach (HEA): The HEA was developed by Save the Children UK and is now used for vulnerability assessments and food security programming by many agencies in Africa. The methodology describes the livelihood systems of wealthy, middle and poor households that live in an area and share a similar 'food economy'. By estimating the coping capacities of each category of households, food aid requirements during a food crisis can be estimated.

Household self-assessment: A study of destitution in Ethiopia devised a simple question that asked respondents to locate their household in one of four well-being categories: ‘doing well’; ‘doing just okay’; ‘struggling’; ‘unable to meet household needs’. This question was asked for different points in time, which allowed an analysis of trends in household food security, and was found to match accurately the timing and impacts of livelihood shocks such as droughts.

Famine scales: The ‘famine intensity scale’ introduces objective, universal thresholds (for crude mortality rate, wasting, market prices and other food security descriptors or outcomes) to differentiate between various degrees of food insecurity, from ‘*Level 1: Food insecurity conditions*’ through to ‘*Level 5: Extreme famine conditions*’. A shift from one level to the next will trigger a scaling up (or down) of humanitarian interventions. Exit criteria are defined by ‘*Level 0: Food security conditions*’.

Each approach is considered in terms of its contribution to three aspects of an EFSA: (1) establishing the baseline; (2) analysing vulnerability; and (3) exit criteria.

INTRODUCTION

Emergency Food Security Assessments (EFSA) are often hampered by an inability to distinguish between problems of chronic and transitory food insecurity. Humanitarian interventions during food crises are usually triggered by a sudden deterioration in key food security indicators, such as a food production collapse, rapid food price rises, or rising malnutrition rates. Yet the people who tend to be vulnerable to food crises are often chronically (but moderately) food insecure, even before a livelihood shock raises their food insecurity ('transitorily') to life-threatening levels. This raises a number of operational challenges, including:

- how to correctly identify the food security problem, in order to design and implement appropriate interventions for different categories of food insecure people;
- how to decide when precisely to launch an emergency intervention (e.g. an Emergency Operation or EMOP); when to switch to rehabilitation (e.g. a Protracted Relief and Recovery Operation or PRRO); when to make the transition to development programming, and when to exit completely from food security interventions; and
- whether chronically food insecure people who are affected by a food crisis should be returned to their pre-crisis state, or should be assisted until they achieve food security and their resilience to future shocks has been strengthened?

The purpose of this paper is threefold:

- to clarify the terminology around chronic food insecurity, transitory food insecurity, and vulnerability to food insecurity;
- to explore the implications of different types of food insecurity for emergency programming;
- to assess alternative methodologies for food security assessments that can differentiate between chronic and transitory, and between moderate and severe, food insecurity.

The structure of this paper is as follows. The next section reviews alternative definitions of chronic and transitory food insecurity; comments on the confusion between the 'temporal' and 'severity' dimensions of food insecurity; proposes a 2x2 classification to resolve this ambiguity; explores the concepts of 'vulnerability' and 'resilience'; elaborates on the linkages between chronic and transitory food insecurity; and introduces the concept of 'composite food insecurity' to capture this interconnectedness.

The following section examines the relationship between different types of food insecurity and WFP's main programmatic responses: EMOPs, PRROs and Development Operations. Two case studies of food security programming are presented (Ethiopia and Palestine) and three policy frameworks are introduced that provide guidelines for analysing the food security impacts of livelihood shocks and for identifying appropriate policy responses for each scenario.

The final main section considers five complementary methodologies for 'rapid appraisal' of food insecurity: dietary diversity; coping strategies index; household economy approach; household self-assessment; and famine scales. The paper concludes by recommending that methodologies are selected that satisfy three principles for information requirements: (1) establish the baseline; (2) facilitate vulnerability analysis; and (3) identify exit criteria.

DEFINITIONS AND CONCEPTS

The most widely accepted definition of food security is probably “secure access by all people at all times to enough food for a healthy, active life” (World Bank 1986). The time dimension of food security is implicit in the phrase “at all times”, but this definition does not distinguish between different degrees or durations of food *insecurity*, which is essential for programming purposes. For this reason, definitions of chronic and transitory food insecurity have been developed.

WFP’s Emergency Needs Assessment policy makes an important point about the relationship between chronic and transitory food insecurity, and the ambiguous implications of these linkages for emergency and development programming.

“An increasing number of situations for which emergency funds are sought have chronic underpinnings, blurring the distinction between chronic and transitory food insecure populations.... Emergency needs assessments often cannot distinguish between chronic and transitory food insecurity, or determine whether a situation requires an emergency intervention or longer-term measures” (WFP 2004).

This section reviews the concepts of ‘chronic food insecurity’, ‘transitory food insecurity’, and ‘vulnerability to food insecurity’. We argue that much of the source of the confusion lies in ambiguities about the way the terms are defined in theory and operationalised in practice. We also introduce the concept of ‘composite food insecurity’ to address the reality that chronic and transitory food insecurity are often inextricably interrelated.

The temporal dimension of food insecurity

Several terms are used to describe the temporal nature of food insecurity, including:

- chronic and transitory food insecurity;
- predictable and unpredictable food insecurity;
- baseline and current food insecurity; and
- cyclical and seasonal food insecurity.

Chronic and transitory food insecurity refer explicitly to the time dimension of food insecurity. Chronic food insecurity is long-term or persistent, while transitory food insecurity is short-term and temporary. “Chronic food insecurity occurs when people are unable to meet their minimum food requirements over a sustained period of time” (DFID 2004). Transitory food insecurity “refers to a sudden (and often precipitous) drop in the ability to purchase or grow enough food to meet physiological requirements for good health and activity” (Barrett and Sahn 2001).

Chronic food insecurity is often explained in terms of “structural deficiencies” in the local economy or food system, and is explained in terms of “poverty”, “lack of assets” and/or “inadequate access to resources”.¹ It follows that chronic food insecurity “is usually the result

¹ “chronic hunger is a consequence of structural deficiencies” (FAO 2005); “Chronic food insecurity is most often linked to poverty” (USAID 2003); “Chronic vulnerability ... is strongly associated with lack of assets” (WFP 2005b); “Chronic food insecurity generally arises through inadequate access to resources, and is therefore structural in character” (FAO 2005).

of persistent structural vulnerability” (FIVIMS 2002). Conversely, transitory food insecurity is primarily caused by short-term shocks and fluctuations in food availability and food access. “The major sources of transitory food insecurity are year-to-year variations in international food prices, foreign exchange earnings, domestic food production and household incomes” (World Bank 1986).

A number of definitions of chronic and transitory food insecurity are provided in Box 1 and Box 2. As can be seen, there is broad consensus on the key features of both terms. Similar phrases recur in most definitions: ‘persistent’ and ‘long period of time’ in the ‘chronic’ definitions; ‘sudden’, ‘temporary’ and ‘shocks’ in the ‘transitory’ definitions.

Box 1. Definitions of Chronic Food Insecurity

“a persistent inability to meet minimum nutrient intake requirements” (Barrett and Sahn 2001).

“Structural or chronic food insecurity implies a persistent inability on the part of the household to provision itself adequately with food” (FAO 2005).

“When a household is persistently unable to meet the food requirements of its members over a long period of time” (IFAD 1997).

“Chronic food insecurity is a trend in food consumption that involves an inability to meet food requirements over a long period” (IFAD 1997).

“the inability of a household or an individual to meet the minimum daily food requirements for a long period of time” (FIVIMS 2002).

“Chronic hunger is a consequence of diets persistently inadequate in terms of quantity and/or quality, resulting from household poverty” (WFS 1996).

“Chronic food insecurity exists when households are unable in normal times to meet food needs because they lack sufficient income, land or productive assets, or experience high dependency ratios, chronic sickness or social barriers” (WFP 2004).

“chronic food insecurity occurs when people are unable to meet their minimum food requirements over a sustained period of time. This is usually associated with slowly changing factors which have increased people’s exposure to shocks or else decreased their ability to cope with the effects of these shocks – essentially increased their vulnerability” (DFID 2004).

Box 2. Definitions of Transitory Food Insecurity

“a sudden (and often precipitous) drop in the ability to purchase or grow enough food to meet physiological requirements for good health and activity” (Barrett and Sahn 2001).

“the sudden reduction of a household’s access to food to below the nutritionally adequate level” (IFAD n.d.).

“transitory food insecurity concerns *shocks* that briefly push the *level* of food consumption below the requirements” (IFAD n.d.).

“Transitory vulnerability to food insecurity involves a temporary inability to meet food needs or smooth consumption levels” (WFP 2005b).

“Transitory food insecurity affects households that are able to meet their minimum food needs at normal times, but are unable to do so after a shock” (WFP 2004).

“Transitory food insecurity occurs when there is a temporary inability to meet food needs, usually associated with a specific shock or stress such as drought, floods or civil unrest”

(DFID 2002).

“Transitory food insecurity: being unable to meet the food intake needs when specific fluctuations or shocks affect income or means to access food, without sacrificing productive assets or undermining the human capital” (Dhur 2005).

To some extent, the anthropometric indicator of height-for-age can be used as a proxy for **chronic food insecurity**, where a low height-for-age compared to a reference population indicates stunted growth (or ‘stunting’), caused by persistently inadequate food intake over an extended period of time. The anthropometric indicator of weight-for-height, which measures recent weight loss (‘wasting’) and is caused by inadequate current food intake (Save the Children 2004) can be used as a crude proxy for **transitory food insecurity**. As argued below, there are overlaps and interactions between chronic and transitory food insecurity, so that children who are stunted are more vulnerable to being wasted as well. This interaction – labelled **composite food insecurity** below – is partly captured by the ‘composite’ malnutrition indicator weight-for-age (‘underweight’). Note, however, that these are not perfect proxies: chronic food insecurity can be reversed, for instance, while stunting is very difficult to reverse after three years of age. Also, anthropometric outcomes can reflect problems with health, sanitation or child care, not just inadequate food intake, so caution should be applied in interpreting anthropometric data in isolation from other indicators. An alternative indicator of transitory food insecurity is ‘mid-upper arm circumference’. All these anthropometric measures are applied to children under five, but it is also important to monitor adult nutrition status, using body mass index (BMI) and chronic energy deficiency as indicators. One reason for monitoring adult nutrition status is that parents often protect the food consumption of their children during periods of food shortage, so child nutrition might be a trailing indicator of a shift from ‘chronic hunger’ to evolving ‘food crisis’.

Alternative terms for ‘chronic’ food insecurity include ‘baseline’ and ‘structural’ food insecurity, while WFP’s Vulnerability Analysis and Mapping (VAM) unit proposes replacing ‘chronic and ‘transitory’ food insecurity with ‘baseline’ and ‘current’ vulnerability. “For the purpose of WFP and of mapping vulnerability to food insecurity, a potentially much more useful differentiation is that made between ‘baseline’ vulnerability and ‘current’ vulnerability” (WFP n.d.). The terms ‘predictable’ and ‘unpredictable’ food insecurity have also been introduced recently to this debate (DFID 2005). There is a certain logic to this: since chronic food insecurity is long-term in nature – it “can persist for years if not lifetimes” (FAO 2005) – and is closely correlated with poverty, the number of people involved can be fairly accurately predicted, and their programming needs can be anticipated and planned. Conversely, transitory food insecurity can emerge or erupt almost anywhere and at any time. This unpredictability makes programming and planning extremely difficult. All that can be estimated is that transitory food insecurity “may affect around 5 percent to 10 percent of the developing world population annually” (FAO 2005).

A third temporal aspect of food insecurity is **seasonal or cyclical food insecurity**. “Seasonal food insecurity occurs when there is a cyclical pattern of inadequate access to food (e.g. food shortages in pre-harvest period)” (FIVIMS 2002). During the annual ‘hungry season’ or *soudure* in tropical crop farming systems, the prevalence of undernutrition typically increases. “Cyclical food insecurity is usually more easily predicted than temporary food insecurity because it generally follows a sequence of known events” (USAID 2003). On the other hand, since seasonality is of limited duration, perhaps it should be subsumed as a form of ‘recurrent transitory’ food insecurity. There are also important linkages with chronic food insecurity, as

poor households have to deplete their limited assets to purchase food to survive the 'hungry season'.

For emergency programming purposes, seasonality is important mainly because it highlights times of year when the food gap and food needs are likely to be greatest, but because of its predictability it is unlikely to trigger an EFSA. Seasonality does, however, present additional data demands. To assess food security status in contexts where seasonality is the norm, it may be necessary to compare food security indicators such as food prices not only against a baseline 'average' but with reference to the baseline for the same season (or month) in previous years.

Despite being conceptualised in terms of its duration, definitions of chronic and transitory food insecurity rarely specify time periods. Must food insecurity be permanent to be labelled 'chronic', or must chronically food insecure people be short of food for, say, at least eight months in a year? If a person goes hungry for a single day, does this qualify as 'transitory food insecurity', or is a minimum period of several weeks or months required? The hungry season does at least place a natural time frame (usually 2-3 months) around cyclical food insecurity in tropical agricultural systems. Given this ambiguity about precisely when transitory food insecurity ends and chronic food insecurity begins, instead of being conceptually and empirically distinct categories, they could be seen as lying at two ends of a continuum, with cyclical food insecurity in between.

The severity dimension of food insecurity

Accurate information on the intensity or severity of food insecurity is more important and urgent in an emergency programming context than the duration of food insecurity: it is more critical to know the magnitude of the food gap than for how long the affected population has faced this food gap. In practice, these two dimensions of food security are usually considered jointly. For instance, a community whose food security status is gradually eroding over time will not receive humanitarian assistance when average food consumption dips below a cut-off threshold (e.g. below 1,800 kilocalories [kcal]) if the decline happens slowly and gradually over time. Similarly, a food secure population whose food consumption falls suddenly from 2,300 to 2,000 kcal/person/day is unlikely to receive as much humanitarian attention as one whose consumption drops from 2,300 to 1,600 kcal.

Perhaps the simplest way of thinking about different intensities of food insecurity is in terms of levels of food intake. Taking 2,100 kcal as an average daily energy requirement, the following categories of food insecurity can be defined:

Figure 1. Food insecurity severity levels

	<u>Status</u>	<u>Calorie consumption</u>
Kcal/ day	<i>Food secure:</i>	consistently above 2,100 kcal
2,100	<i>Mildly food insecure:</i>	between 1,800 kcal and 2,100 kcal
1,800	<i>Moderately food insecure:</i>	between 1,500 and 1,800 kcal
1,500	<i>Severely food insecure:</i>	less than 1,500 kcal/day

A more detailed definition of moderate and severe food insecurity is provided in Box 3.

Box 3. Moderate and severe food insecurity
<p>Moderate food insecurity:</p> <ul style="list-style-type: none"> (i) food intake in insufficient quantity (for example, between 1500 and 1800 kcal/person/day) and poor quality which puts health and nutritional status at risk (for example, protein only 8-10 percent of kcal, fat 10-17 percent of kcal, infrequent consumption of food sources of minerals or vitamins); and/or (ii) accessing food in a way that decreases capital and leads to the depletion of assets, or risks jeopardizing health and human capital (e.g. schooling) in the longer run. <p>Severe food insecurity:</p> <ul style="list-style-type: none"> (iii) food intake in very insufficient quantity (for example, below 1500 kcal/person/day) and quality to maintain proper health and nutrition (for example, protein <8 percent kcal, fat <10 percent kcal, virtually no significant intake of food sources of minerals or vitamins); and/or (iv) accessing food in a way that depletes productive assets and leads to destitution, or is socially unacceptable, or puts health at direct risk.
Source: Dhur 2005

Combining the temporal and severity dimensions

Chronic versus transitory food insecurity implies *duration*, but in practice usually means *severity*. This can be confusing and ambiguous. When ‘chronic’ and ‘transitory’ food insecurity are used together, this implies a time dimension: ‘chronic’ meaning long-term or permanent, ‘transitory’ meaning short-term. When ‘chronic’ is paired with ‘acute’, however, this implies severity: ‘chronic’ suggests moderate hunger, ‘acute’ suggests life-threatening starvation. The EFSA Handbook’s definitions of chronic and ‘transitory-acute food insecurity’ conflate the temporal and severity dimensions in a rather confusing way:

“Chronic food insecurity is a situation in which people and households are persistently unable to meet their food consumption needs. Transitory-acute food insecurity is the

situation of people and households who, following a shock, are temporarily unable to meet their food intake needs without sacrificing livelihood assets” (WFP 2005c).

By introducing the phrase ‘without sacrificing livelihood assets’ to the definition of ‘transitory-acute food insecurity’ – but not to the definition of ‘chronic food insecurity’ – the EFSA Handbook suggests that chronic food insecurity is less serious than transitory food insecurity, even though both are associated with an inability to meet basic food consumption needs, and ‘chronic’ is linked to ‘persistent’ under-consumption while ‘transitory’ is only ‘temporary’ under-consumption.

Figure 2 proposes separating out the ‘time dimension’ and ‘severity dimension’ of food insecurity, into four categories ranging from moderate hunger to humanitarian emergencies. Although this classification appears to introduce additional complexity into the understanding of food insecurity, it has the advantage of correcting the common assumption that ‘chronic’ means ‘moderate’ while ‘transitory’ means ‘acute’. It also draws attention to situations – as in Somalia in 2002 (discussed below) and Niger before the 2004-2005 crisis – where persistently high levels of ‘severe chronic’ food insecurity are ignored because they are regarded as ‘normal’, rather than as a sudden deterioration necessitating an emergency response.

Figure 2. Temporal and severity dimensions of food insecurity combined

	Moderate	Severe
Chronic	Moderate chronic food insecurity (<i>chronic hunger</i>)	Severe chronic food insecurity (<i>high infant mortality rate & crude mortality rate [CMR]</i>)
Transitory	Moderate transitory food insecurity (<i>e.g. seasonality</i>)	Severe transitory food insecurity (<i>emergencies</i>)

‘Vulnerability to food insecurity’

‘Vulnerability to food insecurity’ is often defined as a distinct concept in its own right, although this is, strictly speaking, tautologous, as vulnerability and insecurity are essentially the same thing. Food insecurity does not only describe situations where current food intake is inadequate, it also covers the potential for future food intake to be inadequate. This is apparent from the phrase “*at all times*” in most standard definitions of food security: “Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food for a healthy and active life” (Sphere Project 2004). Nonetheless, for food security assessment purposes, it is useful to separate out ‘current food insecurity’ from the risk of ‘future food insecurity’. A good working definition of ‘vulnerability to food insecurity’ or ‘borderline food insecurity’ is as follows:

“Borderline (or vulnerability to) food insecurity: being at risk to become transitorily or chronically food insecure in future, though until now able to maintain an acceptable food intake; ‘borderline’ refers to a state of ‘vulnerability’ to food insecurity but differs

from ‘transitory food insecurity’ by the fact that food insecurity has not been experienced so far by these at-risk households” (Dhur 2005).

Just as food insecurity can be disaggregated into ‘chronic’ and ‘transitory’, so can food security – into security against chronic food insecurity and security against transitory food insecurity. Achieving food security requires not just achieving an adequate level of food consumption, but maintaining this level at low risk over time – i.e. reducing vulnerability to food insecurity.

“A household can be said to be food secure only if it has protection against both kinds of insecurity. The average access to food over the long term should be nutritionally adequate, and a household should be able to cope with short-term vicissitudes without sacrificing the nutritional needs of any of its members” (IFAD 1997).

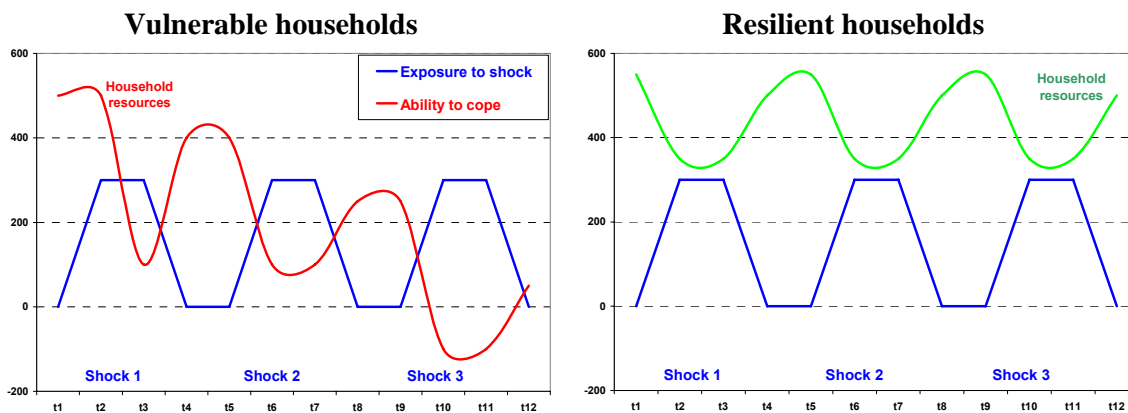
Although vulnerability is intrinsic to the definition of food insecurity, its implications for emergency programming and for longer-term food security policies are often neglected. Vulnerability is often conceptualised as a composite of both ‘internal’ and ‘external’ risk factors; i.e. *exposure* to hazard (or shock) and *resilience*, or the ability to manage the hazard. The vulnerability dimension of food insecurity also has these two components: a household’s food insecurity is a function both of its *exposure to shocks* (e.g. harvest failure, food price inflation) and of its *ability to cope* with these shocks. It is the combination of these two components that determines which households are food insecure following a shock, and how much assistance each cluster of households will need to survive and to maintain a viable post-crisis livelihood.

Understanding vulnerability as having two dimensions is very important for EFSA purposes. In situations of ‘severe transitory’ food insecurity requiring an immediate humanitarian response, interventions must be based not only on an understanding of what caused the food shock, but also on a disaggregated understanding of the impacts of the food shock on individuals and households with differential abilities to cope. This is the thinking that underlies methodologies such as Save the Children’s ‘Household Economy Approach’ (HEA) and the approach used by WFP’s VAM unit. Both of these approaches factor in household ability to cope, and therefore allow for a more differentiated response than a simple ‘Food Balance Sheet’ estimation of the aggregate food gap.

Figure 3 shows two stylised scenarios of the evolving relationship between the two dimensions of vulnerability over time.² In Scenario 1 – ‘*Vulnerable households*’ – households are exposed to repeated slow-onset shocks which are eroding their ability to cope and pushing them towards chronic food insecurity. In Scenario 2 – ‘*Resilient households*’ – the same exposure to regular shocks is associated with improving ability to manage these shocks, either because households develop effective adaptive strategies (e.g. livelihood diversification) or because effective external interventions (e.g. social protection) allows households to protect and build their asset base. The objective of all emergency, rehabilitation and development interventions in contexts characterised by exposure to shocks should be to move households from increasing vulnerability (i.e. declining ability to manage risk) to increasing resilience (i.e. enhanced ability to manage risk) over time.

² These scenarios are adapted from Haddad and Frankenberger 2003.

Figure 3. Vulnerability and resilience



Problems with using transitory food insecurity to trigger EFSA

Transitory food insecurity refers to changes in food security status: a sudden (‘often precipitous’) decline in the ability to meet subsistence needs. If indicators of transitory food insecurity are to be used to trigger an EFSA, this raises significant methodological issues. Two specific challenges with a focus on changes in status are:

- (1) the need for baseline data as well as current data, for purposes of comparison over time (i.e. the ‘temporal’ dimension); and
- (2) the need to introduce cut-offs, in order to determine the importance of a deterioration in status (i.e. the ‘severity’ dimension).

There is also a significant risk that aid allocations might be distorted, in two directions (see Darcy and Hofmann, 2003). Firstly, a ‘severe chronic’ food insecurity situation could receive inadequate donor attention, because without a visible change in status no EFSA or appeal process will be initiated. This possibility is best described by the phrase ‘normalisation of crisis’ (Bradbury 2000). The problem with proposing that an EFSA can only be triggered by a change in status indicators is that a very high but persistent level of food insecurity can become ‘normalised’, leading to a dangerous concept that a high baseline level of chronic food insecurity will be regarded as ‘acceptable’, while a sharp rise from a low baseline level will generate a disproportionate policy response. For instance, if nutritional surveillance reports consistently high global acute malnutrition (GAM) and severe acute malnutrition percentages, but no deterioration over time, this population will be labelled as ‘chronically food insecure’ and hence not deserving of an emergency intervention. Conversely, another situation with a lower level of food insecurity might have an emergency response triggered because of a sudden deterioration in status. In other words, transitory food insecurity is usually operationalised as a *relative* measure of food insecurity; it is not related to crossing a threshold of food insecurity measured by an *absolute* measure. Prendiville’s (2003) comparison of Somalia and southern Africa in 2002 highlights the consequences of this paradox.

“During the 2002 crisis in Southern Africa, malnutrition rates in one area rose from 2.5 percent to 5 percent. Humanitarian organisations feared that it could rise to 10 percent and commenced implementing relief projects. ... In southern Somalia in 2002, a routine nutrition survey showed a malnutrition rate of 13 percent. Humanitarian organisations

recommended no special interventions as the result was (*tragically*) within the range regularly seen in Somalia.” (Prendiville, 2003).

Is it technically correct (let alone morally defensible) that southern Africa received an enormous emergency response in 2002 because it had a ‘transitory food insecurity’ problem, while Somalia – with much higher absolute levels of food insecurity – received no international attention because this was characterised as a ‘chronic food insecurity’ problem? Doesn’t a ‘severe chronic’ food security situation deserve at least equivalent attention as ‘severe transitory’ food insecurity?

The second risk in terms of distorted aid allocations is the corollary of the first. A relatively minor fall in food security indicators could trigger a relatively disproportionate humanitarian response. Southern Africa in 2002 might be an example, at least in terms of the aid that was mobilised relative to the ‘non-response’ for Somalia. Another example is the case of Bosnia during the war in the early 1990s, when a population with adequate pre-conflict food security status and coping capacity received substantially more international assistance per capita than conflict- and famine-affected populations in Africa at the same time (Watson 2002).

Linkages between different dimensions of food insecurity

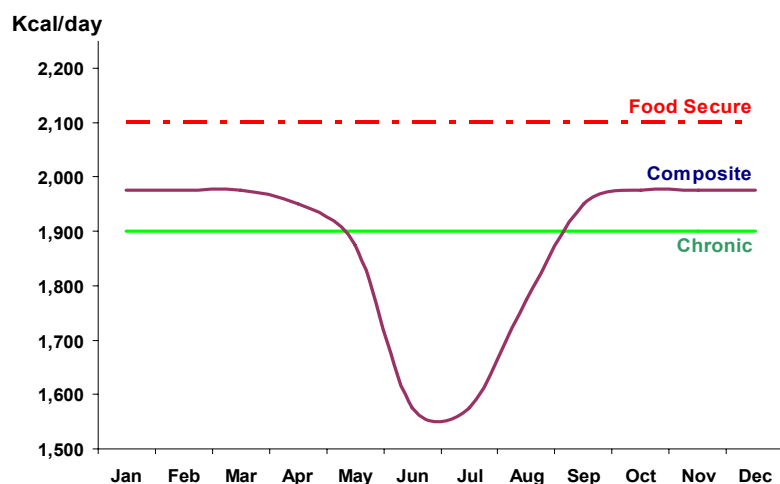
The notion of ‘transitory food insecurity’ as a sudden collapse from adequate to inadequate food intake ignores the reality that there are strong negative synergies between chronic food insecurity and transitory food security shocks. Severe food insecurity tends to affect disproportionately people who are already chronically (but ‘moderately’) food insecure. Most recent food crises (e.g. in Ethiopia, Malawi, Niger and Sudan) have affected countries – and population subgroups within those countries – that are poorer and more undernourished than global or national averages. One reason for this is that powerful negative synergies exist between chronic and transitory food insecurity, and between moderate and severe food insecurity. A major risk factor for severe food insecurity is being ‘moderately chronically’ food insecure before a short-term or transitory shock.

Transitory-to-chronic linkages: Chronic poverty and food insecurity are often the products of a rapid series of shocks – for example, a sequence of droughts with insufficient recovery periods in between. Such shocks can set up ‘food insecurity ratchets’, forcing households to dispose of their asset buffers and their productive assets to survive, until the viability of their livelihoods is undermined and they face destitution as well as heightened vulnerability to famine. Carter *et al.* (2004) show that in the context of droughts in Ethiopia and hurricanes in Honduras, households that fall below a minimum ‘asset threshold’ after a shock are unable to recover their productive assets and escape from poverty.

Moderate-to-severe linkages: Most people who are vulnerable to food crises are already subsisting on the margins of survival, such that a relatively minor shock can fatally compromise their ability to cope. They tend to live in marginal environments, including difficult and risky agro-ecological systems where it is difficult to make a living, and to be politically marginalised, having little voice and weak representation. Slow-onset processes (e.g. rising HIV-prevalence or land pressure) can push households ever closer to the edge, as their livelihoods are gradually undermined and their resource base erodes due to forced ‘disaccumulation’ of assets. When the causes of food insecurity are political (e.g. conflict-related), famine conditions may be deliberately inflicted on certain groups, meaning that food insecurity is not a policy failure, but a policy success.

Perhaps a new concept of ‘*composite food insecurity*’ should be introduced, to address this complex reality of overlapping and multiple vulnerabilities. ‘Composite food insecurity’ applies to households that are chronically ‘hungry’ at the best of times, and are also susceptible to periodic food shocks. Figure 4 illustrates this possibility. In this figure, ‘chronic food insecurity’ is depicted as a persistently inadequate food intake, but at a fairly stable level of 1,900 kcal/day. ‘Composite food insecurity’ is also depicted as a persistently inadequate diet, but with the added dimension of fluctuations between ‘moderate’ and ‘severe’ food insecurity, due to occasional shocks. These individuals or households suffer from ‘chronic hunger’ as well as (transitory) food security shocks, which causes the extent of their food insecurity to fluctuate between ‘moderate’ and ‘severe’.

Figure 4. ‘Composite’ food insecurity



This concept is similar to the concept of ‘permanent emergency’, which was applied to places such as south Sudan during the 1990s, except that ‘permanent emergency’ focuses on the ‘transitory’ aspect, while ‘composite food insecurity’ highlights the fact that severe food insecurity usually affects people who are already moderately chronically food insecure. In this sense, ‘vulnerability to food insecurity’ is a misleading and narrow concept. Relatively few households are food secure most of the time but vulnerable to becoming food insecure some of the time.³ Rather, there are many chronically food insecure households that are vulnerable to a further (transitory) deterioration of their status – from ‘moderate chronic’ to ‘severe chronic’ food insecurity – because they are more exposed to risk, and they have fewer asset buffers to cope. This reality implies that, at a fundamental level, vulnerability to chronic and transitory food insecurity are often inextricable. As WFP (n.d.) argues, it is important to view vulnerability “as a composite of past and current states and events which is a necessary perspective in countries such as Sudan where chronic economic and climatic difficulties have been overlain by successive ‘shocks’.” In such circumstances, chronically poor households that face recurrent shocks are highly vulnerable to sinking into a long-term ‘poverty trap’:

“Recurrent shocks lead to a ‘poverty trap’ and make a long-term perspective critical. Households or communities threatened with repeated shocks faces greater risks of destitution, because they have less time and fewer resources that enable them to recover

³ As is explicit in this definition: “Transitory food insecurity affects households that are able to meet their minimum food needs at normal times, but are unable to do so after a shock” (WFP 2004).

from shocks. Furthermore, these populations are additionally impacted by the fact that recurrent shocks that lead to asset divestment increase the vulnerability of a population to future risks” (CARE 2003).

These synergies or linkages between chronic and transitory aspects raise a number of dilemmas for food security programming. Is it appropriate to restore chronically food insecure people to their pre-crisis, ‘chronic’ state once the ‘acute’ emergency is passed? At what point is a food crisis satisfactorily resolved, if the pre- (and post-) crisis conditions are clearly unsatisfactory? Partly to address this concern, WFP often supports PRROs that aim to assist people in the transition from emergency aid to developmental programmes. The ‘relief to development continuum’ that underpins PRRO thinking implies a linear transition, from humanitarian relief to ensure short-term survival, to rehabilitation measures to restore pre-crisis livelihoods, followed by a resumption of ‘business as usual’ development. But this ‘continuum’ approach presumes that an emergency has “a clearly defined beginning and end (and therefore clearly delineated programmatic transition points)” (CARE 2003), when the reality is that many communities are trapped in low-level conflict or cycles of vulnerability for years, or generations. In these contexts, successful ‘recovery’ requires more than returning communities to their pre-crisis conditions; it requires reducing their ‘chronic vulnerability’ to future ‘transitory’ emergencies, by tackling the root causes of hunger.

“In instances of transitory vulnerability, the population is more likely to be ready sooner for an exit from emergency assistance. It is beyond the scope of most emergency operations to address chronic food insecurity that existed in the affected area prior to a shock. A large number of chronically food insecure households are affected by shocks, however, and exit strategies in such cases require a smooth transition to longer-term programmes to address the chronic vulnerability” (WFP 2005b).

POLICY RESPONSES TO CHRONIC AND TRANSITORY FOOD INSECURITY

Different causal factors imply differentiated policy responses. If transitory food insecurity is a result of temporarily disrupted food systems, then restoring access to food is the most appropriate response. There is a range of policy instruments for achieving this imperative, some food-based (food transfers, food for work) others cash-based (cash transfers, cash for work), others market-based (open market operations, food price subsidies). The intention is to stimulate either food supplies, effective demand for food, or both, in contexts where either or both of these factors has collapsed to below subsistence levels for certain groups of people.

If chronic food insecurity is “a consequence of structural deficiencies” (FAO 2005), then it is far from clear that food transfers will fix these deficiencies. Just as the causes of poverty and hunger are closely related, so are the causes of chronic poverty and chronic food insecurity. Appropriate interventions for both are policies that enable people to make a viable living. These could include: economic policies that promote market development, asset redistribution (e.g. land reform where farmers are land-constrained), delivering health and education services that improve nutrition status and build human capital, and employment creation programmes. This is a much broader agenda than safety nets or humanitarian programmes. In fact, addressing chronic food insecurity with tools designed for transitory food insecurity could exacerbate underlying structural problems (e.g. if non-emergency food aid undermines markets and creates production disincentives for local farmers).

This sets up a policy dilemma: how to correctly analyse the nature of food insecurity, in order to design interventions and programme resources appropriately? One solution could be to pursue a “twin-track approach” (FAO 2005): addressing transitory food insecurity by “making food available at affordable prices and having the appropriate safety nets in place well ahead of the crisis”; and addressing “structural insecurity” by attempting “to facilitate the provision of resources through which households can eventually provide for their own food security in a sustainable fashion”. In short, this means providing safety nets for transitory food insecurity, and restoring sustainable livelihoods for chronic food insecurity.

In emergency situations, “food aid is provided with the objective of preventing or mitigating the extreme form of temporary food insecurity, i.e. famine” (WFP n.d.). However, “[o]ne risk of trying to protect livelihoods through emergency responses is that food resources meant to address a shock or series of shocks can naturally gravitate towards addressing situations of chronic food insecurity, especially because communities that are already chronically food insecure are particularly vulnerable to shocks” (WFP 2005a). Partly because of the difficulty of distinguishing between transitory and chronic food insecurity in these ‘complex emergencies’, WFP introduced PRROs that assist in the transition from relief to development. The challenge for programmers is to identify the appropriate moment to shift from emergency relief to alternative programmes that address chronic food insecurity. In many cases this will imply an exit strategy for food aid programming, since: “[p]rolonged and regular food aid to countries suffering persistent poverty or conflict will not solve the underlying causes of vulnerability, and may even increase it” (DFID 2002).

Case studies: Ethiopia and Palestine

Ethiopia is an important case study for our purposes because it is perhaps the first country that has attempted to draw a clear distinction between chronic and transitory food insecurity, and to design safety net programming that addresses each of these aspects. In the 10 years between 1994 and 2003, the number of relief food-assisted Ethiopians has ranged from 2.7 to 12 million people (20 percent of the total population), with an average of approximately 6 million people each year (Government of Ethiopia 2003). The number of Ethiopians receiving food aid has not fallen under 5 million since 1998. These people have been classified by the government as ‘households constantly under food aid’ and are variously labelled as the ‘chronically food insecure’, ‘core food insecure’, or ‘predictably food insecure’. Since the number of food aid beneficiaries fluctuates from year to year because of shocks such as drought, all food-assisted Ethiopians above the baseline of 5-6 million people are labelled as ‘transitorily food insecure’ or ‘unpredictably food insecure’.

The Productive Safety Net Programme (PSNP) launched in January 2005 builds on the insight that food insecurity in Ethiopia is partly transitory and short-term, but largely structural and long-term in nature. Furthermore, the Government of Ethiopia believes that addressing chronic food insecurity with short-term, relief-oriented instruments (food for work and gratuitous relief) not only fails to address the underlying causes of chronic food insecurity but might exacerbate them by creating dependency and undermining market development. Accordingly, the PSNP provides for different programmatic interventions for each type of food insecurity, as elaborated in Box 4 below. A significant feature of the PSNP is the introduction of an exit strategy. Within five years, chronically food insecure people, i.e. those who have been taken out of the annual emergency appeal process and will benefit from predictable cash transfers rather than unpredictable food aid, are expected to ‘graduate’ out of dependence on external assistance, except during food crises.

The targeting method for identifying ‘predictably food insecure’ people combines geographic criteria with community selection. The predictably food insecure live in those districts that have received food aid in at least four of the last five years; the actual households are those that have been registered at village-level as food aid beneficiaries every year. A major risk with geographic targeting is that it excludes chronically food insecure households living in districts not classified as chronically or predictably food insecure. It is also unclear whether year-to-year shifts in ‘transitory food insecurity’ will be adequately captured in those districts identified as ‘predictably food insecure’. As noted above, people most vulnerable to severe food insecurity are often those who are ‘moderately chronically’ food insecure, but if these districts and households have been removed from the annual emergency appeal process, their critical needs for additional support in bad years might be overlooked, or at least underestimated.

Box 4. *The Productive Safety Net Programme in Ethiopia*

Ethiopia is characterised by a large number of food insecure people even in good years. For example, even when the rains are good, 5-6 million Ethiopians depend on food aid every year. This situation is compounded by recurrent shocks (usually drought-triggered) that raise the numbers of food aid beneficiaries to 12 million or more, as occurred in 2000 and 2003. A further complication is caused by the evidence for gradual deterioration of food security over time, especially in the chronically food insecure and famine-prone highlands, which has increased the number of ‘predictably food insecure’ people year by year.

The Government of Ethiopia seeks to break the cycle of dependency on food aid. In 2004, the PSNP was introduced to distinguish between two groups within the food insecure population. The ‘unpredictable’ food insecure – those who face transitory food deficits because of erratic weather or other livelihood shocks – will continue to be the beneficiaries of emergency appeals and will receive food aid as and when required. The ‘predictably food insecure’ are those facing chronic food deficits, because of poverty rather than food shocks. This group of 5 million Ethiopians has been removed from the annual emergency food needs appeal process, and are receiving cash transfers (in the form of cash for work or gratuitous cash relief) on a regular, predictable basis, with support provided by donors on a multi-annual basis. They are expected to use this cash partly to meet their consumption needs, but partly also to invest in farming and small enterprises. This should allow them to escape from their chronic food insecurity over time, after which they will no longer receive any social assistance except during emergencies.

“The overall lesson learned from the case study from Ethiopia is the importance of distinguishing between ‘acute’ and ‘chronic food insecurity’ problems and applying the right measures in the two situations. **(1) Relief aid** should only be used to relieve temporary and acute food-insecurity situations. Obviously in a short-term perspective there will be a need for food aid, but the allocation of grain on a gratuitous basis should be prevented, except for non-able-bodied persons. **(2) In situations of ‘permanent emergency’** with chronic food insecurity, the long-term measures to be applied are policies aiming at the sustainable and long-term development of the country” (IIS 2003).

Box 5 summarises how WFP is addressing this distinction between short-term and long-term food insecurity in its food aid programming in Ethiopia.

Box 5. WFP programming in Ethiopia

“Whilst development interventions are clearly designed to address chronic poverty related problems, emergency operations should not be seen as addressing exclusively transitory food insecurity problems related to temporary shocks such as drought. For instance, the ongoing WFP emergency operations, that should in theory address short-term food insecurity problems (through free food distribution) and have as main objective *the saving of human lives*, are also supporting post-disaster rehabilitation of households’ assets through EGS [Employment Generation Schemes] (thus covering around 35 percent of the population targeted by EMOP or 1,600,000 ‘mostly chronic food insecure’). However, a sustained reduction of chronic food insecurity would require approaches (medium and long-term planning, participation, partnership) and a set of related interventions that are unlikely to be provided by short-term measures where food distribution is the primary concern.”

“In a longer term perspective it is also important to note the current process of formulating a 2005-2007 Protracted Relief and Recovery Operations (PRRO) for Ethiopia that is to be seen as the main WFP contribution to the Ethiopia Safety Net Programme, which is to include two main components:

- a) The Protracted Recovery component that targets assistance to the chronically food insecure (households constantly under food aid) and includes asset-building at community and household level for public goods (feeder roads, schools) as well as building resilience to shocks and contributing to increased productivity and development (e.g. spring development, area closure);
- b) The Protracted Relief component that is based on general relief distribution for the unpredictable acute food-insecure (with able-bodied population involved in similar activities to those included under recovery) and strengthening of local capacities.”

Source: WFP 2004b

In the case of Palestine, an EMOP implemented by WFP draws a distinction between members of the population of the West Bank and Gaza who are currently food insecure and those who are “at risk of becoming food insecure” [Box 6]. An innovative feature of this EMOP is that food aid is expected to be phased out and replaced with a cash-based safety net, as the economy recovers.

Box 6. Palestine

“Of 3.8 million Palestinians living in the West Bank and Gaza, 50 percent survive on less than US\$2.10 per day; of these, 16 percent live below the poverty line of US\$1.60 per person per day. Unemployment rates have tripled since the start of the *intifada*, reaching 32 percent in 2004 ... rates of acute malnutrition (1.9 percent) and chronic malnutrition (9.4 percent) have remained stable.

In response to the deteriorating humanitarian situation following the Defence Shield operation launched in March 2002, WFP has been implementing a large-scale emergency operation (EMOP). The current EMOP 10190.2, which started in September 2004 for one year, provides food for 480,000 non-refugee food-insecure Palestinians. An October 2004 World Bank report affirms that emergency assistance has succeeded in preventing humanitarian crises among the poorest people and has reduced by a third the number of individuals affected by subsistence poverty.

According to the April 2004 WFP update of the FAO/WFP baseline assessment of 2003, 37 percent of the population are food-insecure; a further 27 percent are at risk of becoming

food-insecure. This reflects a slight improvement compared with the 2003 baseline (40 percent food-insecure and 31 percent at risk) but in-depth studies have revealed that food insecurity varies greatly at sub-governorate levels.

Targeting criteria for chronically poor people include: (i) households without breadwinners, including households headed by women; (ii) households with mentally or physically disabled family members; and (iii) people aged 70 and over.

Food aid will provide a safety net to meet the short-term food needs of food-insecure non-refugee households that have no other means of coping; it will at best sustain living conditions and prevent a further decline in food-security levels, and will be used to create or rehabilitate assets and enhance skills where possible. Food assistance for the new poor would gradually be phased out as income and trade opportunities increase and would be limited to people who had not benefited from the increased opportunities or for whom cash support might not present the best option. As the economy recovers, food assistance to the chronically poor could potentially be replaced by a cash-based safety net.”

Source: WFP 2005d

Implications for programming⁴

For programming emergency assistance, the *severity* of food insecurity should be the critical determinant of the nature and magnitude of the response, not the *duration* of food insecurity. An EFSA conducted in response to a shock will simply identify how many households are critically food insecure and whether or not they were directly affected by the shock, irrespective of their pre-shock food security status. Recommended interventions will simply aim to address the caseload of ‘severe food insecurity’; all severely food insecure households should receive the same level of support. Once the affected population has been assisted to move above the ‘severe food insecurity’ threshold (as defined in Figure 1 and Box 3 above) interventions should switch from ‘emergency’ mode to distinct programming for ‘moderate chronic’ or ‘moderate transitory’ food insecurity, as appropriate.

Establishing clear thresholds has the advantage of providing criteria both for launching an EFSA and for exiting from emergency programmes. The immediate role of an EFSA is to establish which persons are worst affected by a shock in terms of their food security status, and to launch interventions to prevent a further deterioration of their situation (i.e. to save lives) and to mitigate the effects on livelihoods. After the crisis has been addressed and the situation has stabilised (i.e. no ‘severe’ food insecurity remains among the population), a second analysis should be undertaken to determine when to terminate the emergency programme and launch (or return to) rehabilitation and development programmes for the remaining ‘moderately food insecure’ population. For those who were not food insecure before the crisis, no further assistance would be needed, and the exit strategy should be implemented. This approach should also strengthen the coherence between emergency and non-emergency food security programming.

One implication for information systems is that good baseline data should be available in order to ensure that post-crisis and pre-crisis conditions can be compared. Often this information will exist in regular early warning systems such as the Vulnerability Assessment Committee (VAC) process in southern Africa, or from ‘household economy’ baseline surveys conducted in much of sub-Saharan Africa. Where this information is not available, it can also

⁴ This section draws on ideas presented in Dhur (2005).

be obtained by a retrospective analysis to understand the history of livelihoods and the underlying causes of chronic and transitory food insecurity in the local area. This would involve adding a *time perspective* to the data normally collected on sources of food, ‘coping strategies’ and so on, to allow comparisons between the past and present, and to predict possible future trends in key food security indicators.

Table 2 in Annex 1 summarises various “typical livelihood outcomes” in the immediate aftermath of a shock, categorised as either ‘severe’ or ‘moderate’ food insecurity, or ‘vulnerability to food insecurity’. Information required for EFSA purposes includes data on the immediate causes of the crisis and its likely impacts on lives and livelihoods (food consumption, health, care, shelter, water and sanitation, education, security and protection). These outcomes give rise to a range of initial response options, which are differentiated according to the nature of food insecurity experienced (Dhur 2005).

Table 3 in Annex 1 provides an analytical framework for collating information on the *underlying* causes of food and livelihood insecurity, leading to a series of recommendations for ‘follow on’ interventions some time after an emergency programme is launched. These interventions could be categorised as ‘livelihood building’, ‘livelihood strengthening’, and ‘livelihood recovery’. Again, the appropriate response will depend on the pre-crisis food security status of affected groups. Since various categories of food insecurity can co-exist within the same population, this requires a differentiated set of responses that will be launched and terminated at different times. “Some groups could ‘graduate’ from relief assistance quickly, while others would need more time. At present, EFSA often inform responses implemented during emergency operations (EMOPs) but leave aside other responses which in fact could start during the ‘emergency’ phase and continue during a follow on Protracted Relief and Recovery Operation (PRRO)” (Dhur 2005).

Table 1 provides a ‘menu’ of policy options for addressing transitory food insecurity (post-shock) as well as chronic food insecurity and vulnerability to food insecurity (pre-shock). Instead of associating transitory food insecurity entirely with relief interventions, and chronic food insecurity with development interventions, this table also includes examples of preventative measures and “*ex ante* humanitarian interventions” to reduce vulnerability before a shock. The columns headed “Examples of what relief/development interventions need to do” also suggest several roles for EFSA methodologies – e.g. understanding vulnerability better, investing more in early warning systems, and improving the targeting of resource transfers.

Table 1. A menu of options for integrating relief and development interventions in shock-prone areas to accelerate reductions in food insecurity

State	Function	Examples of what relief interventions need to do	Examples of what development interventions need to do
<p>Post-shock:</p> <p>Goal is to meet current needs</p> <p>AND</p> <p>anticipate future needs</p>	<p>Getting food and non-food resources to those who can not meet current needs in a more efficient manner</p>	<p>Improve accuracy and objectivity of food need assessments</p> <p>Improve nutrition content of interventions</p> <p>Increase ability to combine food and non-food resources</p> <p>Build on existing social capital</p>	<p>Improve the capacity to target resources</p>
	<p>Getting food and non-food resources to those who can only meet current needs by undermining the ability to meet future needs</p>	<p>Focus more on underlying asset and livelihood indicators</p> <p>Focus more on future vulnerability, even when dealing with current vulnerability</p>	<p>Understand the vulnerability of this population to future shocks and how such shocks can undermine investment in growth-oriented initiatives</p>
<p>Pre-shock:</p> <p>Goal is to reduce vulnerability</p> <p>(the difference between exposure to the hazard, risk or shock and the ability to manage that risk)</p>	<p>Decrease exposure to potential shock</p> <p>Increase ability to cope positively with potential shocks</p>	<p>Invest more in early warning systems (including media strengthening)</p> <p>Target humanitarian interventions <i>ex ante</i> (to groups that are likely to experience a potential hazard)</p>	<p>Invest in interventions to promote resilience (e.g. promote good governance, build social capital, invest in flood-proofing)</p> <p>Strengthen capacity to make claims and meet obligations</p> <p>Improve the capacity to target resources</p> <p>Invest in less-favoured areas</p>
		<p>Take on a more preventative focus (e.g. infant feeding focusing on all under-2's, not just malnourished under 5's)</p> <p>Build assets (infrastructure, market institutions, livelihood skills) via public works</p>	<p>Cash transfers conditional on human capital investments</p> <p>Invest in infrastructure to allow private market development for key staple food crops</p>

Source: Haddad and Frankenberger 2003

METHODOLOGICAL IMPLICATIONS FOR FOOD SECURITY ASSESSMENTS

Because of the urgency and immediacy of emergency situations, it is not practical to implement comprehensive information-gathering methodologies, such as a household income survey. Instead, EFSA should follow three principles:

- (1) maximize the use of secondary information, especially for ‘establishing the baseline’;
- (2) accept the principles of ‘optimal ignorance’ and ‘acceptable error’;
- (3) choose methodologies and indicators that are specific, measurable, accurate, reliable and timely.

This section of the paper reviews a number of methodologies that have been designed to assess the food security status of a population, and that can be both implemented and analysed quickly to generate robust information that can be used to inform emergency food security programming. These methods include:

- (1) dietary diversity scores;
- (2) coping strategies index (CSI);
- (3) household economy approach (HEA);
- (4) household self-assessment; and
- (5) famine scales.

1. Dietary diversity scores

The number of different food items consumed by a household is a simple but robust indicator of food security. It reflects the level of dietary diversity and therefore the quality of people’s diets. A diverse diet is also associated with higher food consumption: “a 1 percent increase in dietary diversity is associated with a 1 percent increase in per capita consumption. ... the magnitude of the association between dietary diversity and caloric availability at the household level increases with the mean level of caloric availability” (Hoddinott and Yisehac Yohannes, 2002).

A survey conducted recently in Haiti collected data from 2,405 households on their consumption of 20 different food items in 11 food groups (cereals, tubers, vegetables, etc.), within the previous 24 hours and the last seven days. Principal components analysis (PCA) and cluster analysis were used to group households according to their food consumption patterns. Four distinct groups of households were identified (WFP 2005e):

- **Low dietary diversity:** these households consume less than four food items per day belonging to one or two food groups, i.e. cereals and fat. (This group was later sub-divided into ‘low’ and ‘very low’ dietary diversity.)
- **Borderline dietary diversity:** households whose dietary diversity is not entirely adequate because they consume five to six food items per day belonging to only three food groups, i.e. cereals, fat and vegetable proteins. Fresh foods, such as tubers and/or vegetables, are consumed less often.
- **High dietary diversity:** household consumes seven and more food items per day belonging to five and more food groups, i.e. cereals, fat, vegetable proteins, tubers, vegetables and fruits, and (less regularly) animal proteins.

These patterns of food consumption were found to be well correlated with other indicators of food insecurity and poverty, including asset ownership, meals per day, and average ‘food gap’ or ‘food surplus’ - the distance between actual consumption and a ‘minimum food consumption threshold’. A ‘minimum food consumption score’ was derived based on the typical Haitian diet: cereals, oil and pulses every day, vegetables and fruits three days a week, tubers and sugar two days a week. This produces a score of 28 per week ($7 \times 3 + 3 \times 1 + 2 \times 2$), or 4.0 per day. Food secure households have dietary scores of four or above, while the extent to which a food insecure household fall below four measures the depth of their food gap. “Food gap estimates were calculated with the objective of clarifying the difference between chronically and transitory food insecure households” (WFP 2005e). Although this is not followed up in the report, the correlation between dietary diversity and “always experiencing hunger” [see Box 7] suggests a proxy for chronic food insecurity.

Box 7. Dietary diversity in Haiti

Dietary diversity scores were used as a household classification system for a VAM ‘Food Security and Vulnerability Analysis’ in Haiti (WFP 2005). Four household categories were identified.

(1) **Very low dietary diversity** (14 percent of sample):

- The diets of these households rely primarily on cereals, some fat, occasionally pulses and tubers, and are characterized by a lack of meat and few fruits/vegetables (1-3 items/day).
- The mean food gap is estimated at 50 percent.
- 51 percent of adults and 47 percent of children report eating only one meal the day before the survey.
- 58 percent of households report always experiencing hunger, the highest in the sample.

(2) **Low dietary diversity** (33 percent of sample):

- The diets of these households are characterized by daily consumption of cereals and oil, with some consumption of pulses and some vegetables/fruit (3-5 items/day).
- The mean food gap is estimated at 24 percent.
- 33 percent of adults and 28 percent of children report having eaten only one meal the day before the survey.
- 50 percent of households report always experiencing hunger.

(3) **Borderline dietary diversity** (23 percent of sample):

- These diets are characterized by daily consumption of cereals, oil, pulses, some consumption of tubers, some fruit and vegetables, as well as some pasta, sugar, and bread (5-6 items/day).
- The mean food surplus is 10 percent.
- 12 percent of adults and 11 percent of children report eating only one meal the day before the survey.
- 38 percent of households report always experiencing hunger.

(4) **High dietary diversity** (29 percent of sample):

- These diets are characterized by daily consumption of cereals, pulses, oil, at least one source of animal protein, and more frequent consumption of fruit and vegetables (6-9 items/day)

- The mean food surplus is 50 percent
- 12 percent of adults and 12 percent of children report eating only one meal the day before the survey
- 25 percent of households report always experiencing hunger, the lowest in the sample.

Source: WFP 2005e

2. Coping Strategies Index

During the 1980s and 1990s, a number of studies documented the responses of populations affected by food crisis in Africa and Asia, and identified general patterns and sequences in the adoption of ‘coping strategies’. An important insight from this literature is that famines threaten livelihoods as well as lives, and that effective famine prevention requires early intervention to protect livelihoods and lives. A recent application of these insights is the CSI, which was designed by CARE to provide a rapid assessment of a household’s current food security situation. The CSI is based on the argument that changes in the number of strategies adopted, or in the intensity of their adoption, can indicate a deteriorating or improving food security situation over time. A short questionnaire is administered that asks whether the household is adopting various coping strategies in response to food shortage, and if so, how often. Three categories of coping strategies are included in the questionnaire:

- (1) Dietary change (e.g. eating cheaper food, or wild foods);
- (2) Increasing access to food (e.g. borrowing, or asking for help from others); and
- (3) Rationing food (e.g. family skips meals, or mothers prioritise feeding children).

These strategies are weighted and aggregated into an index that summarises these indicators of the household's current food security status. “Monitoring fluctuations in the index can give a rapid indication of whether food security is improving or deteriorating. ... Earlier studies have shown that, under research settings, the CSI accurately reflects current food security status and is also a good predictor of future food security status” (enonline 2001). Equally important, this is a ‘rapid appraisal’ methodology that is simple to implement and generates data that are simple to analyse and interpret. As discussed below, the CSI provides a relative measure of food insecurity rather than an absolute measure of food intake, so is limited in its ability to estimate the severity of food insecurity. Also, unless repeated monitoring is involved over several months, seasons or years, the CSI cannot differentiate between chronic and transitory food insecurity. The questionnaire developed by CARE to calculate the CSI is reproduced below.

“Because food is not enough, or money to buy food is not enough, in the past month, how often have you had to (REPEAT FOR EACH QUESTION):”

Strategy	Every day (7)	3-6 x a week (4.5)	1-2 x a week (1.5)	<1 x a week (0.5)	Never (0)	Weight	Total
1. Rely on less preferred and less expensive food?						1	
2. Borrow food, or borrow money to buy food?						3	
3. Purchase food on credit?						2	
4. Rely on help from relative or						2	

friend outside household?							
5. Limit portions at meal-times?						2	
6. Ration the little money you have to household members to buy street foods?						2	
7. Limit your own intake to ensure child gets enough?						2	
8. Reduce number of meals eaten in a day?						3	
9. Skip whole days without eating?						4	
Total Index Score							

Source: ennonline.net 2001

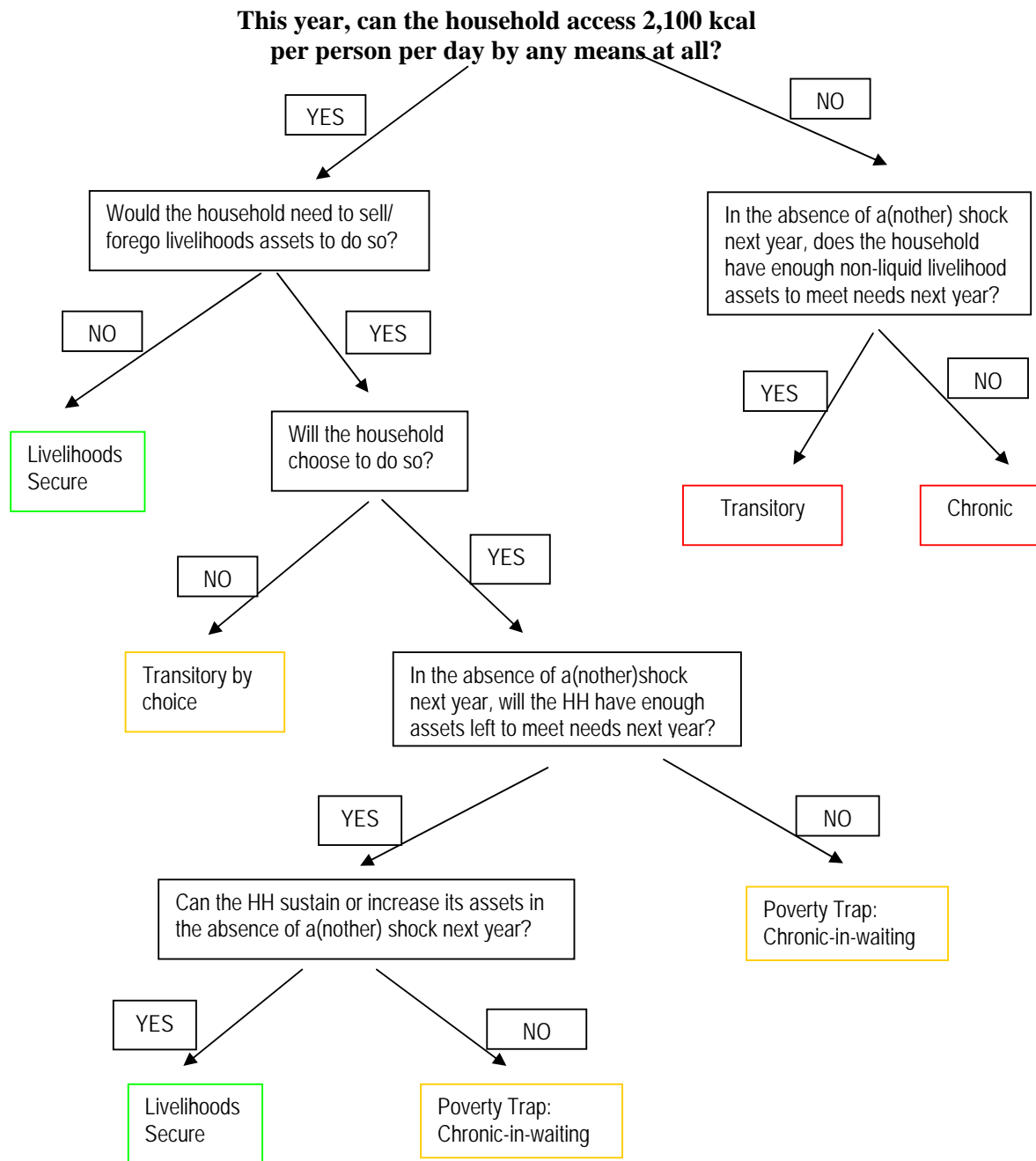
3. Household Economy Approach

HEA analyses the livelihood strategies that are used to secure access to food and income, by typical households from different wealth groups within communities, in a ‘reference year’ (a recent year that was neither very good nor very bad). This establishes an ‘HEA baseline’ (Save the Children 2004). The HEA also models the impacts of shocks on these livelihoods, in terms of changes against the baseline in the household’s food consumption and expenditure patterns, as well as the coping strategies available to them to deal with these shocks – including dietary adjustments, alternative sources of food and income, and asset management strategies.

If the household’s resources and strategies are inadequate for bridging transitory food deficits, a household economy analysis can also be used to quantify cash or food aid requirements and other needs during crises. “Household economy approaches were designed to model the responses of households to shocks and on this basis, to make predictions of emergency assistance needs. They can also be used to model and make predictions as to the size of transfers that would be required to protect a defined level of consumption” (Seaman and Petty 2005).

To date the household economy approach has been used mainly to describe livelihood systems and to estimate food gaps for emergency programming. However, it might also be possible to apply an expanded version of this approach to the analysis of ‘poverty traps’ and chronic food insecurity. One way of doing this is to use the livelihoods assessment from an HEA to answer a series of questions in a ‘decision tree’ format [see Figure 5] “that will indicate whether a particular household will be able to sustainably get enough food to lead an active and healthy life over a number of years, or whether they will be pushed into strategies that place them on a downward spiral that could ultimately result in chronic poverty” (O’Donnell 2005).

Figure 5. Applying the Household Economy Approach to food insecurity analysis



Source: O'Donnell 2005

One advantage of this application of the household economy approach is that it would allow a disaggregated set of recommendations for intervention to be proposed, depending on the nature of food insecurity faced. For instance, while emergency food or cash assistance is an appropriate policy response to transitory food insecurity, households faced with chronic food insecurity would be better served with access to productive assets or skills training for the

able-bodied, and social protection measures (e.g. social transfers) for the non-able-bodied.

4. Household self-assessment

In a study of destitution in Wollo, Ethiopia, a simple self-assessment question was designed that proved to be a robust indicator of household food security status and general well-being over time (Devereux *et al.* 2003). The interviewer asked each respondent to describe the situation of their households in terms of one of four categories:

- 1) **Doing well:** able to meet household needs by your own efforts, and making some extra for stores, savings and investments (e.g. buying livestock or other assets);
- 2) **Doing just okay:** able to meet household needs, but with nothing extra to save or invest;
- 3) **Struggling:** managing to meet household needs, but only by depleting productive assets and/or sometimes receiving support from community or government; and
- 4) **Unable to meet household needs:** dependent on support from community or government (i.e. could not survive without this assistance).

This question was asked about different points in time: (1) the day of the interview; (2) the same time last year (same month); (3) the same time two years ago (same season); (4) five years ago; (5) ten years ago. These four responses were used to allocate each household to one of four well-being categories: (1) ‘Accumulating’; (2) ‘Self-sufficient’; (3) ‘Struggling’; or (4) ‘Destitute’.

This allowed an analysis of trends over time, without the need for longitudinal assessments or repeated surveys. The methodology has since been applied in Somali Region, Ethiopia, where it accurately identified the timing and impacts of shocks such as droughts on pastoralist livelihoods [see Box 8]. Findings from Somali Region also highlight the difficulty of establishing the baseline in geographic areas and livelihood systems that are extremely volatile, where it makes little sense to speak of an ‘average’ year.

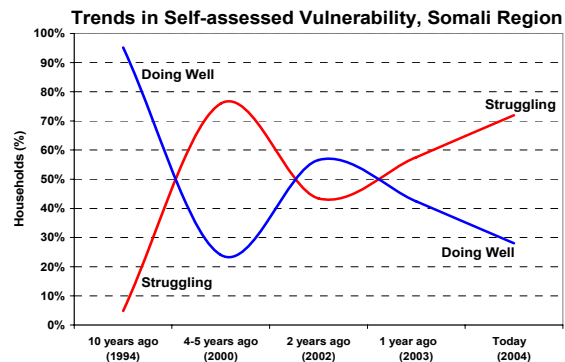
Box 8. Trends in self-assessed vulnerability in Somali Region, Ethiopia

In the diagram below, for simplicity, the two positive responses (‘doing well’ and ‘doing just okay’) are combined into a single category – ‘doing well’ – while the two negative responses (‘struggling’ and ‘unable to meet household needs’) are combined into a second category – ‘struggling’ – which is a mirror image of those ‘doing well’. This diagram can be interpreted as a summary of livelihood trends in the region, and corresponds to our knowledge of major events that impacted on pastoralist livelihoods at different times within the past decade.

The diagram summarises responses across 1,100 households interviewed in 10 districts. A distinctive but complex pattern emerges. Comparing the situation ‘10 years ago’ with ‘today’ (reading the diagram left to right), there has been a dramatic decline in the number of households reporting that they are ‘doing well’, and a corresponding rise in households that are ‘struggling’ to survive. The proportion of households ‘doing well’ has fallen from over 90 percent in the mid-1990s to about 30 percent in 2004-2005, while ‘struggling’ households have risen from close to zero to above 70 percent. This reversal of fortunes has not occurred in a linear trend, however; instead, the diagram provides graphic evidence of the volatility of livelihoods in Somali Region. Around the time of the 1999-2000 drought emergency, there was a dramatic spike in ‘struggling’ households (almost 80 percent, even higher than the present day), which was followed by a period of recovery for two to three

years – in 2002-2003, households ‘doing well’ once again exceeded households that were ‘struggling’ – before another drought-triggered setback in 2003-2004 caused the rapid deterioration in livelihoods that was visible (e.g. in the form of large numbers of dead camels) during our fieldwork in late 2004 and early 2005.

Even allowing for the ‘nostalgia effect’ (a tendency to idealise the past, which can compromise long-term recall data), it seems reasonable to conclude that life is more difficult now for most households in Somali Region than it was ten years ago. Also, the impact of livelihood shocks on household viability is clearly visible in this diagram, illustrating the volatility, unpredictability and hence extreme vulnerability of livelihoods in semi-arid regions.



Source: Devereux (2006, forthcoming)

5. Famine scales

A methodology for distinguishing between degrees of food insecurity has been proposed by Howe and Devereux (2004), which combines both quantitative indicators of biological stress – malnutrition (wasting) and crude mortality rates (CMR) – and qualitative indicators of livelihood stress – adoption of coping strategies, food price rises, distress migration, and so on. Thresholds are suggested for moving from one level of food insecurity to the next.

An application of the famine scales has been developed by the Food Security Assessment Unit (FSAU) in Somalia, which monitors and reports on four levels of food insecurity: ‘Non-alert’ (‘near normal conditions’); ‘Alert’ (‘requires close monitoring’); ‘Livelihood Crisis’ (‘requires urgent livelihood support interventions’); and ‘Humanitarian Emergency’ (‘requires urgent humanitarian assistance’). Two indicators of Livelihood Crisis are ‘>10 percent GAM’ and ‘large-scale migration’. Two indicators of Humanitarian Emergency are ‘>20 percent GAM’ and ‘large-scale destitution’ (FSAU, 2004).

Although the famine scales were designed for monitoring (and preventing) famines – i.e. detecting and responding to changes in transitory food insecurity – the principle of setting cut-off points for transitioning from one level to another is equally applicable to contexts of chronic food insecurity. By introducing indicators of chronic malnutrition (i.e. stunting) to the famine scale, and drawing on the nutrition literature to establish levels for ‘moderate’ and ‘severe’ stunting, different households can be categorised as ‘moderately’ or ‘severely’, and ‘chronically’ or ‘transitorily’, food insecure. For example, where high GAM levels coexist with low levels of stunting, this suggests a ‘severe transitory’ food insecurity problem among the affected population; if both GAM and stunting levels are high this implies ‘severe chronic’ food insecurity; but if GAM levels are low while stunting is high, this indicates ‘moderate chronic’ food insecurity. In all cases, however, accurate diagnosis requires combining these indicators with complementary data on livelihoods and health.

A major advantage of setting thresholds is that this establishes unambiguous and universal criteria for launching, continuing and exiting from emergency assistance programmes. In a sense, the ‘threshold’ approach avoids the problem of defining whether the population is chronically or transitorily food insecure. Whenever a cut-off level for a key monitoring indicator is exceeded, an appropriate intervention will be triggered automatically. For instance, when conditions in an area deteriorate from ‘Level 1 – Food Insecurity’ to ‘Level 2 – Food Crisis’ (Howe and Devereux 2004), this should trigger an EFSA and, if appropriate, a humanitarian intervention. If conditions deteriorate further, to ‘Level 3 – Famine’ or ‘Level 4 – Severe Famine’, the response will be scaled up accordingly. Conversely, once conditions revert to ‘Level 1’, this signals that humanitarian interventions should be terminated and non-emergency development programming should resume until the ideal situation (‘Level 0 – Food Security’) is sustainably achieved.⁵

6. Strengths and limitations of alternative methodologies

All five methods discussed in this section share common characteristics that, on the one hand, make them useful for assessing food security status but, on the other hand, limit their usefulness for the specific purposes of distinguishing between chronic and transitory food insecurity, and identifying appropriate policy responses.

The main advantage of *dietary diversity scores*, the *coping strategies index*, and *household self-assessment* is that they provide a tool for rapid assessment of the food security status of a population at a point in time, and therefore allow for immediate identification of households within the sample who are relatively food secure and relatively food insecure. Moreover, these tools are simple and cost-effective to administer, and generate results that appear to be robust when validated against other indicators of food security or poverty status.

For programming purposes, however, these tools share several limitations. First, all three operate better as a relative rather than an absolute measure. It is not straightforward to translate dietary diversity scores, the coping strategies index or a household’s self-assessment into actual calorie consumption, and hence to calculate food gaps to be addressed with programmatic interventions. This means it is also difficult to quantify severity – whether those with low dietary diversity are ‘moderately’ or ‘severely’ food insecure – except in relative terms: households with very low dietary diversity and frequency scores, or high CSI scores, or self-reporting as ‘unable to meet household needs’, are all highly likely to be severely food insecure at the time of the survey.

Secondly, these methods provide a snapshot at a point in time, so they need to be administered repeatedly to account for variations over time, such as seasonality, and to establish whether those categorised as food insecure (i.e. low dietary diversity, high CSI scores, or self-assessed as ‘struggling’ and ‘destitute’) are chronically or transitorily food insecure. This requires revisiting the same households several times (monthly, season by season, or year to year), which is not only logistically complex but far too slow to allow rapid response. Uniquely, the *self-assessment* methodology does include a recall component that can be used to construct a food security profile for the household over time. Like all recall methods, this is susceptible to recall errors, but it would at least allow a crude categorisation to be made of households as either (1) food secure, (2) chronically food insecure, or (3)

⁵ For more detail on the famine intensity scale indicators, the reader is referred to a complementary paper prepared for SENAC by Zoltan Tiba and Stephen Devereux, *‘Identification of factors that trigger emergency needs assessments in slow-onset crises’*.

transitorily food insecure, over a defined time period.

Thirdly, information about household diets or coping strategies on its own is difficult to interpret without contextual information about the household's livelihood system, demographic structure, and other crucial facts that will be needed to select appropriate remedial interventions. Consider, for instance, two households with low dietary diversity and high CSI scores who self-assess as 'destitute'. One is an elderly infirm widow, living alone without family or community support. The other household is a young couple with several young children; the husband recently lost his job and they are rapidly depleting their few assets to feed the family. In the first case, long-term social assistance is the obvious intervention – for instance, regular and predictable cash transfers or food aid. In the second case, the household could participate in an employment programme (food or cash for work), together with training for a sustainable alternative livelihood. None of these three methods allows such a differentiated programming response to be recommended, because none of them conveys any information about the *causes* of household food insecurity.

A fourth limitation with the coping strategies index (and to a lesser extent with dietary diversity, but not with household self-assessment) is that it is context-specific. The actual coping strategies adopted and their sequencing will vary across livelihood systems (e.g. between urban and rural areas), so the questionnaire might need to be adapted for each population sub-group surveyed.

A fifth limitation with these three tools, and also with household economy approaches, is their scale. They are usually applied to clusters of households at the local or community level. Scaling up from the local level to the regional or national level requires increasing the number of clusters sampled, but the larger and more geographically spread is the sample, the greater the logistical complexity and the higher the cost. On the other hand, there is no other way of estimating the numbers of food insecure people than implementing a statistically valid sampling procedure. If resources are constrained, a crude compromise might be to sample 'sentinel sites' where food insecurity is known to be prevalent. Sentinel sites are often monitored in nutritional surveillance programmes, though there is always the risk of overlooking a food security shock that occurs elsewhere. A final problem related to 'scaling up' is comparability across survey sites, given that these tools provide relative rather than absolute measures of food insecurity.

Household economy approaches overcome some of the problems of the other three methods. Most usefully, because they are grounded in an understanding of household livelihoods, they provide an analytical link between causes and outcomes, which allows appropriate interventions to be identified in response to either chronic food insecurity or a livelihood shock. For instance, farming households that face persistent food deficits (and are therefore chronically food insecure) might need support with agricultural inputs such as fertiliser. Conversely, households that face a temporary food deficit following a drought (and are therefore transitorily food insecure) need short-term social assistance to support them until the next harvest. Unlike the other methods discussed above, the household economy approach does allow for differentiated programming recommendations. The analysis of livelihoods also allows food insecurity facing different groups to be characterised as either chronic or transitory.

Household economy approaches are more complex to administer than the other methods. They require careful training and several days working with each community. This makes

them more expensive and more time-consuming. They also face problems of scaling up and comparability across survey sites, because the wealth ranking method divides a community into several wealth groups relative to each other, but not in relation to neighbouring communities. On the other hand, the concept of ‘household economy zones’ allows regions or countries to be mapped and, once this is done, baseline profiles can be updated at little additional cost. Also, the latest versions of the methodology include calculations of actual income levels or calorie consumption, so precise social protection needs can be estimated for each group of food insecure households.

The *famine intensity scale* has the advantage of proposing absolute cut-off points for defining five levels of food insecurity, from ‘food security conditions’ to ‘extreme famine conditions’. Based on malnutrition and mortality outcomes, these thresholds are universal across all populations, so they avoid the problems of relative methods. Used in combination with descriptive information on social systems, market prices and coping strategies (e.g. migration behaviour), changes in the food security status of a population can be accurately and comprehensively assessed. As with all other methods discussed here, the famine scales approach provides a snapshot at a point in time, though nutritional indicators (stunting) and complementary qualitative information can throw some light on whether the problem is short-term (transitory) or persistent over time (chronic). At present, the famine scales are designed to capture ‘distress’ behaviour and other indicators of a food shock, so (for instance) rising GAM rates accompanied by rapid food price rises and unusual patterns of migration would, in combination, indicate an ongoing (‘transitory’) food crisis. But if the affected population is known to have high levels of poverty and stunting, low asset-holdings and undiversified livelihoods, these baseline conditions would suggest that what is being observed is not just ‘transitory food insecurity’, but a deterioration from ‘moderate chronic’ to ‘severe chronic’ food insecurity.

The best way of differentiating chronic from transitory food insecurity is to monitor populations regularly over time. For this purpose, baseline information should be collected, perhaps using the household economy approach and the famine intensity scale, and rapid assessment methods – dietary diversity, coping strategies index, household self-assessment, nutritional surveillance – should be used to provide regular updates in a food security monitoring system. Although the collection of baseline information is not part of the EFSA methodology, these contextual data are invaluable for the diagnosis of a food security situation, and especially for determining whether a food problem should be classified as ‘transitory’, ‘chronic’, or a ‘composite’ of the two. Box 9 summarises the potential contributions and limitations of alternative methodologies to such an information system.

Box 9. Potential contributions and limitations of different methodologies

Dietary diversity scores, coping strategies index and *household self-assessment* methods are: (1) rapid and simple to administer; (2) cost-effective; and (3) robust. The main disadvantages are: (1) they generate relative measures of food insecurity rather than absolute measures of food gaps; (2) they provide a ‘snapshot’, so need to be administered repeatedly to determine whether food insecurity is chronic or transitory; (3) with no contextual information, it is impossible to identify appropriate interventions; and (4) they are locality-based, so present challenges in scaling up.

Household economy approaches (1) provide important baseline and contextual information about livelihoods; (2) analyse the causes and consequences of chronic and transitory food

insecurity; and (3) allow appropriate policies to be recommended. They are too time- and resource-intensive to be incorporated into regular food security monitoring systems, but can be updated from time to time.

The *famine intensity scale* has the advantage of providing absolute rather than relative measures of food insecurity. Adding stunting to the nutritional surveillance component can help to differentiate between chronic, transitory, and 'composite' food insecurity (as identified by the proxies of stunting, wasting, and stunting plus wasting, respectively).

It is recommended that these tools be used in two ways: (1) to provide baseline information on food security conditions and local livelihood systems; and (2) to build a profile of chronic and transitory food insecurity over time, as part of a food security monitoring system. **No single methodology can fulfil both functions; instead, a combination of 'baseline' and 'rapid assessment' methods is required.**

CONCLUSION AND RECOMMENDATIONS

The review of definitions, methodologies, case study programmes and policy frameworks in this paper has highlighted the importance for operational purposes of distinguishing clearly between different types and levels of food insecurity, including not only chronic and transitory, but also moderate and severe food insecurity. This concluding section argues that methods and tools for distinguishing between chronic and transitory food insecurity should satisfy three information requirements: (1) draw on baseline data; and (2) enable vulnerability analysis; and (3) identify exit criteria. For emergency food security assessment and programming purposes, the second and third requirements are more central than the first. However, any EFSA should be informed by baseline data and contextual information, and since baseline data are essential for the purpose of differentiating chronic from transitory food insecurity, this requirement is also discussed here.

1. Drawing on baseline data

In order to match resources to specific food security problems, it is necessary to understand the baseline food security situation of affected populations before a livelihood shock or food crisis. In many cases, this information will already exist from secondary sources. For example, most food insecure countries have annual Crop and Food Supply Assessment Missions (CFSAM), which generate a range of data on relevant indicators, updated during the season and year to year.

“Central to the approach (used by FEWS) are assessments of baseline vulnerability at the start of the crop season focusing on underlying processes encompassing the previous few seasons, or years. The baseline assessment is subsequently updated as the season progresses, reflecting the current risk of famine based on, for example, the projected harvest, prices of staple foods, food stocks and food aid deliveries” (WFP n.d.).

One limitation of the CFSAM approach, from the point of view of food security programming, is that it monitors data on food supplies and market conditions, rather than food security conditions at the household level. Among the five methodologies reviewed in the previous section of this paper, only the famine scales share this limitation. The other four methodologies all generate data on household-level food security, but would need to be collected regularly over a period of time, in order to establish the 'norm' for each community. However, in many cases the data may not be available at the required level of disaggregation,

e.g. for the specific area or population group or time of the year when the shock occurs. This is a limitation, especially for methods such as the coping strategies index and dietary diversity scores, which are highly context (population and time) specific. For instance, although some cut-off points have been proposed for the coping strategies index and dietary diversity – see the four household categories identified in Haiti [Box 7] above – it is not clear that these categories are transferable across countries.

The coping strategies index, dietary diversity, and the household self-assessment question can all be administered quickly and simply, so routine monitoring should be easy to implement. The most complex methodology of the five is the household economy approach. On the other hand, many chronically food insecure and famine-prone countries in Africa have been surveyed by 'HEA teams, who have divided rural regions into food economy zones (FEZ), and conducted baseline assessments in each FEZ. Provided these 'food economy baseline assessments' were conducted in 'normal' (non-crisis) conditions, they can be used as points of comparison for later surveys.

As a general principle, 'establishing the baseline' should draw on the most recent information available. However, if up-to-date data on the population affected by a crisis are not available, establishing the baseline might require drawing on surveys that were conducted some years before, as in this case from India:

“when the typhoon hit Orissa in India in 1999 the rates of acute malnutrition in Orissa state from surveys conducted a couple of years previously were approaching 20 percent. There was no reason to suppose that these rates did not apply to the population when the typhoon struck. It was clear from this knowledge that even if there were only a small deterioration in the underlying causes of malnutrition, rates of malnutrition were already extremely high and were likely to be associated with excess mortality” (Save the Children 2004).

The baseline assessment must also take into account regular fluctuations (such as seasonality) and predictable trends in food security status. In situations where baseline data are not available, EFSAs might need to rely on retrospective methods, using household questionnaires (e.g. the household self-assessment for different points in time), or participatory methods at community level (e.g. the construction of food security timelines and seasonal calendars). These methods could be field-tested and, if they are found to be robust, incorporated into the design of EFSAs.

2. Enabling vulnerability analysis

Appropriate interventions for addressing chronic and transitory food insecurity must be grounded in a robust and differentiated understanding of vulnerability. Predicting transitory or severe food insecurity requires understanding the trigger factors that could precipitate a rapid deterioration in access to food, as indicated by rapid food price rises or malnutrition rates (wasting) among children. These indicators are typically monitored in early warning systems, through market monitoring, nutritional surveillance and similar regular data collection exercises. Examples of routine reporting of vulnerability to food insecurity are the monthly 'Food Security Bulletins' produced by FEWSNET for many countries, and the reports produced by national and regional VACs in southern Africa. Some countries have monthly nutritional surveillance systems – based on sentinel site monitoring of child anthropometry (wasting and stunting), and sometimes adult anthropometry (BMI) as well.

Instead of setting up costly food security information systems, existing systems should be drawn upon as far as possible. Where available information is lacking or inadequate, ‘rapid appraisal’ methods can be applied. All five of the methodologies reviewed above could be implemented on a regular basis, in order to monitor changes in vulnerability over time. For instance, the coping strategies index and dietary diversity score could be monitored monthly in a short questionnaire format, with changes in the index or the score representing rising or falling numbers of food insecure households and severity of food insecurity among the population being monitored. Similarly, the famine ‘intensity scale’ includes a set of quantitative and qualitative indicators that can be monitored regularly, and provides a simple five-point scale against which changes in food security status can be monitored as frequently as necessary.

The household economy approach is more resource-intensive, and would be less straightforward to incorporate into a regular monitoring system, but after the baseline is established it should be updated occasionally, or in response to specific livelihood shocks, to assess how vulnerability and food insecurity have changed. For instance, a baseline household economy assessment in Tigray was updated after the Ethiopia-Eritrea war caused the border to be closed, disrupting migration and remittances which were major sources of food and income for vulnerable households in northern Ethiopia. The household economy methodology has also been used to analyse the food security impacts of slow-onset crises such as HIV/AIDS and coffee price fluctuations. A simulation model called ‘RIskMapping’, based on the household economy approach, can also simulate the impacts on food security of livelihood shocks, to generate food aid requirements for different household categories.

Another important consideration for vulnerability analysis relates to the unit of analysis. Chronic and transitory food insecurity are concepts that are usually applied to households, but there are population subgroups living within, across or outside households that might be food insecure, even if the household overall is classified as food secure. Emergency food security assessments must not overlook these individuals by focusing excessively on households as their sole unit of analysis. Individuals who are potentially vulnerable to both chronic and transitory food insecurity include the following:

- ***within households:*** household members who are most likely to be vulnerable to ‘individual food insecurity’ include people with disabilities and the chronically ill;
- ***across households:*** vulnerability might be systematically higher for specific age-sex cohorts, (e.g. young girls, older women), especially in societies characterised by gender discrimination; and
- ***outside households:*** classic ‘vulnerable groups’ that are not located in households include street children, widows living alone, and refugees or IDPs separated from their families.

3. Identifying exit criteria

The need to build in criteria not only for exiting from emergency programmes, but also to switch from one type of programme to another, is well acknowledged in the operational literature.

“As part of the planning process, staff and community representatives should establish firm guidelines on when and how to exit from an emergency response situation. Exit criteria are also necessary to indicate when to initiate a transition from emergency

programming to rehabilitation and the withdrawal phase of a longer-term integrated development program” (CARE 2003).

Of the methodologies reviewed in this paper, only the famine intensity scales offer unambiguous thresholds that mark the transition from one level of food insecurity to the next. Indicators that are both universal (e.g. CMR and GAM rates) and context-specific (e.g. migration patterns and local coping strategies) can be monitored to generate decision criteria for scaling interventions up or down, as circumstances evolve. Alternatively, a range of values for the coping strategies index and dietary diversity could be field tested, to determine whether robust cut-offs exist for these simple methodologies on which policy-makers can base key operational decisions, such as when to launch an EFSA, when to initiate an emergency intervention, when to shift from an EMOP to a PRRO, and when to exit from relief and recovery to development programmes.

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List of Acronyms

BMI	Body Mass Index
CFSAM	Crop and Food Supply Assessment Mission (FAO/WFP)
CMR	Crude Mortality Rate
CP	Country Programme
CSI	Coping Strategies Index
EFSA	Emergency food security assessment
EMOP	Emergency Operation
FEZ	Food Economy Zone
FSAU	Food Security Assessment Unit (Somalia)
GAM	Global Acute Malnutrition
HEA	Household Economy Analysis (Save the Children – UK)
kcal	kilocalorie
PSNP	Productive Safety Net Programme
PRRO	Protracted Relief and Recovery Operation
VAM	Vulnerability Analysis and Mapping (WFP)
VAC	Vulnerability Assessment Committee

ANNEX 1. IDENTIFYING FOOD SECURITY IMPACTS OF SHOCKS AND APPROPRIATE POLICY RESPONSES⁶

Table 2. *Emergency food security assessment and initial response options in the immediate aftermath of a shock*

POST-CRISIS	SEVERE FOOD INSECURITY	MODERATE FOOD INSECURITY	VULNERABILITY TO FOOD INSECURITY
TYPICAL LIVELIHOOD OUTCOMES IMMEDIATELY AFTER THE SHOCK OR CRISIS:			
Food consumption	Very low amounts and diversity of food consumed (e.g. decrease to one daily meal, no animal foods, no/little vegetables or fruits)	Low amounts or diversity of food consumed (e.g. decrease to two daily meals, infrequent animal foods, little vegetables or fruits)	Borderline amounts and diversity of food consumed
Sources of food and income	Unsustainable/ unreliable/ insecure/ inappropriate sources of food and income (e.g. begging, borrowing, gathering)	Unreliable and potentially unsustainable sources of food and income (e.g. relying on remittances, humanitarian assistance, migration)	Unreliable sources of food and income (e.g. seasonal labour, lack of agricultural inputs)
Health	- High prevalence of infectious diseases in children (diarrhoea, respiratory infections) - Possibly chronic diseases in adults (HIV/AIDS, tuberculosis)	- Moderate to high prevalence of infectious diseases among children - Risks of chronic diseases in adults	- Low to moderate prevalence of infectious diseases among children - Risks of chronic diseases in adults
Nutritional status	Possibly high rates of global malnutrition (acute and chronic) depending on the pre-crisis food security status and duration of the current crisis	Possibly high rates of chronic malnutrition, depending on the pre-crisis food security status, and acute malnutrition depending on the duration of the current crisis	Possibly moderate to high rates of chronic malnutrition
Shelter	Lost, partially destroyed or inappropriate (protection against cold and rain, overcrowding, insecure, etc.)	Poor or acceptable	Acceptable
Water for domestic use	Low amounts and/or quality of water	Possibly low or limited amounts and/or quality of water	Acceptable or limited amounts and/or quality of water
Education	No access to schools	No or limited access to schools	Limited or acceptable access to schools
Assets	Loss of productive and economic assets	Loss of most productive and economic assets	Some productive and economic assets preserved
Safety	High protection/human rights needs	Moderate protection/human rights needs	Possible needs of protection/human rights

⁶ Source: Dhur 2005.

INITIAL RESPONSE OPTIONS:

Timing/urgency	Urgent/immediate	Rapid	As soon as possible
Type	Relief – Life saving	Relief – Livelihood mitigation	Transition – Livelihood protection
Tentative duration	6 to 12 months	3 to 6 months	1 to 3 months
Possible programmes	<ul style="list-style-type: none"> - Free food distributions with full rations - Supplementary and therapeutic feeding - Cash grants - Immunization and urgent health services - Provision of water - Provision of shelter and clothing - Distribution of cooking utensils and domestic fuel 	<ul style="list-style-type: none"> - Free food distributions with partial or full rations - Supplementary and possibly therapeutic feeding - Cash grants - Food- or cash-for-work - Immunization and urgent health services - Rehabilitation of shelter and water access - Replacement of some cooking utensils - Distribution or support for domestic fuel - Distribution of agricultural inputs, animal feed - Provision of animal health services - Provision of inputs and services against plant pest and diseases 	<ul style="list-style-type: none"> - Free food distributions with partial rations - Supplementary feeding - School feeding - Cash grants or loans - Food- or cash-for-work - food for training - Immunization - Rehabilitation of water access - Distribution of agricultural inputs, animal feed - Provision of animal health services - Provision of inputs and services against plant pest and diseases - School or communal gardens
Exit criteria → 2nd series of response options	<ul style="list-style-type: none"> - Amounts and diversity of food consumed - Nutritional status - Health status - Access to water and shelter 	<ul style="list-style-type: none"> - Amounts and diversity of food consumed - Nutritional status - Health status - Access to water and shelter - Agriculture/animal production 	<ul style="list-style-type: none"> - Sources of income - Agricultural/animal production

Table 3. Emergency food security assessment and second series of response options after a shock/crisis

CURRENT POST-CRISIS	SEVERE FOOD INSECURITY			MODERATE FOOD INSECURITY			VULNERABILITY TO FOOD INSECURITY	
PRE-CRISIS	Chronic food insecurity	Transitory food insecurity	Not food insecure	Chronic food insecurity	Transitory food insecurity	Not food insecure	Transitory food insecurity	Not food insecure
<i>TYPICAL LIVELIHOOD CHARACTERISTICS RESULTING FROM PRE-CRISIS + IMPACT OF THE SHOCK/CRISIS:</i>								
Physical assets: - irrigation - livestock - infrastructures - markets - schools - health posts	No or limited access	Limited access	Limited access	Limited access	Limited access	Limited access	Limited access	Some
Natural assets: - land - communal/ common resources	No or limited access	Limited access	Limited access	Limited access	Limited access	Limited access	Limited access	Some
Economic assets: - employment - savings - credit - remittances	No	Limited	Limited	Limited	Limited	Some	Limited	Some
Social assets: - kinship - social networks - social/assistance programmes	Not benefiting	Not benefiting or limited benefits	Not benefiting or limited benefits	Limited benefits	Limited benefits	Limited or some benefits	Limited benefits	Benefiting
Human assets: - skills - schooling - family size - working-able - household head	- Unskilled - Minimal schooling - Large families - Headed by child, sick, or elderly person - No working-able member	- Limited skills - Basic schooling - At least one working able member	- Skilled - Some schooling - Presence of working able members	- Unskilled - Minimal schooling - Large families - No or one working-able member	- Limited skills - Basic schooling - At least one working able member	- Skilled - Some schooling - Presence of working able members	- Limited skills - Basic schooling - At least one working able member	- Skilled - Some schooling - Presence of working able members

CURRENT POST-CRISIS	SEVERE FOOD INSECURITY			MODERATE FOOD INSECURITY			VULNERABILITY TO FOOD INSECURITY	
PRE-CRISIS	Chronic food insecurity	Transitory food insecurity	Not food insecure	Chronic food insecurity	Transitory food insecurity	Not food insecure	Transitory food insecurity	Not food insecure
Institutions, policies and processes - govt. and NGOs - labour policies - agricult., land, health, education policies, budget and programmes - decentralisation	- Not benefiting - No participation to political decisions	- Not benefiting or limited benefits - Limited participation to political decisions	- Not benefiting or limited benefits - Able to participate to political decisions	- Limited benefits - No participation to political decisions	- Limited benefits - Limited participation to political decisions	- Limited benefits - Able to participate to political decisions	- Limited benefits - Able to participate to political decisions	- Benefiting - Participating to political decisions
2nd SERIES OF RESPONSE OPTIONS:								
Timing	After 3 to 6 months of relief assistance			After 3 to 6 months of relief assistance			As soon as possible	
Type	Livelihood building	Livelihood strengthening	Livelihood recovery	Livelihood building	Livelihood strengthening	Livelihood recovery	Livelihood strengthening	Livelihood recovery
Tentative duration	12 to 36 months	12 months	12 months	12 months	6 to 12 months	6 months	6 months	3 months
Possible programmes	- Food- or cash-for-work for assets (re)building - food for training - School feeding - Provision of agricultural inputs (free distributions, vouchers, fairs) - Income-generation activities - Health and nutrition education			- Food- or cash-for-work for assets (re)building - food for training - School feeding - Provision of agricultural inputs (free distributions, vouchers, fairs) - Income-generation activities - Health and nutrition education			- food for training - School feeding - Income-generation activities	
	Social assistance programmes (permanent)	Safety net (temporary)	Micro-credit	Social assist. Programmes (permanent)	Safety net (temporary)	- Micro-credit - Capacity building	Safety net (temporary)	Micro-credit
	Capacity building of local institutions and community groups National level policies and budgeting							
Exit criteria → long-term response options	Enrolled in social assistance and development programmes	- Enrolled in development programmes - Able to benefit from <i>ad hoc</i> safety nets	Enrolled in, benefiting indirectly from development programmes	Enrolled in social assistance and development programmes	- Enrolled in development programmes - Able to benefit from <i>ad hoc</i> safety nets	Enrolled in, or benefiting indirectly from development programmes	- Enrolled in development programmes - Able to benefit from <i>ad hoc</i> safety nets	Enrolled in, or benefiting from development programmes