



# **FEWS Current Vulnerability Assessment Guidance Manual**

## **Introduction to Current Vulnerability Guidelines**

**August 1999**

*The Current Vulnerability Assessment guidance has resulted from synthesizing the concepts and best practices developed and applied by USAID FEWS Project professionals. It is an analytical tool for practitioners. Given the challenges of applying these methods in the varying environments where FEWS and its partners work, this material will be reviewed and updated from time to time. However, the next review is unlikely to occur before June 2000.*

## **Introduction to Current Vulnerability Guidelines**

As part of its scope of work for USAID, the Famine Early Warning System Project (FEWS) has been assessing vulnerability to food insecurity for nearly a decade. This guidance manual lays out the conceptual framework, format, methodological steps and process for conducting a FEWS Current Vulnerability Assessment (CVA).

The Guidelines are organized in a series of chapters. Chapter 1 provides the background and conceptual underpinnings of vulnerability assessments, which have a long history in the FEWS project. Chapter 2 presents a recommended template for CVAs conducted by FEWS project analysts. The purpose of the template is to provide a common framework and logical flow to the analysis. It includes section headings, samples of key tables and maps, and boilerplate text consistent with FEWS Project definitions. The template also includes embedded word processing styles to facilitate publishing of both hard and electronic versions of the final report.

Chapters 3 through 6 address the contents of the CVA. Chapter 3, 4 and 5 put forth methods for deriving the various components of the analysis and follow the outline in the CVA Template: national food security, household food security and linking results to action. Chapter 6 provides the organizing framework for identifying and characterizing the relevant population groups to be considered in the household food security analysis.

The final three chapters address matters related to the CVA process, rather than contents. Chapter 7 outlines the organizational steps involved in carrying out a CVA. Chapter 8 discusses considerations arising when FEWS conducts CVAs in collaboration with partner organizations. Finally, Chapter 9 provides a template of the planning document (CVA Memorandum) FEWS field analysts are required to submit to the FEWS Vulnerability Committee before embarking on the analysis.

Although the guidance is written as a practical manual both for FEWS and nonFEWS users, the unique characteristics of each country situation will require the analyst to use a substantial amount of judgment. At relevant points in the text, these instances will be highlighted and the issues discussed.

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# **FEWS Current Vulnerability Assessment Guidance Manual**

## **CHAPTER 1 CVA BACKGROUND AND CONCEPTUAL FRAMEWORK**

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# **CVA BACKGROUND AND CONCEPTUAL FRAMEWORK**

## **FEWS CVA GUIDELINES: CHAPTER 1**

The following paper, entitled *Vulnerability Analysis and FEWS*, was authored primarily by Dr. Charles F. Hutchinson of the Arid Lands Office of the University of Arizona. It was presented on behalf of FEWS at the Second Informal Meeting on Methodology for Vulnerability Assessment, organized by the Global Information and Early Warning System of the Food and Agricultural Organization of the United Nations in December 9-10, 1996. It is currently published in the Summary Report from that meeting.

This paper provides an accurate description of the objectives, conceptual framework, assumptions, and operational approaches used by FEWS in vulnerability assessments in 1996. In the intervening years, the work started at the informal meetings on vulnerability has continued in many forms. FEWS has continued to work in increasingly close collaboration with national and international partners interested in vulnerability assessments. Numerous conceptual and methodological improvements have resulted from these experiences. There has been a move to refine definitions of the elements of food security (particularly food availability, food access and food utilization) and to more fully incorporate each of these concepts into the analysis. Additionally, there is growing international interest in finding ways to combine quantitative and qualitative information in a rigorous and transparent manner. Furthermore, there is a growing emphasis on identifying – and tracking – how different socio-economic groups derive their access to food.

These developments, many of which grew out of the Second Informal Meeting, were not fully captured in the 1996 statement of the FEWS approach. As FEWS continues to learn from its partners and its own field experience, the tool box of methodologies will continue to expand. In the meantime, the following paper presents a valuable statement of the historical and conceptual underpinnings of vulnerability analysis in the FEWS project.

# **VULNERABILITY ANALYSIS AND FEWS**

## **INTRODUCTION**

In the context of improving food security in Sub-Saharan Africa, there is a growing appreciation by decision makers of the value of identifying groups experiencing a high degree of food insecurity, particularly women and children under the age of five. To address this problem, many programs have been designed to improve their food consumption, as well as nutritional and health status, by attacking the general problems of food availability, access, and utilization.

Because of FEWS' responsibility to provide the information needed to avoid famine, FEWS has made a concerted effort to develop and refine its vulnerability approach to suit the needs of decision makers faced with the responsibility of responding to any potential threat of famine.<sup>1</sup> In preparation for dealing with this threat, a useful starting point would be to identify those regions and groups most likely to be hardest hit by a potential problem, such as a drought. If a drought were then to occur, it would be possible to predict where its impact would be greatest and who would be most affected. It is within this context that vulnerability analysis (VA) as undertaken by FEWS had its origins.

This paper outlines the approach FEWS currently uses to identify those regions and groups most likely to suffer most in the case of drought or some other shock.. The approach described is intended to be as compatible as possible with other approaches, as it is with the working hypothesis that in areas prone to drought or other calamities, women and children under five experience a high level of vulnerability. This paper will (1) establish the objectives and uses of vulnerability analysis, (2) review the evolution of thought regarding famine and vulnerability, (3) consider various approaches to vulnerability analysis that arose from this understanding, (4) describe the general approach to vulnerability analysis that has evolved within FEWS, and (5) discuss future developments in methods and how they might be applied.

## **OBJECTIVES OF FEWS VULNERABILITY ANALYSIS**

The immediate purpose of the vulnerability analysis is to identify regions and groups most likely to experience, "episodic food shortages and problems of inadequate food access in order to prevent severe malnutrition and starvation." USAID has provided specific guidance that the groups to be identified be ones, "either experiencing or likely to experience high levels of food consumption related problems largely attributable to the lack of food availability and/or food access. The USAID scope of work further requires that basic descriptive and analytical information be derived from "key vulnerability indicators associated with low levels/frequency of food consumption, high proportions of budgets spent on food, and excessive dependence upon one food consumption source (e.g., home production, markets)." Indicators are a key means by which to identify vulnerability, but the scope also prescribes that "special attention" be paid to food "pathways," or the "links between agricultural production, markets, and food consumption which specifically contribute to famine vulnerability." Finally the FEWS scope of work requires

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<sup>1</sup> USAID decision makers typically need to know (1) who faces the greatest threat, (2) when they face it, (2) where they are located, and (4) what can be done about it.

that the “analyses include an examination of the particular vulnerability of children and women” as well as those “spending inordinately high shares of total income upon food.”

Vulnerability analysis can help users in several different ways. First, it provides background information against which current monitoring data can be interpreted by the analyst and conveyed to the decision maker. Without it, it is more difficult to determine if an event (e.g., drought) might precipitate an emergency. Second, the exercise of analyzing vulnerability helps the analyst consider and describe the nature of subnational food economies of the nation, the types of households that constitute them, and how they are linked together. From this understanding, it is possible to understand how disruption among any of the links or pathways that connect the total food economy might affect indicators of food consumption. Third, some of the factors that determine vulnerability change fairly quickly (e.g., civil unrest), and others do not, or only slowly (e.g., agricultural production potential). Thus, it is necessary to perform the analysis often enough to establish trends and the significance of current departures from norms. Fourth, it also provides a picture of the spatial component or “geography” of food security and how it might be expected to change under different circumstances.

By providing a “four dimensional” picture of food security in the country, the vulnerability analysis provides a starting point from which everyone concerned with a particular place can develop a common understanding of the nature of the food economy, how it changes, what should or should not be attempted to deal with immediate problems, and what might be done over the long term to address underlying causes.

The VA audience of users has grown with time. Vulnerability assessments are

typically carried out in conjunction with local institutions, and the analyses and conclusions are shared with the host governments, to be used in their own planning activities. The primary audience for the completed assessments remains USAID -- both in the countries in which FEWS

#### **Steps in FEWS Early Warning**

1. Preseason vulnerability assessment. FEWS analysis conducted prior to the growing season to identify populations likely to be hit hard in the case of a drought or other shock.
2. Season monitoring. Reading and reporting of satellite imagery on rainfall and crop growth and cereal price data produced by a number of different groups and collated by FEWS.
3. Special alerts and warning. Briefings, cables, and emails to USAID by FEWS to inform of potential food emergencies.
4. Contingency planning. Intra-USAID mission effort, undertaken during poor production years, to monitor food security situation and determine appropriate responses. The contingency planning group, which includes the FEWS Rep, uses the following monitoring instruments:
  - *Preliminary harvest assessment*. A FEWS synthesis of available information from many sources on likely harvest size.
  - *Cereals shortfall estimate*. An estimate of the cereals shortfall taking into account production, national stocks, and likely commercial imports. Conclusions are reached about aggregate food aid needs, government appeals, donors likely to respond, and role of USAID.
  - *Needy population targeting*. Identification of those populations that are most needy. FEWS issues post-harvest vulnerability update which informs subsequent discussions with host governments, WFP, and NGOs.
  - *Food needs assessment*. FEWS helps USAID in drafting terms of reference for NGO community-level food needs assessment, in evaluating NGO proposals, and in drafting invitations for NGO participation in delivering/monitoring food aid.
5. Food aid intervention evaluation. Selective assessments carried out, with FEWS involvement, to (i) understand targeting methods used by NGOs; (ii) gain insight into nature of vulnerability; and (iii) observe community status after intervention.

operates and in Washington. Information from the vulnerability assessments is used as a starting point for contingency planning for food emergencies -- and there has been increasing interest in using VA information as an input into development planning. USAID field missions are interested in using VA to identify areas in which interventions could have the greatest effect, and in assessing the results of programs which are already in place (see box).

There is also a large, and increasing, audience outside of USAID, including NGOs, other donors, and multilateral organizations. FEWS has a history of collaboration with other institutions in carrying out vulnerability assessments and in sharing its methodology. Increasingly, efforts are directed towards reinforcing the linkage between analysis and response, by making FEWS information and analysis more readily useable by the institutions which implement relief and development activities.

Although FEWS vulnerability assessments may contribute to a number of different activities, they cannot and should not be “all things to all people.” They do not include assessments of food needs, nor are they blueprints for development activities, but they can be an important source of information and analysis in the support of these activities. Because of its comprehensives in terms of the range of information considered and its spatial and historical perspective, the VA should be seen as an essential input into any relief or development effort.

The objective of the VA is straightforward but in practice can prove difficult to achieve. Ultimately, the focus is on food consumption because of the direct link to malnutrition, morbidity, and starvation. Clearly, the analyst is not expected to measure consumption. Instead of direct observation, other aggregate measures are monitored which can describe the likelihood of food shortages, or failures in food access, from which changes in consumption patterns might be inferred, particularly as they might affect different segments of the population. These might include inferences about the proportion of budgets spent on food in the face of a crop failure, rising prices, or declining income.

As discussed in more detail later, food shortages occur for a number of reasons. Obviously, agricultural production is important but below average production as a consequence of drought does not necessarily result in famine. Conversely, groups may be vulnerable in the absence of significant external “shocks.” For example, as suggested above, households may spend a disproportionate amount of their “income” on food, and/or they may be totally dependent on a single source of income. In these situations, fluctuations in exchange rates, slight or modest inflation, or a labor strike could translate into a sizable population becoming more vulnerable.

Often, the situation is more complex and the analyst must consider a large number of factors to gain an accurate picture of vulnerability. The mechanisms by which different groups gain access to food (i.e., their own production; purchase; other forms of exchange) vary in type and scale, and may fail for a whole host of reasons. One focus here is to attempt to understand the impacts these events have on household food consumption patterns so that we might determine whether response is warranted and, if so, what types of interventions might be appropriate. However, the context in which these events are translated to the household level are as important as the events themselves because it may help to guide the type of response that is pursued.

To choose one example, market systems and even the infrastructure through which goods and services move may be configured in such a way as to place regions or groups at severe disadvantage. In many countries, seed and agricultural inputs are marketed through a single government-controlled parastatal board or company. Because of inefficiencies or intentional manipulation, inputs might not be available to farmers at the proper time during the season. Households dependent on these sources of input supply are in a highly vulnerable situation through a flawed market rather than a stressed production system. More typically, there will be other factors at play that will complicate this simple picture of vulnerability. For example, it is likely that the transportation network of a region will be poorly developed. Thus, some geographic areas and groups will be more vulnerable because of their distance from roads that restricts access to markets, reduces opportunities of employment, and constrains efforts to provide direct relief.

In the explicit objective to use early warning and vulnerability analysis to design mitigation activities, it is necessary to understand and assess the nature and determinants of food insecurity in their broadest context so that, ultimately, appropriate actions can be designed. In the case described above, a decision to open the market to multiple providers of seed and other inputs would reduce vulnerability by improving efficiency, and increasing production and thus income. In the short term, the most suitable response to a production shortfall may not be to provide food aid where most needed, because of the negative effect it would have on producers. Instead, other interventions such as food-for-work or cash-for-work as part of erosion control, reforestation, or a road-building program could meet immediate food needs and improve market efficiency far more effectively. They would also do less harm to local and regional mechanisms for exchange, while reducing geographic vulnerability through infrastructure improvement. Simply put, the underlying objective of a vulnerability analysis is to identify the causes of food insecurity so that mitigative measures might be pursued that reach the maximum number of households, enhance market efficiency, inflict the least damage on existing mechanisms of exchange, minimize social and economic polarization, and strengthen local institutions. Thus, in addition to identifying regions and groups at risk, the analyst is compelled to determine -- to the degree possible -- what the primary causes of that vulnerability are so that appropriate responses can be designed when and where they are needed.

### **APPROACHES TO VULNERABILITY ANALYSIS**

During the past generation, three formal approaches to VA have emerged. In part, these reflect different understandings of famine vulnerability that have evolved over time. However, they also reflect different objectives and information demands that drive the analysis. Each can be useful in specific situations and no single one should be used to the exclusion of others. Because some approaches work better in some situations than others, and some yield different types of information, elements of each may be employed at different times and places.

## **Food Balance**

Since biblical times, at least, the general perception of famine has been one of demand outstripping food supplies. Thus, it is not surprising that the first modern attempts to devise an early warning system that included a sort of vulnerability analysis was based on a fairly strict arithmetic model, in which the objective was simply to establish the adequacy of supply to meet demand.

The *food balance sheet* approach first employed in 1975 by the Global Information and Early Warning System (GIEWS) of the Food and Agriculture Organization (FAO) attempts to determine the relationship between demand and supply, or the sum of agricultural production, stocks, and imports. It is a practical approach, in that the relationship between supply and demand is transparent, and data which describe it are routinely gathered and reported by a number of national ministries and international agencies. More importantly, the outcome of the analysis, the difference between demand and supplies, results in an estimate of the amount of food that might be required to mitigate the effects of an emergency. Because of its simplicity and because so much emergency assistance involves provision of food aid, the food balance sheet is still a common tool. Moreover, it provides an estimate of food aid need that can be done quickly and early in the process, and thus permits action to be planned and undertaken early.

Despite its advantages, the food balance approach has limitations, particularly as a tool for vulnerability analysis. First, and foremost, it assumes that the simple supply and demand model reflects reality in terms of how individuals or groups might access food. As described below, this assumption is flawed in that food availability does not translate into food access for all groups in the population. Second, it relies largely on data that may vary wildly in their reliability for a host of reasons. Third, because it is typically performed at the national level and deals only with food, the food balance can tell us little about the nature of the “food economy” of a country, and much less about its constituent parts and how these vary and change through time. Finally, aside from the insight of the analyst, there is no explicit attention paid to the differences that might exist between areas and groups and how these differences vary and evolve with time. However, the food balance sheet remains a useful and often necessary tool in providing an initial sense of the magnitude of a national food deficit.

## **Indicator**

In the wake of widespread famine in 1984, early warning efforts were renewed. With the availability of satellite data and a different model of famine, a new approach emerged that was pioneered primarily by FEWS.

By studying earlier situations in India and Africa, famine was found to be far more complex than a simple shortage of food (Sen, 1981; Garcia, 1981). In most instances, food might be available but the mechanisms (entitlements) by which an individual or group gains access to food may cease to function adequately in an emergency. For example, during a severe drought, labor markets may collapse due to an influx to urban areas of farmers whose crops have failed. Food may be available in these areas, but priced so high as to deny access by those who cannot find

wage labor. In such situations, the supply-demand model still would have relevance at the national level, but it could not inform about what was happening to different groups in smaller areas and might underestimate absolute needs.

To accommodate this new complexity, an approach common to global scale agricultural assessments was adopted – convergence of independent evidence (NRC, 1987). In addition to working toward better estimates of supply using satellite information, a wider range of data were gathered which might illuminate conditions that would reflect or affect food access. Thus, data describing health conditions (i.e., morbidity, mortality, and malnutrition) were gathered to describe general well-being, as well as data describing general access to food (i.e., food prices; labor prices; terms of trade). By analyzing the trajectories of these different indicators, the situation of any region or group might be “triangulated.” By relying on the convergence of evidence, predictions of impending emergencies could be made with more confidence.

The indicator approach offers several advantages. First, because it deals with a number of different and often independent data, the opportunities for error are reduced. Second, the indicator approach is flexible; indicators can be added or deleted at any time, according to their usefulness and availability. Third, because it deals with data, the method of analysis might be formalized and thus replicated. Finally, because it considers a variety of data, it can be used for many applications.

There are also disadvantages to the indicator approach. First, like all approaches, it is restricted by the quality of data on which it is based. Second, the availability and quality of data varies from place-to-place, and thus it is sometimes difficult to replicate results or to make comparisons across countries – a difficult task even when good data are available. Third, analysis of aggregate (i.e., district, province) data must be based on a good understanding of local livelihood systems and how households respond to stress. Fourth, as a consequence, it is difficult to translate aggregate data into absolute needs. Finally, because it is heavily based on data, data collection and management is a significant issue.

## **Process**

Although the “indicator” approach is based on data, it also rests on a number of assumptions (see below). One obvious assumption is that the food economies of a region or country are understood in terms of the ways in which different groups gain access to food and how that varies seasonally and during emergencies. In contrast to the indicator approach which seeks to determine household behavior through analysis of aggregate data (top down), the “process” approach attempts to determine aggregate need through development of an understanding of processes operating at the household level (bottom up).

Rather than rely on a general model of households, the process approach developed and applied by the Save the Children Fund of the United Kingdom (SCF/UK) is based on a specific understanding of local food economies. Initially, the area of interest is divided (stratified) into food economy regions which share broadly similar patterns of livelihood and access to food. Within these, key informants are interviewed through a structured questionnaire. The purpose is

to establish the ways in which households in different economic groups (rich, “average”, poor) acquire food and how those patterns change during times of stress, in terms that are quantitative at least in a relative sense (e.g., what proportion of food is acquired through purchase by season). Given a disruption (e.g., inflation or devaluation) in established patterns, it is possible to identify the relative need of each group and thus develop an estimate of shortfalls (i.e., proportion of food that cannot be purchased) by multiplying household shortfall by the number of households in the group.

The primary advantage of the process approach (as outlined here) is that it describes household food economies based on local knowledge. This offers the potential for a depth of understanding that is not contained in other approaches. Second, as a result, it also captures the differences between different classes of households, as well as how they change seasonally. Third, because it relies on key informants, a model can be constructed fairly quickly – particularly for small areas. Finally, a primary product of the process is an estimate of food aid need.

Disadvantages of the process approach derive, in part, from its strengths. First, and foremost, no household data are gathered on a routine basis. Without subsequent surveys it is difficult to determine if conditions are improving or deteriorating. Second, the quality of the product is dependent on key informants and analysts. Thus, despite a structured questionnaire, comparisons between areas and replication may be troublesome due to the differences among individuals. Third, once in place it is difficult to adjust to change. For example, if the fundamental food economy of an area should change (e.g., opening of a mine), another survey probably would be required.

### **THE CURRENT FEWS APPROACH**

Since its inception, FEWS has relied largely on indicators as a key component to vulnerability analysis. The project will continue to use this approach for four primary reasons. First, in many countries, the databases developed by FEWS have a breadth and depth that will now support more rigorous analysis. Second, the types of questions that are being asked of FEWS vulnerability assessments encompass more than the basic supply/demand information considered in a food balance sheet. Third, aside from those discussed above, alternative assessment methods that might be contemplated rely too much on primary data that are expensive, spatially incomplete, difficult to replicate or compare, and difficult to use in tracking change. Finally, it provides a convenient link to an indicator based approach to assessing the impact of interventions.

It is particularly important to note that, unlike other types of vulnerability analysis, the FEWS approach does not usually produce an estimate of food aid need. Its primary purpose is to answer questions about where vulnerability is greatest, who is most affected, when are they the most vulnerable, and what are the causes of vulnerability. As a consequence, the numbers that might result from the analysis have not been the primary objective. Rather, they are an intermediate product that serves to guide the analyst in subsequent analyses. Certainly, this process may ultimately yield estimates of need, but that is not the primary objective.

In this section, we will outline the FEWS conceptual framework and general approach to vulnerability analysis.

### Conceptual Framework

The first formal FEWS conceptual framework (Downing, 1990), was built on the notion of vulnerability being composed of two parts: (1) the risk of occurrence of an event and the factors that contribute to it, and (2) the ability of a group or household to cope with its consequences and the collection of factors that condition that ability (Chambers, 1989). This general concept has served as the cornerstone of the FEWS approach to vulnerability analysis.<sup>2</sup>

Clearly, vulnerability is conditioned by a number of factors, both inherent and transient. Many of these can be analyzed and understood because they are observable and measurable. This helps us to partially understand the “risk” part of vulnerability equation. The more elusive part of the equation is determining the ability of a group -- or collection of households -- to deal with unanticipated events, and how the ability to cope changes over fairly short periods of time. Things like household resource base and income options are not routinely reported. Equally important, most data are not published according to gender, economic class, or ethnic group. Thus, they must either be elicited directly through surveys, or inferred through the interpretation of published aggregate data. This can be achieved through an understanding of individual household behavior and of how that behavior might be expressed in aggregate statistics.

### The Model of Household Response

The model described here originated with work done by Watts (1983), which was subsequently elaborated (Corbett, 1988), and ultimately applied to early warning and vulnerability assessment for famine mitigation (Hutchinson, 1992). It correlates directly with the FEWS Vulnerability Matrix.

Figure 1 illustrates the ways in which households respond to changes in their economic condition. There are several *caveats* to interpreting and applying this model. First, many coping activities may be used routinely in non-emergency situations. If a household is relatively poor, it may be obliged to resort to some form of coping during expected seasonal variations (i.e., the “hungry season,” that period before harvest when reserves are at their low point). Second, coping may not proceed sequentially along a single linear trajectory; several strategies might be pursued in parallel by any single household. Third, specific strategies will vary among groups and regions as a function of the options available. Fourth, strategies will vary from year to year and change over time as new opportunities for gainful activities arise. Ultimately, though, the

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<sup>2</sup> Recent work has extended this general model to encompass other factors of vulnerability such as economic exploitation, differences in power between castes/classes, genders and age groups and how they change with time (Watts and Bohle, 1993). These types of information/insights are outside the traditional focus of FEWS analysis. They could be cited in VA s as supporting or complementary information but are unlikely to enter into the core analysis.

primary objective of the household is to conserve resources. Thus, there is a general progression of types of activities that forms a broad pattern that can be applied to virtually any household and region:

Adaptation. This class of activities might be called, “making do with what is available.” It involves changing preferred patterns of consumption (e.g., skipping meals and ultimately changing diet by shifting to foods that are more readily available), and reallocating available resources of land, labor, and capital (e.g., changing herd composition; replanting to more appropriate crops; producing charcoal locally; or migrating to labor opportunities). At this stage, the market might reflect an increase in cereal prices and a decrease in labor prices.

Divestment of liquid assets. After, or often before, options for adaptation are exhausted, the household begins to dip into “liquid” resources (e.g., sale of small animals), accumulated wealth (e.g., sale of jewelry), or to tap the resources of extended family (e.g., informal loans from kin). Markets may reflect a decline in the prices of small animals, an increase in the number offered for sale, a continued rise in cereal prices, and thus perhaps an accelerating decline in terms of trade (cereal per animal).

Divestment of productive assets. The decision to sell productive assets is perhaps the most significant threshold in this continuum. It might involve the consumption of seed, the incurring of significant formal debt, and ultimately the sale of capital items required for production (e.g., plows or draft animals in agricultural households; cows in pastoral households). Once crossed it is difficult -- if not impossible -- for a household to return to previous levels of productivity and security. Typically, markets would show increasing cereal prices, declines in prices for farm implements and land, and a decline in price for large animals. Rises in malnutrition rates should be expected.

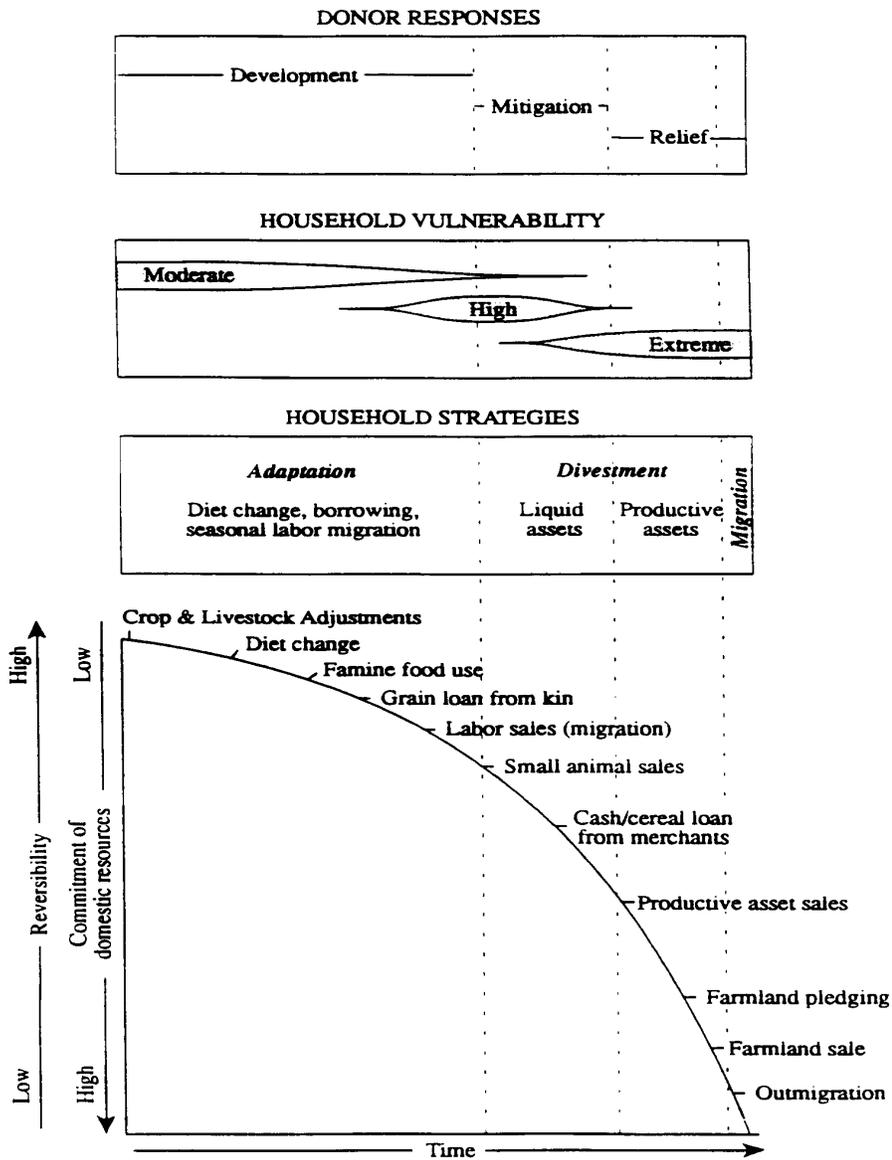


Figure 1. Household responses to food security emergencies. (After Watts, 1983).

Outmigration. Once local options are exhausted, there may be a general movement to urban centers, or refugee camps if they have been established. There would be accompanying dramatic increases in malnutrition, morbidity and mortality.

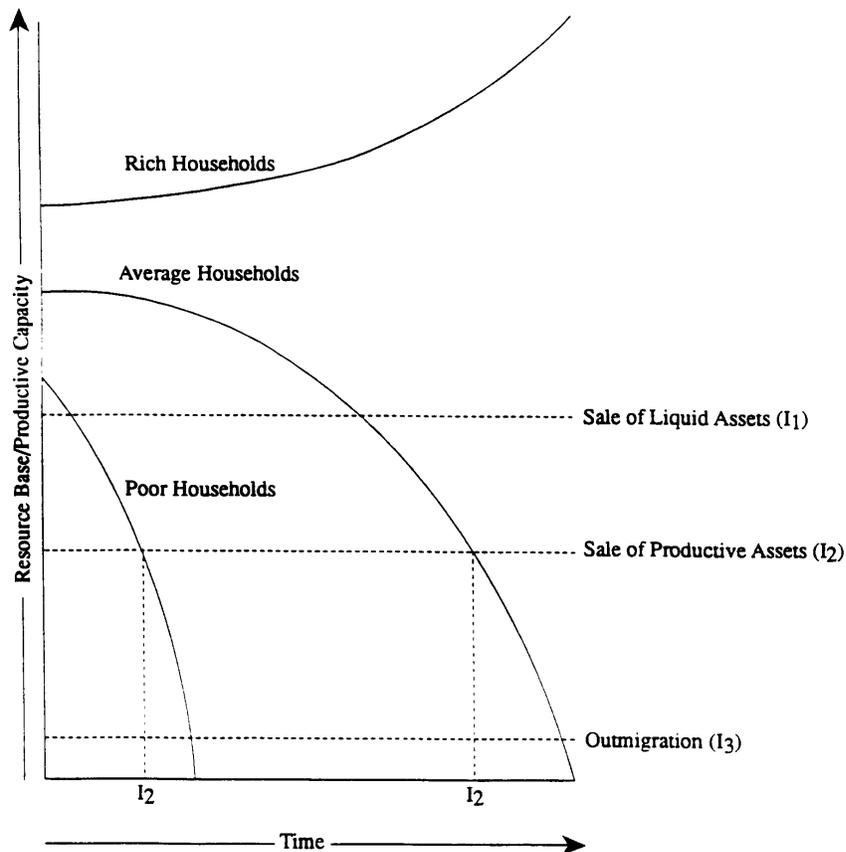


Figure 2. Differences between household responses as a function of resource base.

As suggested above, resiliency, or the ability of any group or household to recover from adverse change is a function of several factors. First is the range of options available to exploit. For example, if a group is near a major urban center or agricultural region, there will be more opportunities for outside employment. Or, the group may be situated near a road that would facilitate movement to distant areas where more alternatives exist for generating income. Moreover, some groups in environments that are especially risky for agricultural production (e.g., the Sahel), may have a wide array of options (income portfolio) on which to draw because of their experience in dealing with risk; those in less risky environments (e.g. the Guinean zone) may have a more restricted array of coping strategies and thus, paradoxically, may be more vulnerable to extreme events (Reardon, et al., 1988).

A second factor that conditions the ability of a group to cope is, not surprisingly, the level of resources upon which the group or household can draw. The comparison between different households is illustrated in figure 2 (Hutchinson, 1992).

We can use these two graphs to raise at least five points. The first is that households with different initial resource levels will cross critical thresholds at different times. The second is that

some well-positioned households may actually increase their resource base during emergencies by acquiring assets at depressed prices and thus may be in a position to exploit members of lower economic classes.

Third, different households may be parts of different “social economies” and thus have access to a network of other resources. This might include membership in an extended family, clan or tribal group that provides support to its members during times of stress. Fourth, the use of specific coping strategies may have vastly different meanings, depending on the nature of the household. For example, the sale of small animals will have no impact on a rich household, but the loss of household resources may substantially increase the vulnerability to food insecurity of a poorer household. Finally, and not surprisingly, some groups may enjoy access to greater political power or class/caste positions than others, which permits them to tap other resources at a higher level of political or economic organization.

The household model of response can also be used to determine when and to what degree household economic conditions might be expected to improve. Although the examples here show responses to negative events (e.g., crop failures), they can also be used to infer what might happen during upturns (e.g., potentially good harvests). During favorable conditions, households may replenish or add to their stocks and liquid assets, thus increasing their resiliency, or ability to cope with future downturns. However, if households have lost control of their most valuable and productive assets (e.g., seed; tools; cows), they will not be positioned to take full advantage of opportunities as they arise.

### **Assumptions**

By understanding household responses to changes in economic and food security status, we are able to interpret aggregate data. Clearly, this ability is based on a large set of assumptions. The FEWS approach is based on two categories of assumptions, basic and operational.

#### **Basic Assumptions**

The first set of assumptions are those that outline our understanding of famine and how we approach it. There are at least seven:

1. Famine is the culmination of a process rather than a catastrophic event.
2. Famine has observable precursors or indicators.
3. There is a progression of indicators that reflects the degree of vulnerability to famine.
4. Indicators will vary between places and through time.
5. Some indicators appear early enough to permit mitigative action to be taken.
6. Not all regions or groups are equally vulnerable to famine.

7. Vulnerability of regions and groups will vary through time.

### Operating Assumptions

While these basic assumptions explain our understanding of famine, they do not prescribe how FEWS must approach vulnerability analysis in an operational sense. For this, it is necessary to understand FEWS operational environment. First, FEWS is mandated to systematically and objectively assess all groups within a country or region. FEWS is not free to preselect subregions or subsets of the population for intensive study. Second, given this constraint, FEWS typically relies on published secondary data that cover the entire region rather than conduct targeted sample surveys of specific regions or groups. Within this environment, FEWS must rely on a set of at least six operating assumptions:

1. Households respond rationally to changes in their economic condition.
2. Households seek to conserve their resources.
3. Markets exist in some form virtually everywhere and respond to the forces of supply and demand with varying degrees of efficiency.
4. The ability of households to maintain acceptable levels of food consumption is conditioned by (a) the depth, diversity and quality of their resource base, (b) the breadth of their income portfolio, and (c) their relationship to economic, social and political hierarchies.
5. Household food security status can be inferred from aggregate secondary data..
6. Vulnerability assessments contain information that can guide both relief and development activities.

### Operational Approach

The following outline is distilled from descriptions of vulnerability analyses done during the past two years in different countries by different analysts. It is not drawn from a single effort, but is rather a composite of what appears to work best. It is a guide which must be adapted to local conditions and data limitations. In terms of techniques, the chapter following this one deals with specific tools for data processing and analysis.

As a general rule, there should be very few surprises that emerge from the vulnerability analysis. While broadly systematic, it will necessarily contain some measure of the analyst's biases and may be based on data that is highly variable in quality. As a result of these uncertainties, the process cannot be considered a black box, and the results should not take precedence over common sense or other informed opinions. At this point in the development of methodology, the conclusions of the vulnerability analysis are still largely qualitative and relative. Clearly, as the vulnerability analysis methodology continues to evolve it will become more systematic, objective (i.e., quantitative) and reliable. Thus, the general approach described below is still very much a

“work in progress.”

## Baseline Vulnerability Analysis

The purpose of the baseline analysis is to capture the basic nature of the food economy of regions and groups so that the impact of changes on food security can be understood. It focuses on understanding those factors that contribute to vulnerability but which change slowly (i.e., quality of resource base; depth of assets; access to markets; access to alternative sources of income; political power; class/caste; gender). Although it provides the context for annual (current) assessments, formal baseline analyses are performed only every 3 to 5 years because they focus on factors that are comparatively stable.

### Stratification

Geographic. Analysis to identify group vulnerability must begin at the administrative unit level. While this is reasonable and necessary from a data management perspective, some efforts have been made to improve analysis that might be pursued further. For example, a single administrative unit may be composed of areas that are fundamentally different or, conversely, adjacent administrative areas may be very similar. In other words, it would be expedient and comparatively simple to stratify the country into areas that would minimize the variance in factors that we feel are important. Thus, using the smallest administrative division as a basic unit of aggregation, countries or regions should be divided into areas that are more-or-less homogeneous in the primary determinants of baseline vulnerability (e.g., resource base; livelihood systems; infrastructure). More importantly, geographic strata should be defined only after the analyst has developed a firm understanding of the basic nature of the country or region and can statistically determine whether a stratification will enhance or diminish the analysis.

Socioeconomic/Demographic. Within geographic strata, it is necessary to further identify different groups. Typically, classification will be based on household production strategies (e.g., pastoral; crop production; arts and crafts). However, in some areas it may be necessary to distinguish among tribal/ethnic groups, and caste/class groups, as well as women and children under the age of five.

### Index Construction

As noted above, the indicator approach is data intensive and employs a large number of data types. This presents a data management challenge, but also raises significant methodological issues in finding ways to analyze a very large variety of data. The solution that has been most commonly pursued is index construction, or the combining of multiple indicators in a single measure that can be used to rank areas and groups.

Indexes may be constructed in five basic steps: (1) determination of the primary “dimensions” of vulnerability for which indexes will be constructed; (2) selection of indicators to be used in each index; (3) standardization of indicators; (4) weighting of indicators within indexes; and (5) ranking according to summed scores.

Dimensions. The use of “dimensions” is comparatively new and reflects attempts to arrive at classes of measures that can be compared across, and within countries or regions, even if individual indicators are not available for every location. For example, production indicators are often gathered using different methods, and may not exist at all in some areas. Also, there is a common desire to group indicators that describe a general aspect of the population that is more easily understood and might be translated into recommendations that can lead more directly to action. Using the income example, we might wish to combine household crop production with other measures that describe general “income” including fishing or and wage labor. Thus, if we find “income” to be the primary determinant of vulnerability, we could consider development interventions that would include provision of alternative sources of employment that might lead to increased household crop production (e.g., a program of constructing bunds in fields that would control erosion, but also increase crop yields).

Three dimensions are commonly recognized, although more have been considered. The first relates to the resource base upon which households draw. This would include considerations of rainfall, soils, natural vegetation (e.g., agroecological zonation). The second attempts to describe the relative level of development and might include overall measures of nutritional status, access to infrastructure (e.g., roads; schools; health care facilities). A third should describe the economic resources of regions and groups, considering income (e.g., average crop production; livestock numbers; coping ability, including remittances and access to wage labor) and, to the degree possible, some idea of food income, reserves and general wealth.

Indicator selection. Obviously, there are a large number of indicators that might be used in an analysis. Typically, a candidate list of indicators is drawn up that contains those factors that describe vulnerability, often in the “dimensions” or general categories described above. From this “shopping list,” indicators are selected.

Indicators may often be “self selecting.” Data for some indicators may be totally lacking or of such poor quality that they cannot be used. Others, which may be less-preferred but which are available, then become self-selected. This is perhaps the most common mode of selection, particularly in data-poor regions. In areas where highly desirable indicators are absent (e.g., average cereal crop production), a “second best” or proxy indicator has been used (e.g., average rainfall). In situations where objective data are not available, subjective data have also been used successfully (e.g., quality of season).

Where data are comparatively abundant, there are other considerations. It is usually better to select indicators that are not redundant. For example, if a map of agroecological zones is available, other data describing climate, soils and natural vegetation may add little, and actually may cause confusion when attempting to establish the relative importance of each during analysis.

The selection of indicators usually relies on decisions made by the analyst in light of the needs of the decision maker(s). However, it may be desirable to use the recommendation of one or a panel of experts, particularly when an early warning “community” exists in a region or country.

Standardization. It is difficult to compare measures of rainfall and soils, for example. Thus, indicators are transformed into some common measure. This may take the form of numeric ranking (from best to worst), scaling (as a percentage of maximum value), or transformation or scaling (e.g., z-scores). It has also taken the form of transforming indicators into a common denominator (e.g., food or monetary equivalents), but this is not necessarily the required endpoint. Scaling or other data transformations can be done for time series data for each area (temporal), or over many areas for data representing one point in time (spatial). Each approach offers advantages and disadvantages.

Weighting. Indicators are assigned weights according to their relative importance. Using no (equal) weights assumes that all indicators are of equal importance. However, it is usually clear that some variables are more important than others and this difference must be accommodated during analysis. In the past, weights have been developed through the best judgment of the analyst, through experience, or through the use of expert opinion.

Ranking. After indicators have been standardized and weighted, they can be summed to create the dimension index. Subsequently, areas can be ranked according to these sums. At times, the indexes themselves are weighted and summed to create an overall vulnerability index so that areas can be ranked. This may be done, but it should be as transparent as possible, so that its meaning to the decision maker is clear.

As suggested at the outset, the baseline vulnerability analysis is the starting point of the overall analysis, not the endpoint. The results should identify the regions and groups most vulnerable to chronic food insecurity. By the end of the process, the analyst should be in a position to explain the causes of chronic food insecurity and to suggest ways in which it might be reduced.

### Current Vulnerability Updates

The update describes current conditions and thus is performed at least annually. The purpose is to identify those regions and groups that might be at greatest risk as a result of any number of unexpected changes (e.g., drought; civil war; inflation) that might affect access to food. FEWS analyzes vulnerability in periodic vulnerability assessments or updates.

Typically, the update will be based on an examination of indicators included in the baseline and on a consideration of how they have changed recently by region and by group (the past year; the past three years). The magnitude and direction of change is determined by comparing recent values (the past year; the past three years) to baseline values (5 to 10 year averages for each region). In addition to indicators contained in the baseline analysis, other more variable current indicators will be analyzed (e.g., market prices; market activity in general) to determine their impact on groups and households. For example, if we find rapidly changing terms-of-trade (e.g., increasing ratio of volume of grain per animal unit) in a region that has had poor crop performance the past three years, if some segments of the population were previously highly vulnerable, we can conclude that they are moving toward extremely vulnerable conditions.

Pre-season vulnerability analyses are performed just prior to the start of a new agricultural season with the focus on establishing groups' or areas' vulnerability to the outcome of the coming agricultural season. They take into account households' baseline resiliency and income changes experienced by households over the three most recent seasons, quantifying the magnitude and direction of the changes and determining their effect on households' ability to respond to the outcome of the upcoming agricultural season.

Post-season food security analyses revise the pre-season update, evaluating the magnitude and direction of changes as a product of the current harvest outcome and its effect on households' ability to gain access to sufficient food to meet household consumption requirements over the next season. They identify areas where households experienced changes significant enough that they cannot gain access to sufficient food over the next season to meet household consumption requirements without depleting productive assets or employing destructive coping strategies to do so.

## **CURRENT AND FUTURE DEVELOPMENTS**

FEWS will continue to refine the general indicator approach it has used for the past decade. There are three compelling reasons to proceed along this path. First, in many countries, the databases developed by FEWS have a breadth and depth that will now support more rigorous analysis of food security. Second, because of this robustness, the FEWS database and vulnerability analysis can be used to address needs that USAID has in other areas, such as development planning. Finally, alternative methods that might be employed rely too much on the acquisition of primary data that can be prohibitively expensive, spatially incomplete, and difficult to replicate or compare.

As in the past, the focus will continue to be on the evolution, rather than a restructuring, of the FEWS approach. As above, there are several arguments for the evolutionary approach. First, the situation in each FEWS country is and has been different in a number of ways including: (1) the nature of food security within the country, (2) the information demands of the mission, and (3) the availability of data. Thus, the nature of the VA has varied among countries, and has evolved over time. Second, FEWS field representatives have different backgrounds and experiences that they bring to bear on the VA process. Thus, although confronted with problems that are broadly similar, they have tended to find parallel solutions that respond to the immediate demands placed on them and which reflect their background and ingenuity. The elements of the current FEWS approach are a product of a winnowing process in which a common set of problems is addressed by a group of problem solvers from a wide variety of backgrounds. The current FEWS approach grew out of a common vision, but one that has had different renderings that reflect differences in expertises, information demands, the nature of different countries, and the passage of time. FEWS will continue to nurture this diversity, use those elements that are judged by the group to work best, and pursue solutions to the problems that are identified collectively.

## Current Developments

Current implementations of the theoretical model of vulnerability are being extended along two paths. The common point of departure is the current indicator approach which involves monitoring factors which are either linked to the causes of vulnerability or are observable components or characteristics of vulnerability. One of the evolving approaches involves defining vulnerability in terms of household expenditure and attempting to measure the different components of income and their variation. The other involves a causal model of vulnerability, with a focus on exploring the degree of relation between a proxy measure of vulnerability and a set of candidate causal factors. Neither of these approaches constitute a radical departure, but seek to satisfy the same general ends by different means.

### Common Denominator

As noted above, a fundamental problem in the indicator approach is the difficulty of deriving meaningful unifying measures from a diverse set of data. One approach that has been used is to convert most measures into a common denominator. Two that have been explored are monetary or, more commonly, food equivalents. In these, variables such as production and income are converted to food or cereal equivalents. The intent is to develop a complete picture of current food availability on a per capita basis. This can then be compared with accepted food consumption standards to determine whether shortfalls are likely to occur and, if so, how serious they might be. The product is easily grasped by decision makers and can facilitate action. However, because it relies so heavily on prices and rates of exchange, it is susceptible to rapid changes and must be updated frequently.

### Outcome Prediction

The rich databases enjoyed by many FEWS countries suggest that other, more statistically rigorous types of analysis might be pursued. Specifically, by analyzing past conditions and their outcomes, it may be possible to predict what might happen in the future. This predictive approach has been applied in three steps: (1) identify those indicators that do the best job of predicting or estimating some outcome or “proxy” of vulnerability (e.g., malnutrition rates); (2) determine their importance relative to other indicators (i.e., weights); and thus (3) suggest causal links between the data that are monitored and ultimate outcomes.

In considering an entire country, any one model developed by these methods would be unlikely to work well in all conditions. Thus, other techniques are also being examined that might be used to identify units (e.g., administrative or other reporting units) that are similar in those properties that determine or reflect vulnerability. Once identified, models can be developed for each group of similar units, thus improving the ability to predict outcomes at smaller reporting units.

## **Future Developments**

Two general types of problems that have been identified will be pursued in the further development of the FEWS methodology. The first will seek out and incorporate relevant research findings reported by other groups on food security issues within FEWS countries. The second will address the geographic limitations of data considered by FEWS. The third will seek systematic ways to incorporate expert opinion.

### **Incorporation of Other Findings**

FEWS is responsible for reporting on a vast area. In addition, there are a wide variety of individuals and agencies upon whom FEWS depends for the gathering and analyzing of primary data in order to conduct their mandated activities. Many of these groups are concerned with food security for relatively small areas (e.g., NGOs).

As noted throughout this paper, the secondary data analyzed by FEWS is aggregated to some level of reporting unit and thus cannot portray differential food access among regions, or socioeconomic, demographic, and ethnic groups. Often, the data gathered by other groups is designed to illuminate these differences.

Where they are available, FEWS will seek out these “other” research findings in each country and use them to add detail regarding food access and consumption as it varies among regions, socioeconomic, demographic and ethnic groups in VA reports.

### **Geographic Data Treatment**

FEWS analysis is currently constrained by the geographic unit by which data are reported. For example, as noted above, agricultural production is reported at the level of some administrative unit. The entire unit is thus assumed to have a single production value per unit area. However, actual yields vary considerably, largely as a function of resource endowment (e.g., climate, soil, water), or the ability of different groups to invest in inputs. As a consequence of using aggregate data, agricultural production for any single point is likely to be under or overestimated, thus giving an inaccurate picture of food availability for different areas and groups.

In other cases, some data (e.g., market prices) are reported for discrete geographic points. Prices that might be expected to occur between these points can be interpolated mathematically. However, actual prices at any point between markets will be determined by factors other than simple distance to market (e.g., distance to roads). Thus, again, it would be possible to under or overestimate degrees of food access for different areas and groups.

In the future, FEWS will pursue techniques for both (1) disaggregation of aggregate data, and (2) “spreading” point data over larger regions. This will involve consideration of other potentially useful datasets (e.g., agricultural land use), and the exploration of other methods for dealing with existing geographically referenced data (e.g. geostatistics).

## Use of Expert Opinion

There are many instances where there is a need to incorporate expert opinion in the VA. This may be due to the limitation of data in those countries where FEWS has not operated, or where there may be little data due to chaotic conditions. In these situations, there is little recourse but to rely on the opinions of those who are best informed. The expert opinion approach has several features to recommend it. First, it is most likely the best that can be done under these situations: where data are not available, there is little reasonable recourse but to ask those who know best. Second, by relying on “experts” it is possible to lay the foundation for a cooperative effort that builds on a diverse set of players with different experience and expertise.

There are tools that can be used to elicit expert opinion in a structured way, either from individuals or groups. These will be examined and tested in collaboration with the broader early warning community.

## **TWO IMPORTANT FINAL CONSIDERATIONS**

Throughout this paper repeated reference has been made to “what FEWS does”. This is understandable in as much as the aim of the paper is to make the FEWS approach to VA more transparent. It is important, however, not to lose sight of two features which underly all of FEWS’ efforts: the desire to collaborate with others working on food security issues and the need to assist host governments in their efforts to upgrade local capacity.

### **Collaboration**

Throughout its history, FEWS has welcomed collaboration with other groups involved in early warning. This is due in part to practical considerations. FEWS relies on data that are usually produced by other agencies. Thus, there is a real need for FEWS to maintain open lines of communication between members of the early warning community to insure an unimpeded flow of data and information. Moreover, the work of famine early warning -- particularly at a national level -- is in many ways a group undertaking in which all interested agencies participate not only to share data, but also to develop a common understanding of the situation in a country or region.

There is also a broader reason for an “open door” collaborative mode. FEWS invites comments and suggestions on the methodology it employs and the products it presents to insure that they are both correct and meet the needs they are intended to satisfy. In addition, if the methods employed by FEWS are generally understood in both their strengths and weakness, they are more likely to be accepted and used.

Useful developments in methodology will continue to occur not only in FEWS, but in all parts of the early warning community. FEWS encourages and participated these developments, and incorporates the elements which help FEWS fulfill its responsibilities through improvements in accuracy, speed and cost.

## **Capacity Development**

Pervading all its efforts in the Sub Sahara is FEWS' commitment to assist host governments in upgrading local capacity. In appraising the performance of its Field Representatives, FEWS places considerable emphasis on the individual's ability to assist in the transfer of methodology and technique. Recent evidence of FEWS' commitment to improving local capacity in VA can be found in Ethiopia, Malawi and several countries in the Southern Africa region. FEWS Representatives have worked closely with government and key donor analysts, in these countries, to insure that VA methodologies are fully documented and internalized -- with the ultimate objective of diminishing the need for reliance on skills from abroad.

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# **FEWS Current Vulnerability Assessment Guidance Manual**

## **Chapter 2 CVA Template**

**August 1999**

*The Current Vulnerability Assessment guidance has resulted from synthesizing the concepts and best practices developed and applied by USAID FEWS Project professionals. It is an analytical tool for practitioners. Given the challenges of applying these methods in the varying environments where FEWS and its partners work, this material will be reviewed and updated from time to time. However, the next review is unlikely to occur before June 2000.*

# THE FEWS CVA TEMPLATE

## FEWS CVA GUIDELINES: CHAPTER 2

The following template provides the basic outline, boilerplate definitions and graphics and some suggested text for the FEWS Current Vulnerability Assessment (CVA). The purpose of the template is to harmonize the flow and logic presented in FEWS CVAs. The CVA author is requested to type directly into an electronic version of this minimally formatted document (available from FEWS/W).

The template contains:

- a proposed outline (in black), embodied both in the table of contents and the following sections;
- boilerplate text and graphics (in black). This text should not be modified without discussion with the FEWS Vulnerability Analysis Committee.
- suggested text and graphics (in blue). This text indicates the flow of the argument, but can be modified as required.

For additional directions on how to use the template, see the CVA Guidelines Chapter entitled *The FEWS CVA Process*.

The CVA is organized in four principal sections. The table below links those sections to chapters in the CVA Guidelines that provide relevant instructions and examples.

<b>Section of Template</b>	<b>Section of CVA Guidelines</b>
Introduction	see footnotes in Template for instructions
National Food Security	Chapter 3: National Food Security
Household Food Security	Chapter 4: Household Food Security Chapter 6: Identifying Population Groups
Conclusions and Actions	Chapter 5: Linking CVA Results to Action

The other sections of the FEWS Guidelines Manual pertain to the CVA process, rather than to analytical methods.



**[CountryName, Year]  
Current Vulnerability Assessment  
[PublicationDate]**

**Famine Early Warning System Project  
U.S. Agency for International Development**

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## List of Abbreviations

## Executive Summary<sup>1</sup>

This current vulnerability assessment (CVA) considers the ability of populations to meet their food needs between {date} and {date}.

### *National Food Security*

The 19xx/xx agricultural season was ....

Domestic cereal availability from production and stocks is xxx MT, leaving a xxx MT net import requirement. Planned imports include xxx MT, leaving a positive/negative food balance of xxx MT at the national level. Compared to last year and to average...

In addition, ....

### *Household Food Security*

Of the xx {admin unit name} considered in this analysis, xx are extremely, xx are highly, and xx are moderately food insecure (figure 1).

Reasons...

Food access is...

Food availability is...

Food utilization is...

### *Risks*

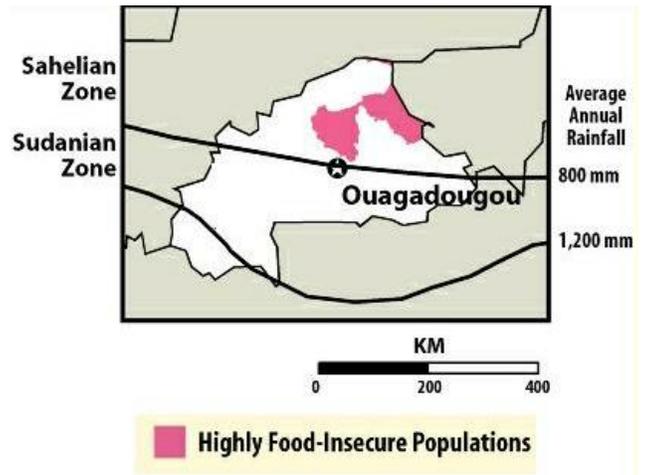
### *Actions*

Actions needed or already taken.....

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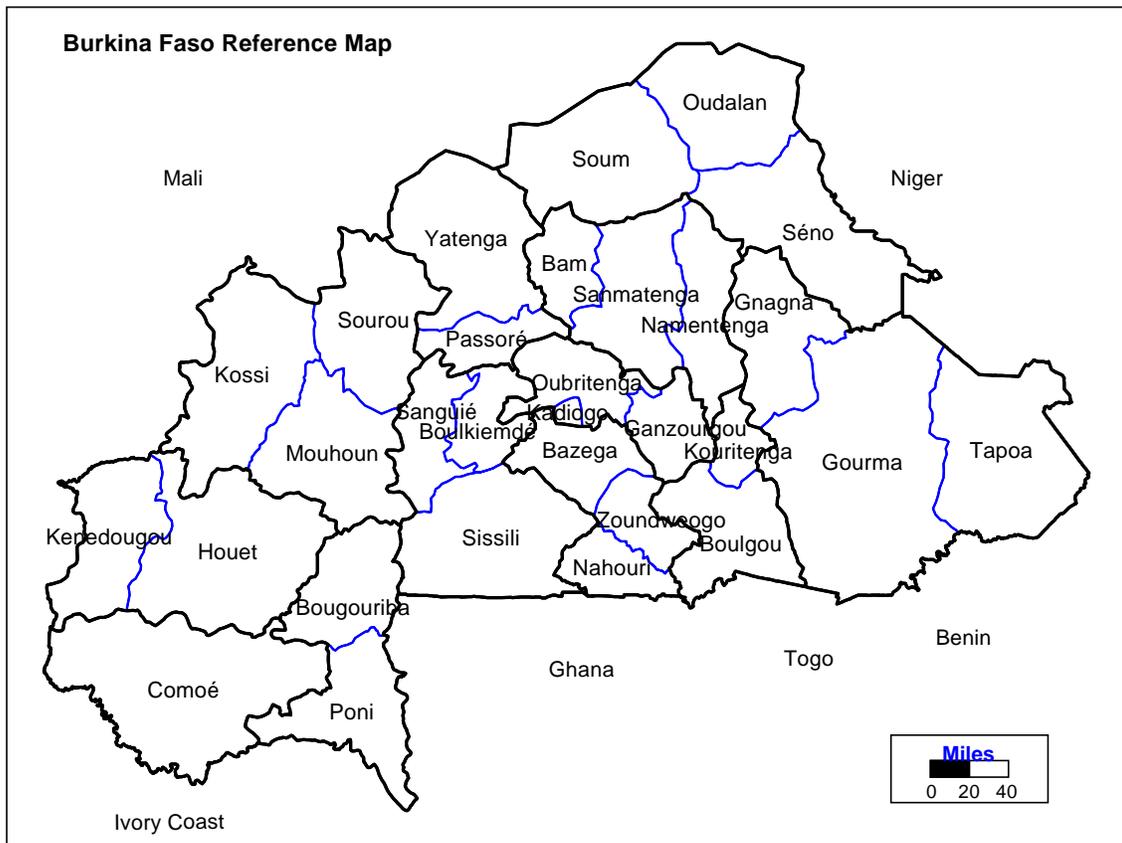
<sup>1</sup> The summary should touch on the most important points from each of the main sections and include a map showing the locations of populations by their level of food security. The summary should be no longer than 300 words. In addition, following the summary, a country reference map should be included, with the names and boundaries of the administrative units referred to in the analysis, as well as any important geographical features (e.g., district capitals, major waterways, neighboring countries, etc).

**Figure 1. Highly Food-Insecure Populations in Burkina Faso in 1997/98**



Source: FEWS

**Figure 2. {CountryName} Reference Map**



Source: FEWS

## I. Introduction

This Current Vulnerability Assessment (CVA) focuses on current or transitory food insecurity (see Key Terms box) for both {country name} as a whole and for specific populations within the country.

For the current consumption period ({date} to {date}), it:

- evaluates whether there will be enough food available at the national level to meet the consumption needs of the entire population;
- identifies {name of admin unit} where the 'average' household is likely to be food insecure;
- describes the extent to which households in these {name of admin unit} are food insecure;
- evaluates the impact of potential shocks to food security in the current consumption period;
- provides a basis for determining where concerted monitoring and possible interventions (including emergency food aid) may be needed; and
- summarizes the actions that are being taken or need to be taken to respond to any food emergencies.

## Key Terms

**Food Security** is a condition in which a population has physical, social and economic access to sufficient safe and nutritious food over a given period to meet dietary needs and preferences for an active life. A food-secure population can meet its consumption needs during the given consumption period by using strategies that do not compromise future food security.

**Food Availability** is a measure of the food that is, and will be, physically available in the relevant vicinity of a population during the given consumption period through a combination of domestic production, stocks, trade and transfers.

**Food Access** is a measure of the population's ability to acquire available food during the given consumption period through a combination of its own production and stocks, market transactions or transfers.

**Food Utilization** is a measure of whether a population will be able to derive sufficient nutrition during the given consumption period from available and accessible food to meet its dietary needs.

**Food Insecurity** is the inverse of food security: a condition in which a population does not have access to sufficient safe and nutritious food over a given period to meet dietary needs and preferences for an active life. Possible causes are insufficient food availability, insufficient food access and inadequate food utilization.

**Current (or transitory) food insecurity** occurs when a population suffers a temporary decline in consumption. Current food insecurity can result from instability in food production, food prices, household incomes, or health conditions.

**Chronic (or long-term) food insecurity** occurs when a population has continuously inadequate consumption. Chronic food insecurity arises from conditions of poor food production, limited incomes, and poor health.

(Adapted from World Bank, 1986)

## II. National Food Security

### A. Domestic Food Availability

There are two main components of domestic food availability: food production and food stocks.

#### 1. Production

<b>Table 1. Comparison of Current Year Production with Recent Periods</b>
<i>{See CVA Guidelines Chapter 4 (National Food Security) for instructions}</i>
Source:

#### 2. Initial Stocks

### B. Domestic Utilization

Food requirements for the year include *{food use, feed and seed requirements, projected exports, and requirements for replenishing the national security stocks}*. During the 19XX/XX consumption period...

#### 1. Food Use

##### a. Population

The *{agency name}* estimates the country's mid-19xx population at xxx. The population is derived from the 19xx census using a xx growth rate.

##### b. Consumption Requirements

The national food (cereal) consumption requirement is calculated using an annual per capita consumption requirement of xxx.

#### 2. Other Uses

#### 3. Closing Stocks

### C. Trade

#### 1. Projected Exports

2. Projected Imports

3. Projected Food Aid

D. National Food Balance

**Table 2. Food Balance for 19XX/20XX**

*{See CVA Guidelines Chapter 3: National Food Security for Instructions}*

E. Caveats and Uncertainties

1. Caveats

2. Uncertainties

**Figure 3. Prices of Major Staples**

*{See CVA Guidelines Chapter 3: National Food Security for Instructions}*

Source:

### III. Household Food Security

#### A. Objective of the Analysis

The objective of the analysis of food security at the household level is to:

- identify *{name of admin units}* where the ‘average’ household is likely to be food insecure;
- describe the extent to which households in these *{name of admin units}* are food insecure (see FEWS Food Security Categories box);
- evaluate the impact of potential shocks to food security in the current consumption period; and
- provide a basis for determining where concerted monitoring and possible interventions, including emergency food aid, may be needed.

#### B. Conceptual Approach

FEWS defines food security as the condition in which a population has physical, social and economic access to sufficient safe and nutritious food over a given period to meet dietary needs and preferences for an active life (see Key Terms box). Embodied in this definition is the important concept that food security is more than simple food self-sufficiency. As the work of Nobel Prize winner Amartya Sen on entitlements underscores, even if adequate food supplies are available, a household’s access to that food depends on its income-earning strategies, assets and coping behaviors. Thus a population’s food security goes beyond aggregate food availability to include an assessment of how much food people can access directly through their own production or indirectly through market and other transactions. A population’s food security also depends on its ability to properly utilize food. Individual health and nutritional conditions and as well as food care practices determine whether available, accessible food can provide nutritional value to the individuals consuming it. Using quantitative and qualitative information, FEWS pulls together information on each of these three pillars of food security – availability, access and utilization – to determine whether households will be able to meet their consumption requirements in a given period.

#### C. Methodology

##### 2. The Parameters for the Analysis

a. Time Period:

b. Level of Analysis: Although the conceptual framework is based on the household, the CVA groups households into representative populations to facilitate the analysis and improve targeting of relief interventions. These populations are defined in terms of their location (administrative unit) and

way of accessing food (food economy or livelihood system). This analysis takes the *{name of admin unit}*, that is the *{level of admin unit, i.e., 3<sup>rd</sup> order}* administrative unit, as the unit for analysis. This is done for two reasons: *{name of admin unit}*-level data are generally available (unlike household data) and emergency responses to food insecurity and mitigation efforts focus on administrative units rather than households. In focusing on the *{name of admin unit}*, CVA conclusions apply to an 'average' household in the *{name of admin unit}* but do not necessarily hold for the poorest and richest households within an *{name of admin units}*.

c. *Socio-economic Groups*: This CVA considers current food access of *{list of socio-economic groups considered}*. This CVA does not consider current food access *{list of socio-economic groups not considered}*.

d. Unit of analysis:

e. Consumption Threshold:

#### D. Current Food Security Status

1. Populations in Extremely Food Insecure Areas
  - a. Household Food Availability
  - b. Household Food Access
  - c. Household Food Utilization
2. Populations in Highly Food Insecure Areas
  - a. Household Food Availability
  - b. Household Food Access
  - c. Household Food Utilization
3. Populations in Moderately Food Insecure Areas
  - a. Household Food Availability
  - b. Household Food Access
  - c. Household Food Utilization
4. Populations in Food Secure Areas
  - a. Household Food Availability
  - b. Household Food Access
  - c. Household Food Utilization

### **FEWS Food Security Categories**

To assist decision-makers in prioritizing emergency food allocations within and between countries, FEWS categorizes populations as food secure or food insecure using the following operational definitions:

**Food-secure populations** can meet their consumption needs during the given consumption period using income derived from strategies that do not compromise future food security.

**Moderately food-insecure populations** can meet their consumption needs during the given consumption period only by intensifying their normal coping strategies. These households are vulnerable to any subsequent shock, either in the given or subsequent consumption period.

**Highly food-insecure populations** will not be able to meet their consumption needs during the given consumption period. They will be forced to reduce consumption and dispose of their productive assets, thereby undermining their future food security.

**Extremely food-insecure populations** are now, or will soon be, unable to meet their consumption needs. They have already exhausted their strategies for acquiring food and are currently destitute.

Although FEWS assigns a food security status to each population group, it cannot quantify the number of food-insecure people. The food security status applies to an 'average' member of the group. The larger the area and the more heterogeneous the group, the more likely it is that food security levels will vary among households within the group. Detailed food needs assessments are needed to identify the numbers of affected people and appropriate interventions.

Appropriate Interventions: For moderately food-insecure populations, no interventions are necessary, but contingency plans should be developed to respond if conditions deteriorate. For highly food-insecure populations, appropriate interventions could include food, income and asset support, employment and credit programs, and government actions to facilitate agricultural production, marketing and trade. For extremely food-insecure populations, appropriate interventions could include emergency food distributions and long-term rehabilitation programs.

## **E. Caveats and Uncertainties**

### **1. Caveats**

## 2. Uncertainties

**Table 3. Populations in Food Insecure Areas of Burkina Faso in 1998/99**

Region/Province	Socio-economic Group	Highly	Moderately
Sahel			
Séno	Farmers	93,000	
Séno	Pastoralists		10,000
Soum	Farmers		58,000
Oudalan	Farmers		17,000
Center-North			
Sanmatenga	Farmers	131,000	
Bam	Farmers	32,000	
Namentenga	Farmers		6,000
Center			
Oubritenga	Farmers		66,000
Ganzourgou	Farmers		41,000
Kadiogo	Urban Poor		12,000
Center-East			
Kouritenga	Farmers		54,000
Center-South			
Bazega	Farmers		36,000
Center-West			
Boulkiemdé	Farmers		28,000
Sanguié	Farmers		18,000
North			
Yatenga	Farmers		15,000
Passoré	Farmers		31,000
<b>Total</b>		<b>256,000</b>	<b>392,000</b>

Note: The table shows the entire population of affected socio-economic groups at the given administrative level. This does not imply that the entire population of those groups is food insecure (see box on FEWS Food Security Categories).

## **IV. Conclusions and Actions**

A. Summary of Food Insecurity (year)

B. Actions Required

1. Information Needs

2. Mitigating Food Insecurity

3. Response Planning Process

## **V. Appendices**

A. Last Year's Final Food Balance (19xx/yy)

B. Definitions of Socio-economic Groups

C. Household Food Availability Tables

D. Household Food Access Tables

E. Household Food Utilization Tables

F. Food Security Status by Population Group



# **FEWS Current Vulnerability Assessment Guidance Manual**

## **Chapter 3**

### **National Food Security**

**August 1999**

*The Current Vulnerability Assessment guidance has resulted from synthesizing the concepts and best practices developed and applied by USAID FEWS Project professionals. It is an analytical tool for practitioners. Given the challenges of applying these methods in the varying environments where FEWS and its partners work, this material will be reviewed and updated from time to time. However, the next review is unlikely to occur before June 2000.*

# NATIONAL FOOD SECURITY

## FEWS CVA GUIDELINES: CHAPTER 3

The purpose of this chapter is to provide guidance on how to measure the amount of food that currently is, or will be, available in the country during an identified consumption period, drawing from domestic and external sources. The materials for analyzing national food security are presented in a food balance sheet format.

This chapter includes:

A. Domestic Food Availability .....	3
1. Production.....	3
2. Initial Stocks.....	4
B. Domestic Food Utilization .....	6
1. Food Use .....	6
2. Other Uses.....	9
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C. Trade (Net Imports) .....	10
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D. National Food Balance .....	12
E. Caveats and Uncertainties .....	16
1. Caveats.....	16
2. Uncertainties .....	17

As there are many ways to arrange the components of the food balance and conventions vary by country and region, FEWS CVAs can contain different food balance formats. This flexibility is necessary so that the results will be accepted by collaborating institutions and decision-makers (the national government, regional early warning units or international organizations). Regardless of the format, the CVA needs to:

- obtain the most accurate and comprehensive estimates possible,
- document the assumptions and definitions used, and
- test the sensitivity of the bottom line results to reasonable perturbations in the data.

This guidance therefore lays out the concepts for estimating the national food balance in the broadest of terms. The outline presented in the CVA template reflects the way CILSS organizes these components. This chapter follows that outline, but also includes different examples of crop production and food balance tables from CILSS (FEWS/Mali), FAO/WFP (Rwanda), FAO/GIEWS and SADC. The actual topic

headings used in a final CVA report should be modified to reflect the ordering of items on the country-specific food balance table<sup>1</sup>.

The purpose of the food balance computation is to assess national food security in terms of what the country can access directly (its own production and stocks) and indirectly through markets and transfers (net commercial imports and food aid), as compared with what it needs for human consumption and other uses. In addition to discussing components of the food balance, the FEWS CVA also discusses the limits of the analysis, including uncertainty concerning the measurements or potential risks that could upset the national food balance during the relevant consumption period.

## **A. Domestic Food Availability**

Domestic food availability consists of the gross production of all food crops during the defined consumption period (including secondary crop seasons) and food stocks.

### **1. Production**

At the national level, describe whether this year's total production was good or bad relative to key reference periods: last year, the year before, and a recent average (3-5 years, if possible). Comment on the pattern of successive harvests: if this year's outcome is poor, but last year's was good, people will be in a better position to cope. Include production from all harvests during the defined consumption period, even if the crops for secondary seasons have not yet been planted (in which case the production figures should be based on reasonable guesses from previous secondary harvests).

Include a table with gross production by major cereal crop, compared with reference periods (last year) and recent average (last 5 years) (Table A).

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<sup>1</sup> For additional details on how to compute food balances, see

- "A Manual for the Food Needs Assessment: Conceptual Framework and Software Documentation", The Food Needs Assessment Project, AID/Bureau for Food For Peace and Voluntary Assistance. The Pragma Corporation, Washington DC. October 1988.
- "Guidelines for Crop and Food Supply Assessment Missions", Global Information and Early Warning System, FAO, Rome, 1996.
- Rook, J.M., Food Balance Sheets, Volumes 1-4. Technical Handbook, SADC/FAO Early Warning System. FAO Project GCPS/RAF/270/DEN (undated).

For a description of the differences between cereal balance computation in CILSS countries, see:

- "Outil d'Aide à la Lecture des Bilans Céréalières dans les Pays du CILSS", Chapitre 3, Rapports du Groupe de Réflexion sur les Systèmes d'Information sur la Sécurité Alimentaire dans le Sahel; Réunion du Réseau de Prévention des Crises Alimentaires dans le Sahel, Club du Sahel, Dakar, 3-4 décembre, 1998.

**Table A: Comparison of 1998/99 Provisional Gross Production Estimates with Final Estimates for 1997/98 and 5-year Average**

	Millet	Sorghum	Maize	Rice	Fonio	Total Cereals
<b>1998/99 (MT)</b>	736,800	1,094,500	331,900	98,600	12,600	2,274,400
<b>1997/98 (MT)</b>	811,500	1,254,000	293,700	111,800	10,800	2,481,800
<b>5-yr Average (MT)</b>	811,900	1,271,000	293,400	71,400	14,000	2,461,700
<b>Difference in % 1998/99 vs 1997/98</b>	-9%	-13%	+13%	-12%	+17%	-8%
<b>Difference in % 1998/99 vs 5-year Average</b>	-9%	-14%	+13%	+38%	-10%	-8%

Source: Ministry of Agriculture, FAO/CILSS

Several elaborations on this production table are possible, and even advisable, depending on country situation:

- adding non-cereal crops such as legumes, roots, tubers and bananas (see Table B);
- aggregating based on caloric equivalents; and
- distinguishing between seasons or cropping systems, such as for the unimodal and bimodal systems in Tanzania or the main-season and off-season harvests in the Sahel.

Both of these tables (A and B) present gross production in metric tons for the purpose of documenting the level and comparing the current year to previous periods. Not all of what is produced, however, is available for human consumption. The final food balance table usually distinguishes between food available for human consumption, post-harvest losses (pests, diseases, spoilage and mishandling) and other nonfood uses (animals, seed and industry). The exact placement of these concepts in the food balance depends on the particular convention followed (see section B.2).

## 2. Initial Stocks

Initial stocks (also called carryover or opening stocks) can make up an important component of domestic food availability. Stock levels may be monitored or unmonitored and may include:

- official stocks: government stocks, strategic grain reserves, marketing board stocks;
- privately held commercial stocks: traders, large millers<sup>2</sup>;
- privately held on-farm stocks; and
- stocks in port or transit (sometimes covered in the preceding categories).

<sup>2</sup> In SADC countries, stocks held by large-scale millers are grouped with official stocks.

**Table B**  
**Rwanda - Food Crop Production**  
**1998 A season forecast compared with previous years (metric tons)**

Crops	Aver.89-93A	1990 A	1997 A	1998 A	%98A/89-93A	%98A/90A	%98A/97A
Sorghum	21,700	28,504	15,100	18,323	84	64	121
Maize	79,500	81,196	72,100	47,915	60	59	66
Wheat	4,000	2,884	1,100	1,471	37	51	134
Rice	5,800	5,371	5,500	9,661	167	180	176
<b>Total cereal</b>	<b>111,000</b>	<b>117,955</b>	<b>93,800</b>	<b>77,371</b>	<b>70</b>	<b>66</b>	<b>82</b>
Beans <sup>1</sup>	135,700	135,809	90,200	91,922	68	68	102
Peas		6,213	8,100	10,101		163	125
Groundnuts <sup>2</sup>	14,300	3,725	1,900	3,651	26	98	192
Soya		8,119	2,500	4,132		51	165
<b>Total pulses</b>	<b>150,000</b>	<b>153,866</b>	<b>102,700</b>	<b>109,806</b>	<b>73</b>	<b>71</b>	<b>107</b>
Bananas	1,173,300	1,398,633	1,077,600	1,351,174	115	97	125
<b>Total banana</b>	<b>1,173,300</b>	<b>1,398,633</b>	<b>1,077,600</b>	<b>1,351,174</b>	<b>115</b>	<b>97</b>	<b>125</b>
Potatoes	150,100	147,572	133,500	134,998	90	91	101
Sweet, potatoes	418,000	364,524	384,100	368,521	88	101	96
Taro & yams	26,000	19,945	24,800	32,096	123	161	129
Cassava	148,900	136,951	114,700	120,261	81	88	105
<b>Total Roots &amp; Tubers</b>	<b>743,000</b>	<b>668,992</b>	<b>657,100</b>	<b>655,876</b>	<b>88</b>	<b>98</b>	<b>100</b>
<b>TOTAL</b>	<b>2,177,300</b>	<b>2,339,446</b>	<b>1,931,200</b>	<b>2,194,227</b>	<b>101</b>	<b>94</b>	<b>114</b>

Source:

Special report, FAO/WFP Crop and Food Supply Assessment Mission to Rwanda, 16 February 1998

Notes:

1 Includes peas in the case of the 1989-93 A average

2 Includes soya in the case of the 1989-93 A average

The handling of information on stocks in the food balance analysis depends on the particular convention being followed. Sometimes, the initial stocks are considered as part of domestic availability with closing stocks under utilization (Tables C and D) or as the bottom line (Table F). Other times, the stock figures are presented as 'net', or the difference between initial opening stocks and closing stocks (Table E: stock draw-down).

Information pertaining to stocks is usually spotty. There are several techniques for estimating stocks, including making educated guesses based on available information, or running monthly supply models (see FAO/GIEWS). In the write-up, discuss what types of stocks cannot be included in the estimates and how large those unmeasurable stocks may be. For example, if there have been a succession of good years, there may be anecdotal evidence that households are maintaining carry-over stocks. Conversely, if there have been recent food crises, on-farm stocks may be exhausted. Although it may be impossible to put actual numbers in the table, the existence of such stocks should be discussed here. If there are enough

unmeasured stocks to influence the food balance, they should again be mentioned in the section on Caveats and Uncertainties.

## **B. Domestic Food Utilization**

### **1. Food Use**

The amount of food required for human consumption is the product of the number of consumers (the total national population) and the amount they need to meet their consumption needs.

#### **a. Population**

Estimate the population corresponding to the mid-point in the consumption period under analysis. The population can be estimated by computing a series based on the annual rate of population growth and the last census figures (see box on Projecting Forward a Population Series).

**Example: Projecting Forward a Population Series**

To project forward population using a given growth rate  $r$  and a population of  $P$  at time  $t$ , then the expansion of the series for  $n$  periods is:

$$P_{t+1} = P_t (1+r)$$

$$P_{t+2} = P_t (1+r)^2$$

$$P_{t+3} = P_t (1+r)^3, \text{ etc}$$

Or, for the general case:

$$P_{t+n} = P_t (1+r)^n$$

The table below shows two different applications of this formula generating the same series. After 10 years, a population of 100,000 growing at a rate of 2.5% per year would reach 128,008, as shown in column B. Column C shows the formula (in an Excel spreadsheet format) that projects the series one year at a time, based on the figure from the previous year. Column D shows the formula for the general case, which is based on the number of periods. They both produce the same result.

	<b>A</b>	<b>B</b>	<b>C</b> Based on previous year	<b>D</b> Based on number of periods
1	Growth rate, $r$	0.025	C1	D1
2	1990	100,000	C2	D2
3	1991	102,500	=C2*(1+C\$1)	=D\$2*POWER((1+D\$1),(A3-A\$2))
4	1992	105,063	=C3*(1+C\$1)	=D\$2*POWER((1+D\$1),(A4-A\$2))
5	1993	107,689	=C4*(1+C\$1)	=D\$2*POWER((1+D\$1),(A5-A\$2))
6	1994	110,381	=C5*(1+C\$1)	=D\$2*POWER((1+D\$1),(A6-A\$2))
7	1995	113,141	=C6*(1+C\$1)	=D\$2*POWER((1+D\$1),(A7-A\$2))
8	1996	115,969	=C7*(1+C\$1)	=D\$2*POWER((1+D\$1),(A8-A\$2))
9	1997	118,869	=C8*(1+C\$1)	=D\$2*POWER((1+D\$1),(A9-A\$2))
10	1998	121,840	=C9*(1+C\$1)	=D\$2*POWER((1+D\$1),(A10-A\$2))
11	1999	124,886	=C10*(1+C\$1)	=D\$2*POWER((1+D\$1),(A11-A\$2))
12	2000	128,008	=C11*(1+C\$1)	=D\$2*POWER((1+D\$1),(A12-A\$2))

To project population backwards using  $P_t$  and  $r$ :

$$P_{t-1} = P_t (1-r)$$

$$P_{t-2} = P_t (1-r)^2$$

$$P_{t-3} = P_t (1-r)^3, \text{ etc}$$

Usually the official census office maintains growth rate statistics. If no estimate of the current growth rate is available, the past rate of growth between two credible population counts can be computed (see box on Computing a Population Growth Rate). This calculation can either be done for the nation as a whole or, if the underlying areas are growing at different rates, for each subnational jurisdiction. After deriving the subnational growth rates, the subnational populations would be projected, with the national total being the sum of these projected components.

### Example: Computing a Population Growth Rate

The formula for calculating the annual rate of population growth ( $r$ ) between two years is:

$$r = e^{\left[ \frac{\ln\left(\frac{P_{t+n}}{P_t}\right)}{n} \right]} - 1$$

where  $P_t$  is the population figure from year  $t$  and  $P_{t+n}$  is the population figure from year  $t+n$  and  $n$  is the number of years between the two periods. For example, for a case with a 1990 and 2000 population figures in the previous box:

$$t=1990$$

$$t+n=2000$$

$$n=10$$

$$P_t=P_{1990} = 100,000$$

$$P_{t+n}=P_{2000} = 128,008$$

$$r = e^{\left[ \frac{\ln\left(\frac{128,008}{100,000}\right)}{10} \right]} - 1$$

$$r=.025$$

Note that the computation returns the annual growth rate of 2.5% used in the previous example.

The spreadsheet formula for  $r$  is:  $r=\exp(\ln(P_{t+n}/P_t)/(t+n-t)) - 1$

The spreadsheet table below shows the step by step calculations:

	Step	Formula	Computation
1	P(2000)	A1	128,008
2	P(1990)	A2	100,000
3	P(2000) / P(1990)	=A1/A2	1.280
4	ln(P(2000)/P(1990))	=LN(A3)	0.247
5	[ln(P(2000)/P(1990))]/10	=A4/10	0.025
6	e to the [ln(P(2000)/P(1990))]/10	=EXP(A5)	1.025
7	e to the [ln(P(2000)/P(1990))]/10 minus 1	=A6-1	0.025

### b. Consumption Requirements

There are many different – and reasonable – consumption figures used across FEWS countries. For FEWS CVAs, the consumption requirement must be

- defensible, in terms of national and international norms;
- clearly explained; and
- come from a documented source.

Considerations include:

- Choosing between estimates of historic consumption versus estimates of nutritional requirements. *Status quo* consumption estimates are examples of the

former, derived from rough indicators of food supply and population<sup>3</sup>. WFP rations are based on the latter. Caloric requirements based on in-country assessments of consumption patterns and activity levels may be derived from a combination of approaches. Beware that any consumption requirement based on historic averages may fall below nutritional requirements. Likewise, using a “minimum” consumption requirement as the national target will – if there is social variation – imply that some populations are likely to go hungry. It may be more appropriate to select an adequate or desirable consumption level.

- Choosing between an aggregate requirement and requirements broken out by type of food. Requirements may be expressed in terms of one dominant cereal (such as maize in southern Africa) or in terms of calories per person per year.
- Breaking out requirements by population group. In Niger, for example, different consumption figures are employed for settled and nomadic peoples.
- Choice of nutritional concept (calories, proteins, micronutrients, etc.). Food balance computations are usually based on caloric values rather than protein or micronutrient values.

In all cases, if controversy exists concerning these choices, explain the differences and present computations for alternative scenarios.

The consumption threshold used for the national food balance assessment should be consistent with that (or those) used for the household food security part of the CVA.

## 2. Other Uses

Not all food is available for human consumption. Food balance computations often account for post-harvest losses (including transportation, milling and storage), as well as non-food uses (including animal feed, seed and industry). Conventions concerning the definition and treatment of these other uses vary widely between agencies and countries.

In the example from Mali (Table C), the losses are only accounted in the transformation from gross to net production and include seed, transport and transformation. In Table D, losses are included in the “other uses/losses” row under “Total Utilization” and include seed retention and losses due to pest damage during storage. (Feed use of grains would have also been included on this line, but is negligible in the case of Rwanda.) Alternatively, post-harvest losses could be subtracted from gross production to compute net production, while other uses (including feed, seed and industry) could be handled in the food use section.

As defined by FAO/GIEWS, *feed* uses includes the grains consumed by livestock, whether domestically produced or imported. If the food balance

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<sup>3</sup> For more information about *status quo* consumption figures, see the Pragma and SADC manuals cited earlier.

accounts for non-cereals, then non-cereal feeds should also be included. The same source defines *seed* uses as the domestically produced seed used for food crops (assuming imported seed is treated under food imports). *Industrial* use is taken to mean brewing (or similar transformations) if the caloric value of the transformed product is very different from the raw grain inputs.

As conventions vary widely by agency, document the exact meaning and placement of these concepts in the CVA food balance. Include a description of the specific factors used to compute the losses or uses (definitions, coefficients and sources) in the appropriate section of the text, footnotes to the food balance table or appendices.

### **3. Closing Stocks**

There may be some target level of stocks to be maintained by the end of the consumption period (such as the national security stocks). Such stocks should be included in Domestic Utilization, as shown in Tables C and D; alternatively, they could be netted out from initial stocks, as shown in Table E (stock draw-down). Tables C, D and E do not attempt to include on-farm stocks in closing stocks. On-farm stocks would show up as a domestic surplus or negative import requirement.

The SADC food balance table is based on a more complex treatment of stocks (Table F). The table recognizes the possibility that governments maintain a minimum level of stocks throughout the consumption period to cover short-term food needs (e.g., strategic grain reserves). Likewise, large millers may maintain minimum operating stocks. These stocks are included under “Desired monitored stocks”. Closing stocks cover all types of stocks (not just grain reserves) and cannot be less than zero.

### **C. Trade (Net Imports)**

The domestic balance (domestic availability minus domestic utilization) is adjusted by cross-border flows of major foodstuffs to determine the overall food balance. Reliable data on the trade of food commodities are often scarce as trade statistics are often underreported. Policies, such as customs duties and trade bans, provide incentives for underreporting and diverting goods to the informal sector. For the food balance, attempts should be made to estimate total net imports of all major foodstuffs throughout the given consumption period.

As with food losses and stocks, the components of trade (exports, imports and food aid) are sometimes treated in different parts of the balance sheet.

- In some balance sheets, net imports (imports minus exports) are added to the domestic balance to determine the net surplus or deficit (Table C) or the import gap (Table F).

- In FAO-related balance sheets (Tables D and E), exports are considered part of total utilization (domestic utilization minus exports)<sup>4</sup>. The various sources of imports are then compared with the import requirement (domestic availability minus total utilization) to determine the gap.

Imports and exports take many forms, all of which should be accounted. As with stocks, they can be broken out by agent (government and traders). Often government-related (official, public) trade is considered “formal” and tends to be better documented (or “monitored” as in Table F). Food aid flows across borders are considered official, and are usually reasonably well documented. Commercial trade, carried out by large and small traders, may be less completely documented. Where traders have acquired import or export licenses or permits, they are trading formally, and statistics may be available on their transactions. By many estimates, however, a vast amount of informal or “unmonitored” food flows across borders in Africa.

The best approach to dealing with the imperfect trade figures is first to make a reasonable estimate of possible flows, based on past history and current conditions. Then test the sensitivity of the results to the underlying assumptions by varying the estimates to see how much it changes the food balance.

- Where statistics are available, evaluate the historic series to determine likely imports and exports.
- Where statistics are not available, there may be occasional studies to help determine a possible range of values. For example, cross-border trade studies may provide insight into the ratio of informal to formal trade, which could be used to estimate informal trade flows.
- In both cases, current information on the factors that might influence this year’s food flows should be used to determine capacity to import (or export). Examples include food availability in neighboring countries, relative food prices and currency exchange rates on both sides of common borders and relevant government policies on both sides of common borders.

Discuss the degree to which official data may underestimate true flows and include assumptions and references in footnotes to the table.

## 1. Projected Exports

Consider official and private exports, including what has already been shipped and what is still expected to be shipped during the consumption period. There may be food aid exports if international donor agencies are buying locally for distribution in nearby countries.

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<sup>4</sup> In Table D, however, Rwandan exports of food are expected to be zero during the consumption period.

## 2. Projected Imports

Consider official and private imports, including what has already arrived and what will be arriving during the consumption period.

## 3. Projected Food Aid

Within the category of food aid, distinguish between

- Programmed versus emergency food aid. Program and project food aid are not linked to current food insecurity but rather to other objectives such as budgetary support, chronic food insecurity or development. They are usually treated as imports in the food balance sheet. Emergency food aid should not be included under projected food aid. At a *minimum*, emergency food aid is the food aid required to fill the net deficit or import gap remaining after commercial imports and program food aid have been considered. (Although not discernable from the food balance, emergency food aid requirements might be larger than the national food deficit, if subnational populations do not have access to the available food. At times, emergency food aid can be required even in a time of national surplus)<sup>5</sup>.
- Pledged versus unpledged food aid, under the rubric of emergency food aid. If relevant, discuss whether the government has already formulated an emergency request and how much aid donors are likely to provide (Tables D and E).

Include food aid that is already received and still expected during the consumption period.

## D. National Food Balance

Summarize the above information on availability, utilization and trade in terms of a food balance and discuss the size of the deficit/surplus compared to selected reference periods. If FEWS estimates vary from other widely circulated estimates of the food balance (e.g. FAO or the national government) for the country, please explain.

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<sup>5</sup> In this sense, the terminology used in Food Balance Tables D and E is potentially misleading, since it equates a food deficit directly with food aid requirements. Whatever terminology is used, the CVA text should take care to distinguish between the national balance and total food aid requirements if the analysis of household food security suggests localized food access problems.

**Table C: Mali - Preliminary cereal balance 1997/98**

Population through 04/30/98 = 9,436,000

	<b>Rice</b>	<b>Wheat/Barley</b>	<b>Dry Cereals</b>	<b>Total</b>
<b>Domestic Availability</b>	<b>450,000</b>	<b>6,510</b>	<b>1,623,220</b>	<b>9,436,000</b>
Production				
Gross Production	663,240	5,400	1,715,770	2,384,410
Net Production	411,870	4,590	1,458,400	1,874,860
Initial Stocks (11/01/97)	39,020	1,920	164,820	205,760
Official	39,020	1,920	58,620	99,560
On-Farm	n.a.	n.a.	106,200	106,200
Trader	n.a.	n.a.	n.a.	n.a.
<b>Domestic Utilization</b>	<b>400,000</b>	<b>47,880</b>	<b>1,618,900</b>	<b>2,066,780</b>
Consumption Standard (kg/person/year)	40.72	4.15	158.94	203.81
Food Use	384,290	39,160	1,499,760	1,923,150
Other Uses	n.a.	n.a.	n.a.	n.a.
Closing Stocks (10/31/98)	15,770	8,720	119,140	143,630
Official	15,770	8,720	37,790	62,280
On-Farm	n.a.	n.a.	81,350	81,350
Trader	n.a.	n.a.	n.a.	n.a.
<b>Domestic Surplus (+) or Deficit (-)</b>	<b>+50,890</b>	<b>-41,370</b>	<b>+4,320</b>	<b>+13,840</b>
<b>Net Imports</b>	<b>+30,000</b>	<b>+41,640</b>	<b>-20,000</b>	<b>51,640</b>
Projected Imports (+)	30,000	37,140	0	67,140
Projected Food Aid (+)	0	4,500	0	4,500
Projected Exports (-)	0	0	-20,000	-20,000
<b>Net Surplus (+) or Deficit (-)</b>	<b>+80,890</b>	<b>+270</b>	<b>-15,680</b>	<b>+65,480</b>
Per Capita Availability (kg/person/year)	51	5	170	226

SOURCE: PROJET DIAPER III (CILSS-UNION EUROPEENNE).

## Notes:

Net production is obtained by multiplying gross production by the following coefficients (0.62 for rice and 0.85 for other cereals); it includes losses due to seed, transport and transformation; the source for these estimates is Projet DIAPER III (Amélioration Instruments Diagnostic Permanent pour la Sécurité Alimentaire Régional) du CILSS.

- End of April 1998 population of 9,436,000 is obtained from the Direction Nationale des Statistiques et de l'Informatiques (DNSI) 1987 population census, projected using a growth rate of 2.5%.
- n.a. = not available or not applicable.

Table C shows a food balance table adapted from FEWS/Mali. Key features include the restriction to cereals, the use of commodity-specific consumption requirements, splitting the stocks analysis between Domestic Availability and Domestic Utilization, and the omission of trader stocks and nonfood uses.

**Table D: Rwandan Food Balance January-June 1998 ('000 tons)**

Population 03/31/98: 7,830,000

	Cereals & pulses			Roots & tubers	Bananas	Total
	Cereals	Pulses	Subtotal			
<b>Domestic availability</b>	<b>91</b>	<b>116</b>	<b>207</b>	<b>656</b>	<b>1,351</b>	
Opening stocks	14	6	20	0	0	
1998 A production	77	110	187	656	1,351	
<b>Total utilization</b>	<b>148</b>	<b>153</b>	<b>301</b>	<b>795</b>	<b>1,638</b>	
Consumption	129	125	254	736	1,597	
Other uses/losses	8	22	30	59	41	
Closing stocks	10	6	16	0	0	
<b>Import requirements</b>	<b>57</b>	<b>37</b>	<b>94</b>	<b>139</b>	<b>287</b>	
Cereal equivalent	57	37	94	21	10	207
Est. commercial imports	18	18	36	3	4	43
<b>Food aid requirement</b>	<b>39</b>	<b>19</b>	<b>58</b>	<b>18</b>	<b>6</b>	<b>82</b>
of which pledged						70
Uncovered deficit						12

Source: Adapted from "Special Report, FAO/WFP Crop and Food Supply Assessment Mission to Rwanda, 16 February 1998".

Notes:

- Food consumption requirements are calculated on the basis of the historical consumption of 33 kg of cereals per capita per year, 32 kg of pulses, 188 kg of roots and tubers and 408 kg of bananas.
- Other uses of grains include seed retention and losses (mainly to pests in storage and in trading). Feed use of grains has been negligible since the sharp reduction of the national livestock herd during 1994. Altogether non-food uses and losses are assumed to account for 11 percent of cereals, 20 percent of pulses and 9 percent of roots and tubers. Losses for bananas and plantains are estimated at 3 percent.
- Only 50 percent of the root and tuber and banana deficits/import requirements were converted into cereal equivalents based on the assumption that consumers would not fully substitute cereals for the entire shortfall.

Table D includes a broader range of cereals and noncereal staples. To compare these nutritionally dissimilar foods, the table converts import requirements into cereal equivalents. All food losses are included under Utilization. Although not immediately evident from the table, Domestic Utilization equals Total Utilization because exports are assumed to be zero and have not received their own line.

**Table E: Sample Food Balance Sheet from FAO/GIEWS in thousands of tons**

	Wheat	Rice <sup>1</sup>	Total Cereals	Pulses
Production	A1	B1	C1	D1
Stock Draw-down	(-)A2	(-)B3	(-)C2	(-)D2
<b>Domestic Availability</b>	$A3=A1+A2$	$B3=B1+B2$	$C3=C1+C2$	$D3=D1+D2$
Food Use	A4	B4	C4	D4
Feed, Seed Use & Post Harvest Losses	A5	A5	C5	D5
Exports	A6	B6	C6	D6
<b>Domestic Utilization</b>	$A7=A4+A5$	$B7=B4+B5$	$C7=C4+C5$	$D7=D4+D5$
<b>Total Utilization</b>	$A8=A7+A6$	$B8=B7+B6$	$C8=C7+C6$	$C8=C7+C6$
<b>Net Total Import Requirement</b>	$A9=A8-A3$	$B9=B8-B3$	$C9=A9+B9$	$D9=D8-D3$
Commercial Imports	A10	B10	$C10=A10+B10$	D10
Int'l. Food Assistance Requirement	$A11=A9-A10$	$B11=B9-B10$	$C11=A11+B11$	$D11=D9-D10$
Project and Program Food Aid	$A12=A11-A13$	$B12=B11-B13$	$C12=A12+B12$	$D12=D11-D13$
Emergency Food Aid	A13	B13	C13	D13

Source: Adapted from "Guidelines for Crop and Food Supply Assessment Missions", Global Information and Early Warning System, FAO, Rome, 1996

<sup>1</sup>Cereal equivalent.

Table E, also designed by FAO, is essentially similar to Table D and shows the derivations of the figures. The major difference is the treatment of stocks, where initial and closing have been combined under Domestic Availability.

Table F shows the SADC food balance approach. As with Table C, exports and imports are grouped together under Net Imports. The treatment of stocks differs substantially from the other tables, with the definition of a new category called Desired Monitored Stocks (see section B.3). The table can easily be expanded to include cereals and noncereals as well as cereal equivalent conversions.

As can be seen in the above discussion, the formats of the food balance tables vary substantially. The differences are primarily a matter of presentation and do not have a great impact on the bottom line: an assessment of unmet food needs. More important than the specific choice of one format over another is the need to:

- obtain the most accurate and comprehensive estimates possible,
- document the assumptions and definitions used,
- test the sensitivity of the bottom line results to reasonable perturbations in the data, and
- ensure that the format is consistent with local conventions so that the results will be accepted by collaborating institutions and decision-makers (the national government, regional early warning units or international organizations).

**Table F : SADC's «Standard» Food Balance Sheet**

<b>Domestic Availability</b>	<b>A1=A2+A5</b>
Opening Stocks	A2=A2+A4
Monitored	A3
Unmonitored	A4
Gross Harvest	A5
<b>Domestic Requirements</b>	<b>A6=A7+A8+A9</b>
Food Use	A7
Feed Use	A8
Other Uses/Losses	A9
<b>Desired Monitored Stock</b>	<b>A10</b>
<b>Domestic Shortfall/Surplus</b>	<b>A11=A1-A6-A10</b>
<b>Net Imports</b>	<b>A12=A13-A16</b>
Imports	A13=A14+A15
Commercial	A14
Food Aid	A15
Exports	A16
<b>Import Gap</b>	<b>A17=A11+A12</b>
<b>Closing Stocks</b>	<b>A18=A10+A17</b>

Source: Rook, J.M., Food Balance Sheets, Volumes 1-4. Technical Handbook, SADC/FAO Early Warning System. FAO Project GCPS/RAF/270/DEN (undated)

## E. Caveats and Uncertainties

Even under the best of conditions, the food balance computations are fraught with uncertainty. Underestimating the food deficit could cause governments, traders, and donors to under react, resulting in hardship and hunger. Overestimating the food deficit would compromise credibility and perhaps trigger excessive imports of food aid, wasting funds and disrupting domestic food markets and production in the subsequent season. Thus, the food balance analysis must include a frank discussion of the limits of the analysis and factors that could disrupt that balance.

### 1. Caveats

The major caveat that should be raised in the text is the difference between the bottom line of the food balance analysis and food aid needs. A food deficit (or unmet import requirement) at the *national* level must not be equated with food aid needs. The food balance assumes all food was distributed evenly through-out the population. To the extent that some people consume more than the requirements, others will go without. Furthermore, within the country, there may be populations that are food insecure due to a lack of physical availability, access or capacity to properly utilize food. Food aid may be required for particular populations even if the food

balance is in surplus. Thus, a calculated national food deficit serves as the lower limit on food aid needs.

Additionally, there are two major kinds of uncertainty that influence the interpretation of the food balance results.

## 2. Uncertainties

Additionally, there are two major kinds of uncertainty that influence the interpretation of the food balance results.

- **Measurement Issues**

Two kinds of measurement issues arise in the food balance assessment. First is the decision of what to include and exclude from the analysis. For example, some donors do not want to base their food aid decisions on deficits that include livestock feed or rebuilding national security stocks. Second, all statistics are measured with a certain margin of error, or confidence interval. Even for 'official' data, the margin of error (or confidence interval) can be quite large. Estimates of unmonitored sources of food availability, utilization and trade are also likely to be very rough. Thus, it is important to determine a realistic *range* for the food balance, based on scenarios for the best and worst cases. Measurement issues and errors include:

- inclusion of livestock feed;
- the final target level for closing national security stocks;
- assessments of agricultural production (especially if based on preliminary figures);
- overly simplified or contested consumption requirements;
- informal trade flows; and
- Unmonitored stocks, especially farmer stocks.

One way to get a general view of whether the food balance calculations are reasonable is to analyze the result in light of food price trends. For example, if the food deficit were larger than usual, markets would be likely to reflect food prices higher than seasonal norms (and vice versa). It may be useful to include a chart (or charts) of major food prices in major markets as a confirmation of the analysis.

If price trends do not reflect the food balance result, consider whether:

- the food balance is measured incorrectly;
- prices are measured incorrectly; or
- some factor (other than food supply) is influencing price trends, such as marketing policies.

It may be necessary to revise the analysis if no good reason can be determined for a discrepancy between prices and food supply. At a minimum, any lingering discrepancy should be explained.

- **Risks**

In addition to measurement issues, risks factors that could change the food balance over the given consumption period should be noted, including:

- trade policies (domestic and international);
- food prices relative to trading partners, which would change the terms of trade and thus relative imports and exports;
- budgetary or foreign exchange restrictions that would affect import capacity;
- wars and conflicts; and
- natural calamities, such as floods or droughts that might affect secondary harvests or food marketing.



# **FEWS Current Vulnerability Assessment Guidance Manual**

## **Chapter 4 Household Food Security**

**August 1999**

*The Current Vulnerability Assessment guidance has resulted from synthesizing the concepts and best practices developed and applied by USAID FEWS Project professionals. It is an analytical tool for practitioners. Given the challenges of applying these methods in the varying environments where FEWS and its partners work, this material will be reviewed and updated from time to time. However, the next review is unlikely to occur before June 2000.*

# HOUSEHOLD FOOD SECURITY

## FEWS CVA GUIDELINES: CHAPTER 4

This chapter describes the theory and method for assessing current household food security in the FEWS CVA, and makes suggestions for presenting the results of this multi-step analysis in terms useful to decision makers<sup>1</sup>. Many of the explanations included in this chapter can be adapted for use in the final CVA report.

This chapter includes:

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<sup>1</sup>The focus is exclusively on current, or transitory, food security. Issues related to chronic, or baseline, food security are included in the FEWS FSVP guidelines.

## **A. Objectives of the Analysis**

The objectives of the household food security analysis are to:

- identify administrative units where the ‘average’ household is likely to be food insecure;
- describe the extent to which households in these administrative units are food insecure;
- evaluate the impact of potential shocks to food security in the current consumption period; and
- provide a basis for determining where concerted monitoring and possible interventions (including emergency food aid) may be needed.

## **B. Conceptual Approach**

FEWS defines food security as the condition in which a population has physical, social and economic access to sufficient safe and nutritious food over a given period to meet dietary needs and preferences for an active life (see Key Terms box). Embodied in this definition is the important concept that food security is more than simple food self-sufficiency. As the work of Nobel Prize winner Amartya Sen on entitlements underscores, even if adequate food supplies are available, a household’s access to that food depends on its income-earning strategies, assets and coping behaviors. Thus a population’s food security goes beyond aggregate food availability to include an assessment of how much food people can access directly through their own production or indirectly, through market and other transactions. A population’s food security also depends on its ability to properly utilize food. Individual health and nutritional conditions and as well as food care practices determine whether available, accessible food can provide nutritional value to the individuals consuming it. Using quantitative and qualitative information, FEWS pulls together information on each of these three pillars of food security – availability, access and utilization – to determine whether households will be able to meet their consumption requirements in a given period.

## Key Terms

**Food Security** is a condition in which a population has physical, social and economic access to sufficient safe and nutritious food over a given period to meet dietary needs and preferences for an active life. A food-secure population can meet its consumption needs during the given consumption period by using strategies that do not compromise future food security.

**Food Availability** is a measure of the food that is, and will be, physically available in the relevant vicinity of a population during the given consumption period through a combination of domestic production, stocks, trade and transfers.

**Food Access** is a measure of the population's ability to acquire available food during the given consumption period through a combination of its own production and stocks, market transactions or transfers.

**Food Utilization** is a measure of whether a population will be able to derive sufficient nutrition during the given consumption period from available and accessible food to meet its dietary needs.

**Food Insecurity** is the inverse of food security: a condition in which a population does not have access to sufficient safe and nutritious food over a given period to meet dietary needs and preferences for an active life. Possible causes are insufficient food availability, insufficient food access and inadequate food utilization.

**Current (or transitory) food insecurity** occurs when a population suffers a temporary decline in consumption. Current food insecurity can result from instability in food production, food prices, household incomes, or health conditions.

**Chronic (or long-term) food insecurity** occurs when a population has continuously inadequate consumption. Chronic food insecurity arises from conditions of poor food production, limited incomes, and poor health.

(Adapted from World Bank, 1986)

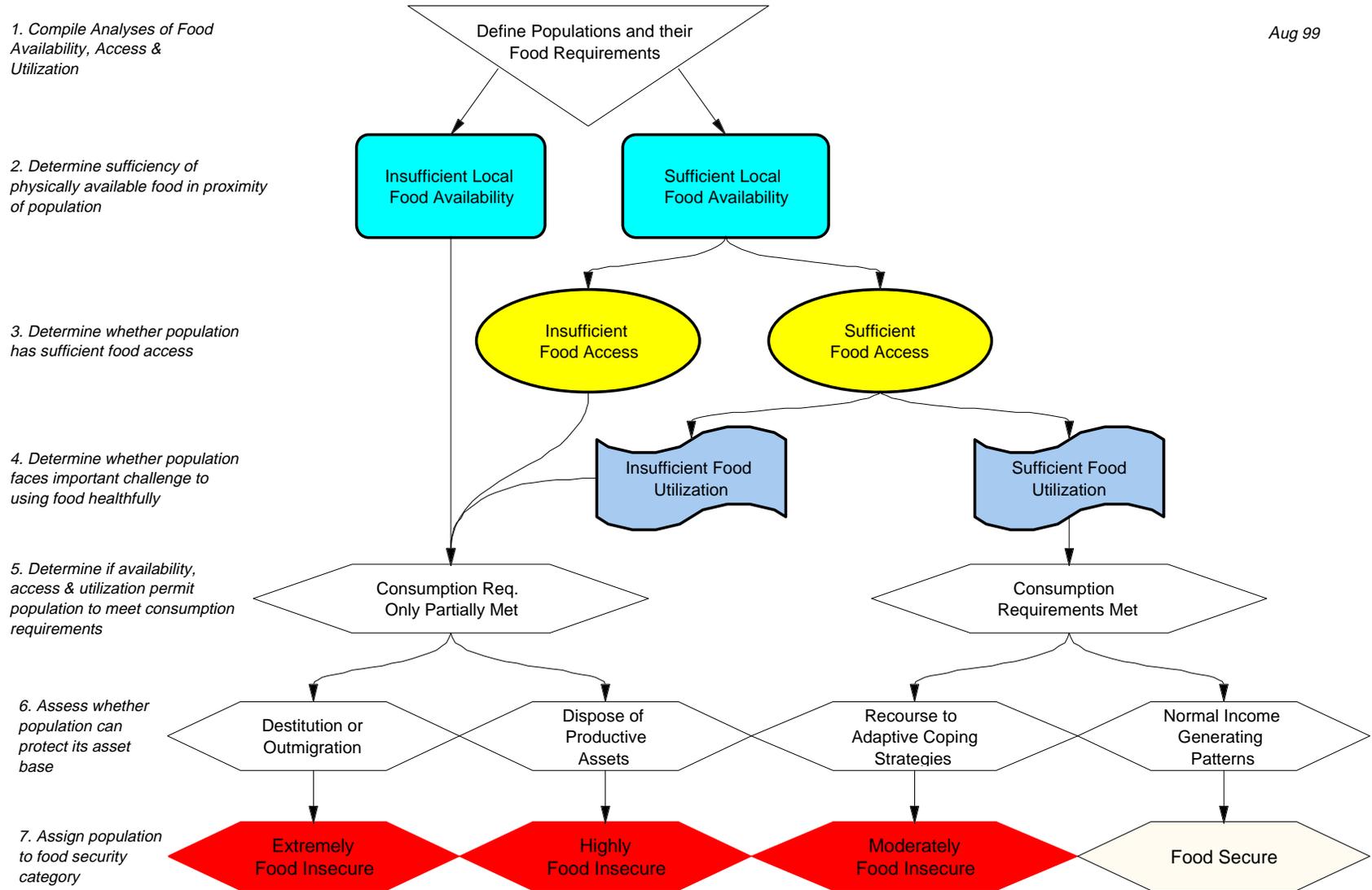
## C. Methodological Overview

Based on the conceptual framework, Figure 1 shows how FEWS brings together data and qualitative information on food access, availability and utilization to determine household food security.

The first step in a CVA analysis is to define the populations to be studied and their food needs. Although the conceptual framework is based on households, the CVA focuses on representative groups of households to facilitate the analysis and improve targeting of relief interventions. These populations are defined by their location (administrative unit) and way of accessing food (livelihood system). Each population is assigned a consumption threshold below which it is food insecure.

**Figure 1: Assessing Current Household Food Insecurity**

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The second step is to determine whether there will be enough food physically *available* from direct sources (local production, stocks and wild foods) as well as indirect sources (markets, barter and transfers) to meet the consumption needs of each of the identified populations during the consumption period.

The third step is to determine whether each of the identified populations has sufficient *access* to available food through a combination of direct and indirect sources. Direct access includes food crops and edible livestock products grown or stored by the household and the wild foods (plants, animals, fish, etc.) it collects or hunts. Indirect access includes food the household acquires through market exchanges and transfers. By selling commodities produced by the household (such as crops, livestock, artisanal products), labor (wages), or assets (such as jewelry, consumer goods, tools, plow-animals, land) or engaging in trade, households earn income that can be used to purchase food. Households can also obtain food as gifts (cash or in-kind) from friends, relatives or the community (such as remittances and food aid).

The fourth step is to evaluate whether any of the populations suffer from diseases and practices that diminish their ability to meet dietary needs from the available, accessible food and determine how much that would decrease their food security.

In the fifth and sixth steps, the information on availability, access and utilization is brought together to determine the extent to which each of the identified populations can meet its consumption requirements and protect its asset base.

In the final step, each population is assigned to a food security category (see box on FEWS Food Security Categories).

### **FEWS Food Security Categories**

To assist decision-makers in prioritizing emergency food allocations within and between countries, FEWS categorizes populations as food secure or food insecure using the following operational definitions:

**Food-secure populations** can meet their consumption needs during the given consumption period using income derived from strategies that do not compromise future food security.

**Moderately food-insecure populations** can meet their consumption needs during the given consumption period only by intensifying their normal coping strategies. These households are vulnerable to any subsequent shock, either in the given or subsequent consumption period.

**Highly food-insecure populations** will not be able to meet their consumption needs during the given consumption period. They will be forced to reduce consumption and dispose of their productive assets, thereby undermining their future food security.

**Extremely food-insecure populations** are now, or will soon be, unable to meet their consumption needs. They have already exhausted their strategies for acquiring food and are currently destitute.

Although FEWS assigns a food security status to each population group, it cannot quantify the number of food-insecure people. The food security status applies to an 'average' member of the group. The larger the area and the more heterogeneous the group, the more likely it is that food security levels will vary among households within the group. Detailed food needs assessments are needed to identify the numbers of affected people and appropriate interventions.

Appropriate Interventions: For moderately food-insecure populations, no interventions are necessary, but contingency plans should be developed to respond if conditions deteriorate. For highly food-insecure populations, appropriate interventions could include food, income and asset support, employment and credit programs, and government actions to facilitate agricultural production, marketing and trade. For extremely food-insecure populations, appropriate interventions could include emergency food distributions and long-term rehabilitation programs.

## **D. Setting the Parameters of the Analysis**

The CVA must describe the major parameters of the analysis, which include:

- The time frame: the consumption period (month/year to month/year) and the reference period(s) used for comparative purposes should be clearly stated and consistent with those used in the analysis of National Food Security. Describe which seasons and major events are covered (if they are relevant to household food access).
- The population groups studied in terms of their administrative level, socio-economic groups, livelihood strategies and sources of income. (For details,

- see the CVA Chapter 6: Identifying Population Groups). Also list those groups that were excluded from the analysis and explain why.
- The unit in which food access was assessed (ie, the common denominator): kilograms per person per period (perhaps in cereal equivalents), kilocalories per person per period, currency units per person per period.
  - The consumption threshold(s) used to represent food access (expressed in the selected unit of measure).<sup>2</sup>

## **E. Food Availability**

The purpose of the food availability analysis is to determine whether the total amount of food physically available in an area over the given consumption period is adequate to meet the consumption needs of the households in that area<sup>3</sup>. Total food includes that from direct sources (household stocks, own production) as well as indirect sources (markets, barter and transfers). Events that may depress food availability include wars, border closings, floods, land mines, etc. When such events cause food availability to fall below local dietary needs, local food availability becomes a problem.

Usually, even dramatic factors such as these do not entirely stop the flow of food into an area. Some food continues to arrive at markets for sale at extremely high prices. This phenomenon should be captured in the analysis of household food access (section F, below); as prices rise, indirect food access falls. Thus, the food availability analysis only focuses on times when shortfalls in local stocks and production can not be compensated by markets and other sources for food, even for the wealthy who may have adequate 'access' or buying power. Such instances are not common but do occur in the countries FEWS where operates.

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<sup>2</sup> See section B.1.b in the CVA Guidelines Chapter 3 (National Food Security) for a discussion of consumption thresholds.

<sup>3</sup> Previous versions of FEWS CVA Guidance included a section called Subnational Availability, which has been incorporated into this section on Household Food Availability. The concept of availability has been broadened to include not only direct availability, but also indirect availability to food through markets and food transfers. Additionally, the analysis of availability has been incorporated into the assessment of household food security, whereas in earlier versions it was in a separate chapter between the national and household level analyses.

**Table 1: Total Household Food Availability**

Group/Area	Direct Food Availability						Indirect Food Availability		Total Food Availability
	Relative to Consumption Requirement			Relative to Average Direct Availability			Problem	Effect	
	Production	Stocks	Total	Production	Stocks	Total			
Group/Area <sub>1</sub>	Relative to needs (in % or in words)			Relative to average (in % or in words)			Civil insecurity Floods Isolation Policies Other?	% constrained/ not constrained or whether or not constrained	% constrained/ not constrained or whether or not constrained
Group/Area <sub>2</sub>									
Group/Area <sub>3</sub>									
Group/Area <sub>4</sub>									
etc.									

**Steps:**

1. Create a table for Total Household Food Availability based on the example above.
2. Assess direct food availability for the relevant market area around each population.
  - Include all *food* production that constitutes an important component of diets (cereals, noncereal food crops, milk, meat, and wild foods). If there are wide differences in the nutritive value of the crops (as occurs between tubers and cereals) use calorie or cereal equivalents. Exclude nonfood crops.
  - As household level information on food stocks is usually lacking, a proxy measure of stocks can be derived from an evaluation of the last 2 or 3 harvests. Consecutive poor seasons are likely to mean stocks are below average or exhausted.
  - To adjust for increases in population between the current and average period, express the values in per capita terms.
  - Express estimates in either numeric or verbal terms. (Even subjective information can be expressed in rough percentage terms).
  - Express estimates relative to both average and needs.

3. Assess indirect food availability for the relevant market area around each population. Consider how recent and near term events might influence the food available from markets, transfers and barter during the consumption period. The analysis of indirect food availability is likely to be expressed in subjective terms due to a lack of timely data on food supplies and the uncertainty about the impact of future events.
  - It is important to discuss the possibility of impediments large enough to stop the physical flow of food supplies into the given market area, such as floods, wars and border policies.

#### **Double counting?**

Note that food production is a major component of both the food availability and food access. If no other information were considered, then availability and access would collapse to the same concept. This potential 'double counting' underscores the importance of including information on impediments to food flows in the food availability analysis. Likewise, it points to the need to include information on income and assets derived from sources other than food crop production in the food access analysis (below).

4. Assess total food availability for each population during the given consumption period drawing on the information on direct and indirect food availability
  - Assess whether direct food availability covers food needs. If so, total food availability is not constrained.
  - If direct food availability does not cover food needs, evaluate whether the population will be physically able (as opposed to economically able) to meet their needs from foods brought into the given market area, either through trade, transfers or barter.
    - If so, indirect availability is unconstrained and total availability should be unconstrained.
    - If not, then indirect availability is constrained
      - If direct availability is at least average, then total food availability is likely to be unconstrained.
      - If direct availability is below average, then total food availability is likely to be constrained.
5. Note that the last column in the Total Food Availability table will become part of the Attainable Consumption table in section H, below.

## **F. Food Access**

The objective of the food access analysis is to measure the ability of households to gain sufficient food access to meet their consumption requirements during the given period using income derived from strategies that do not compromise future food

security. FEWS takes a budgeting approach to this question, estimating whether household resources (both food and nonfood) are sufficient to cover food needs<sup>4</sup>. In an ideal world, household food access could be measured by adding up all the direct and indirect sources of food and comparing that total to some measure of food needs. On the other extreme, if data were completely missing, key informants could be asked a series of questions to establish the degree to which households in their area would be able to meet food requirements without running their assets down to unsustainable levels.

In reality, the CVA analysis of food access is based on a mix of quantified and qualified information, incorporated into the analysis in a step-wise fashion, from most to least reliable. Remaining gaps are filled in with rough estimates and best guesses. The analysis is generally based on secondary sources of information, all of which serve as proxies, or indicators, of the underlying sources of food access. Some of these indicators are numeric, coming from published data series (e.g., agricultural production statistics). Others, while also numeric, must be derived using data and parameters borrowed from earlier periods or neighboring regions. Still other indicators are expressed in words (qualitative or unmeasured), usually relative to some undefined norm.

The process of bringing together quantified and qualified indicators of the multiple components of food access analysis has many steps (sections F.1 to F.4) but can be simplified as follows:

- The first step is to document the strategies households use to obtain direct and indirect access to food. This information is organized in a Food Access Data Matrix.
- The second step is to evaluate the current performance of the sources of food access that can be quantified and converted into a common unit (the measured sources of food access). This information is organized in the Measured Food Access table.
- The third step is to evaluate the current performance of the sources of food access that cannot be quantified. These unmeasured sources of food access are approximated in subjective terms, and if possible, weighted by their relative

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<sup>4</sup> Over the years, analysts for the FEWS project have explored many different approaches to assessing food access, each with its strengths and weaknesses. Many of the FEWS CVAs from the SADC region countries have been based almost wholly on quantitative information. The current year contribution for each of the measureable components of food access was translated into monetary values or cereal equivalents, summed up and compared to a consumption threshold (see the FEWS *bulletin*, December 1998, *Special Report*). In some project documents, this method has been called the income accounting approach. Other FEWS CVAs have employed more qualitative approaches to assessing household incomes. The FEWS CVAs for the Sahelian countries (1997/98 and 1998/99) combined a comparison of the crop production component of food access relative to needs and to average with qualitative information on other sources of food access. The Malawi 1996 VA (entitled *A Quest for Causality*) was based on a combination of statistical estimation techniques (principal components, cluster analysis and regression). Earlier FEWS CVAS used rankings (Niger, 1990) or Z-scores (Regional Vulnerability Assessment, 1994) of important food security indicators. For a review of these approaches, see CVA Guidelines Chapter 2: Background and Conceptual Framework.

contribution to food access. This information is organized in the Unmeasured Food Access table.

- The fourth step is to combine the information on measured and unmeasured access in an assessment of total food access. The sum of the period's measured sources is compared with the consumption threshold and with its own historic performance. Qualified information is interpreted in light of its performance and importance to the particular population. This information is compiled in the Total Food Access Table to determine whether the population has sufficient food access to the consumption threshold.

Technical details for this approach are given below.

# 1. The Food Access Data Matrix

**Table 2: The Food Access Data Matrix**

Group/Area	Direct Food Access					Indirect Food Access							
	Retained Own Production		Food Stocks	Wild Foods	Programmed Food Aid	Marketed Crops	Marketed Livestock Products	Ag. Transform .Artisnial Services, etc.	Remittances	Liquid Asset Sales	Productive Asset Sales	Programmed Income Aid	Other Income Sources
	Crops	Livestock											
	(units?)	(units?)	(units?)	(units?)	(units?)	(units?)	(units?)	(units?)	(units?)	(units?)	(units?)	(units?)	(units?)
Group/Area <sub>1</sub>													
Group/Area <sub>2</sub>													
Group/Area <sub>3</sub>													
Group/Area <sub>4</sub>													
etc.													

1. Create a food access matrix similar to the table above to document:
  - the selected populations (rows),
  - the major sources of food access for those populations (columns), and
  - the performance of each source of food access in the defined consumption period for each population (cells).
2. Determine areas and groups (rows). If there are many populations with highly diverse sources of food access, the information might be reorganized into separate food access matrices for each major population (socio-economic group or region).<sup>5</sup>
3. Determine sources of food access (columns), modifying the example as needed. Include all sources of income, even if information on their performance may be sketchy or missing. When considering food aid, distinguish between emergency and program aid. The analysis should either omit all food aid or include only program food aid. (Discuss in the body of the report instances where program food or income aid makes up a large part of food access for any particular population).

<sup>5</sup> See CVA Guidelines Chapter 6: Identifying Population Groups

4. Organize columns by direct access (food that comes from stocks and own production rather than market) and indirect access (food that comes from market exchanges, transfers and asset sales).
5. Review the information available and determine whether for each of the sources of food access, the information is:
  - quantified (a reasonable data series exists for the food access source),
  - proxied (a reasonable data series can be constructed by FEWS to capture the current period performance of the food access source),
  - qualified (an adequate amount of information, rather than data, is available to assess the performance and importance of the income source), or
  - omitted (reliable information is missing for the food access source).
6. Fill in the 'units' terms as appropriate.

The subsequent sections discuss how to fill out the Food Access Data matrix. They provide advice on computing quantified/measured sources of food access and incorporating information on qualified/unmeasured food access.

## 2. Measured Food Access

Food access was introduced in the conceptual framework in terms of direct and indirect components. Once those components are identified in the Food Access Data Matrix (Table 2), they are analyzed in terms of what is quantifiable (or measured) and qualified (unmeasured).

**Table 3: Measured Food Access**

Group/Area	Measured Direct Food Access		Measured Indirect Food Access		Total Measured Food Access
	Retained Own Production		Marketed Crops	Marketed Livestock Products	
	Crops	Livestock			
	(units?)	(units?)	(units?)	(units?)	(units?)
Group/Area <sub>1</sub>					
Group/Area <sub>2</sub>					
Group/Area <sub>3</sub>					
Group/Area <sub>4</sub>					
etc.					

1. Create a Measured Food Access table for the sources of food access that can be measured, such as that shown in Table 3 above. The actual columns included will depend on the nature of the data. (A common practice is to create separate tables for each of the major socio-economic groups).
2. For each quantifiable source of food access, estimate the amount of food access that will be derived in the consumption period. Note the quantity and the units in the appropriate cells. The computations behind these estimates

- may require additional worksheets and should link to the appropriate cells on this worksheet (see box on Valuing the Sources of Food Access, below).
3. Copy (with links) the information for the measured or quantified sources of food access into the Food Access Data Matrix (Table 2).
  4. Add up all sources of Measured Food Access and put that number in column for Total Measured Food Access.

### **Valuing the Sources of Food Access**

Performance of measured sources of food access should be expressed in the same units throughout the table, either as:

- kilograms/per person/per year (often in cereal equivalents),
- kilocalories/per person/per day, or
- monetary values per person per year.

The choice between these units is mostly a matter of preference and will not greatly influence the outcome of the analysis. The results will, however, be very sensitive to the actual conversion factors used to translate dissimilar measures into a common unit.

There are two major conversions to keep in mind. First, unless the entire analysis is conducted in monetary terms, summing up the direct sources of food access requires information on calories. The standard foods produced by farmers vary greatly in their caloric content. Cassava and bananas, measured in their wet form, have less than half the caloric value of cereals or beans. (In general, food security analyses for large populations ignore the other dimensions of nutrition, such as proteins, macro- and micronutrients.)

Secondly, converting indirect sources of food access into their food value requires prices. The amount of food that can be purchased using money from labor or asset sales is highly dependent the value of the nonfood resource and the cost of the purchased food. Prices vary considerably between regions and seasons and not all households will have access to the most advantageous prices. Thus great care should be taken to use realistic prices for the analysis, based on a sound understanding of market dynamics, regional variations and likely trends during the course of the consumption period.

Finally, the computations should be set up to permit the sensitivity of the results to the conversion factors to be tested. This can be done by storing the conversion factors in a separate spreadsheet, linked to the computation of measured food access. Later in the analysis (Section K), the values in the conversion table will be altered to see the effect of shocks on food access.

### 3. Unmeasured Food Access

In data-poor environments, many important components of food access may not be measured. Ignoring their contribution, however, leads to an overestimate of food insecurity. Estimating the contribution from unmeasured sources of food access in the current period presumes there is information (although not necessarily data) concerning:

- the normal performance of each unmeasured source of income,
- the performance of each unmeasured source of income in the current period relative to that normal, and
- the importance (or weight) of each unmeasured source of income relative to total income.

Qualitative assessments of how well particular sources of food access performed in the current period relative to usual may be gathered from key informant interviews or proxy indicators. The contribution of unmeasured sources of food access to total food access can be obtained from food economy studies, income and expenditure surveys, key informant interviews or educated guesses. The source of these estimates needs to be stated along with necessary caveats about the margin of error of the estimates. Combining information on the overall importance of each of the individual sources of food access with their current performance relative to normal will give the total contribution to food access made by the unmeasured sources.

If information is missing on the performance and importance of each of the unmeasured sources of food access (columns A-I in the table below), the ability of populations to fill the access gap must be evaluated in even more subjective terms, perhaps using key informants to provide answers to two key questions: 1) how important are the unmeasured sources of food access relative to total food access, and 2) how have they performed relative to usual? In that case, Table 4 (described below) will include only the last column (J).



Steps:

1. Set up a table for unmeasured food access similar to Table 4, above. The actual columns used will depend on the group specific sources of food access.
2. Express the performance of the unmeasured sources of income relative to a defined historic baseline period either as proportions (%) or in words (columns A-C). Categorical descriptions could be as follows:
  - Much below
  - Below
  - Same
  - Above
  - Much above
3. Input the 'weights' for each of these sources of unmeasured food access (columns D-F). These are the shares contributed by each particular source of food access relative to the total. The weights can be expressed as:
  - Actual share of total food access (%)
  - Approximate share of total food access (%) rounded to the nearest 5%: less than 5%, about 5%, about 10%, about 15%, etc.
  - Purely qualitative terms, such as:
    - ◆ enormous (piece of total access)
    - ◆ major (piece of total access)
    - ◆ moderate (piece of total access)
    - ◆ minor (piece of total access)
    - ◆ very small (piece of total access)
4. Multiply the performance times the weights and put the result in columns G through I.
5. Add up all sources of Unmeasured Food Access and put that figure in column J: Total Unmeasured Access. If the performance and weights for each unmeasured source of food access have been expressed in shares, the sum will also be expressed as a share. If the performance and weights for each unmeasured source of food access have been expressed in words, the total will be a subjective, but documented and well-reasoned, sum. In either case, the interpretation of the result (column J) is the share of total baseline food access that will be contributed by this period's unmeasured access.
6. Copy (with links) the summary information concerning the weighted performance of each of the food access sources (columns G-I in the example) into the Food Access Data Matrix.
7. Copy the results in column J of the table into column H of the Total Food Access table, below.

#### 4. Total Food Access

This part of the analysis brings together measured and unmeasured food access to determine if households will access to enough food to carry them through the selected consumption period. Because measured and unmeasured food access cannot be simply 'added' together, the operational question is whether any gaps between total requirements and measured sources of food access can be filled by the unmeasured sources of food access. The analytical process is depicted in Figure 2 and summarized follows.

- A. Compile the information from the final columns in Tables 3 and 4 (the measured and unmeasured analyses) into the Total Food Access table (Table 5, below).
- B. Compare the sum of measured food access to the defined consumption threshold.
  - B1 Populations above the threshold have sufficient food access to meet their consumption needs for the defined period.
  - B2 For populations with measured food access below the consumption threshold, compare measured food access to its historic average (or baseline).
    - B.2.a. Measured Access above average
      - If measured access is above average, and the performance of the unmeasured sources of food access is at least average, then the population has adequate food access<sup>6</sup>.
      - If measured access is above average but the performance of unmeasured access is below average, then the result depends on the relative importance of these two categories. Unmeasured access, although below average, may be enough to meet the consumption threshold, a judgement call made by the analyst given case-specific information on the performance and size of the various sources of food access.
    - B.2.b. Measured Access below average
      - If measured access is below its average, and the performance of the unmeasured sources of food access is also below average, then the population is likely to have inadequate food access (unless they are usually quite well off).

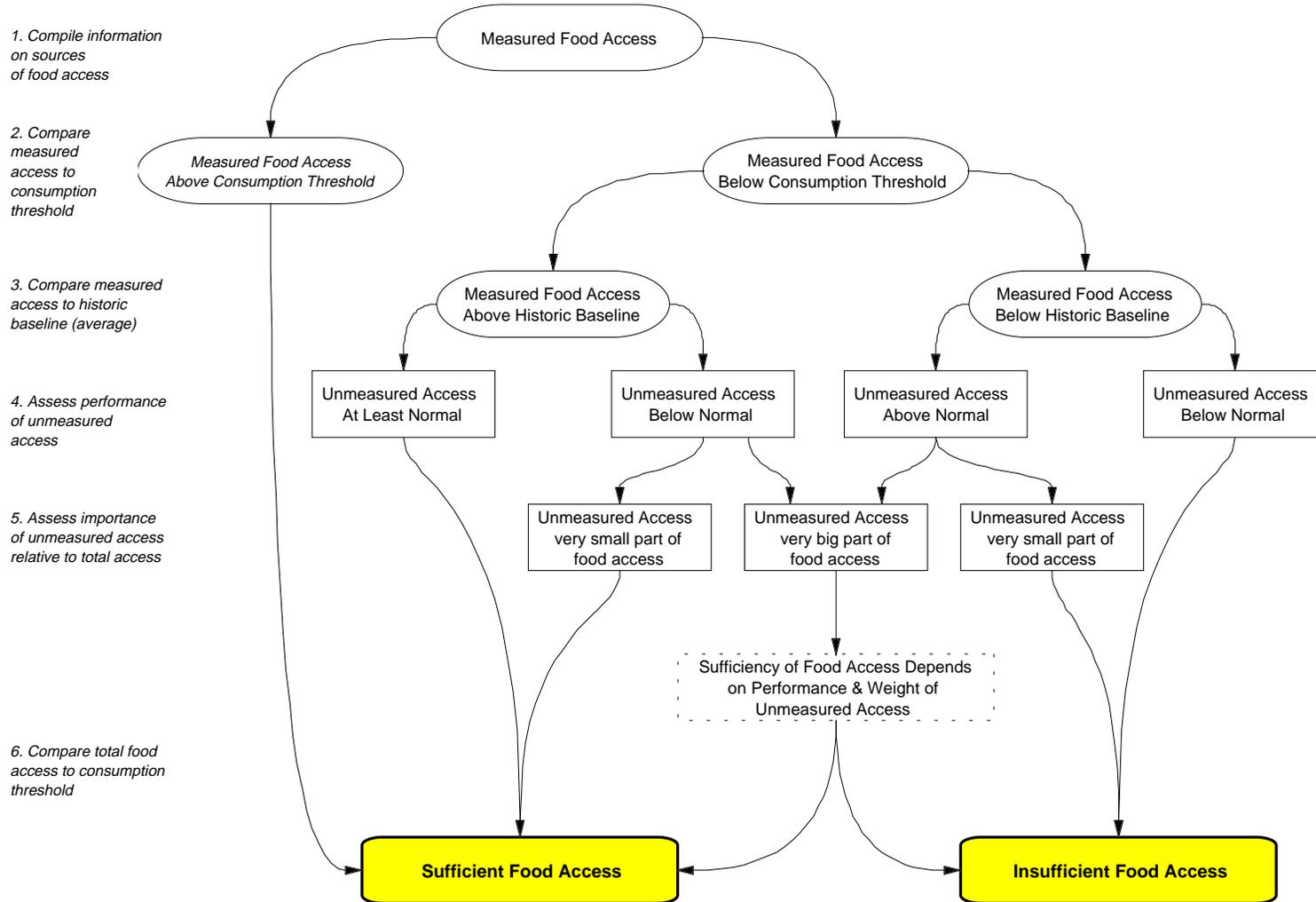
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<sup>6</sup> Strictly speaking, the population has at least average or normal food access. However, if a population is chronically food insecure due to insufficient food access, then even normal or above normal food access in any given period may mean they still do not have enough to eat. The Total Measured and Unmeasured Food Access Table has a column (J) that permits chronic food insecurity to be incorporated into the analysis.

- If measured access is below average but the performance of unmeasured access is above average, then the result again depends on the relative importance of these two categories. Unmeasured access may be enough to meet the consumption threshold, a judgement call made by the analyst given case-specific information.

**Figure 2: Assessing Food Access**

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**Table 5: Total Food Access**

	A	B	C	D	E	F	G	H	I	J	K
Group/Area	Measured Food Access (M)							Unmeasured Food Access (U)	Total Food Access		
	Consumption Threshold (units?)	Current Measured Access (units?)	Current Measured Access Relative to Con. Thresh.	Baseline Meas. Access (units?)	Current Measured Access Relative to Meas. Baseline	Baseline Measured Relative to Total Baseline	Current Measured Access weighted by share of total access	Total Unmeasured Access in Current Period, weighted by share of total access	Current Total Food Access Relative to own Baseline	Baseline (chronic) food access relative to consumption threshold	Current Total Food Access Relative to Consumption Threshold
	C	Mc	Mc/C	Mb	Mc/Mb	Mb/Tb	Mc/Mb * Mb/Tb = Mc/Tb	Uc/Ub * Ub/Tb = Uc/Tb	Mc/Tb + Uc/Tb or (Mc+Uc)/Tb = Tc/Tb	Tb/T	Tc/Tb * Tb/C = Tc/C
Group/Area1	units	units	%	units	%	%	%	% or words	% of needs met	% of needs met	% of needs met
Group/Area2									<i>or</i>	<i>or</i>	<i>or</i>
Group/Area3									much below baseline	much below threshold	much below threshold
Group/Area4									below baseline	below threshold	below threshold
etc									at baseline	at threshold	at threshold
									above baseline	above threshold	above threshold
									much above baseline	much above threshold	much above threshold

Table 5, above, provides the layout for the Total Food Access table. The actual columns will depend on the nature of the information. The symbols are interpreted as follows:

- C = Consumption threshold (the kilograms, kilocalories or monetary units needed to meet nutritional standards during the given consumption period)
- $M_c$  = Measured food access in the current period
- $M_b$  = Measured food access in the baseline period
- $U_c$  = Unmeasured food access in the current period
- $U_b$  = Unmeasured food access in the baseline period
- $T_c$  = Total food access in the current period
- $T_b$  = Total food access in the baseline period

1. Input the consumption threshold (C) into column A. C may differ by group/area.
2. Copy the total for current Measured Food Access ( $M_c$ ) from column E of the Measured Food Access table to column B.
3. Compute column B/A and put the result in column C ( $M_c/C$ ).  $M_c/C$  is a measure of the consumption gap, the degree to which this period's measured food access meets the consumption threshold.
4. Input the baseline for measured food access ( $M_b$ ) into column D. (This comes from the version of the Measured Food Access table that used multi-period averages, rather than single-period figures.)
5. Compute column B/D and put the result in column E. ( $M_c/M_b$ ).  $M_c/M_b$  is a measure of the degree to which this period's measured food access will contribute its normal share of total food access.
6. Input estimates for the importance of measured access as a share of total access (on average) in column F ( $M_b/T_b$ ). If a numerical estimate of  $T_b$  is not available, make a rough estimate of the share of the total pie accounted for by the measured sources of access (income).
7. Multiply column E times column F and put the result in column G ( $M_c/M_b * M_b/T_b = M_c/T_b$ ).
8. Copy column J from the Unmeasured Food Access Table into column H of this table. Recall that the interpretation of the figures in column H ( $U_c/T_b$ ) is the share of total baseline food access that will be contributed by this period's unmeasured access.

Total food access is equivalent to total income if total income is taken to include the value of food access sources that are produced directly (i.e., own stocks, own retained production, wild foods), as well as those that could be obtained through markets and transfers, including asset sales (if all income were in fact converted into food).

Total Food Access  
 = Total income  
 = Total measured + unmeasured food access  
 = Total direct + total indirect access.

These equivalencies are important since most expenditure surveys (a major source of income shares) often use the term 'total income' rather than 'total food access'.

9. Now that measured and unmeasured access is presented in a parallel manner (as a share of baseline), they can be combined. “Add” column G and column H, and put the result in column I. This “addition” can be done qualitatively. This is the performance of this period's sources of food access (both measured and unmeasured) relative to their own baseline.
10. Estimate baseline (chronic) food access ( $T_b/C$ ), either from the baseline food access assessment in the FEWS FSVP, or from qualitative understandings. Put the result in column J. Up until this point, the analysis has focused on the performance of total food access (measured and unmeasured) in the current period relative to its own baseline. However, if that baseline does not meet the consumption threshold, the population's average performance may be unsatisfactory (see box on Adjusting for Chronic Food Insecurity).

### **Adjusting for Chronic Food Insecurity**

To determine which populations lack sufficient food access in the current period, adjust the performance of the combined sources of food access relative to baseline by the degree to which their normal food access meets the consumption threshold:

$$\frac{Current(T_c)}{Normal(T_b)} \times \frac{Normal(T_b)}{Needs(C)} = \frac{Current(T_c)}{Needs(C)}$$

11. Multiply column I times column J, and put the result in column K ( $M_c/M_b * M_b/T_b = M_c/T_b$ ). This is the final ratio of total food access in this period to the consumption threshold.
12. Transfer either column I (total food access this period relative to normal) or column K (total food access this period relative to needs) from the Total Food Access Table into the food access column of the Attainable Consumption Table (Section H). When possible, transfer the information from column K.

## **G. Food Utilization**

This analysis identifies populations that suffer from diseases and practices that diminish their ability to meet dietary needs from the available, accessible food. The discussion should focus on information related to the causes of inadequate utilization (such as disease loads), rather than the results (malnutrition rates). Assess, in either quantified or qualified terms, the impact these factors have on utilization. At this time, few studies incorporate utilization into household-level analyses of food security. Thus, no particular table format has been proposed. The results, however, will need to be summarized in a form that fits into the Attainable Consumption table in section H, below.

## H. Attainable Consumption

Step 1: Transfer the summary information from each of the component analyses into a common table, modeled along the lines of the Food Security Table, below.

**Table 6: Food Security Table**

	Group/Area	Food Access	Food Availability	Food Utilization	Attainable Consumption
IDEA	Socio-economic Groups	Degree to which the population has the ability to acquire sufficient food to meet consumption needs during the given consumption period	Degree to which adequate food is physically available to meet consumption needs during the given consumption period	Degree to which available, accessible food will meet consumption needs during the given consumption period	Given food availability, access and utilization, degree to which the population will be able to attain the consumption threshold during the given consumption period
Terms of Measure	Name of Pop Group/Area	% of needs met <i>or</i> <ul style="list-style-type: none"> <li>• much below threshold</li> <li>• below threshold</li> <li>• at threshold</li> <li>• above threshold</li> <li>• much above threshold</li> </ul>	% constrained <i>or</i> <ul style="list-style-type: none"> <li>• highly constrained</li> <li>• somewhat constrained</li> <li>• not constrained</li> </ul>	% constrained <i>or</i> <ul style="list-style-type: none"> <li>• highly constrained</li> <li>• somewhat constrained</li> <li>• not constrained</li> </ul>	% of period <i>or</i> <ul style="list-style-type: none"> <li>• much below threshold</li> <li>• below threshold</li> <li>• at threshold</li> <li>• at or above threshold</li> </ul>

Step 2: Given food access, availability and utilization conditions for each population, determine whether – and the degree to which – each population will meet its consumption requirements. Put the answer in the Attainable Consumption column of Table 6.

## I. Coping Behaviors

Vulnerability to food insecurity is composed of two parts: (1) the risk that a destabilizing event will occur, and (2) the ability of a group or household to cope with the consequences of that event<sup>7</sup>. In a current analysis of food security, the major risk, or shock, to livelihoods has already been experienced. Assuming that households seek to preserve their food security, they will employ a broad range of coping strategies to gain access to food. These strategies may involve:

- changing nothing (maintaining normal income-generating patterns),
- adaptation (making do with what is available and some divestment of liquid assets),
- divestment of productive assets, or
- out-migration and destitution.

<sup>7</sup> See CVA Guidelines Chapter 2: Background and Conceptual Framework

To the extent that these coping strategies are expected to generate income during the consumption period, they should be included in the Food Access analysis (section F). However, recourse to unusual coping strategies or a debilitating intensification of the more usual strategies also reflects the severity of the food insecurity problem. As such, information on coping strategies also serves as a confirmatory indicator of attainable consumption. Given that attainable consumption can be only roughly estimated, qualitative information on manifestations of food insecurity is helpful in calibrating the assessment.

#### Steps

1. Drawing from whatever reliable, although probably subjective, information is available, determine the coping strategies that are being used, or are likely to be used by each population group during the current consumption period.
2. Summarize that information in an additional column in the Food Security table (Table 6).

**Table 6, extended: Food Security Status by Population Group**

	Group/Area	Food Access	Food Availability	Food Utilization	Attainable Consumption	Coping Behaviors	Food Security Status	Population Count
IDEA	Socio-economic Groups	Degree to which the population has the ability to acquire sufficient food to meet consumption needs during the given consumption period	Degree to which adequate food is physically available to meet consumption needs during the given consumption period	Degree to which available, accessible food will meet consumption needs during the given consumption period	Given food availability, access and utilization, degree to which the population will be able to attain the consumption threshold during the given consumption period	Nature of the coping strategies used by the population during the given consumption period	Food security status for the population during the given consumption period	Total size of the given population group (100%)
Terms of Measure	Name of Pop Group/Area	% of needs met <i>or</i> <ul style="list-style-type: none"> <li>• much below threshold</li> <li>• below threshold</li> <li>• at threshold</li> <li>• above threshold</li> <li>• much above threshold</li> </ul>	% constrained <i>or</i> <ul style="list-style-type: none"> <li>• highly constrained</li> <li>• somewhat constrained</li> <li>• not constrained</li> </ul>	% constrained <i>or</i> <ul style="list-style-type: none"> <li>• highly constrained</li> <li>• somewhat constrained</li> <li>• not constrained</li> </ul>	% of period <i>or</i> <ul style="list-style-type: none"> <li>• much below threshold</li> <li>• below threshold</li> <li>• at threshold</li> <li>• at or above threshold</li> </ul>	<ul style="list-style-type: none"> <li>• Destitution</li> <li>• Dispose of productive assets</li> <li>• Recourse to adaptive strategies</li> <li>• Maintain normal income - generating patterns</li> </ul>	<ul style="list-style-type: none"> <li>• extremely food insecure</li> <li>• highly food insecure</li> <li>• moderately food insecure</li> <li>• food secure</li> </ul>	Number

**Table 7: Current Food Security Classification Criteria**

<b>Attainable Consumption</b>		<b>Nature of Coping Strategies</b>		<b>Current Food Security</b>
Below Threshold	+	Destitution	=	Extremely food insecure
Below Threshold	+	Dispose of productive assets	=	Highly food insecure
Near Threshold	+	Recourse to adaptive strategies	=	Moderately food insecure
Above Threshold	+	Maintain normal income-generating patterns	=	Food secure

## **J. Food Security Categories**

The final stage in determining household food security is to assign each population to a food security category. The operational criteria are based on the FEWS Food Security Categories (see section C) and Figure 1, and are summarized in Table 7.

Steps:

1. Add two more columns to the Food Security Table for Food Security Status and Population Count shown above (Table 6, extended).
2. Based on the information on access, availability, utilization and coping behaviors assign each population to a food security category: food secure, moderately insecure, highly insecure and extremely insecure.
3. Include the number of people in each population group in the final column. Although FEWS assigns a food security status to each population group, it cannot quantify the number of food-insecure people within that group. The food security status applies to an 'average' member of the group. Thus, include the total population count for any given group/area in the table. It is very important to stress in the writing-up the results that we do not know the exact number of people in each food insecurity class, and that detailed food needs assessments are needed to identify the number of affected people and appropriate interventions. For this reason, all attempts should be made to break groups down into the smallest sizes possible.

## **K. Caveats and Uncertainties**

Under the best of conditions, an assessment of household food security is fraught with uncertainty. Current data on access, availability and utilization are often missing and poorly measured (errors in measurement). Even were the data perfect, they do not necessarily represent well the conditions of all members of the associated population groups (errors in representation). Furthermore, predicting food security over the consumption period requires major assumptions about expected future incomes, market conditions and coping alternatives in upcoming months (risks). To avoid under- or over-estimating food security, the analysis must include a frank discussion of the implications for each source of uncertainty.

## Steps:

1. List the important factors that could upset the results and determine a realistic range for the values each factor might take during the relevant time frame. Consider issues of measurement, representation and future risk. Examples include:
  - mismeasured agricultural production information (especially if based on preliminary figures);
  - mismeasured (or omitted) farmer stocks;
  - mismeasured (or omitted) sources of off-farm incomes;
  - poor representation due to over-simplified descriptions of livelihoods which mask significant diversity among households within a given population or area;
    - the risk of large food price swings due to changing trade policies, exchange rate fluctuations, conflicts, etc.; and the risk of natural calamities, such as floods or droughts, that might affect secondary harvests or food marketing.
2. Evaluate how much a reasonable change in each of the identified factors could alter food security or coping capacities for the affected populations. Although the effects of most of these factors will be difficult to quantify, they should be explained so that the reader knows what will happen to whom if a certain event occurs. The effects of food price fluctuations can and should be rigorously tested because of the central role played by prices in the food access analysis (see step 3, below).
3. Conduct a sensitivity analysis of the effects of food price fluctuations on the food access analysis. The results will be most sensitive to changes in the price of the common unit used to express each of the measured sources of access. If, for example, all sources of measured access have been converted into maize equivalents, then the results will depend greatly on the price of maize used for the conversions. Reasonable initial values for maize prices in each district might be the annual price, averaged over recent years.<sup>8</sup> A reasonable range for those prices might be the historic highs and lows for that period.

### Sensitivity Analysis

An analysis is only as sound as its underlying assumptions. When a moderate change in a parameter has little effect on the result, the analysis is considered robust and worthy of confidence. When a minor change in a parameter leads to a very different conclusion, the analysis is considered fragile and not applicable outside the specific range set by the original parameter.

Ideally, the conclusions should be robust to the underlying assumptions. If they are not, it becomes even more important to document what kinds of events could alter the conclusions.

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<sup>8</sup> Numerous alternatives are defensible, such as the average price during the major maize marketing period, or a reference price taken from similar production years, etc.

The same type of test should be conducted with any other important prices (such as livestock prices for pastoralists).

4. In addition to discussing the sensitivity of the results to the underlying assumptions, compare the results with relevant information gathered from field trip reports, media reports, government assessment missions, nutritional studies, etc. Determine whether there are any apparent contradictions and if so, why? It may be necessary to revise the analysis if these other sources of information are compelling. At a minimum, any lingering discrepancy should be explained.
5. In the CVA text, discuss only the major factors that could influence the results, the possible size of their effect and the likelihood of their occurrence. Do not include the computations themselves, although these might be included in the appendices to the CVA report if necessary.

## **L. Writing up the Results**

Although the analysis of current food insecurity involves many steps, the presentation should be short and clear. To avoid losing readers in long tables with complex terminology, the text in the CVA should focus on identifying the food insecure populations, describing the degree and cause of their food insecurity and rapidly lead to a summary of what actions are needed. Thus, the CVA text should describe the method in general terms and present the final results in both tabular and verbal form. The only table required in the main body of the report is a final summary table of the number of people considered food insecure by area, socio-economic group and degree of insecurity. An example of the Populations in Food Insecure Areas table (Table 8) is given below and in the CVA Template. Note that this example excludes even the moderately food-insecure populations, but they could be added if recommendations include interventions tailored to that group. Discussion of why those populations are insecure should be included in the text, but supporting documentation (all other tables) can be relegated to the appendices.

There are numerous ways to organize the discussion: by component of food security, by level of food insecurity or by region. To keep the reader focused on where needs are greatest, the text is best organized around the level of food insecurity (as laid out in the template). If, however, there is a strong geographical pattern to food insecurity, the text may be better organized by region. In either case, each section would contain a discussion of the essential elements of food access, availability and utilization that compromised food security for the populations falling in that group.

### Populations in Food Insecure Areas of Burkina Faso in 1998/99

Region/Province	Socio-economic Group	Highly	Moderately
Sahel			
Séno	Farmers	93,000	
Séno	Pastoralists		10,000
Soum	Farmers		58,000
Oudalan	Farmers		17,000
Center-North			
Sanmatenga	Farmers	131,000	
Bam	Farmers	32,000	
Namentenga	Farmers		6,000
Center			
Oubritenga	Farmers		66,000
Ganzourgou	Farmers		41,000
Kadiogo	Urban Poor		12,000
Center-East			
Kouritenga	Farmers		54,000
Center-South			
Bazega	Farmers		36,000
Center-West			
Boulkiemdé	Farmers		28,000
Sanguié	Farmers		18,000
North			
Yatenga	Farmers		15,000
Passoré	Farmers		31,000
<b>Total</b>		<b>256,000</b>	<b>392,000</b>

Note: The table shows the entire population of affected socio-economic groups at the given administrative level. This does not imply that the entire population of those groups is food insecure (see box on FEWS Food Security Categories).



# **FEWS Current Vulnerability Assessment Guidance Manual**

## **Chapter 5**

### **Linking CVA Results to Action**

**August 1999**

*The Current Vulnerability Assessment guidance has resulted from synthesizing the concepts and best practices developed and applied by USAID FEWS Project professionals. It is an analytical tool for practitioners. Given the challenges of applying these methods in the varying environments where FEWS and its partners work, this material will be reviewed and updated from time to time. However, the next review is unlikely to occur before June 2000.*

# **LINKING CVA RESULTS TO ACTION**

## **FEWS CVA GUIDELINES: CHAPTER 5**

The purpose of this chapter is to describe how to link the results from the CVA analysis to action. The previous sections of the report evaluate the status of national and household food security, as well as the impact of potential shocks. The assessment of household food security also provides a basis for determining what responses may be needed<sup>1</sup>. The Conclusions and Actions section of the CVA outline fulfills the final objective of summarizing the actions underway or required to respond to any food emergencies.

### **A. Considerations**

As a desk study, the CVA is designed to provide a rough estimate of who is food insecure, where, and why. It should be seen as one step in a continuum from problem identification to resolution. The CVA is part of the preparedness activities undertaken in normal times to detect the presence of food insecurity. Once that insecurity is identified, several other steps are needed to better monitor food insecurity, assess its impact, estimate needs, determine the appropriate response, provide relief and support rehabilitation. The results should feed into those subsequent steps, focusing on the information needed to select and manage appropriate responses to the reported food insecurity. The results are not intended to determine the exact number of food-insecure people in each category nor provide estimates of exact needs.

### **B. Write Up**

The Conclusions and Actions section of the CVA should summarize the major findings and link those findings to possible actions. The discussion should be short (1-2 pages) and focus on the types of actions that may be appropriate, given the nature and extent of the food insecurity problem. It is not intended to provide a final answer on the necessary interventions but how further inquiry might be best directed.

#### **1. Summary of Food Insecurity in 19XX/YY**

The purpose of this section is to answer the question: How bad is it? Provide a brief overview (1-2 paragraphs) that describes national and household food security in global terms. The flow will be similar to the executive summary:

---

<sup>1</sup> This chapter is not intended to describe details related to response planning, but rather to show how to incorporate such information into the CVA. A typology of interventions as well as selection criteria will be found in the FEWS Contingency Planning and Crisis Response Guidelines, forthcoming.

- the major events that influenced food insecurity,
- the current national and household level situation, and
- a perspective of the current situation relative to recent years.

Express the current situation in terms like:

- Domestic cereal availability from production and stocks is xxx MT, leaving a xxx MT net import requirement. Planned imports include xxx MT, leaving a positive/negative food balance of xxx MT at the national level. Compared to last year and to average...
- Of the xx {admin unit name} considered in this analysis, xx are extremely, xx are highly, and xx are moderately food insecure.
- Of the total national population of YY considered in this analysis (excluding XYZ), xx (or yy %) are extremely, xx (or yy%) are highly, and xx (or yy%) are moderately food insecure.

## 2. Actions Required

The purpose of this section is to match the types of possible responses (in general terms) to the populations identified by the analysis as food insecure. It could be organized by degree of food insecurity (extremely, highly, moderately), by region or by any other grouping of the populations that makes sense in light of the recommended responses. The discussion should address responses related to information needs, programs and process consistent with the CVA findings.

In considering appropriate responses, note that the FEWS categories of food insecurity are already associated with a range of appropriate interventions in general terms. As written in the box on FEWS Food Security Categories in the CVA Template):

- For **moderately food-insecure** populations, no interventions are necessary, but contingency plans should be developed to respond if conditions deteriorate.
- For **highly food-insecure** populations, appropriate interventions could include food, income and asset support, employment and credit programs and government actions to facilitate agricultural production, marketing and trade.
- For **extremely food-insecure** populations, appropriate interventions could include emergency food distributions and long-term rehabilitation programs.

Based on these general guidelines, the discussion of **information needs** should consider:

- where more focused assessments are most required, with a distinction made between populations that require monitoring and those needing emergency needs assessments right away;
- what indicators of food insecurity should be monitored, based on the nature of the current problem; and

- what additional information is needed to determine appropriate responses and guide their implementation.

The recommendations related to **programs and process** should not extend beyond the scope of the CVA results, nor assign specific tasks to partner organizations. The recommendations should link the diagnosis of food insecurity to the types of actions to be considered. The following list groups interventions into general categories, ordered from those with immediate impact to those with a longer-term impact.

Responses to current food insecurity tend to fall in the first several categories:

- activities to activate (or re-activate) the response planning process (such as setting up contingency planning groups, clarifying the organizational structures, roles, and lines of authority and building consensus on the food security problem and possible solutions);
- food and income transfers (such as free food distributions, school, supplemental or therapeutic feeding, seed protection rations, cash transfers, market sales of food or food subsidies);
- labor-intensive employment programs (such as employment generating schemes, food-for-work or cash-for-work);
- asset transfers and credit programs (such as farmer cash loans, micro-credit, livestock purchases, cereal banks or seed, tools or oxen distribution); and
- government policies to facilitate food availability and access (such as changing tariffs, quotas and other border policies which affect trade).

It may be appropriate to consider (briefly) how longer-term actions can help prevent the events that caused the current food insecurity and, conversely, how the current food security situation might effect on long-run development objectives and programs. These include:

- government policies and programs to facilitate crop and livestock production, and marketing (such as fostering distribution of productivity enhancing inputs, developing marketing infrastructure, or maintaining trade and macro-economic policies conducive to food security); and
- technology development and transfers in agriculture (such as promoting agricultural research and extension).

The discussion of appropriate actions should also take into account those that are already planned or underway.

The following table may provide a useful way of organizing the information if the responses vary significantly by affected population group.

<b>Name of Affected Population</b>	<b>Food Insecurity Category</b>	<b>Maximum number of people</b>	<b>Possible types of responses</b>	<b>Other considerations</b>

## **C. Beyond the CVA Report**

The link from analysis to action extends beyond the CVA report. The FEWS Field Representative should also support the response planning process. Depending on the particular context in which FEWS operates, possible activities include:

- participating in more in-depth investigations of CVA results where needed;
- disseminating the findings through reports, briefings and FEWS publications to the local food security and early warning community (which may include regional and international representatives), USAID and the US Embassy;
- working with relevant food security action groups to develop a consensus on the nature and extent of the problem as well as appropriate responses;
- participating in contingency planning exercises where appropriate; and
- participating in joint emergency needs assessment missions with local governments, NGOs and international donor agencies.

The process of disseminating results and building consensus may be delicate. The results of the CVA will necessarily have political ramifications because they relate to level and distribution of well-being in society. Because current food insecurity often reflects the accumulated effect of government policies and resource allocations, the results may be uncomfortable for policy-makers. This underscores the importance of building the CVA on solid analysis and presenting the results clearly.



# **FEWS Current Vulnerability Assessment Guidance Manual**

## **Chapter 6**

### **Identifying Population Groups**

**August 1999**

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# **IDENTIFYING POPULATION GROUPS**

## **FEWS CVA GUIDELINES: CHAPTER 6**

The purpose of this chapter is to help analysts define populations in a manner useful to FEWS Vulnerability Assessments. The major population groups are characterized in terms of their location, sources of income, assets and coping strategies. The information that results from these exercises can be used to:

- determine which administrative levels to include in vulnerability assessments;
- determine which socio-economic groups within those administrative levels to include in vulnerability assessments;
- document the major sources of income for those populations for monitoring purposes;
- determine the importance of the various sources of income to the food security of those populations;
- identify the progression of coping strategies used by the selected populations; and
- organize information which is usually passed on orally, if at all, into a structured database format.

### **A. Review of FEWS Approach**

FEWS assessments of household food security are based on food access, availability and utilization (to the extent possible) for socio-economic groups within the smallest administrative units for which reliable data are available. Confined to secondary sources of information, FEWS typically uses district-level data to assess the quantifiable (or measured) sources household food access, converts them into a common unit (e.g., monetary units, calories, kilograms) and compares the total to a consumption threshold; measured food access falling below threshold signals a potential access problem. Next, information on the unmeasurable sources of incomes is incorporated to determine the food access of the different socio-economic groups living within each area. After considering information on local food availability and utilization, FEWS determines the food security status of the socio-economic groups in each administrative unit. In each country, this general approach is adapted to local conditions.

Thus FEWS assesses household food security based on a combination of quantitative and qualitative information for the major population groups in a country, identified first by geographic location (area, administrative level) and secondly, by socio-economic group. Several socio-economic groups (small farmers, pastoralists, fisher folk, refugees, female-headed households, urban dwellers, etc.) may live within any one area, each accessing food in a distinct way.

## B. Determining the Best Geographic Level of Analysis

*Criteria:* Select the smallest administrative unit for which reliable data on the major sources of household income are available in a regular and timely manner. In the FEWS context, this choice is often dictated by the availability of seasonal or annual agricultural production data, which tends to be published at the second or third administrative level.<sup>1</sup> When there are no reliable sources of published data on the major source(s) of food access at an appropriate administrative level, the analyst may choose to utilize proxy measures.<sup>2</sup>

*Number of categories:* The number of locations will be determined by the administrative structure of the country, once the decision about the best level for the analysis is made. For example, the 1998/99 Burkina Faso CVA, carried out at the 2<sup>nd</sup> administrative level (province) analyzed 30 discrete areas with an average population of 360,000. The 1998/99 Zimbabwe CVA, carried out at the 4<sup>th</sup> administrative level (commune), analyzed 173 discrete areas with an average population of 37,000.

*Other:* In general, the lower the administrative level, the smaller the resident population. A small population is likely to be more homogeneous, with fewer internal socio-economic distinctions, an advantage to pushing the analysis to the lowest administrative level possible.

## C. Determining the Best Socio-economic Level of Analysis

For the purpose of FEWS Vulnerability Assessments, socio-economic groups are defined in terms of the way they gain access to food (food economies or household livelihood strategies).

*Criteria:* For the purposes of assessing food insecurity, identify socio-economic groups that:

- capture the major food economies in country,
  - can be used by the relief and development community to target interventions,
  - are exhaustive (everyone in the country should fall into one of the groups),
- and
- are mutually exclusive (no one in the country should fall into more than one of the groups).

---

<sup>1</sup> The first administrative level is the nation as a whole. The second administrative level is the next lowest. It is often called *Prefectures* in the African Francophone countries or *Districts* in the African Anglophone countries. That administrative level may be further divided into the third administrative level: sub-prefectures, communes, counties, *wereda*, etc.

<sup>2</sup> See the Chad Current Vulnerability Analysis 1998/99, conducted at the 4<sup>th</sup> administrative level using 2<sup>nd</sup> level crop production information combined with NDVI analyses at the 4<sup>th</sup> level. Similarly, the Zimbabwe Current Vulnerability Assessments (1997/98 and 1998/99) use various livestock parameters to create a series at the 4<sup>th</sup> administrative level.

*Number of categories:* The total number of socio-economic groups should be tractable (i.e., feasible to work with) perhaps on the order of three to six nationwide. Although not all areas contain all the identified socio-economic groups, the analysis can quickly grow unwieldy. If each of 40 administrative areas had an average of 3 groups each, the analysis would cover 120 different populations (areas/groups).

*Other:* Identify all the major socio-economic groups in the country, their sources of income, locations, and population counts, even if it is not possible to include them in the analysis. It is important to state clearly which populations are and which are not covered, along with their basic characteristics.

## D. Practical Recommendations

The following steps are designed to help analysts define the major socio-economic groups in a country for the purposes of vulnerability assessments (both CVAs and FSVPs). The groups are defined in terms of their sources and levels of income, assets and coping strategies. The following worksheets provide a structure to organize information that is often impressionistic. They also provide a framework for identifying knowledge gaps that can be addressed over time through additional literature review and key informant interviews.

### 1. Identify Districts

At the administrative level selected for the analysis, create a spreadsheet like Table 1 below, with one row per administrative unit. Sort the administrative units by admin2, admin3, etc. Include the most recent population data available, noting the source and the date of the population numbers.

**Table 1: Administrative Units**

Province	District	Population
Coast	Taita Taveta	233,820
Coast	Tana River	160,823
Eastern	Embu	232,154
Eastern	Isiolo	88,807
Eastern	Kitui	307,267

Sources:

District-level population figures

## 2. Identify Socio-Economic Groups

Identify broad categories of populations in country (socio-economic groups, or SEGs) that differ in how they gain access to food. Variation can be due to differences in their income flows, their asset base or their coping strategies. In rural economies, livelihood strategies are often closely linked with agro-ecological zones and production systems. Information for defining these categories can come from household and expenditure surveys, census studies, NGO reports, academic studies, key informant interviews, or a combination of these sources. Studies of food economies or livelihood systems, such as those produced by Save the Children Foundation (SCF/UK), the Food Economy Group (FEG), the Bureau for Applied Research in Anthropology at the University of Arizona (BARA), or various other groups should serve as a sound foundation.

Assign a unique code as shorthand for each socio-economic group in the subsequent analysis.

**Table 2: Socio-Economic Groups {example only}**

Name of SEG	Description of Livelihood Strategies			Code
	Major Income Sources	Major Assets	Major Coping Strategies	
Food Crop Farmers	Cereals and other food crops	Land, food stocks	Rural labor, sharecropping, urban migration	Farmer1
Agro-pastoralists	Cereals, other food crops, and livestock	Land, food stocks, livestock	Transhumant migration, livestock sales, rural labor	Farmer2
Cash Crop Farmers	Cash crops, cereals, other food crops	Land, jewelry, consumer goods	Plant food crops, sell jewelry and consumer goods	Farmer3
Urban Residents	Wage labor, petty trade	Jewelry, consumer goods	Increase labor/trade, beg	Urban
Fishing Households	Fish, cereal crops	Fishing equipment, land, small animals	Sell equipment and animals	Fisher

Sometimes rich and poor households follow the same income strategy, but have significantly different asset bases with which to cope with food crises. In these cases, break the population into two distinct groups (such as rich cash crop farmers and poor cash crop farmers).

A description of socio-economic groups linked to production systems can be found in the Mali 1999 CVA. The populations include dryland farmers, irrigated and recessional rice farmers, agropastoralists, pastoralists and urban residents. As these groups are found in close proximity, the Mali 1999 CVA often assigns more than one group to any given administrative unit.

An example of socio-economic groups based on non-overlapping agro-ecological zones can be found in the Kenya 1998 CVA. In the Kenya example, the socio-

economic groups extend in homogenous bands across administrative units such that no one administrative unit contains more than one socio-economic unit:

- mixed farmers in the high potential agricultural areas of Western, Nyanza, Central and Eastern Provinces;
- cereal and dairy farmers in the high potential grain-basket areas of the Rift Valley Province;
- marginal agricultural farmers in the semi-arid areas of Eastern, Coast and Nyanza Provinces;
- Agropastoralists in the southern and northern lying districts of the Rift Valley Province, and in particular, Kajiado, Narok, Baringo, West Pokot, Keiyo, Marakwet and Koibatek Districts; and
- pastoralists in the northern and eastern areas of the country and in North Eastern and Eastern Provinces in particular.

### **3. Link the socio-economic groups to their districts**

- 3.1 Expand Table 1 by adding column headings similar to those indicated in Table 3, below.
- 3.2 Merge in the socio-economic group information by considering which of the socio-economic groups are present in each of the administrative units. Add a row below the administrative unit for each of the socio-economic groups as demonstrated in Table 3 below. In column D, label the socio-economic groups using the codes from Table 2. For each location, consider whether there are any other socio-economic groups present in that area that were not originally listed on Table 2. If so, revise Tables 2 and 3 accordingly.
- 3.3 In column E, estimate the population for each SEG, if possible. If exact figures are not available, try to derive approximate figures based on share of local population; at a minimum, give some sense of the relative size of these groups within the area. Better estimates can be included later, based on field trips.
- 3.4 Include the source(s) of the population figures. This can either be included as an additional column (if the information comes from different sources for each area/group) or in the notes to the table.
- 3.5 Include a working definition for the SEG Codes in the notes to the table.

**Table 3: Socio-Economic Groups by District**

A	B	C	D	E
Province	District	District Population	SEG	
			Code	Population
Coast	Taita Taveta	233,820	Farmer1	
			Farmer2	
			Fisher	
Coast	Tana River	160,823	Farmer1	
			Farmer2	
			Herder1	
Eastern	Embu	232,154	Farmer2	
			Farmer3	
Eastern	Isiolo	88,807	Farmer1	
			Fisher	
Eastern	Kitui	307,267	Farmer 3	

Sources:

District-level population figures as of {date}:

Information used to determine presence or population of SEG:

Definition of SEGs:

Farmer1 =

Farmer2 =

etc.

## 4. Income Information by Area/Group

- 4.1 Add additional column headings for each of the major sources of income used by any of these SEGs, as shown in Table 4 (population columns not shown)
- 4.2 Indicate the major sources of income for each socio-economic group in each district. Depending on the reliability of the information, this can be done by:
  - marking an x;
  - using numbers or words to suggest magnitude (with 1 for the most important source, 2 for the next, etc.); or
  - estimating the percentage of total income that comes usually from each source. Such information is approximate; it may come from local studies, household and expenditure surveys, or key informant interviews. The shares should add to 100%.
- 4.3 Provide any data available on total annual income in the Total Income column.

- 4.4 Indicate the source of the information and your degree of confidence in the accuracy of the information, either as two final columns to the table, or notes at the bottom of the table.
- 4.5 Create duplicate tables if there are food economy studies available that break down these shares by average, good and bad years.

Table 4: Socio-economic Group Income Sources

Province	District	SE Group	Direct Access			Indirect Access							Total Income
			Stocks	Retained Own Food Production	Retained Own Livestock Prod.	Cash Crops	Livestock Offtake	Ag. Transform. Artisinal Services, etc	Petty Trade	Remit-tances	Prog. Food or Inc. Aid	Other Income	
Coast	Taita Taveta	Farmer2	X	X		X		X					
Coast	Taita Taveta	Farmer3	X	X	X	X		X					
Coast	Taita Taveta	Fisher		10%						20%		70%	55,000 cfa
Eastern	Embu	Farmer1		80%									
Eastern	Embu	Farmer3	X	X		X							

Sources:

District-level population figures as of {date}:

Information used to determine presence or population of SEG:

Breakdown of income shares:

Total Income:

Definition of SEGs:

Farmer1 =

Farmer2 =

etc.

## 5. Asset Information by Area/Group

Copy the template from Table 4 into another worksheet, preferably in the same workbook. Label the column headings with the names of the major assets available to each of the selected populations. For each area/group, indicate the major types of assets held. (Study Table 6 as well, to make sure both include the same assets).

**Table 5: Socio-economic Group Assets**

Province	District	SE Group	Productive Assets			Liquid Assets				
			Land (size)	Plow Oxen	Other	Food Stocks	Livestock	Jewelry	Consumer Goods	Other
Coast	Taita Taveta	Farmer2								
Coast	Taita Taveta	Farmer3								
Coast	Taita Taveta	Fisher								
Eastern	Embu	Farmer1								
Eastern	Embu	Farmer3								

Sources:

Asset Information

Definition of SEGs:

Farmer1 =

Farmer2 =

Etc

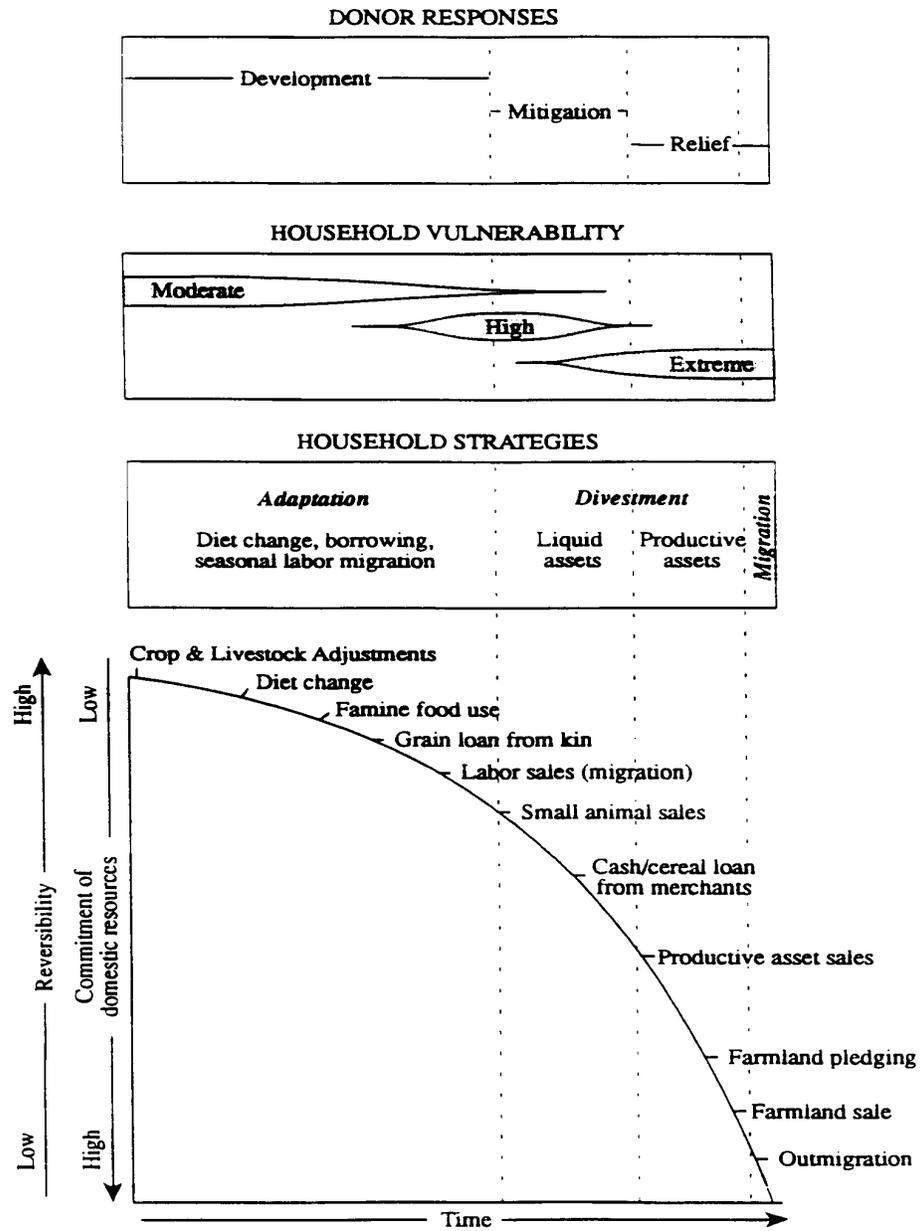
## 6. Coping Strategies by Area/Group

The purpose of this database is to consolidate information on the coping strategies used by each population (area/group) to offset food insecurity. Ideally, the information would list the particular strategies used by each population and provide a sense of when each strategy is used. The goal is to translate the ideas captured in the figure below into an operational ordering of coping strategies used by each group.

Two suggested ways to capture information on coping strategies by socio-economic group in a database.

- Identify and use the coping strategies as column headings (Table 6a). In each cell, place a code for the degree of severity for each population that employs that strategy. The strategies listed in the table are taken from the figure and should be adapted as needed for country-specific experience.
- Alternatively, identify and use the degree of intensity as column headings (Table 6b). Place specific codes for coping strategies in the appropriate cells. Again, the strategies listed in the table are taken from the figure and should be adapted as needed for the country-specific situation.

**Figure: 1 Household Response to Food Security Emergencies**  
 (taken from CVA Guidelines Chapter 2)



Source: CVA Guidelines Chapter 2 (CVA Background and Conceptual Framework). Adapted from Watts, 1983.

**Table 6a: Socio-economic Coping Strategies (By strategies)**

Province	District	SE Group	Crop/Livestock Adjustments	Diet change	Famine Food use	Grain loan from kin	Labor sales	Small animal sales	Loans from Merchants	Prod. Asset Sales	Farm land pledging	Farm-land sale	Out-migration
Coast	Taita Taveta	Farmer2											
Coast	Taita Taveta	Farmer3											
Coast	Taita Taveta	Fisher											
Eastern	Embu	Farmer1											
Eastern	Embu	Farmer3											

Sources:

Coping Strategy Information:

Definition of SEGs:

Farmer1 =

Farmer2 =

etc.

Codes for Severity of Coping Strategies *{example}*

1= Adaptation: belt-tightening strategies with a high degree of reversibility, low commitment of domestic resources, associated with moderate food insecurity.

2=Divestment of Liquid Assets: moderate degree of reversibility, moderate commitment of domestic resources, associated with high food insecurity.

3=Divestment of Productive Assets: low degree of reversibility, high commitment of domestic resources, associated with high to extreme food insecurity.

4=Migration: very low degree of reversibility, destitution, associated with extreme food insecurity.

**Table 6b: Socio-economic Coping Strategies (by degree of intensity)**

Province	District	SE Group	Adaptative Responses			Divesting of Liquid Assets			Divesting of Productive Assets			Destitution		
			Cope1	Cope2	Cope3	Cope4	Cope5	Cope6	Cope7	Cope8	Cope9	Cope10	Cope11	Cope12
Coast	Taita Taveta	Farmer2												
Coast	Taita Taveta	Farmer3												
Coast	Taita Taveta	Fisher												
Eastern	Embu	Farmer1												
Eastern	Embu	Farmer3												

Sources:

Coping Strategy Information:

Definition of SEGs:

Farmer1 =

Farmer2 =

etc.

Codes for Coping Strategies *{example}*

1=Crop/Livestock Adjustments

2=Diet change

3=Famine Food use

4=Grain loan from kin

5=Labor sales

6=Small animal sales

7=Loans from Merchants

8=Oxen Sales

9=Farmland pledging

10=Farmland sale

11=Out-migration



# **FEWS Current Vulnerability Assessment Guidance Manual**

## **Chapter 7**

### **The FEWS CVA Process**

**August 1999**

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# THE FEWS CVA PROCESS

## FEWS CVA GUIDELINES: CHAPTER 7

### A. Action List For CVA Author

- Determine a schedule for the CVA process in collaboration with the appropriate FEWS/RFFR and FEWS/W Point Person, taking care to coordinate with key collaborators (see CVA Memo Guidance). Include dates for submitting:
  - A. CVA Memorandum
  - B. First draft
  - C. Second draft
  - D. Final draft
- Submit CVA Memorandum 4 months before deadline for 1<sup>st</sup> draft of CVA
- Identify socio-economic groups
- Assess national food balance analysis
- Assess household food ability
- Assess household food access
- Assess household food utilization
- Assess household food security
- Corroborate results
- Submit a plan to FEWS/W point person for disseminating the CVA results, developed in collaboration with RFFR.
- Make sure the CVA complies with the Criteria for Review (below)
- Submit First Draft
- Submit Second Draft
- Submit Final Draft
- Disseminate Results

### B. Preparing the CVA Document

To simplify the review and publication process, CVAs should be well written, technically and grammatically correct and have clearly defined definitions and sources. The emphasis should be on content, rather than length or formatting.

#### 1. The CVA Template

The CVA template provides the basic outline, boilerplate definitions and graphics and some suggested text for the FEWS Current Vulnerability Assessment. The purpose of the template is to harmonize the flow and logic presented in FEWS CVAs, contributing to the FEWS “look and feel” of the final report.

The CVA author is requested to type directly into an electronic version of this document. (FEWS field staff can request a Word 7 version from FEWS/W). The template has a simple format, with minimal use of Word styles, to avoid confusion and facilitate publication.

There are several components of the Template:

- **The Outline** includes the critical components of the FEWS CVA and the general flow of the argument. It can be revised as needed to suit local needs. For example, the names and addresses of collaborators should be added to cover page, if relevant.

There may be alternative outlines that also cover the key FEWS ideas. For example, the current template organizes the discussion of food security first by population group (location/socio-economic group), and within those groups, discusses the three components of food security (access, availability, utilization). Alternatively, this section could be organized by level of food security (secure, moderately insecure, highly insecure and extremely insecure), with a list of the populations under each category, followed by an analysis of the three components of their food security.

Because it devotes excessive space to food secure areas and is highly repetitive, an outline which is organized by the steps of the analysis (with a discussion of each of the components of food security) is discouraged.

- **Boilerplate Definitions**  
FEWS boilerplate definitions have been included in boxes. These definitions are what make this a FEWS CVA. Review the text carefully to make sure it is correct for your CVA. Do not modify the boilerplate text without specific discussion with the VA Committee.
- **Boilerplate Graphics/Tables**  
FEWS boilerplate graphics and tables have also been included in boxes. In some cases, an example from previous FEWS CVAs has been included. This example should be replaced or modified with the appropriate country-specific information covering the basic ideas found in the example.
- **Suggested Text**  
In addition to boilerplate definitions and graphics, some ‘helpful’ language has been supplied to guide the flow of the sections. The author can revise this text.

Fill in blanks and XX's with country-specific information (marked in blue) and add additional text, tables and graphics as needed.

## **2. Length**

The purpose of a CVA is to inform decision-makers which areas or groups of people are or are likely to become food insecure in the current consumption period. The CVA should be long enough to provide that information, as well as explain the underlying reasons for vulnerability so that proper monitoring and targeting can take place. It should be short enough so that decision-makers will read it. Target length is 15-20 pages, not counting appendixes.

## **3. Final Version of the Text**

- Digital versions of text should be submitted in Word 7, following the format laid out in the CVA Template. An electronic version of the Word 7 template file is available from the FEWS/W VA Committee.
- Footnotes should be kept to a minimum. Information pertaining to sources or definitions should be moved into the text whenever possible.
- All acronyms should be spelled out when first encountered in the text, followed by the abbreviations in parentheses. They should be included in the List of Abbreviations.

## **4. Final Graphics (tables, charts and maps)**

- Graphics must be referenced in the body of the report and support the arguments made in the text.
- Graphics, especially tables, should be kept to a minimum in the text. Use appendixes to show components of the analyses.
- A citation of the data source must be included for each graphic.
- Axes and legends must be labeled and the units of measure used must be understandable.
- Data for all supporting graphics should be submitted using FEWS standard issue software (Excel, Atlas, etc). Countries and administrative units should use the FEWS ID codes used in FEWS \*.bna files.

## **5. Documentation**

Authors should keep documentation of the process followed in identifying and quantifying groups and regions in their respective countries for project historical and comparison purposes. Copies of this material should be provided to the VA Committee if it assists in the interpretation of the results.

## C. Review Process

In order to maintain a high quality, uniform and succinct CVA product, all FEWS CVAs will be reviewed by the VA Committee before being distributed in final draft in country.

### 1. Key players in the CVA process

- The AFFR/CFFR, who is the primary author of the CVA
- The Regional FEWS Field Representative (RFFR), who serves as resource, reviewer and VA Committee link with the primary author (AFFR/CFFR)
- The FEWS/W point person (PP), who coordinates the review process on the FEWS/W side, serving as an *ad hoc* member of the committee. The PP would usually, but not necessarily, be the country Regional Coordinator. The PP is responsible for handling all CVA-related communications between the VA Committee and the primary authors, as well as bringing technical and scheduling matters to the attention of the VA Committee. The PP is responsible for keeping the process in line with the terms set out in the VA memo and with helping the authors with the analysis if needed. The PP represents the CVA authors to FEWS/W.
- The VA Committee, which provides technical support to FEWS analysts and reviews CVA memos and CVA drafts for consistency with FEWS guidelines and definitions. The VA Committee is made up of a chairperson and one to three reviewers, including the point person, consulting FEWS/W and FEWS/Field technical specialists as needed.
- The VA Committee Chairperson, who identifies and coordinates participants in each VA review process, keeps the VA Committee on schedule and brings important matters to the attention of the FEWS Director
- The FEWS Director, who approves the final CVA draft

### 2. The steps in the CVA review process are:

- Step 1: VA Committee Chair appoints a point person to oversee the CVA-writing process on behalf of FEWS/W.
- Step 2: The PP works with the FFR to set a CVA deadline. The deadline is determined by the local agricultural calendar and the planning horizon for relief decision-making.
- Step 3: FFR drafts CVA memo and sends it to the PP (4 months prior to CVA deadline).
- Step 4: The PP and the VA Committee review the CVA memo and either approve it (go to step 6) or return with comments to FFR (2-week turnaround).
- Step 5: FFR revises CVA and sends it to the PP (if needed).

- Step 6: The PP and VA Committee review the CVA and either approve it or send comments to FFR (2-week turnaround)
- Step 7: VA Committee submits CVA to Director with recommendation for final approval (1-week turnaround)

Steps 3 through 6 may require several iterations between the FFR and the VA Committee. Turn-around time for each iteration is 2 weeks at either end.

### **3. Criteria for Review**

CVAs submitted to the VA Committee will be reviewed according to the criteria below. For more details, refer to the appropriate technical appendix that covers that part of the CVA.

- I. Mandate
  - Does the CVA fulfil the FEWS objectives of:
    - 1. Evaluate whether there will be enough food available at the national level to meet the consumption needs of the entire population?
    - 2. Identify populations (locations/groups) for which the 'average' household is likely to be food insecure?
    - 3. Describe the extent to which households in these locations/groups are food insecure?
    - 4. Evaluate the impact of potential shocks to food security in the country in the current consumption period?
    - 5. Provide a basis for determining where concerted monitoring and possible interventions (including emergency food aid) may be needed?
    - 6. Summarize the actions that are being taken or need to be taken to respond to any food emergencies?
- II. Approach
  - A. Are the conceptual definitions consistent with FEWS Guidance?
    - 1. Definition of Food Security, in terms of availability, access and utilization,
    - 2. Categories of food insecurity, in terms of moderately, highly and extremely food insecure.
  - B. Is the assessment carried out at both the national and the household levels (with the latter being represented by identified groups/areas)?
- III. Method
  - A. Is there a clear statement and accurate use of the main parameters:
    - 1. Production period (growing seasons)
    - 2. Consumption period
    - 3. Administrative level of analysis
    - 4. Socio-economic groups

5. The common unit of analysis used for the quantitative portions of the assessment
  6. Criteria for assessing quantitative information (consumption threshold)
- B. Is national food security convincingly analyzed using a food balance analysis?
  - C. Is household food security convincingly analyzed using
    1. Availability
    2. Access
    3. Utilization
  - D. Has the analysis applied generally accepted statistical methods to the most disaggregated and reliable data available?
  - E. Does the analysis convincingly incorporate qualitative information on unmeasured sources of food access to address the possible gap between the consumption threshold and those sources of food access that were measured?
  - F. Does the analysis combine variables in a clear, defensible and explainable way that allows an understanding of the relationships between indicators?
  - G. Are households convincingly classified into the FEWS food security categories?
    1. Are methodological explanations clear and transparent?
    2. Do the numbers of people assigned to food security categories represent the total population of identified group/area?
    3. Is the point made that not all people in a given group/area are necessarily food insecure?
  - H. Does the analysis cross check the results using outcome indicators, sensitivity analyses or field trips?
- IV. Presentation
- A. FEWS CVA outline followed, or logically modified
  - B. Appropriate use of boilerplate text
  - C. FEWS Word 7 template employed (with proper formatting)
  - D. Text clear, concise and grammatically correct
  - E. Clear relation between analysis and final results
  - F. Clear relation between final results and proposed responses (actions)
  - G. Minimal inclusion of 'chronic' information, except where needed to interpret current information
  - H. Appropriate use of graphics
  - I. Figures properly labeled
  - J. Data sources clear
  - K. Transformations of data clear
  - L. Names and addresses of collaborators included
  - M. Acronyms and abbreviations clarified
  - N. Appropriate length (i.e., short)



# **FEWS Current Vulnerability Assessment Guidance Manual**

## **Chapter 8 Collaborative CVAs**

**August 1999**

*The Current Vulnerability Assessment guidance has resulted from synthesizing the concepts and best practices developed and applied by USAID FEWS Project professionals. It is an analytical tool for practitioners. Given the challenges of applying these methods in the varying environments where FEWS and its partners work, this material will be reviewed and updated from time to time. However, the next review is unlikely to occur before June 2000.*

# **COLLABORATIVE CVAS**

## **FEWS CVA GUIDELINES: CHAPTER 8**

FEWS CVAs usually entail collaborative relations. Some FEWS CVAs are fully designed, executed and written up by collaborative committees. Others are undertaken by FEWS staff using analyses generated by other organizations (such as food balances computations, deficit village lists, etc.). The purpose of this chapter is to highlight issues involved in setting up successful collaborative relationships for CVAs.

The CVA process should meet two different objectives of the FEWS Project: identifying food insecure populations for better intervention targeting and building in-country capacity to conduct similar analyses. For the most part, these two objectives are mutually reinforcing. Sincere collaboration leads to a richer product, builds consensus and usually generates better links to the decision-making process. Collaboration, however, also entails compromises by all parties. FEWS field representatives may need to modify the proto-typical CVA as laid out in these guidelines, while remaining true to the fundamentals of FEWS CVAs. Additionally, FEWS field representatives may need to clarify issues related to intellectual property and dissemination with their collaborative partners to avoid misunderstandings later in the process.

### **A. Characteristics of FEWS-Generic CVAs**

The CVA analysis is designed to be FEWS-generic and country-specific. There are at least six broad dimensions that characterize any CVA analysis, in order of priority: 1) mandate, 2) approach, 3) methodology, 4) process, 5) presentation and 6) ownership. Because the information, stakeholders, and decision-making process varies among countries, the final CVA reports will undoubtedly differ along these dimensions. Consistency with those characteristics at the top of the list, especially mandate and approach, is essential if FEWS is to accept a local CVA. There is much greater tolerance for differences in those characteristics described at the end of the list.<sup>1</sup>

- 1) **Mandate:** FEWS is expected to provide decision-makers with useful information that identifies the nature and scope of food security problems, a sense of how the problem came about and the appropriate ways to deal with it. For the current consumption period, the FEWS CVA:
  - evaluates whether there will be enough food available at the national level to meet the consumption needs of the entire population,

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<sup>1</sup> See section C.3 in CVA Guidelines Chapter 7: The FEWS CVA Process for a more specific, operational statement of the criteria for review.

- identifies populations (locations/groups) for which the ‘average’ household is likely to be food insecure,
- describes the extent to which households in these locations/groups are food insecure,
- evaluates the impact of potential shocks to food security in the country in the current consumption period,
- provides a basis for determining where concerted monitoring and possible interventions (including emergency food aid) may be needed, and
- summarizes the actions that are being taken or need to be taken to respond to any food emergencies.

Given the type of information that is available at the central level, the necessarily broad coverage of the analysis and the limited resources devoted to the report, the analysis is not intended to identify the exact beneficiaries that require assistance nor determine exactly what intervention is needed. Furthermore, the interventions proposed must be generally consistent with US Government policy (even if not carried out by the USG). If an assessment of food insecurity engages, or appears to engage, FEWS or USAID in promoting solutions that are seen to be inappropriate in either of those organizations, then FEWS should not accept its identification with the assessment.

- 2) Approach: FEWS has a long history of iterative development of how best to assess vulnerability to food insecurity, based on an analysis of food availability, access and utilization at the national and household levels. The approach taken must include the three basic pillars of food security (availability, access and utilization) and use that information to group households into categories analytically comparable to the FEWS classification: food secure or moderately, highly or extremely food insecure. FEWS cannot accept a VA analysis based solely upon nutritional conditions, the national food balance, or an unstructured compilation of indicators associated with food security.
- 3) Method: Essentially, FEWS CVAs must be rigorously argued following the conceptual framework laid out in these guidelines. The choice of method for analyzing the components of food security (availability, access and utilization) will be driven by the characteristics of the data and information available. FEWS therefore allows for substantial differences in the type of measurement carried out (qualitative or quantitative), the measurement unit used (kg, calories, maize equivalents, etc.), the administrative unit of assessment, the socio-economic groups identified, and various other factors.

The method should be acceptable as long as the CVA:

- considers access, availability and utilization;
- applies generally-accepted statistical methods to the most disaggregated and reliable data available;

- sets defensible parameters (consumption thresholds, time periods, units of analysis);
- incorporates the necessary qualitative information needed to fill in data gaps;
- combines variables in a clear, defensible and explainable way that allows an understanding of the relationships between indicators;
- cross checks the results using outcome indicators<sup>2</sup>, sensitivity analyses or field trips; and
- is explained clearly.

CVAs that include analytic products beyond those specified by FEWS will also be acceptable, assuming the core of the assessment produces the minimum of what FEWS requires.

- 4) **Process:** In some FEWS countries, the process under which a CVA is undertaken is exactly that specified by current FEWS guidance, in which the timing, pre-assessment products, dialogue with FEWS/W, and the other required steps are described. Where FEWS is engaged in collaborations with many players focused on building local capacity, then a different process will be allowed if the mandate, approach and method are generally consistent with FEWS guidelines. Some case-by-case accommodation may be needed when the collaborative process does not meet FEWS timing needs, or when the presentation of the local product makes it difficult for FEWS to publish it.
- 5) **Presentation:** There may be cases where the approach, method and process will be acceptable to FEWS, but the presentation may be radically different from the FEWS CVA template because of local imperatives. These may relate to the length of the assessment (too long or too short), the aesthetics of presentation (too many graphs, charts, tables), the terminology (similar concepts but different terms) or requirements set out by local decision-makers. These may need some special preamble when presented in a FEWS web site, or other FEWS product-type, but if they meet the other tests described above, they should be acceptable.

Alternatively, there may be cases where the collaborative process generates CVA inputs that FEWS is free to write-up into its own report, following the FEWS CVAs Guidelines (see B, below).

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<sup>2</sup> An outcome indicator would be information (either qualitative or quantitative) pertaining to the likely outcome of the population's food security status. For example, if a population has been classified as highly food insecure, information on the outcome of such a problem should be consistent with the ranking. Information on rising rates of child malnutrition rates and labor migration would support the ranking. The absence of such trends, perhaps combined with high prices (strong demand) for luxury items such as meat and milk or silos full of grain would suggest that the population was misclassified as highly food insecure.

- 6) Ownership: In some cases, a local CVA collaborative group may not want to identify explicitly the approach, method, process, or presentation as “belonging” to FEWS. If all the other factors mentioned above are acceptable, and FEWS’ participation in the process and product is noted, then the product can be acceptable to FEWS.

## **B. Alternative CVA products**

While the collaborators may come together for key parts of the analysis and interpretation, they may want to write-up their results for different constituencies. Under these conditions, the writing of the CVA could be done in two steps:

Step 1: Basic Draft. The collaborators would prepare a first cut draft of the CVA which serves as a road map to the analysis. It includes an introduction (bulleted), a methodology section (bulleted and referring to the already completed document), an analysis section (just the tables and maps that show the progression from data analysis to designating areas by levels of food insecurity) and a recommendations section (bulleted). This road map document will allow the results and recommendations to be produced and discussed more quickly. An additional benefit of this “bare bones” draft is that once it is agreed upon by all parties, each collaborator can begin to write for their own respective audience.

Step 2: Additional Analyses: Depending on the needs of the food security community in-country, the collaborators in various arrangements might decide to generate any or all of the following products:

- Collaborators Analyses. The collaborators could then expand the basic draft into a full-fledged analysis or summary report, as relevant to local conditions. The production of such documents would be much faster once all parties have agreed to the substance of the report (Step 1).
- Individual Agency Reports: FEWS, or any other of the agencies involved in the initial collaboration, could write the information from the basic draft (step 1) into a FEWS CVA, as set out in the FEWS CVA Guidelines.

## **C. Documenting the Collaborative Process**

As they say in the New England region of the United States, “Good fences make good neighbors”. In any collaboration, it is important to be clear about each party’s rights and responsibilities. While contracts with partner agencies are not necessary, it is wise to document joint decisions related to the CVA. In particular, understandings should be clear concerning:

- schedules,
- resources devoted to the CVA,

- input of different reviewers and the reasons that reviewer suggestions were or were not incorporated into subsequent drafts,
- dissemination procedures (including rights to print copies or post electronically), and
- scope for extracting or repackaging results into alternative reports.



# **FEWS Current Vulnerability Assessment Guidance Manual**

## **Chapter 9**

### **The CVA Memorandum**

**August 1999**

*The Current Vulnerability Assessment guidance has resulted from synthesizing the concepts and best practices developed and applied by USAID FEWS Project professionals. It is an analytical tool for practitioners. Given the challenges of applying these methods in the varying environments where FEWS and its partners work, this material will be reviewed and updated from time to time. However, the next review is unlikely to occur before June 2000.*

# **THE CVA MEMORANDUM**

## **FEWS CVA GUIDELINES: CHAPTER 9**

The CVA memorandum describes how the authors of the CVA plan to carry out the major steps in the analysis. Ideally, the explanations provided in the CVA memorandum will serve as text for the CVA report itself. To save time, the section headings in the memorandum generally mirror those in the CVA template.

The CVA Memorandum is written by the CVA author(s) and submitted to Point Person four months before the deadline for the final version. The memorandum allows the Point Person and VA Committee to coordinate with the author(s) early in the assessment process to ensure that the final CVA will be consistent with FEWS definitions and approaches.

Please provide information on the following points. Responses can be written directly into a digital version of these pages, preferably in a different color.

### **A. INTRODUCTION**

#### **1. Objectives**

List the specific questions your particular CVA proposes to answer. A FEWS-generic list is suggested in the Introductory Section of the CVA Template; modify as needed.

#### **2. Context**

- What growing season(s) is covered by the analysis (month/year to month/year)?
- What *consumption period* will the analysis cover (month/year to month/year)?
- What administrative level will be used for the analysis of household food security? How many such units are there, and what is their average population?

### **B. NATIONAL FOOD SECURITY**

#### **1. Example of Food Balance**

Attach a sample Food Balance Sheet (Table 2 in the CVA Template). Preferably, attach last year's Food Balance and describe any changes you propose to make.

## 2. Consumption requirements

What consumption requirement will be used in the food balance analysis? If there is not widespread agreement about this requirement in-country, please discuss the alternatives and justify your choice.

## 3. Caveats and Uncertainties to Analysis of National Food Security

- How much confidence do you have in the data used for computing the food balance? Which data series are good, and which are unreliable? What steps will you take to check whether the calculations make sense?
- Which other organizations estimate the country's Food Balance and how does their methodology differ from yours? For example, will the FEWS food balance be the same or different from the official government, CILSS, SADC, IGAD or FAO versions? Why, and in which direction (more surplus, more deficit)?
- What risk factors in the upcoming consumption period might significantly change the national food balance (such as 2nd season crop failures, changes in border policies or exchange rates, conflicts, etc)? How are you planning to identify and incorporate those potential changes in the Food Balance analysis or write-up?

# C. HOUSEHOLD FOOD SECURITY

## 1. Socio-economic groups

Will the CVA distinguish between socio-economic groups within the selected administrative unit? If so, which groups (provide name and brief description)? What important socio-economic groups will not be included? If the CVA will not distinguish between socio-economic groups, discuss why not.<sup>1</sup>

## 2. Sources of Household Food Access

Fill in the following table with the important sources of food access (incomes and asset sales) in-country<sup>2</sup>. Some examples have been given in the table; expand or contract the table as needed. Describe the form of the available information in terms of whether it is:

- Quantified = a data series is already available in final form
- Proxied = a data series can be derived from various sources of information (production from NDVI, etc)

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<sup>1</sup> For a discussion of how to define the administrative levels and key socio-economic groups for a CVA, see the *CVA Guidelines Chapter 6: Identifying Population Groups*.

<sup>2</sup> Refer to *CVA Guidelines Chapter 6: Identifying Population Groups* for suggestions on how to characterize the incomes, assets and coping strategies of the major socio-economic groups.

- Qualified = information on the performance of this source of food access is available in relative terms only (such as poor/average/good)
- Omitted = no information is available in any form

<b>Major Sources of Food Access</b>	<b>Nature of Information Quantified, Proxied, Qualified or Omitted?</b>
Direct Sources of Food Access	
Food Crop Production	
{list specific food crops}	
Retained Food Stocks	
{list specific food crops}	
Animal Products	
{list specific animal products}	
Wild Foods	
{list specific wild foods}	
Indirect Sources of Food Access	
Cash Crop Sales	
{list specific cash crops}	
Animal Product Sales	
{list specific species}	
Other Agricultural Product Sales	
Forestry Products	
Fishery Products	
Off-farm incomes	
Wages	
Petty Commerce	
Artisan/Self-Employment	
Transfers	
Remittances	
Program Food Aid	
Emergency Food Aid	
Other {specify}	
Asset Sales	
Liquid	
Jewelry	
Consumer Goods	
Productive	
Plow animals	
Tools/Equipment	
Land	
etc	

### **3. The Common Denominator**

- Describe the units that will be used to express the quantifiable sources of food access. Examples include: monetary units, maize-equivalent monetary value, calories, cereal equivalent kilograms or other (explain).
- For the common unit you have selected, describe the actual data you will use. If, for example, you will be using commodity prices, clarify the type of price (wholesale, retail, other), the period, the level of disaggregation (national, district markets, other) and the source of the prices. If you will be using calorie conversions, provide a table of the caloric values for the key foods; give the source.

### **4. Reference Criteria**

Describe the criteria that will be used to evaluate the quantifiable components of household food access. Specifically describe your proposed:

- Consumption threshold (will it be the same as the one in the food balance?)
- Baseline (or average) reference period (which years?)
- Other

### **5. Handling Qualitative Information on Food Access**

- Is information available on how important each unmeasured component of food access is in relation to the total? Do you have (or can you patch together) rough estimates of their share of the income pie for a comparable production/rainfall year?
- Describe your approach for incorporating this unmeasured information into the analysis of food access?<sup>3</sup>

### **6. Handling Food Availability**

Are there important impediments to the flow of food into food-deficit regions? What are they? How do you propose to evaluate their impact on food security?<sup>4</sup>

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<sup>3</sup> See *CVA Guidelines Chapter 4: Household Food Security* for a discussion of possible approaches.

<sup>4</sup> See *CVA Guidelines Chapter 4: Household Food Security* for a discussion of possible approaches.

## **7. Handling Food Utilization**

Are there important impediments to the ability of individuals to actually ingest and metabolize the nutritional value of the accessible and available foods? What are they? How (if at all) do you propose to evaluate their impact on food security?<sup>5</sup>

## **8. Classifying Levels of Food Security**

All FEWS CVAs must use the FEWS classification of food insecurity (food secure, moderately food-insecure, highly food-insecure, extremely food-insecure).<sup>6</sup> If an alternative classification scheme will also be used due to collaboration with other organizations, provide a translation of non-FEWS terms into FEWS terms.

## **9. Caveats, and Uncertainties to Analysis of Household Food Security**

What risk factors could alter the final assessment of household food security given in the CVA? How will these be handled? Quantifiable examples include sensitivity analyses with prices or alternative crop production figures (reflecting perhaps a 10-30% revision in the figures between the preliminary and final estimates). Other examples include discussions of the localized effects of flooding, wars, etc.

## **D. Collaborators**

- List potential collaborators for the overall report, or any particular sections (spell out acronyms).
- Describe how you will collaborate with these groups (joint authorship, participation on panel of experts, etc.).
- Discuss any implications for the FEWS VA review process.
- What organizations will FEWS be collaborating with to compute the Food Balance? (Spell out acronyms.)

## **E. Dissemination**

Describe plans for disseminating the results of the CVA analysis.

## **F. Schedule**

Provide a schedule for the major steps in your CVA process. The list below assumes the submission is a first draft of the completed CVA; it is also possible to submit components of the CVA along the way (such as the introductory text, methodological write-up, and preliminary results and conclusions).

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<sup>5</sup> See *CVA Guidelines Chapter 4: Household Food Security* for a discussion of possible approaches.

<sup>6</sup> See *CVA Guidelines Chapter 4: Household Food Security* for the definitions of the levels of food insecurity.

- Approximate date that preliminary production data for the major season will become available
- Approximate date that final production data for the major season will become available
- Approximate timing of most food aid decisions in country
- First draft of CVA
- Second draft of CVA
- Final draft of CVA
- Any other in-country deadlines that may be relevant to process (e.g., dates set in collaboration with other agencies).