



Comprehensive Food Security & Vulnerability Analysis Guidelines

January 2009 • first edition



World Food
Programme

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Humanitarian Aid

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Foreword

Fighting hunger in a changing world demands that we stay vigilant in our efforts to collect, analyze and disseminate information that is so very critical for designing and implementing hunger solutions which can save lives in emergencies, as well as putting the hungry poor on the path to food security.

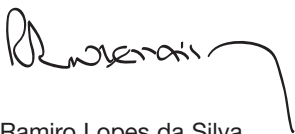
Understanding food security and vulnerability has always been challenging. Yet the emergence of relatively new phenomena such as the recent high food and fuel prices, the global financial crisis, and climate change, all highlight the need to better understand the lives and livelihoods of vulnerable populations so that effective policies and actions can be implemented to save lives and address the root causes of hunger.

To tackle hunger, we first need to understand three key factors: how food is made available to people; how they economically and physically access food; and how they utilize the food. Understanding the constraints underlying each of these factors is a necessary condition for designing and implementing appropriate and effective hunger reduction strategies.

The Comprehensive Food Security and Vulnerability Analysis (CFSVA) is a unique tool designed to understand these factors. It describes the profile of the food-insecure and vulnerable households, identifies the root causes of hunger, and analyzes risks and emerging vulnerabilities among populations. It provides crucial information on the type of interventions that would be the most effective in reducing hunger, targeting the neediest, informing preparedness and developing contingencies. The range and depth of information provided by CFSVAs are invaluable, not only for WFP, but for the entire humanitarian and development community.

Over the last four years WFP, along with partners, has completed 27 CFSVAs worldwide. This was in large part made possible due to generous support from the European Commission's Humanitarian Aid department (ECHO), the Citigroup Foundation and the Gates Foundation.

This document, built on this experience, will guide WFP food security analysts, programme officers and partner's staff as they undertake Comprehensive Food Security and Vulnerability Analyses.



Ramiro Lopes da Silva
Deputy Chief Operating Officer and Director of Operations

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The guidelines were written mainly by WFP staff and by Tango International, under the umbrella of the Strengthening Emergency Needs Assessment Capacity Plan. The purpose of the plan (2004–2007) was to reinforce WFP's capacity to assess humanitarian needs in the food sector during emergencies and their aftermath through accurate and impartial needs assessments. The effort was funded from internal and external sources, among them, ECHO, the Canadian International Development Agency (CIDA), the Citigroup Foundation, the UK Department for International Development (DFID), and the French, Danish, German, and Belgian Governments.

These guidelines benefited from several peer-review and consultation mechanisms. An initial workshop was held in April 2007, in Rome; a second one, in March 2008, in Cairo. The participants were mainly CFSVA practitioners from within WFP.

A draft of these guidelines was thoroughly reviewed by John Hoddinott (International Food Policy Research Institute), Nancy Mock (Tulane University), and Dan Maxwell (Tufts University), and most of their important comments and suggestions were taken into account in the final version.

WFP expresses special thanks to the many VAM staff, in headquarters and in the field, who in writing these guidelines provided their invaluable knowledge of food security analysis, based on many years of experience in a large variety of countries where food security is an issue.

All the contributions are gratefully acknowledged, although responsibility for the present text, including errors, remains with WFP.

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Untitled boxes



Definitions



Additional information



Examples

Acronyms

ADRA	Adventist Development and Relief Agency
AET	Actual Evapo-Transpiration
AIDS	Acquired Immunodeficiency Syndrome
AIS	AIDS Indicator Survey
AMS	AgroMetShell
ANOVA	Analysis of Variance
AoE	Area of Estimation
ART	Anti-Retroviral Treatment
BSS	Behavioural Surveillance Survey
BMI	Body Mass Index
CBO	Community-Based Organization
CCA	Common Country Assessment
CDC	United States Centers for Disease Control and Prevention
CED	Chronic Energy Deficiency
CFSAM	Crop and Food Supply Assessment Mission
CFSNS	Comprehensive Food Security and Nutrition Survey
CFSVA	Comprehensive Food Security and Vulnerability Analysis
CGIAR	Consultative Group on International Agricultural Research
CFW	cash for work
CHS	Community and Household Surveillance
CI	Confidence Interval
CIDA	Canadian International Development Agency
CO	Country Office
CRED	Centre for Research on Epidemiology of Disasters
CRS	Catholic Relief Services
CSB	Corn-Soya Blend
CSI	Coping Strategies Index
CSPPro	Census and Survey Processing System
CTC	Community-Based Therapeutic Care
DEM	Digital Elevation Model
DFID	Department for International Development (United Kingdom)
DHS	Demographic and Health Survey
DOT	Direct Observation Therapy
DOTS	directly observed treatment, shortcourse
DTP	Desktop Publishing Applications
EFSA	Emergency Food Security Assessment
EMOP	Emergency Operation
EM DAT	Emergency Events Database
EMF	Enhanced Metafile
EOS	End of Season
EPI	Expanded Programme on Immunization
FANTA	Food and Nutrition Technical Assistance
FAO	Food and Agriculture Organization of the United Nations
FCG	Food Consumption Group

FCS	Food Consumption Score
FEWS NET	Famine Early Warning Systems Network
FFW	food for work
FGD	Focus Group Discussion
FSMS	Food Security Monitoring System
GAM	Global Acute Malnutrition
GDDS	General Data Dissemination System
GDI	Gender-related Development Index
GDP	Gross Domestic Product
GEM	Gender Empowerment Measure
GER	Gross Enrolment Rate
GIS	Geographic Information Systems
GLM	General Linear Model
GMR	Global Malnutrition Rate
GMR	Global Mortality Rate
GPS	Global Positioning Systems
GTZ	German Agency for Technical Cooperation
HAZ	height for age
HBC	Home-Based Care
HDDS	Household Dietary Diversity Score
HDI	Human Development Index
HDR	Human Development Report
HH	Household
HIC	Habitat International Coalition
HIC	Humanitarian Information Centre
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HLS	Household Livelihood Security
IASC	Inter-Agency Standing Committee
IDP	Internally Displaced Person
IFPRI	International Food Policy Research Institute
ILO	International Labour Organization
ILWIS	Integrated Land and Water Information System
IMF	International Monetary Fund
IOM	International Organization for Migration
IUGR	Intrauterine Growth Retardation
JMP	Joint Monitoring Programme
LCA	Logistics Capacity Assessment
LGP	length of growing period
LSMS	Living Standards Measurement Survey
MCDA	Military and Civil Defence Assets
MCH	Mother-and-Child Health
MICS	Multiple-Indicator Cluster Survey
MTCT	Mother-to-Child Transmission
MUAC	mid-upper arm circumference

NCHS	National Center for Health Statistics
NDVI	Normalized-Difference-Vegetation-Index
NER	Net Enrolment Rate
NGO	non-governmental organization
NHDR	National Human Development Report
NOAA	National Oceanic and Atmospheric Administration
OCHA	Office for the Coordination of Humanitarian Affairs
ODAN	WFP Emergency Needs Assessment Service
OEN	WFP Needs Assessment Unit
OLS	Ordinary Least Square
OMXF	WFP Food Security Analysis Service
OVC	orphans and other vulnerable children
PCA	Principal Components Analysis
PDA	Personal Digital Assistant
PET	Potential Evapo-Transpiration
PLHIV	people living with HIV
PMTCT	prevention of mother-to-child transmission
PPS	Probability Proportional to Size
PRA	Participatory Rural Appraisal
PRRO	Protracted Relief and Recovery Operation
PRSP	Poverty Reduction Strategy Paper
PSU	Primary Sampling Unit
RB	Regional Bureau
RFE	Rainfall Estimate
SADC	Southern African Development Community
SAF	Standard Analytical Framework
SAM	Severe Acute Malnutrition
SD	Standard Deviation
SENAC	Strengthening Emergency Needs Assessment Capacity (project)
SO	Special Operation
SOP	Standard Operating Procedure
SOS	Start of Season
SRS	Simple Random Sampling
SSE	sum of squares for error
SSU	Secondary Sampling Unit
SWOT	Strength, Weakness, Opportunity and Threat (analysis)
TANGO	Technical Assistance to NGOs
TB	tuberculosis
TFC	Therapeutic Feeding Centre
TOR	Terms of Reference
UNCCS	United Nations Common Coding System
UNCT	United Nations Country Team
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme

UNHCR	Office of the United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UN-ISDR	United Nations International Strategy for Disaster Reduction
UNU	United Nations University
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USGS	United States Geological Survey
USU	Ultimate Sampling Unit
VAM	Vulnerability Analysis and Mapping
VAM-SIE	VAM Spatial Information Environment
VBA	Visual Basic for Applications
WFP	World Food Programme
WHO	World Health Organization
WAZ	weight for age
WHZ	weight for height
WR	Water Requirement
WRSI	Water Requirement Satisfaction Index

Glossary

Analysis plan – A plan, based on the key hypotheses to be tested, detailing how the collected data will be analysed. It may also guide which data need to be collected from primary sources and which from secondary.

Asset – Anything considered valuable or useful, such as a skill, a quality, or a person.¹ In the Sustainable Livelihoods Framework, the following six categories of assets are defined:

- human: health and nutrition status, physical capacity, skills, level of education, etc.;
- social: household, gender, kinship and other networks; community groups; values and attitudes; etc.;
- financial: income; credit and loans; savings; liquid assets; etc.;
- physical: productive items such as tools and equipment, stores, housing, livestock, and infrastructure;
- natural: land, water, forests, etc.;
- political: power relationships, access to – and influence over – local and higher-level government processes.

Chronic food insecurity – A long-term or persistent inability to meet minimum food requirements.

Cluster sampling – A sampling technique in which the sample is defined in two or more stages. The population of interest is first divided into groups (clusters), usually according to geographical area or location (e.g. villages are used as clusters). Second, a random sample of clusters is selected. Third, households or individuals from the selected clusters are then randomly sampled. There can be additional stages. Sampling units in the second and subsequent stages are selected from within the selected clusters from the previous stage – e.g. households from within a sampled village, or individuals from within a household.

Community group discussion – A discussion with a mixed group of community members that includes men, women, and young people from all subgroups within the community – village, camp, urban neighbourhood, etc.

Comprehensive Food Security and Vulnerability Analysis (CFSVA) – A study, typically conducted in a crisis-prone food-insecure country, that describes the food security status of various segments of the population over various parts of a country or region, with the purpose of indicating the broader underlying causes of vulnerability, and recommending appropriate interventions to deal with problems identified.

Coping strategies – Activities to which people resort to obtain food, income, and/or services when their normal means of livelihood have been disrupted.

1. Chambers Compact Dictionary, Edinburgh, UK: Chambers Harrap Publishers Ltd, 2005.

Coping strategies index (CSI) – A quick and simple indicator of household food insecurity behaviour that reveals how households manage or cope with shortfalls in food consumption. Two CSI have been proposed in the literature: a context-specific CSI and a reduced CSI. While the first is based on a series of context-specific strategies and context-specific severity scores, the second always relies on the same short list of (five) coping strategies and the same severity weights.

Data – Information collected from primary or secondary sources.

Design effect – In the context of sampling, the loss or (exceptionally) the gain in precision of statistical estimates when sampling design differs from simple random sampling.

Focus group discussion – A structured discussion to obtain qualitative information on a particular topic (the focus) with people who are knowledgeable and who have experience in that topic.

Food access – A household's ability to acquire food regularly through one or a combination of home production and stocks, purchases, barter, gifts, borrowing, and food aid.

Food availability – The food that is physically present in the area of concern, through all forms of domestic production, commercial imports, reserves and food aid. This might be aggregated at the regional, national, district, or community level.

Food consumption score (FCS) – A composite score based on the dietary diversity, food frequency, and relative nutritional importance of the various food groups consumed. The higher the FCS, the higher is the dietary diversity and frequency. High food consumption increases the possibility that a household achieves nutrient adequacy.

Food security – The state at which all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life (World Food Summit, 1996).

Food utilization – (i) A household's use of the food to which they have access; and (ii) individuals' ability to absorb and metabolize nutrients (i.e., the efficiency of food conversion by the body).

Gender perspective – An approach that includes a comparative analysis of the roles and relations between men and women, and boys and girls, with respect to division of labour, productive and reproductive activities, access to and control over resources and benefits. The perspective includes systematic investigation of socio-economic and environmental factors that influence roles and relations as well as the differential impacts of humanitarian or development intervention on women and men, girls and boys.

Gender-sensitive indicators – Indicators used to measure the extent of gender inequality (e.g. female share of total, ratio between females and males, gender gap).

Geospatial data set – A set of data that includes detailed location information. The data may be organized by geographic area or with geographic features such as coordinates, and line and polygon attributes.

Hazard – Something that has the potential to cause harm; also, the probability of occurrence of a potentially damaging phenomenon within a given time period and area.

Hazard analysis – The identification, study, and monitoring of any hazard to determine its potential, origin, characteristics, and behaviour.

HIV perspective – An approach that takes into consideration the immediate, medium-term, and long-term effect of HIV and AIDS on food security.

Indicator – A variable or combination of variables that give insight into a particular aspect of a situation.

Information needs – The data that must be collected and processed from primary and secondary sources in order to fulfil assessment objectives.

Key informant interviews – Interviews with individuals who have good knowledge about particular aspects of a community or a given emergency.

Literature review – The collection and assessment of findings in existing documents relevant to a food security analysis being conducted.

Livelihood group – A group of people who share the same basic means of livelihood and lifestyle – the same main subsistence and income-generating activities, and social and cultural practices – and who face the same risks of food and nutrition insecurity.

Livelihoods – The capabilities, assets (both material and social), and activities required for a means of living linked to survival and future well-being.²

Livelihood strategies – The means by which households use resources, household assets, and skills to obtain the income necessary for welfare goals such as enjoying food security, living a healthy life, having sufficient shelter, and educating their children.

Primary data – The data collected during the assessment, (e.g. interviews with key informants, focus groups, households and individuals). Primary data analysis is the process of analysing primary data.

Proxy indicator – An indicator that is used to indirectly measure a variable that is difficult to measure or cannot be measured directly.

Purposive sampling (non-probability sampling) – A method by which groups are selected for interview according to the researcher's choice. Purposive sampling does not involve random selection, so extrapolation of results to wider populations is not

2. Humanitarian Charter and Minimum Standards in Disaster Response, The Sphere Project, Geneva, Switzerland, 2004.

possible; the method's value lies in selecting information-rich cases for in-depth analysis related to the issue being studied.

Qualitative data – Observations that are categorical rather than numerical; qualitative data often includes attitudes, perceptions, and intentions.

Quantitative data – Measurements of quantities, amounts, or ranges, expressed as numbers, that can be analysed using statistical methods and models.

Questionnaire – A series of questions that have been carefully formulated and ordered to provide information from individuals, households, and communities. In a selected sample, the same individual, household, or community questionnaire is addressed to each individual, household, or community, respectively.

Random sampling (probability sampling) – A sampling method in which all members of the sampled population have a known, non-zero chance of being selected. Results can be extrapolated to the entire population with a degree of accuracy that depends on the sample size and the variability of the indicator. Based on formal statistical theory, random sampling allows reliable estimates to be calculated and minimizes bias.

Resilience – The ability to recover after being affected by a shock.

Response analysis – Analysis to determine the need, or otherwise, for an intervention and, when appropriate, to identify the most suitable types of interventions, an intervention's timing, and its targeting criteria.

Risk to food insecurity – The probability of food insecurity resulting from interactions between a natural or human-induced hazard and vulnerable conditions.

Sample – A subset of households or individuals extracted from the total population under study. Samples can be probability or non-probability samples.

Sampling frame – A complete list of potential sampling units. If households are the primary sampling units (PSU), the sampling frame is the list of all the households living in the area under study. Most of the time, food security assessments use villages/clusters as primary PSUs. In such cases, the sampling frame is the comprehensive list of villages of the study area, and for each selected village/cluster, there is a related household sampling frame consisting of all households from the village.

Secondary data – Data collected from outside the current assessment. Examples include data collected by other agencies. Secondary data analysis is the act of re-analysing existing data so that the findings inform the conclusions of the CFSVA.

Semi-structured interview – An interview based on a prepared series of questions and a checklist, the phrasing, order, and form of which are not fixed.

Shock – An event that has a negative impact on food and nutrition security. Shocks can be natural or caused by human action.

Simple random sampling – A technique in which the primary sampling units (PSUs) are selected directly from the sampling frame. Each unit has the same probability of being selected. No intermediate steps are undertaken.

Stage sampling – See cluster sampling.

Stratified sampling – A sampling method by which the population of interest is split up into subgroups (i.e. strata) that have something in common. In the context of food security analysis, administrative boundaries or food security zones can be strata.

Thematic map – A map that displays the spatial pattern of a single theme or series of attributes related to a single subject matter.

Transitory food insecurity – A short-term or temporary inability to meet minimum food requirements, indicating a capacity to recover.

Triangulation – A process for comparing information from different sources to determine if evidence converges.

Vulnerability to food insecurity – Conditions that increase the susceptibility of a household to the impact on food security in case of a shock. Vulnerability is a function of how a household's livelihood would be affected by a specific hazard and how it would manage to cope with this impact.

A photograph of two people, likely of African descent, wearing light-colored traditional robes, bent over and digging in the sand with long-handled tools. A large, white, stylized number '1' is superimposed on the right side of the image. The entire image is covered with a semi-transparent blue filter.

CHAPTER

1

Introduction

WFP's mandate to address hunger and food insecurity demands a comprehensive understanding of household food security situations, particularly in fragile nations, to enable an effective response. WFP food security/vulnerability assessment and analysis is a key tool for programme formulation, and at country level, the Vulnerability Analysis and Mapping (VAM) units provide regular and comprehensive analysis of the prevailing food security situation in a given country to guide WFP and its partners' operational responses. Comprehensively addressing various aspects of food security ensures that WFP plans relevant and efficient interventions based on timely identification of the problem and thorough analysis of its impact on the affected population. This in-depth understanding ensures that WFP targets only those most in need. It also ensures that WFP's response strategies (general food distributions, food for work, food for education, and food for health) are appropriate for saving lives and strengthening livelihoods, thereby reducing future vulnerability.

As of 2008, WFP is operational in 80 countries, and its large technical field network of more than 100 VAM staff members gives it a comparative advantage to undertake food security analysis. Since 2005, WFP, through the multi-donor-funded Strengthening Emergency Needs Assessment Capacity (SENAC) project, has invested millions of dollars to strengthen its food security analysis methodology.

Throughout its existence, the Food Security Analysis Service (OMXF, which incorporates VAM) has worked to provide normative technical guidance in the analysis of food security and vulnerability. Although some of this guidance was published, much of the methodological support given to the field remained without a formal written record.

Under the SENAC project, a refinement and consolidation of food security analysis methodology, primarily as it is used in Comprehensive Food Security and Vulnerability Assessments (CFSVAs), is taking place. The existing draft guidelines for this analysis methodology, along with guidelines on the core principles and themes surrounding CFSVAs, needed to be consolidated, edited, and harmonized. They aim to guide VAM officers and partners with a food security analysis background, in the conduct of the CFSVA.

What are CFSVAs?

The CFSVA process generates a document that describes the food security status of various segments of a population over various parts of a country or region, analyses the underlying causes of vulnerability, and recommends appropriate interventions to deal with the problems. CFSVAs are undertaken in all crisis-prone food-insecure countries. Given their relevance, analytical rigour, and comprehensiveness, CFSVAs have become a key reference for decision makers involved in planning and implementing food security-related programmes. The location-, population-, and livelihood group-specific information and analysis provided through these studies are used to design and implement broader sectoral interventions to address the supply-and demand-side constraints to food security.

CFVSAs involve activities ranging from reviewing existing literature and data to undertaking surveys to collect and analyse primary data. A CFSVA can be an extensive exercise, usually taking around four to eight months from initiation to dissemination of results. The timeframe depends on the size of the study, the political environment, and other characteristics of the country.

The overall objective of a CFSVA is to analyse the food security and vulnerability condition of population groups and communities, and to provide baseline information on the population in a “normal” situation. CFSVAs provide to WFP decision-makers and partners in government, civil society, and the donor community timely and relevant information on household food insecurity and vulnerability, who and how many people are affected, and where they are located, allowing for recommendations on (food) interventions to improve the situation.

CFSVA principles

- CFSVAs should be undertaken, where possible, in partnership with other United Nations system agencies, government counterparts, and key civil society organizations.
- All CFSVAs should include a thorough literature review and secondary data analysis to identify data gaps and, when necessary, to justify primary data collection.
- Analytical methods found in CFSVAs should be clearly defined so as to ensure transparency.
- The shelf life of CFSVAs is determined by the indicators being collected and reported. In most situations, CFSVA findings are valid for three to five years, unless there are drastic food security changes in the meantime.
- CFSVAs can be completed using secondary data in countries and regions where such data are recent and of good quality.

How are CFSVAs used?

Needs assessments:

- CFSVAs can inform the design of WFP operations - especially in the context of protracted relief and recovery operations (PRROs), country programmes, special development activities, and, in some situations, emergency operations (EMOPs).
- In complex emergencies and post-conflict situations, CFSVAs can provide an important form of updated information for all sectors and partners until standard surveys (e.g. income/expenditure, demographic and health surveys [DHS]) can be conducted.

Baseline vulnerability analysis:

- Information found in CFSVAs can be used to design and implement food security monitoring systems, which track key trends and regions within a country.
- CFSVAs can act as a benchmark for emergency food security assessments in the event of a crisis or shock (pre-crisis baseline). Since comparability is a key element, definition of indicators should be standardized and the sampling approach made compatible with eventual subsequent emergency food security assessments (EFSAs).
- In some situations, CFSVAs can be used as a “global food security baseline” against which the impact of specific WFP projects/programmes can be compared (project/results monitoring).

Government policy and rural development initiatives:

- CFSVAs are a strategic entry point for partnership and collaboration with other United Nations system agencies - especially in the context of Poverty Reduction Strategy Papers (PRSPs), UNDAF Common Country Assessments (CCAs), and the United Nations Cluster Approach.
- CFSVAs can be the umbrella under which new WFP research efforts - such as market analyses, cross-border trade, safety nets - are launched.

- CFSVAs can be used as the basis for planning capacity-building initiatives in collaboration with government partners.

CFSV analysis³ is based on a particular understanding of food security and vulnerability. The Food and Nutrition Security Conceptual Framework presented in Figure 1.1 informs not only the selection of indicators for analysis and use in geographic targeting, but also the design of field assessment instruments and the organization of standardized reporting formats.

1.1 PURPOSE AND STRUCTURE OF THIS DOCUMENT

The purpose of these guidelines is to provide the CFSVA analysis team with currently recommended procedures and protocols for undertaking a CFSVA. It is not a manual or protocol, but rather a collection of guiding frameworks, tools, and approaches to CFSVA planning, implementation, analysis, and dissemination. It consolidates existing CFSVA guidelines into one unique, comprehensive document. It should be used as a reference to ensure that most aspects of a CFSVA exercise are adequately covered. The reader should already possess basic knowledge of food security and social research techniques, which should be applied according to the guidance in this document. These guidelines are organized in the following way. First there is a section on the key planning steps for implementing a CFSVA. This is followed by sections organized by the different types of data used: desk review, household and community data collection, and how such data are typically analysed. The next section covers food security analysis, and how information from all sources is combined to answer the key questions of the CFSVA. The document ends with sections on conclusions and response options and report preparation and dissemination. Gender and HIV/AIDS are cross-cutting elements of the document.

1.2 A LIVELIHOODS APPROACH FOR CFSVA⁴

1.2.1 Key terms, concepts, and issues

In the last decade, international and national agencies have used the concept of sustainable livelihoods and the application of livelihoods analysis as a means to better understand and respond to the multidimensionality of poverty and food insecurity. Given that the causes of poverty are complex, it is essential in a CFSVA to understand the web of poverty and people's mechanisms for dealing with it (CARE, 2002).

A DEFINITION OF LIVELIHOOD

A livelihood comprises the capabilities, assets (stores, resources, claims, and access) and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation: and which contributes net benefits to other livelihoods at the local and global levels in the long and short term.

Source: Chambers and Conway, 1992



3. Part of this section is taken from VAM, *VAM Standard Analytical Framework: Role and Objectives of VAM Activities to Support WFP Food-Oriented Intervention*, WFP, Rome, 2002.

4. Information is partly taken from *Integrating "Livelihoods" into Food Security and Vulnerability Analysis: Some Initial Guidance*, WFP draft, 2005.

Livelihood systems are made up of several components:

- The activities households engage in to earn income and make a living. These include a range of on-farm and off-farm activities that together provide a variety of procurement strategies for food and cash.
- The assets and other resources a household possesses.
- Social networks and safety nets, the human and social capital that a household possesses or can call on in times of need.

Thus, livelihood systems are quite diverse. Each household can have many possible sources of entitlement (i.e. the rights, privileges, and assets a household has, and its position in the legal, political, and social fabric of society). (CARE, 2002).

Livelihood strategies and outcomes

Generally speaking, the goal of household livelihood strategies is to improve welfare levels in some way, ensuring that: (a) the household has enough to eat; (b) their fluctuating income is stabilized; (c) children are able to go to school; (d) the household can afford or access health services; or (d) natural resources are better managed.

Households often use their skills and know-how to diversify income sources and offset risks.

Households are able to meet their needs through six main tangible and intangible assets.

1. **Human capital:** skills, knowledge, ability to labour, nutritional status of adults and children;
2. **Financial capital:** financial resources, savings, credit, liquid assets;
3. **Natural capital:** types and quantities of crops grown and harvested;
4. **Physical capital:** assets and land available to households;
5. **Social capital:** informal community support networks, extended family structures, or community labour-sharing systems; and
6. **Political capital:** participation in community decisions and power relations.

Levels of security derived from these assets are generally termed **livelihood outcomes**, a set of factors that govern household welfare. It is important to take into account: which resources must be combined or transformed to ensure sustainable livelihoods; the tradeoffs that exist between resources; which resources are prerequisites to others; and the trends in long-term use (adapted from Scoones, 1998). Household livelihood security is defined as adequate and sustainable access to income and resources to meet basic needs. Basic needs include food, proper nutrition, clean water, health and health facilities, economic and educational opportunities, housing, physical safety, and time for community participation and social integration. Having enough to eat is one of the livelihood outcomes. A household's attempts to secure sufficient amounts of food are a central component of its livelihood strategies. Therefore, food security is a sub-component of household livelihood security. However, food is only one important basic need among several, and adequate food consumption is sometimes sacrificed for other important needs.

1.2.2 Policies, institutions, and organizations

Policies and institutions affect the livelihood choices of poor and food-insecure households and are the last piece of the conceptual framework. Policies are generally split into the following three broad categories:

- **Macroeconomic policies** place the focus on medium- and long-term measures that aim to stabilize a given economy (currency devaluations, labour markets, interest rates on borrowing capital, privatization, financial liberalization, public investments, and trade liberalization).
- **Social policies** place the focus on measures that can improve health and nutrition, education, safety nets, and social protection schemes for the disadvantaged.
- **Sectoral policies** place the focus on specific areas within an overall economy and society (e.g. agriculture, water supply, management and sanitation, energy infrastructure, and the environment).

Institutions and organizations, the structures through which policies are formulated and implemented, represent the interface between households and policymakers.

- The **state**, in addition to services, may provide safety nets, change policies, or limit freedoms, all of which can have positive or adverse effects on livelihood systems.
- **Formal civil society** may offer support of conditions that enable households; or may confine household opportunities.
- **Informal civil society** may negatively or positively influence the livelihood strategies pursued by households.
- The **private sector** may augment or constrict opportunities for households.

The political, institutional, and economic environment has a profound effect on household livelihoods (assets, strategies, and outcomes). For example, the local agricultural policy governing input and output markets has an effect on whether households whose main activity is farming can effectively use their land, labour, water, and livestock (livelihood assets). Input and output markets facilitate the production, movement, and exchange of agricultural commodities (e.g. seeds, fertilizer, storage, marketing, farm-gate purchases). If such systems are inefficient, then farming-based livelihoods are rendered ineffective, leading to losses in income and contributing to a broader decrease in household welfare. This shows clearly how policies and institutions can affect **availability** of assets, **access** to those assets, and ability to utilize assets productively.

1.3 THE FOOD AND NUTRITION SECURITY CONCEPTUAL FRAMEWORK

CFSVA is based on a particular understanding of food security and vulnerability. The Food and Nutrition Security Conceptual Framework informs not only the selection of indicators for analysis and use in geographic targeting, but also the design of field assessment instruments and the organization of standardized reporting formats. The Food and Nutrition Security Conceptual Framework adopted by CFSVAs considers food availability, food access, and food utilization as core elements of food security, and links them to households' asset endowments, livelihood strategies, and political, social, institutional, and economic environment. The strength of the household livelihoods approach lies in its ability to obtain a holistic and multidimensional profile of a micro-level context

- food, nutrition, livelihood, and rights-realization - with strong regional and national contextualization, allowing for the scaling-up of interventions (CARE, 2002).

Food security was broadly defined in the 1996 World Food Summit Plan of Action with the following text:



Food security exists when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

While this is a goal-level notion, it is important to define operational measures of food insecurity, vulnerability to food insecurity, and its determinants. The CFSVA focuses on identifying specific metrics for food insecurity and vulnerability and it adopts a risk analysis framework for understanding the distribution and causes of vulnerability and resiliency of countries, regions, communities, and households.

During a CFSVA, this framework serves two purposes by providing:

- a basis for developing initial hypotheses on the level of vulnerability and food insecurity, and the causes and effects of both; and
- a succinct way of visualizing the relationships among factors that affect food and nutrition security, which is helpful during data collection and analysis.

The Food and Nutrition Security Conceptual Framework is based on UNICEF's Nutrition Framework and the (DFID) Sustainable Livelihoods Framework.

The analysis of food security begins with an examination of livelihood assets; the agro-ecological, political and institutional context of the area; and the resulting livelihood strategies adopted by the people that may lead to food security. Various hazards and more gradual changes affect the macro context and household-level assets and strategies, and hence household food security.

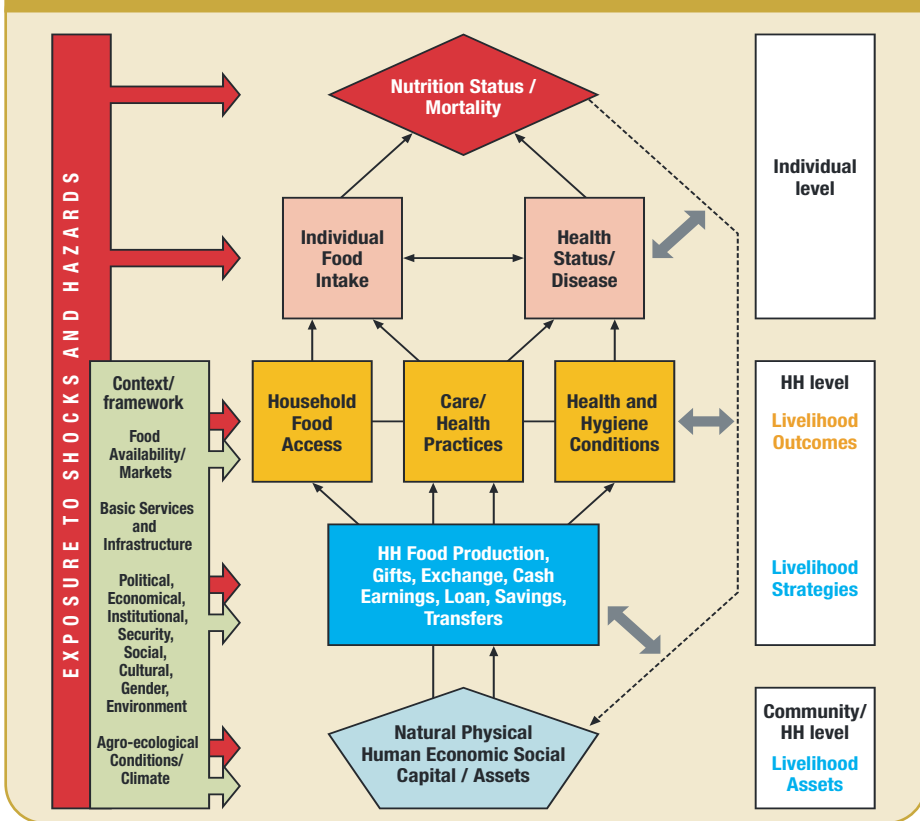
The food security status of any household or individual is typically determined by the interaction among a broad range of agro-environmental, socio-economic, and biological factors. As with the concepts of health or social welfare, there is no single, direct measure of food security. However, the complexity of the food security problem can be simplified by focusing on three distinct, but interrelated, dimensions: aggregate food availability, household food access, and individual food utilization.

Achieving food security requires addressing all three of these separate dimensions, ensuring that:

- the aggregate availability of physical supplies of food from domestic production, commercial imports, food aid, and national stocks is sufficient;
- household livelihoods provide adequate access for all members of the household to those food supplies through home production, market purchases, or transfers from other sources; and
- the utilization of those food supplies is appropriate to meet the specific dietary and health needs of all individuals within a household.

Vulnerability is a forward-looking concept aimed at assessing community and household exposure and sensitivity to future shocks. Ultimately, the vulnerability of a household or community is determined by their ability to cope with their exposure to

Figure 1.1: Food and Nutrition Security Conceptual Framework



the risk posed by shocks such as droughts, floods, crop blight or infestation, economic fluctuations, and conflict. This ability is determined largely by household and community characteristics, most notably a household's or community's asset base and the livelihood and food security strategies it pursues.

The framework shows that exposure to risk is determined by the frequency and severity of natural and man-made hazards, and their socio-economic and geographic scope. The determinants of coping capacity include household levels of natural, physical, economic, human, social, and political assets; levels of household production; levels of income and consumption, and, most important, the ability of households to diversify their income and consumption sources to mitigate the effects of any risks they face.

Coping behaviour involves activities such as the sale of land or other productive assets, the cutting of trees for sale as firewood, and, in an extreme example, the sale of girls into prostitution. These practices undermine not only the long-term productive potential of vulnerable households, but also important social institutions and relationships. The extent of reliance on these destructive practices is an indicator of vulnerability levels during a crisis.

While an understanding of how households cope is important to analysis, knowing how well households cope, or the resilience of household livelihoods, is more important.

How well the local economy can absorb the additional labour or products, such as livestock or firewood, that appear on the market as the result of coping behaviour during a disaster, and the stability of wages and prices for those products, are critical factors in understanding vulnerability.

Food security analysis is primarily a static view of food access and household constraints to that access, from either a short- or long-term perspective. In contrast, risk and vulnerability analysis, because it includes the element of risk that households face in their day-to-day decision-making and their capacity to respond effectively over time, views food access from a more dynamic, forward-looking perspective.

In the end, there is a significant overlap between households that are currently food insecure and those at risk to the severe fluctuations in food access that threaten well-being. While, in concept, all households may be considered vulnerable to a certain degree, from an operational perspective, the primary emphasis of vulnerability analysis should be on households that are nearly, or already food insecure.

CFSVAs should provide stakeholders with an analysis of food insecurity and livelihoods at the sub-national level by addressing the five VAM questions:

1. Who are the food-insecure or vulnerable people?

VAM surveys are conducted at the household level. The collected information is regrouped and analysed in order to create livelihood groups. Looking at household expenditure and income, the analyst is able to determine which are the most vulnerable households and what risks (drought, flood, pest, insecurity) will affect them the most. In Liberia, it was noted that households that had recently returned were particularly vulnerable to food insecurity, as they had to restore their livelihoods in an environment that had been destroyed by the war. These households are now a priority for WFP.

2. How many people are food insecure or vulnerable?

During the design phase of the survey, a sample of households is drawn using probability sampling methods. The prevalence of food insecurity and vulnerability found in the sample is applied to the entire population from which the sample was drawn in order to estimate the total number of food-insecure and vulnerable people. (For example, in Mali, VAM estimated in 2005 that 6.2 million people were food insecure and vulnerable.) These numbers are then used to target WFP PRROs and EMOPs.

3. Where do the food-insecure and vulnerable people live?

CFSVAs provide an essential package of maps showing the areas most affected by food insecurity and vulnerability. These are crucial tools for decision-makers and for targeting aid. The maps are produced by VAM staff with considerable experience in geographical information systems.

4. What are the underlying causes and threats of food security and malnutrition?

CFSVAs collect a wide range of information that allows VAM and WFP to explore the determinants of food insecurity/vulnerability. Using qualitative and quantitative techniques, together with local expert judgment, the CFSVA analysis team is able to identify the local contextual causes of food insecurity and vulnerability.

5. What are the implications for food security interventions?

VAM gives recommendations for interventions in a country based on the conclusions of the CFSVA and input from WFP programme officers and partners in development involved in the CFSVA and in the field of food security.

1.4 BASIC GENDER CONCEPTS, FRAMEWORKS, AND INDICATORS⁵

1.4.1 Gender analysis and CFSVA studies

The purpose of gender analysis is to determine gender disparity. This knowledge can then be incorporated into gender-responsive programming with positive measures taken to level the playing field. The effective integration of gender analysis into CFSVA studies entails exploring how gender roles relate to all aspects of food security (availability, access, and utilization) and food aid interventions. Specific issues include:

- Understanding how gendered division of labour and decision-making power are related to food availability and access;
- Exploring variability of food consumption (i.e. utilization), health, and nutrition by gender and how these factors affect food utilization for both genders;
- Analysing how the benefits of food aid interventions can be effectively targeted to both men and women and used to promote gender equality; and
- Anticipating any negative impacts interventions may have on women or men, girls or boys, or on gender relationships.

Applying a gender perspective to CFSVA studies demands that a gender-sensitive approach be taken during research design, data collection, data analysis, reporting, and, ultimately, programme planning. This requires an explicit sensitivity to the varying needs of men and women. It is therefore crucial to involve men and women in all stages of the research, and to sensitize enumerators and other research team members to gender issues relevant to the context in which a study is being conducted.

Avoiding assumptions

Although the term gender has often been misinterpreted as focusing on women, a gender perspective requires a comparative analysis of men and women, as well as the relations between them.

Assumptions concerning the relationship between gender and vulnerable groups are inappropriate prior to the analysis of the particular context under study, and run the risk of introducing bias into the research design.



1.4.2 Gender analysis frameworks

Gender relates to all three aspects of food security:

- **food availability** - productive, reproductive and community roles;
- **food access** - differentiated access to and control over resources, power, and decision-making at the household and community level; and
- **food utilization** - caring practices, reproductive health, gender-specific diseases.

5. Information in this section draws heavily on the *Thematic Guidelines: Integrating a Gender Perspective into Vulnerability Analysis*, WFP, 2005.

Box 1.1: Challenges of incorporating a gender perspective in different settings

In some of the settings in which CFSVA operates, gender disparities are obvious, and inform and shape everyday life. In these settings, the challenge is to bring a gender perspective to the analysis of food security and vulnerability, while respecting local culture.

In other settings, gender disparities are more subtle. The challenge in these settings is to design perceptive studies that are able to capture less obvious gender variance, inequity in gender relations, and the relationship of these factors to food security and vulnerability.

The following case provides an example of how gender inequities can be both pervasive and obvious, and more subtle and nuanced.

In Malawi, gender inequalities exist because of discrimination within families and institutions, and because of the social and cultural norms that perpetuate the beliefs and practices detrimental to women. The greatest challenge to achieving gender equality is overcoming socially accepted cultural beliefs and ideologies that emphasize male dominance. In Malawi, marriage customs that establish men as dominant heads of household are an important form of gender discrimination. These customs underlie property rights and inheritance practices that disadvantage women. The socialization of boys and girls to assume different roles and the norms limiting women's mobility are also important factors in gender inequality in the country. The universal acceptance of gender inequality helps bring about unequal access to opportunities, resources, and assets for women and men. Results of the Malawi Integrated Household Survey show that the sex of the head of household is a statistically significant variable for poverty. Forty-one percent of rural households are food insecure, and 40 percent of these are female-headed. Studies have found that even female-headed households without significantly lower average incomes fare poorly in indicators of human capabilities including health, education, and employment.

Source: TANGO International, Gender Exploitation in Malawi, prepared for CARE Malawi, 2004.

Several conceptual frameworks provide examples of how a gender perspective can be applied to studies of food security and vulnerability.

DFID⁶ has developed a Gender Analysis Framework that offers key issues to consider in four areas of enquiry: gender roles, assets and livelihoods, power and decision-making, and needs analysis.

Roles and responsibilities

- What do men and women do?
- Where (location/patterns of mobility)?

6. DFID Infrastructure Department

- When (daily and seasonal patterns)?
- What are their productive roles (paid work, self-employment, and subsistence production)?
- What are their reproductive roles (domestic work, child care, and care of the sick and elderly)?
- What is their community participation/self-help (voluntary work for the benefit of the community as a whole)?
- What is their community politics (decision-making/representation on behalf of the community as a whole)?

Assets

- What livelihood assets/opportunities do men and women have access to and control over?
- What constraints do they face?
- What are their human assets (e.g. health services, education)?
- What are their natural assets (e.g. land, natural resources)?
- What are their social assets (e.g. social networks)?
- What are their physical assets (e.g. infrastructure)?
- What are their economic assets (e.g. capital/income, credit)?

Power and decision-making

- What decision-making do men/women participate in?
 - Household level (e.g. expenditure decisions, use of savings)?
 - Community level (e.g. decisions on the management of community water supplies)?
- What decision-making do men/women usually control?
 - Household level (e.g. expenditure decisions, use of savings)?
 - Community level (e.g. decisions on the management of community water supplies)?
- What constraints do they face?

Needs and priorities

- What are the needs and priorities of both men and women?
 - “Practical” gender needs - inadequacies in immediate necessities such as water access, food, and employment (e.g. a more convenient water point to save women time and energy)?
 - “Strategic” gender needs - structural changes that challenge subordinate roles and create greater equality (e.g. legal rights, equal wages, reproductive choice)?
- What perspectives do they have on appropriate and sustainable ways of addressing their needs?

Gender, while not explicitly illustrated in the Food and Nutrition Security Conceptual Framework pictured in Figure 1.2, is a critical dimension of food security and should always be taken into consideration. The questions listed in section 1.4.2 provide good guidance on how a gender lens can be applied to this framework and guide analysis and project design.

1.4.3 Gender-sensitive indicators⁷

Various indicators can be used to measure the extent of gender inequality, based on the number of females and males in a given context (female share of total, ratio between females and males, gender gap) or by comparing the variable outcomes among the two subgroups.

An illustrative list of generic, quantitative indicators that can be used to incorporate gender analysis into food security and vulnerability studies is provided in Table 1.1. Examples of their application in developing indicators are also provided (in the right-hand column). These indicators are a useful tool for ensuring that sex-disaggregated quantitative data are generated during primary data collection and allow for gender analysis to be incorporated into the overall food security and vulnerability analysis.

Table 1.1: Gender-sensitive indicators

Indicator	Formula	Interpretation	Example
Female share of a total	$\frac{\# \text{ (females)} * 100}{\# \text{ (females + males)}}$	<ul style="list-style-type: none"> • 50% = gender equality • <50% = females are underrepresented • >50% = males are underrepresented 	Share of women participating in political meetings at the community level
Ratio between females and males	$\frac{\# \text{ (females)}}{\# \text{ (males)}}$	<ul style="list-style-type: none"> • 1 = gender equality • The closer to 0, the more females are underrepresented • >1 = males are underrepresented 	The ratio between girls' and boys' school enrolment rates (no. of girls per 1 boy)
Female characteristic as percentage of male characteristic	$\frac{\text{mean female characteristic} * 100}{\text{mean male characteristic}}$	<ul style="list-style-type: none"> • 100% = gender equality • The closer to 0%, the more females are disadvantaged • Values >100% = males are disadvantaged 	Average earnings of women as percentage of average earnings of men
Gender gap (% difference between no. of females and males vs. the no. of males in the same population)	$\frac{(\# \text{ males} - \# \text{ females}) * 100}{\# \text{ males}}$	<ul style="list-style-type: none"> • 0% = gender equality • The closer to 100%, the more females are disadvantaged • Values <0% = females are advantaged 	Differences in school enrolment between boys and girls; differences in access to (or control over) productive assets between men and women

1.4.4 Gender dynamics

Understanding gender relations and dynamics is critical to our understanding of livelihood systems and intra-household issues. Often gender plays a large role in the division of labour, access to goods and services, control over resources, and power relations and rights.

Women and men often allocate resources differently, which has a differential impact on household welfare. Women frequently allocate more resources to meet a household's

7. See also CIDA: *Guide to Gender-Sensitive Indicators*, Quebec 1997, 9-13.

basic needs than men do. However, much of women's work is unpaid and/or taken for granted. As a result, it is often not counted, and their contribution to household livelihood security is thus undervalued. Additionally, women often have limited power in household decision-making, and in choosing how they will contribute to the household livelihood system.

1.5 UNDERSTANDING THE IMPACT OF HIV/AIDS ON LIVELIHOODS⁸

The Food and Nutrition Security Conceptual Framework helps to demonstrate the impact of HIV/AIDS on food security (see Figure 1.2). The framework underlines that illnesses and deaths due to AIDS have both an immediate and a long-term impact on households' and communities' vulnerability to food insecurity. It suggests considering both the direct impact of AIDS at all livelihood levels (human, financial, social, natural, and physical) and the indirect impact of policies, institutions, and processes on livelihoods.

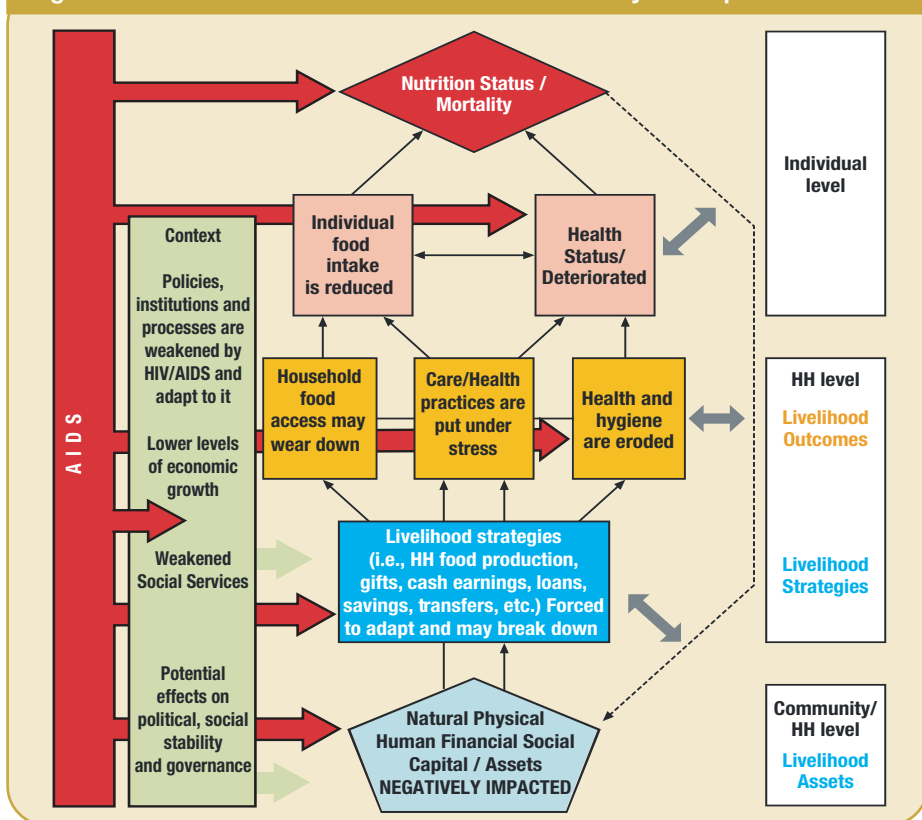
Finally, it draws attention to the feedback loop generated by the epidemic: livelihood assets are often negatively impacted by AIDS; livelihood strategies are usually adapted in response to HIV/AIDS, but the strategies can hardly prevent the increase in poverty and food insecurity. This increases susceptibility to HIV/AIDS. Most of the studies that adopted the Sustainable Livelihoods Framework found that HIV/AIDS had significant impacts on all capital assets, including human, financial, social, natural, and physical.

In countries highly affected by HIV/AIDS, consideration for HIV/AIDS should be mainstreamed in each component of the CFSVA, including:

- Secondary data/literature review;
- Collection of household-level data; and
- Collection of community-level data (e.g., infrastructures, perception of the community).

8. Detailed guidance on how to mainstream HIV/AIDS into CFSVA is provided by the technical guidelines "HIV/AIDS Analysis: Integrating HIV/AIDS in Food Security and Vulnerability Analyses" developed by WFP VAM in 2007. Guidelines are available online on the Food Security Analysis/VAM website, www.wfp.org/food-security.

Figure 1.2: HIV/AIDS in the Food and Nutrition Security Conceptual Framework



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