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vulnerability analysis and mapping

Technical Guidelines

HIV/AIDS ANALYSIS

Integrating HIV/AIDS in Food Security and Vulnerability Analysis

United Nations World Food Programme (WFP), 2008, "*HIV/AIDS Analysis: Integrating HIV/AIDS in Food Security and Vulnerability Analysis*", Vulnerability Analysis and Mapping Branch and HIV/AIDS Service, Rome, Italy.

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Annexes

Bibliography

List of Acronyms and Abbreviations

AIS	AIDS Indicator Survey
ANC	antenatal clinic
ART	antiretroviral treatment
ARV	antiretroviral drug
BMI	body mass index
BSS	Behavioural Surveillance Survey
CFSNS	Comprehensive Food Security and Nutrition Survey
CFSVA	Comprehensive Food Security and Vulnerability Analysis
CHS	Community and Household Surveillance
CI	chronic illness or chronically ill
CMR	crude mortality rate
CO	country office
CP	Country Programme
CRS	Catholic Relief Services
C-SAFE	Consortium for Southern Africa Food Security Emergency
CSB	Corn-Soya Blend
CSI	Coping Strategy Index
DFID	UK Department for International Development
DHS	Demographic Health Survey
DOTS	Directly Observed Treatment, Short-course
EMOP	Emergency Operation
EFSA	Emergency Food Security Assessment
FCS	Food Consumption Score
FFE	food for education
FFT	food for training
FSMS	Food Security and Monitoring System
GIS	Geographic Information System
HBC	home-based care
HH	household
HQ	headquarters
IP	Implementing Partner
ITN	insecticide treated net
MCH	mother-child health
MDG	Millennium Development Goal
MICS	Multiple Indicators Cluster Survey
MLR	Multiple Linear Regression
NGO	non-governmental organization
NAC	National AIDS Committee
NVAC	National Vulnerability Assessment Committee
ORS	Oral Rehydration Solution
OVC	orphans and other vulnerable children
PLHIV	people living with HIV
PMTCT	prevention of mother-to-child transmission
PRRO	Protracted Relief and Recovery Operation
RB	Regional Bureau
SADC	Southern Africa Development Committee
SAM	Service Availability Mapping
SSA	sub-Saharan Africa
STD	sexually transmitted disease
STI	sexually transmitted infection
TB	Tuberculosis
U5MR	Under 5 Mortality Rate
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNGASS	United Nations General Assembly Special Session on AIDS
UNICEF	United Nations Children's Fund
VAM	Vulnerability Analysis and Mapping
VGF	Vulnerable Group Feeding
WAZ	weight-for-age Zeta Score
WHO	United Nations World Health Organization
WFP	United Nations World Food Programme

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The contents of the guidelines build upon previous research conducted in the area of HIV/AIDS, livelihood and food security, lessons learned and current practice. They have been developed in close cooperation with the Southern Africa Regional Office (Johannesburg, South Africa). Drafts of the document were circulated within WFP and shared with external counterparts, including IFPRI/Renewal and Michigan State University.

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Introduction

1. Programming in the era of AIDS: WFP response to HIV/AIDS

The HIV/AIDS pandemic has grown from a serious public threat to a massive and complex crisis, forcing humanitarian and development agencies to modify their programmes to address the changing nature of a world with HIV/AIDS. As a consequence, WFP has started to consider carefully how the complexities of AIDS can be addressed by its activities. In 2003, WFP adopted five key principles for programming related to HIV/AIDS: [1]

1. The entry point for WFP involvement will always be situated in nutrition and food security. WFP's interventions will target beneficiaries based on their food security status, not just their HIV status.
2. When and where appropriate, WFP will take HIV and AIDS into account in all of its programming categories and in all assessments of needs.
3. WFP's HIV and AIDS response in specific countries will depend on the national strategy and will always fit within the government's framework for action.
4. In order to minimize the debilitating stigma and discrimination often associated with HIV and AIDS, WFP will support local non-government organizations and community-based organizations, including associations of people living with HIV and AIDS. WFP will use food aid to complement and scale up existing government, UN and NGO partner activities in prevention, mitigation and care for HIV-affected individuals and families.
5. WFP food assistance will place special emphasis on women and vulnerable children in particular orphans, and will support the broader national and international response to HIV and AIDS to ensure that food aid is part of a larger package provided to HIV-affected households and communities.

Main WFP-supported programming options for people living with HIV/AIDS are shown in Box 1.

Box 1 – Main programming options for people living with HIV/AIDS[2]

WFP-supported programmes provide food assistance to:

- facilitate OVC access to education and support care (e.g. food support to OVC, extended and foster families and institutions that take care of orphans and food for training that targets OVC);
- support training that promotes livelihood diversification (e.g. training focused on income-generating activities and vocational skills);
- support education and prevention activities;
- support home-based care (HBC);
- promote adherence to treatment of individuals with tuberculosis (TB);
- promote adherence to (and uptake of) paediatric anti-retroviral therapy (ART) of children living with HIV and AIDS provide nutritional support (and adherence to) prevention of mother-to-child transmission (PTMCT) of pregnant and lactating mothers living with HIV and AIDS;
- support adherence to and uptake of ART

2. Why include HIV/AIDS in food security and vulnerability analysis?

Because food aid can enable relief, recovery and development, identifying food-insecure areas is the first step to target areas receiving WFP assistance. In countries with high prevalence of HIV, geographic targeting should combine data on food insecurity with data on HIV prevalence to identify food-insecure areas where HIV prevalence is particularly high. However, including HIV/AIDS in the food security and vulnerability analysis goes far beyond simply overlapping this information. When HIV/AIDS indicators are integrated into a food security and vulnerability analysis, findings can strengthen the country-specific empirical evidence on the interaction between HIV/AIDS and household food security and enhance the understanding of the role of food assistance in mitigating the impact of HIV/AIDS. In particular, data can be used to:

[1] WFP/EB.1/2003/4-B.
[2] WFP/EB.1/2003/4-B; WFP/EB.A/2006/5-D/1

1. explore the relationship between HIV/AIDS, food consumption and nutritional outcomes;
2. compare livelihood assets and strategies of households living with HIV/AIDS and non-affected households;
3. highlight coping strategies frequently adopted by the affected households.

When information is collected during an assessment of children orphaned or made vulnerable by HIV/AIDS, data can be used to:

4. identify OVC's shortcomings in education and nutrition and determine whether they are more likely to be involved in working activities (child labour);
5. compare food security status, livelihood assets, strategies and coping mechanisms of households with orphans and households without orphans.

Not only can such findings increase the country-specific evidence on the link between HIV/AIDS, livelihood and food security, but they can be used to guide other steps of targeting (see section III, chapter 2).

Targeting all WFP interventions is a complex exercise which occurs at different levels and different stages of the programme design process. Within WFP, Emergency Food Security Assessments (EFSAs), Comprehensive Food Security and Vulnerability Analyses (CFSVA) and Food Security Monitoring Systems (FSMS) provide geographic and socioeconomic information to target WFP interventions. CFSVAs are often used to supply "pre-crisis information" for an EFSA and to target WFP's areas of intervention. Using primary and secondary data, CFSVA describe current household food security status and vulnerability to food insecurity (i.e. risk analysis). The outcome of this analysis is used to provide programming recommendations based on the five basic Vulnerability Analysis and Mapping (VAM) questions:

1. Who is food insecure?
2. Where do they live?
3. How many are they?
4. Why are they vulnerable to food insecurity and hunger?
5. How can food aid make a difference in reducing their vulnerability to food insecurity?

3. Guidelines' objectives

This document provides guidance on how to include issues related to HIV/AIDS in the food security and vulnerability analyses conducted by WFP. It intends to enhance the dialogue between country offices (COs), the Regional Bureau (RB) and headquarters (HQ). It also seeks to ensure that all stakeholders involved in a food security and vulnerability analysis share the same background and are equally aware of the technical issues that occur when HIV/AIDS is included in a CFSVA.

This document does not deal with the overall process of targeting food assistance. Therefore, it cannot be used as a stand-alone guideline for targeting food-based interventions for people living with HIV/AIDS or interventions with food-security objectives in countries with high prevalence of HIV. It does not suggest a strategy for selecting beneficiaries in areas with high prevalence of HIV.

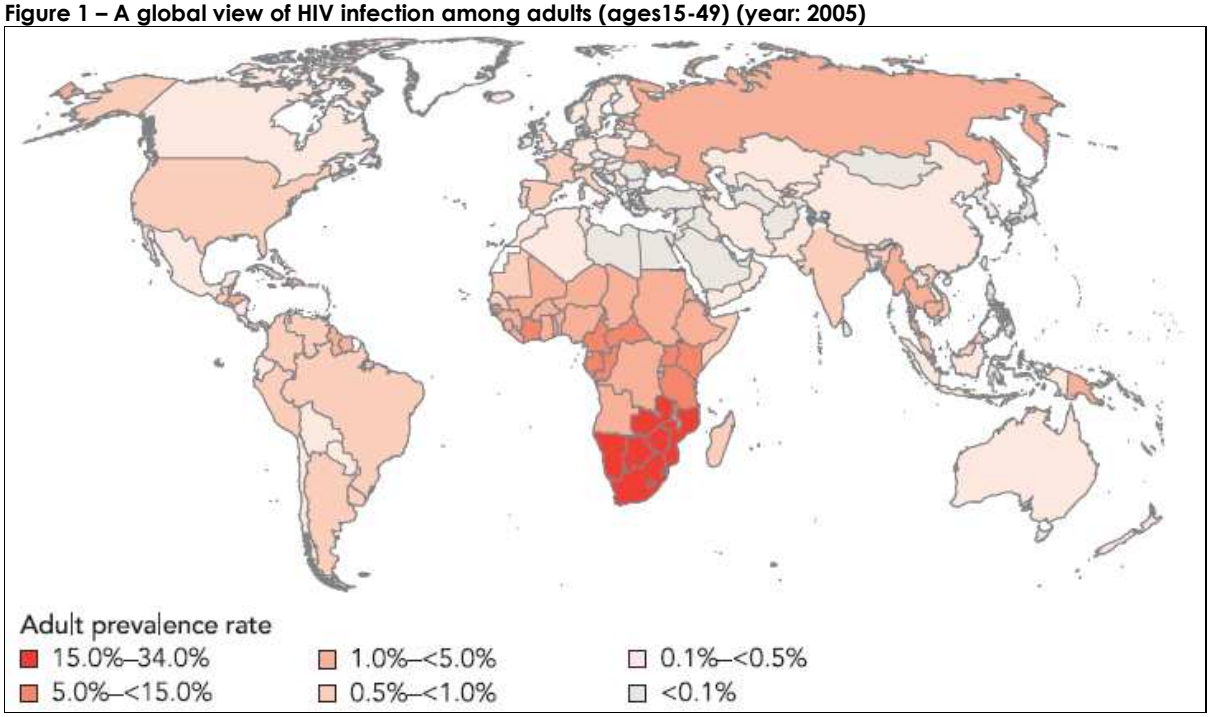
Specific objectives of the guidelines are to:

- highlight countries where the inclusion of HIV/AIDS in food security and vulnerability analysis is most needed;
- introduce key concepts and terms for integrating HIV/AIDS and OVC issues into WFP food security and vulnerability analyses;
- increase the information for existing sources (e.g. standardized surveys, databases and reports) that provide sub-national data on HIV/AIDS, such as prevalence, knowledge and behaviour;
- recommend indicators related to HIV/AIDS and OVC for WFP food security and vulnerability analyses;
- suggest quantitative and qualitative tools for collecting data relevant to HIV/AIDS and OVC;
- provide guidelines on how to analyse data from a food security and vulnerability assessment through an HIV lens.

4. Priority areas

The figures below identify the countries with high prevalence of HIV. These are the countries that have the greatest need to include HIV/AIDS and OVC issues in food security and vulnerability analysis.

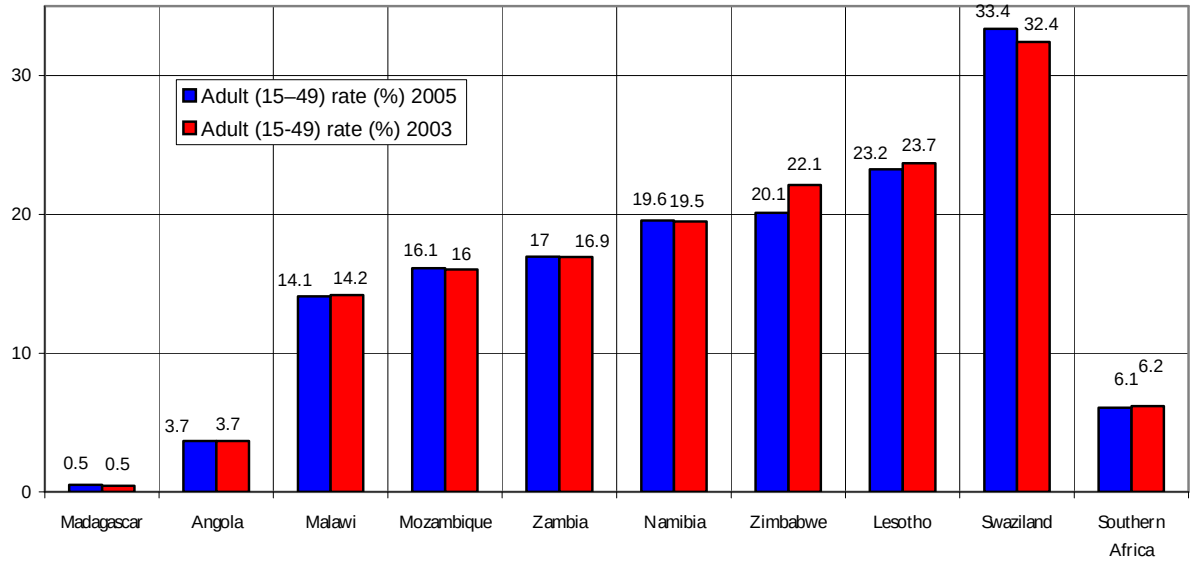
Figure 1 – A global view of HIV infection among adults (ages15-49) (year: 2005)



Source: UNAIDS, 2006, "Report on Global AIDS Epidemic"

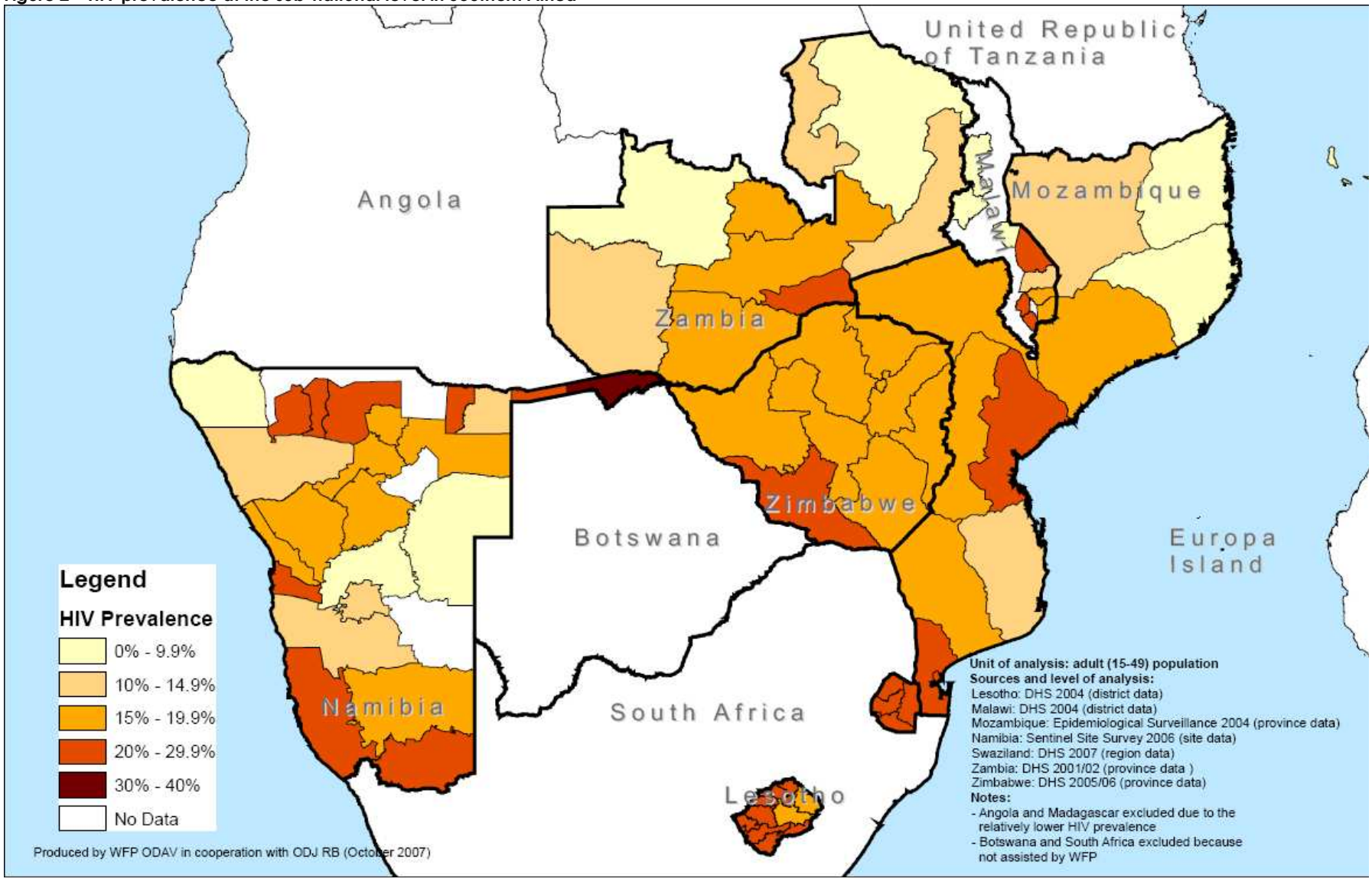
Southern Africa is the epicenter of the global HIV and AIDS epidemic. Nine of the ten countries with the highest prevalence of HIV and AIDS in the world are found in this region. Here, the impact of HIV and AIDS is aggravated by chronic food insecurity and weakened government capacity to provide support to the most at-risk populations. Except for Angola and Madagascar, in all the countries of Southern Africa it is advisable to include HIV and AIDS in the food security and vulnerability analysis.

Chart 1 – Adult (ages 15-49) HIV prevalence in 2003 and 2005 in WFP-assisted countries in Southern Africa



Source: : UNAIDS, 2006, "Report on Global AIDS Epidemic"

Figure 2 – HIV prevalence at the sub-national level in Southern Africa



In other regions, HIV prevalence does not reach such high levels and it is therefore less urgent to include issues related to HIV/AIDS in the food security and vulnerability analyses for these areas.

The table below shows the countries in these other regions that have high HIV prevalence.

Table 1 – Priority countries in the other WFP regions

WFP Regional Bureaux	Priority countries	Adult HIV prevalence rate, 2005 (1)
ODB	Thailand	1.4%
	Cambodia	1.6%
ODC	Russian Federation	1.1%
ODK	Kenya	6.1%
	Tanzania	6.5%
	Uganda	6.7%
ODD	Côte d'Ivoire	7.1% *(non updated data)*
ODDY	Central African Republic (CAR)	6.2%
ODPC	Haiti	3.8%

(1) Sources: UNAIDS, 2006, "Report on Global AIDS Epidemic". Prevalence in CAR extracted from the MICS 3 data

Section I – Secondary data on HIV/AIDS

1. HIV/AIDS in the secondary data review

National and sub-national data related to HIV/AIDS can inform a situation analysis in several ways:

- Estimates on HIV/AIDS prevalence can be used to establish whether it is relevant to include HIV/AIDS in a food security and vulnerability analysis. These estimates can also identify areas with both high HIV/AIDS prevalence and high food insecurity.
- Data on knowledge and awareness of HIV/AIDS, presence of risky behaviours, identification of main roads and analysis of migration flows can suggest areas and groups where food support is most needed for prevention, mitigation and care activities.
- Data on health centres (e.g. location, type and kind of services) can identify areas and institutions where WFP assistance can complement care and treatment services to people living with HIV/AIDS.
- Understanding the prevalence of other chronic illnesses[3] and serious diseases (e.g. malaria and TB,) is useful to determine whether, and to what extent, the validity of chronic illness as a proxy indicator of HIV/AIDS may be jeopardized by such confounding factors.

This section gives an overview of standardized surveys and tools, such as databases and websites, which produce data related to HIV/AIDS and OVC. For each source of data, objectives, issues, data availability, opportunities and constraints for food security and vulnerability analysis are outlined.

2. AIDS Indicator Survey (AIS)

The AIDS Indicator Survey (AIS) is part of the MEASURE DHS project implemented by ORC Macro.[4] It provides countries with a standard tool to obtain indicators to monitor national HIV/AIDS programmes. Five AIS have been completed (Cote d'Ivoire 2005, Guyana 2005, Tanzania 2003, Uganda 2004, Vietnam 2005) and one survey is ongoing (Tanzania 2007). All of them, except Guyana 2005, report HIV prevalence (measured through blood testing).

Data are collected through household and individual questionnaires.

- The household questionnaire identifies eligible men and women (typically aged 15-49) for individual interviews and capture information on basic characteristics of the household and its members. In particular, information is obtained on parental survivorship and residence (which provides the basis for calculating orphan-hood levels), care, support and OVC.
- The individual questionnaire (for eligible women and men) collects data on background characteristics, pattern of marital unions, age at sexual debut, patterns of sexual behaviour, condom use, experience with STIs, treatment response to self-reported STIs, knowledge and attitudes related to HIV/AIDS and coverage of HIV-testing.

Opportunities and constraints for food security and vulnerability analysis

☺ Country reports can be downloaded at: http://www.measuredhs.com/aboutsurveys/ais.cfm

☺ Country reports provide data disaggregated by sex, age group, residence (e.g. urban or rural) and sub-national level data (e.g. by region or province).

☺ Data from the country reports and databases which are relevant for analysis on HIV/AIDS and OVC are: HIV knowledge and attitudes, HIV-related behaviour, youth and AIDS, orphan status and HIV prevalence.

☹ Data sets are available only for some surveys.

☹ Data on food security are not collected.

[3] WHO's definition of chronic disease is 'a disease of long duration and generally slow progression'. Chronic diseases include heart disease, stroke, cancer, chronic respiratory diseases and diabetes. For each country WHO is able to provide a picture of major illnesses and causes of mortality. Such information can be retrieved at the WHO website (www.who.org).

[4] ORC Macro conducts the MEASURE DHS project in partnership with the John Hopkins University, Bloomberg School of Public Health/Center for Communication Programs (CCP), Program for Appropriate Technology in Health (PATH), Casals and Associates Jorge Scientific Corporation (JSC).

3. Multiple Indicator Cluster Survey (MICS)

The Multiple Indicator Cluster Survey (MICS) is a survey programme developed by UNICEF to assist countries in monitoring children's and women's status. Two rounds of surveys have been completed (MICS 1 in 1996, MICS 2 in 2000). The third round (MICS 3) is ongoing. It covers most of the topics of the earlier rounds and includes new indicators.

Approximately 65 surveys were conducted in 2000 (MICS 2) and approximately 55 countries have conducted MICS 3. Countries have been selected in conjunction with MEASURE DHS to avoid overlaps between the two surveys. Fifty-seven country reports and 42 data sets from MICS 2 are currently available. Reports and data sets from MICS 3 will be uploaded on the MICS website.

Data are collected through a household questionnaire, a questionnaire for adult women (aged 15-49) and a questionnaire for children under 5.

- The household questionnaire includes a household listing form (with information on orphans) and modules on education, child labour, water, sanitation and salt iodization. The MICS 3 household questionnaire also looks at support to children orphaned and made vulnerable by HIV/AIDS.
- The women's questionnaire includes modules on child mortality, tetanus, maternal and new born health, contraceptive use and knowledge of HIV/AIDS. The MICS 3 questionnaire also includes questions about malaria, polygyny, female genital cutting and sexual behaviour.
- The children's questionnaire includes modules on birth registration and early learning, vitamin A, breastfeeding, care of illness, malaria, immunization and anthropometry.

Opportunities and constraints for food security and vulnerability analysis

☺ Country reports and data sets from MICS 2 can be downloaded from the MICS website: http://www.childinfo.org/MICS2/Gj99306m.htm. MICS 3 results (country reports and data sets) will be available after completion of the surveys at the website: http://www.childinfo.org/mics/mics3.

☺ Country reports include statistics disaggregated at the sub-national level and by main demographic characteristics.

☺ Modules that are relevant for an analysis on HIV/AIDS and OVC include orphan status, education, child labour, contraceptive use and HIV/AIDS knowledge (see table 2).

☺ Data sets from MICS 2 are available for most of the countries (see table 2).

☹ The AIDS module addresses knowledge of HIV transmission, but it does not provide estimates of HIV prevalence; blood testing and proxy indicators are not included.

☹ Data on food security are not collected.

Table 2 – Modules in the MICS 2 questionnaire that are relevant for an analysis on HIV/AIDS and OVC

Country	household (& orphans)	education	child labour	contraceptive use	HIV/AIDS knowledge	report available	data set available
Algeria							
Angola							
Azerbaijan							
Bolivia							
Burundi							
CAR							
Côte d'Ivoire							
Cuba							
Dominican Rep.							
Ecuador							
Equatorial Guinea							
Gambia							
Guinea Bissau							
Indonesia							
Iran							
Iraq							
Kenya							
Korea PDR							

Country (continued)	household (& orphans)	education	child labour	contraceptive use	HIV/AIDS knowledge	report available	data set available
Lao PDR							
Lebanon							
Lesotho							
Madagascar							
Myanmar							
Niger							
Nigeria							
Palestinians in Syria							
Philippines							
Rwanda							
SaoTome & Principe							
Senegal							
Sierra Leone							
Somalia							
N-Sudan							
S-Sudan							
Swaziland							
Syria							
Tajikistan							
Tchad							

Only WFP -assisted countries are included in the table.
Green cell means that the module is present.

4. Demographic and Health Survey (DHS)

The Demographic and Health Survey (DHS) is the key component of the MEASURE DHS project implemented by ORC Macro. It provides data for a wide range of monitoring indicators in the areas of population, health and nutrition. Since 1996, approximately 178 Standard DHS have been completed in 77 countries; 158 country reports have been finalized and 134 data sets are available.

Data are collected using three types of questionnaires.

- The household questionnaire includes a household listing, household characteristics (e.g. water and sanitation, cooking fuel, assets of the household and use of bed nets), nutritional status and anaemia (e.g. level of haemoglobin and height and weight of women aged 15–49 and children under 5).
- The women's questionnaire contains questions on individual background characteristics, reproductive behaviour and intentions, contraception, antenatal, delivery and postpartum care, breastfeeding and nutrition, children's health, AIDS and other sexually-transmitted infections and husband's background.
- The men's questionnaire covers individual background characteristics, reproduction, knowledge and use of contraceptives, employment and gender roles and AIDS and other sexually-transmitted infections.

Opportunities and constraints for food security and vulnerability analysis

☺ Data are disaggregated at the sub-national level and by main demographic characteristics.

☺ Data sets and country reports can be downloaded from the DHS website: http://www.measuredhs.com/aboutsurveys/dhs/start.cfm

☺ HIV prevalence rates (through blood testing) are available for some countries (Burkina Faso 2003; Cameroon 2004; Dominican Republic 2002: Ghana 2003; Haiti 2005; Kenya 2003; Malawi 2004; Mali 2001; Zambia 2001/02).

☺ The AIDS module looks at knowledge of AIDS and other STIs, knowledge on how to avoid AIDS and high-risk sexual behaviour.

☺ Questions on orphan status are also included.

☺ Data sets are available for most of the countries.

☹ Except for the countries reported above, estimates of HIV prevalence are not available.
☹ Data on food security are not collected.

5. Behavioural Surveillance Survey (BSS)

Behavioural Surveillance Surveys (BSS) are designed by Family Health International to track trends in HIV/AIDS knowledge, attitudes and risk behaviour in selected segments of a country or community. Standardized questionnaires designed for specific categories (e.g. adults, youth, sex workers and drug users) include questions on marriage, sexual history, use of condoms, STDs, knowledge, opinions and attitudes towards HIV/AIDS, exposure to prevention, drug use and needle sharing behaviours.

Surveys have been conducted in 13 countries: Cambodia (1997, 1998, 1999); Cote D'Ivoire (1998, 2002); Ethiopia (2002); Haiti (2000); Honduras (2001); India (1996, 1997, 1998, 1999, 2000, 2001, 2002); Indonesia (1996, 1997, 1998, 1999, 2000, 2002); Jamaica (1999-2000); Kenya-Mombasa (1998); Lao PDR (2000-2001); Nicaragua (2000); Rwanda (2000); Zambia (2000).

Opportunities and constraints for food security and vulnerability analysis

☺ Survey reports can be downloaded at the website http://www.fhi.org/en/topics/bss.htm
☺ BSS provide data on specific target groups. They can be used to complement information from general population surveys.
☹ Indicators (or proxy indicators) on HIV/AIDS prevalence are not collected.
☹ Information on orphans is not collected.
☹ Data sets are not available.
☹ Data on food security are not collected.

6. HIV/AIDS Survey Indicators Database

The HIV/AIDS Survey Indicators Database is a comprehensive source of information on HIV/AIDS indicators derived from sample surveys. Data come from Demographic and Health Surveys (113 are available), Multiple Indicator Cluster Surveys (29), Reproductive Health Surveys (6), Sexual Behaviour Surveys (3), Behavioural Surveillance Surveys (29), and AIDS Indicator Surveys (2).

Indicators in the database are primarily derived from the UNAIDS "National AIDS Programmes: Guide to Monitoring and Evaluation". They aim to monitor the goals set by the UN General Assembly Special Session on HIV/AIDS, the Millennium Development Goals, and the strategic goals of the President's Emergency Plan for AIDS Relief.

Indicators address the following issues: policy and political commitment, condom availability and quality, discrimination, knowledge, voluntary counselling and testing, mother-to-child transmission, sexual negotiation and attitudes, sexual behaviour, sexual behaviour among young people, injecting drug use, blood safety and nosocomial transmission, STI care and prevention, care and support, social impact and HIV prevalence.[5]

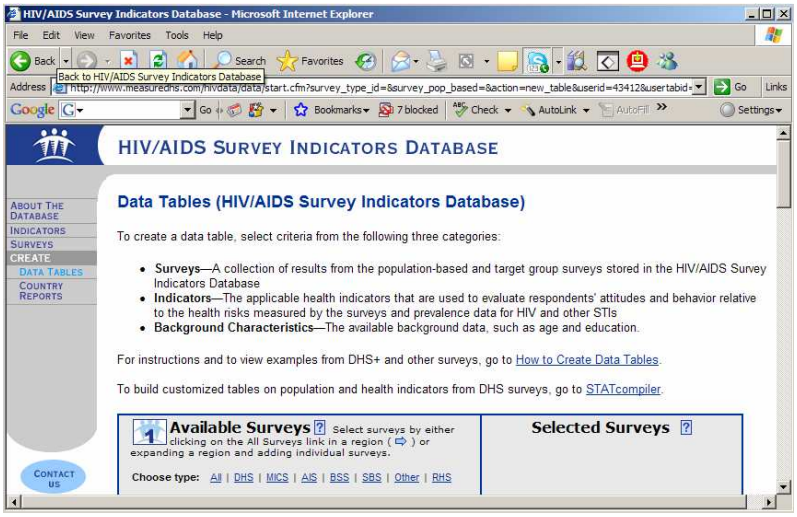
Opportunities and constraints for food security and vulnerability analysis

☺ Database is accessible at: http://www.measuredhs.com/hivdata/ .
☺ Country reports, which are automatically produced, allow less expert users to access survey findings and obtain country profiles.
☺ Customized tables provide statistics for specific countries, regions, indicators and years. They also compare statistics over time and disaggregate data by sex, age, residence (e.g. urban or rural) and educational level.
☹ It is not possible to obtain sub-national level data; data are only disaggregated by residence (e.g. urban or rural).
☹ Data on HIV/AIDS prevalence are available for a limited number of countries.

[5] Key indicators of HIV prevalence are: HIV prevalence among young (ages15-24) people, pregnant women and the general population, syphilis prevalence among pregnant women and HIV prevalence in sub-populations with high-risk behaviour.

The database can be used to produce country reports and customized tables for specific countries, regions, indicators and years. Statistics can also be mapped by using an interactive GIS mapping tool (http://www.hivmapper.com/).

Figure 3 – Tables in the HIV/AIDS Survey Indicators Database



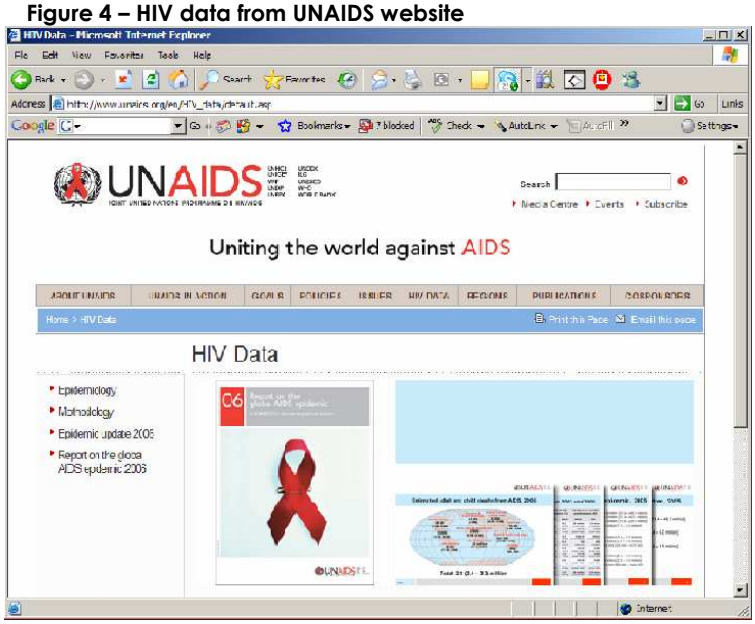
7. Joint United Nations Programme on HIV/AIDS (UNAIDS)

The "Report on the global AIDS epidemic" offers a global view of the AIDS epidemic, including countries' progress, the impact of AIDS on people and societies, populations more exposed to the infection, HIV prevention, treatment and care, the role of civil society, etc. Periodic updates to the report are regularly produced.

HIV estimates

In countries with generalized epidemics (adult prevalence >1% in the general population), UNAIDS/WHO estimates of HIV prevalence are primarily based on surveillance among pregnant women attending antenatal clinics (ANCs). In the absence of population-based surveys that include blood testing, HIV prevalence among pregnant women attending ANCs is typically used as a proxy for HIV prevalence in the general population. The growing number of population-based prevalence surveys, new and improved HIV surveillance data and improved analyses have strengthened the methodology.

Figure 4 – HIV data from UNAIDS website



Opportunities and constraints for food security and vulnerability analysis

☺ The report and periodic updates can be downloaded from the UNAIDS website: http://www.unaids.org .

☺ The report and periodic updates are good tools to identify national surveys recently conducted.

☹ Data in the global report and periodic updates are not disaggregated at the sub-national level.

☹ Data on food security are not collected.

8. United Nations World Health Organization (WHO)

Some tools developed by WHO, such as the Global HIV/AIDS Online Database, the Global Health Atlas and the Health Mapper, can be used during the review of secondary data.

The UNAIDS/WHO Global HIV/AIDS Online Database presents the most recent country-specific data on the spread and impact of the virus, risky behaviours and health sector response. For any selected country, the user can view epidemiological fact sheets on HIV/AIDS and STIs including:

- basic demographic and socioeconomic data;
- HIV prevalence by surveillance site, population group, geographic area and year of survey[6];
- maps representing the geographic distribution of HIV in relation to population density, major urban areas and communication routes;
- reported cases of HIV, AIDS and other STDs;
- location of health services and care;
- knowledge, behaviour and prevention;
- blood transfusions;
- HIV prevalence by surveillance site

Global Health Atlas includes standardized statistics for individual diseases and indicators at country, regional, and global levels. Sub-national level data are not available. From the public domain of the global health atlas (http://www.who.int/health_mapping/tools/globalatlas/en/index.html) user can do:

- Data query to browse and query the contents of the database in reports, charts and maps
- Interactive mapping: to select geographic areas and create maps of selected data, the location of health facilities, schools, roads, geographic features
- Maps and resources: to access to static maps and related documents, publications and statistics on HIV / AIDS and STIs

Health Mapper is a surveillance and mapping application which provides core baseline geographic, demographic and health information, such as location of communities, health care and education facilities, road accessibility and access to safe water. Information on the application can be retrieved from the WHO Health Mapper page: (http://www.who.int/health_mapping/tools/healthmapper/en/index.html). Data and maps are not accessible online. However, the Health Mapper does produce maps at a sub-national level.

Service Availability Mapping (SAM) is a survey that periodically provides information needed to respond to health system management problems. It pulls together data from other surveillance systems, special studies and surveys to provide a comprehensive picture of services available within a country and detailed information on selected facilities. SAM surveys have been conducted only in a limited number of countries.

In high prevalence countries, SAM examines private and public heath centres that provide HIV and AIDS-related interventions, such as ART, PMTCT, HIV testing and counselling. SAM offers a list of these centres and describes their services at a sub-national level.

9. Summary

This section provided an overview of the main sources of information on HIV/AIDS and OVC issues. The accompanying table summarizes the type of data available from each source of information.

At the regional and country levels, it is possible to identify other sources of information. Especially in countries with high HIV-prevalence, official bodies are expected to collect or access updated HIV/AIDS information.[7] It is good practice to conduct a desk review of information available in the country as it can be more significant to the context of research. In high-prevalence countries, data on HIV/AIDS and OVC from standardized surveys or other official bodies always should be reviewed and used to inform the situation analysis. However, it is worth noting that these surveys

[6] Major urban areas are usually compared against non-major urban areas. Differentiation between the two geographic areas is not based on strict criteria. For most countries, major urban areas are considered to be the capital and, where applicable, other metropolitan areas with similar socioeconomic patterns.

[7] Many countries have established National AIDS Councils (NACs) to better coordinate and manage a concerted national response against AIDS.

usually do not include data on food security or information on household response to AIDS. Therefore, they cannot be used to explore the relationship between HIV/AIDS, food security and livelihoods. In order to study such relationships, it is crucial to include proxy indicators of HIV/AIDS in food security and vulnerability analyses.

The inclusion of HIV/AIDS in the secondary data review can go beyond HIV/AIDS prevalence. Knowledge / awareness of HIV/AIDS, risky behaviours, identification of main roads and migration flows help identify areas for prevention, mitigation and care activities. Data on health centers facilitate the identification of regions where WFP assistance can complement care and treatment services already in place. The incidence of other chronic illnesses / serious diseases is useful to understand if chronic illness is a good proxy indicator for HIV / AIDS.

Table 3 – Availability of data related to HIV/AIDS: an overview

Source (1)	**HIV prevalence**	**HIV knowledge & behaviours**	**OVC**	**Health centres**	**Level** (2)
AIS reports / data sets	**yes**	**yes**	**yes**		sub-national
MICS 2 reports / data sets		**yes**	**yes**		sub-national
MICS 3 reports / data sets	**yes** (some countries)	**yes**	**yes**		sub-national
DHS reports / data sets	**yes** (some countries)	**yes**	**yes**		sub-national
BSS reports		**yes** (for some groups)			sub-national
UNAIDS Global Report on AIDS	**yes**				national
WHO epidemiological fact sheets	**yes**	**yes**		**yes**	sub-national (some indicators)
WHO Global Atlas	**yes**				National / regional / global
WHO Health Mapper	**yes**			**yes**	sub-national

(1) AIDS Survey Indicators database is not included in the table because it collects data from other sources

(2) Sub-national level data can be at a very low level of disaggregation or simply divided into urban and rural settings

Section II – Collecting and analysing data on HIV/AIDS

1. HIV/AIDS, livelihood and food security

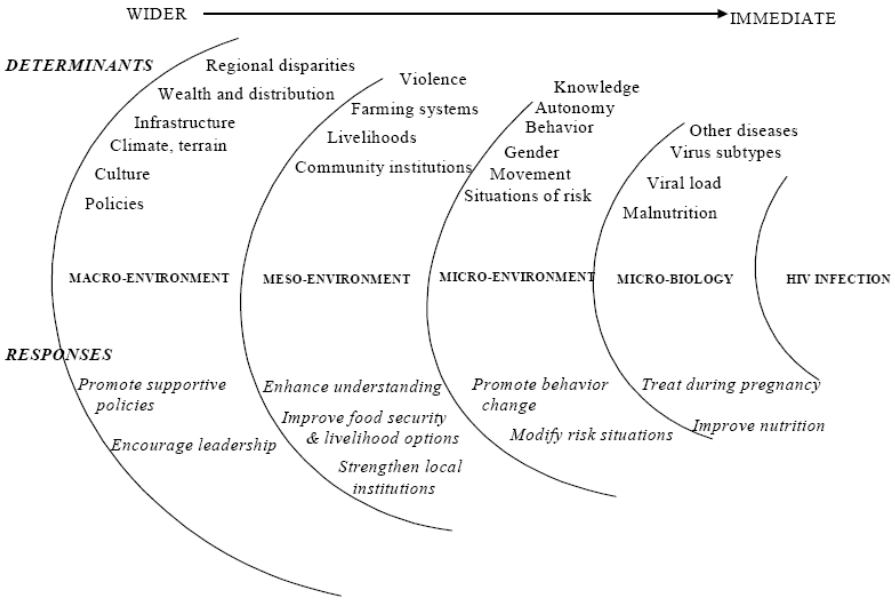
1.1. Driving forces

Empirical evidence about the driving forces behind HIV infection has been growing during the past decade. Literature on the social, economic and biological factors that determine an individual's risk of becoming infected by HIV refers to two key terms: susceptibility and resistance (Gillespie and Kadiyala, 2004; 2005).[8]

- **Susceptibility** is the chance of an individual to become infected by HIV. It has two components:
  a. the chance of being *exposed* to the virus, which in turn relates to the environment and specific situations of risk that the individual faces, and the riskiness of her/his behaviours;
  b. the chance of being *infected* with the virus once exposed.
- **Resistance** is the ability of an individual to avoid the infection, either by escaping exposure or, if exposed, by escaping infection.

The map below provides an overview of the wider and immediate factors that increase the likelihood of being exposed to the virus (determinants). It also highlights potential responses that help enhance the resistance of individuals and communities to HIV infections.

Figure 5 – Wider and immediate determinants and responses to HIV infection



Source: Loevinshon and Gillespie (2003)

The studies that have systematically investigated the factors that increase exposure to HIV highlight the following driving forces: gender, mobility, orphan status and malnutrition. These factors can be used to identify groups at higher risk of infection.

[8] See, for instance, Gillespie (ed.), 2006; Gillespie and Kadiyala (2004; 2005); Harvey P. (2004); Loevinshon and Gillespie (2003).

Driving forces	Explanation
Gender	Women are more exposed to HIV infection than men. Biologically, they are more susceptible to the infection. Biological factors that increase women's exposure to HIV include the structure of the female genital tract, the higher efficiency of male-to-female transmission compared with female-to-male transmission and the higher cofactor effect of genital ulcer diseases for male-to-female than for female-to-male transmission. From the sociocultural point of view, women's relative powerlessness makes them less likely to negotiate condom use, more exposed to genital mutilation, dry sex and coerced sex and gives them limited access to prevention, education and health care. Economically, women's dependence on men and their unequal access to resources, opportunities and assets place them at high risk. In particular, it increases the likelihood of a variety of unsafe sexual behaviours (e.g. transactional sex, coerced sex, multiple sexual partners, early sexual debut, rare use of condoms, poor communication and information on sensitive topics and widow inheritance).
Mobility	Movement itself is not inherently risky, but when single individuals move or families are split up, the likelihood of being engaged in risky sexual practices increases.
Orphan status	Orphans are more susceptible to HIV than non-orphans. Not only are they more likely to be sero-positive due to mother-to-child transmission, but they have more chances to spend most of the day with no adult supervision, to adopt unsafe sexual behaviours and to be more exposed to sexual exploitation and abuses.
Malnutrition	There is solid empirical evidence linking inadequate nutritional status to increased risk of vertical (mother-to-child) transmission. Many studies also suggest that an improved maternal micronutrient status may reduce vertical transmission of HIV by enhancing systemic immune function in the mother or fetus, reducing the rate of clinical, immunological or viral progression in the mother, reducing viral load or the risk of viral shedding in genital secretions or breast milk, reducing the risk of low birth weight, or maintaining the integrity of the child's gastrointestinal tract. Fewer studies have systematically and rigorously investigated the role of malnutrition and health on the risk of horizontal (adult-to-adult) transmission. Yet, studies that focussed on this topic have provided some evidence. Both general (protein and energy) and micronutrient deficiencies are associated with significant defects in cell-mediated and humoral immunity, depressed cytokine production, lowered specific antibody production, and decreased phagocyte function.

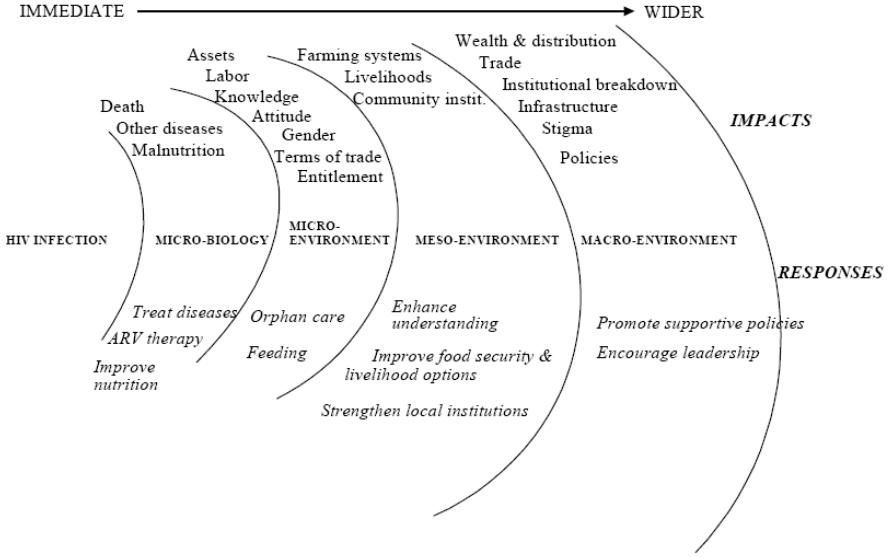
1.2. Impact and responses

Literature on AIDS impact and responses suggests distinguishing between vulnerability and resilience (Gillespie and Kadiyala, 2004; 2005).

- **Vulnerability** refers to the likelihood of significant impacts occurring at a certain level. These impacts are hidden, lethargic and destructive processes that are often punctuated by events (e.g. sale of assets), some of which are irreversible.
- **Resilience** refers to the active responses that enable people to avoid the worst impacts of AIDS or to recover faster to a level accepted as normal.

The following map represents the immediate and wider impacts of and responses to AIDS. Like with determinants and responses shown in the previous map, the impact of AIDS and responses to the epidemic affect the micro-biological system and the micro, meso and macro environments.

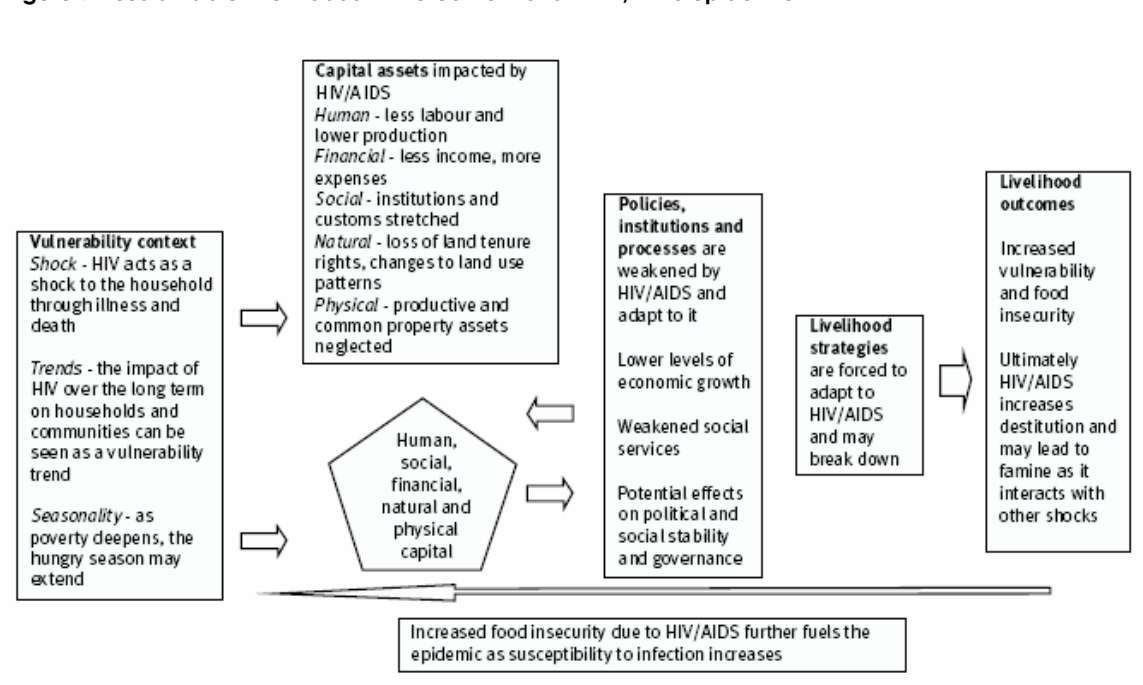
Figure 6 – Wider and immediate impacts of and responses to AIDS



Source: Loevinshon and Gillespie (2003)

The sustainable livelihoods framework (SLF) is commonly used to understand the impact of HIV/AIDS on food security (see figure 7).[9]

Figure 7 - Sustainable livelihoods in the context of an HIV/AIDS epidemic



Source: Harvey (2004)

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 the direct impact of AIDS at all levels of livelihoods (human, financial, social, natural and physical) as well as the indirect impact that policies, institutions and processes have 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 avoid the increase in poverty and food insecurity. This increases susceptibility to HIV/AIDS.

[9] See: Stokes, 2003; Loevinsohn and Gillespie, 2003; Seeley and Pringle, 2003; DFID, 1998; Carney, 2002

Most of the studies that adopted the SLF found that HIV/AIDS had significant impacts on all capital assets, including human, financial, social, natural and physical:

- **Human capital** comprises the skills, knowledge, ability to work and health that enable people to pursue different livelihood strategies and outcomes. HIV/AIDS erodes human capital through the effects of premature illness and death on productive and reproductive labour and by fracturing inter-generational knowledge transfer.
- **Financial capital** includes the financial resources that people use to achieve their livelihood objectives. HIV/AIDS erodes financial capital as expenditures for health care and funerals increase and credit becomes harder to access.
- **Social capital** deals with the social resources on which people rely to pursue livelihood objectives. They include networks and connections, membership in formalized groups (e.g. organizations and institutions), relationships of trust, reciprocity and exchange and customs and practices that influence behaviour. Social capital is put under stress by HIV-related stigma and exclusion, increase in orphan rates and reduced incentives for collective action.
- **Natural capital** refers to the natural resource stocks from which resource flows and services are derived; **physical capital** includes the basic infrastructure and producer goods needed to support livelihoods, such as asset and livestock diversity. HIV/AIDS undermines physical and natural capital as assets are sold off to raise cash and labour losses affect the ability to farm and maintain common property resources.

1.3. Children orphaned or made vulnerable by AIDS

HIV/AIDS has multidimensional effects that pose unique challenges to development in many nations. One of these effects is the rapid increase in the number of children orphaned or living in households affected by the disease.

Orphans and vulnerable children (OVC), being deprived of the material, social and psychological support of their caregivers, may have a poorer level of human capital than other children. This, combined with having a weaker voice in redressing discrimination, can make OVC more exposed to other deprivations and shocks. So far, most of the studies on OVC have focussed on shortcomings in education, nutrition and health status. Main conclusions include the following:

HIV/AIDS impact on OVC	Explanation
Education	Many households living under strained conditions have to sacrifice health care or schooling to maintain household food requirements. Poor education is therefore the first and more frequent vulnerability for OVC. (cfr. Ntozi *et al.* , 1999, Nyambedha *et al.,* 2003 ; Gilborn *et al.,* 2001). Negative impact on education is particularly severe for poor households and starts at the moment the parent becomes ill. Few studies have considered the effects on children's education before their parents' death. A study conducted in Uganda suggests that the education of adolescents living with a terminally sick parent may suffer more than that of fostered orphans (Gilborn *et al.*, 2001). Similarly, research in Kenya shows that adult mortality negatively affects schooling in the period directly before mortality occurs, likely because children share the burden of caregiving (Yamano and Jayne, 2005).
Nutritional status	Empirical evidence on the relationship between orphan and nutritional status is mixed. A recent meta-analysis of national surveys conducted in Sub-Saharan Africa over the last five years concluded that anthropometric measures of orphans are not worse compared with other children (Rivers et al., 2004).[10] However, communities differ in the ability to protect orphans and local evidence exists showing that orphans are more likely to be malnourished compared with non-orphans. For instance, a study conducted in Tanzania found a higher level of stunting among orphans, especially if they live with the poorest households, households with uneducated parents and households with least access to health care (Lundberg and Over, 2000; Ainsworth and Semali, 2000). Research conducted in Uganda discovered that orphans' health and nutritional status is worse and their use of public services much lower than that of non-orphans (Deininger et al., 2003).

[10] The meta-analysis was conducted by the Department of International Health and Development at the Tulane University School of Public Health and Tropical Medicine. The analysis was conducted on 13 DHS surveys, 17 MICS II surveys, 6 C-SAFE / WFP data sets, and 6 UNICEF surveys. Nutritional status was measured through Weight-for-Age (WAZ) z-scores.

2. HIV/AIDS-affected households: definition and indicators

Most of the empirical studies on HIV/AIDS consider a household as affected by HIV/AIDS if:

- one or more adult member(s) are infected by HIV/AIDS; and / or
- one or more adult member(s) died recently (over the past 12 months) from AIDS.

Despite the simplicity of this definition, some practical constraints occur when trying to identify households affected by HIV/AIDS during a survey: 1) it is difficult to test for HIV antibodies during a survey; 2) it is challenging to ask an individual directly whether s/he is sero-positive; 3) proxy indicators for HIV/AIDS lead to errors.

Testing for HIV antibodies during a survey

Blood tests provide the most reliable estimates for HIV prevalence when conducted on a representative sample of the population. Some recent DHS and AIS have included blood tests for HIV (see box 2). However, testing for HIV antibodies is rarely incorporated in population-based surveys. Issues of stigma, misconceptions and confidentiality may lead some respondents to refuse the testing. Moreover, testing for HIV antibodies requires additional work, including: 1) training on the procedures for obtaining voluntary consent and for handling, storing and transferring blood specimens; 2) training on the techniques used to draw blood; 3) training on how to record and return the results; 4) testing and delivering results; 5) internal and external quality control. These additional jobs also increase expenses.

Box 2 – Estimating HIV prevalence through blood tests

Population-based surveys

HIV data sets are currently available for 13 DHS (Burkina Faso 2003; Cameroon 2004; Dominican Republic 2002; Ethiopia 2005; Ghana 2003; Guinea 2005; Kenya 2003; Haiti, 2005; Lesotho 2004; Malawi 2004; Mali 2001; Rwanda 2005; Senegal 2005; Zambia 2001/02).[11] Swaziland has recently completed a DHS including a blood test.

Five countries (Cote d'Ivoire, Guyana, Tanzania, Uganda and Vietnam) have completed an AIS. All of them (except Guyana) have included an HIV blood test.

WHO / UNAIDS estimates

For countries with low-level or concentrated epidemics, UNAIDS estimates for HIV prevalence are based on studies among key populations at higher risk of exposure. In countries with generalized epidemics (adult prevalence >1% in the general population), estimates of HIV prevalence are primarily based on surveillance among pregnant women attending antenatal clinics (ANCs). In the absence of population-based surveys that include testing for HIV antibodies, this method provides a proxy for HIV prevalence in the general population. Recent UNAIDS estimates have been adjusted with national estimates that include blood tests.

Proxy indicators

It is difficult to get reliable answers to direct questions on HIV/AIDS status. Many people ignore their HIV status simply because they don't test for HIV. Others prefer not to disclose their sero-positive status due to the risk of being stigmatized. Because of these problems, proxy indicators are necessary to identify households living with infected individuals. In high-prevalence countries, chronic illness (CI) is typically used to identify HIV/AIDS-affected households.

Table 4 – Proxy indicators typically used to identify households affected by HIV/AIDS

Distinctive traits of HIV/AIDS-affected HHs	Proxy indicators
One or more adult member(s) affected by AIDS	Presence (and number) of a chronically-ill adult(s) (e.g. aged 18-59, age range can be context-specific) in the household
One or more adult member(s) recently died from AIDS	Whether the household experienced recently (over the past 12 months) the death(s) of one (or more) adult member(s) (e.g., aged 18-59, age range can be context-specific) from chronic illness

The term "chronic illness" easily can be misunderstood; it is crucial to agree on a definition. An individual is usually considered "chronically ill" if s/he lives in a condition or with a

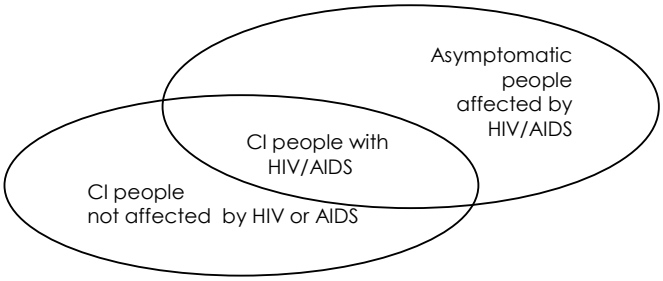
[11] Source: http://www.measuredhs.com/aboutsurveys/search/listmodules_main.cfm

disease that prevented him/her from being fully functional for at least 3 out of the past 12 months.

Limitations of the proxy indicators

Not all chronically-ill individuals are affected by HIV or AIDS; some of them may be suffering from other illnesses. Also, not all people living with HIV or AIDS are chronically ill; some of them are in the first stages of the disease or receive treatment (e.g. ART). As a result, using chronic illness as a proxy indicator for AIDS leads to inclusion and exclusion errors. How big is this risk?

Figure 8 – Chronic illness as a proxy for HIV/AIDS: errors



Findings on the limitations of chronic illness are controversial. Recent studies provide convincing evidence of the strong contribution of AIDS to prime-age (15-49) mortality in Eastern and Southern Africa (e.g., Mather *et al.*, 2004). However, some researchers suggest not generalizing such correlation to all countries and regions. For instance, Barrère (2005) found that in Malawi, within a sample of chronically-ill individuals, only 54 percent were likely to have HIV or AIDS.

Alternative ways to identify people living with AIDS continue to emerge, but results are questionable. Some instruments, such as the checklist-type tool developed by the Catholic Relief Services (CRS), are not suitable for a population-based survey because they would require competence in medicine from the enumerators and awareness of the symptoms from the interviewees. Other tools, such as the verbal autopsy method developed by Ainsworth and Semali (1998), do not require medically-skilled enumerators, but they do require careful phrasing of the questions and direct access to people who live(d) in close contact with the chronically ill. Methods based on verbal autopsy or symptoms deserve attention and need more investigation (see box 3).

Box 3 – Alternative ways to identify presence of AIDS

CRS checklist

Symptoms included in the CRS checklist are: weight loss>10% from normal or regular weight, unexplained prolonged fever, generalized lymph node enlargement, oral thrush, skin infections, TB, non-resolving herpes simplex, pneumonia, herpes zoster within the last 5 years, kaposi's sarcoma, recurrent upper-respiratory infection, meningitis, unexplained chronic diarrhoea (>30 days), persistent confusion or dementia.

Verbal autopsy method (by Ainsworth and Semali)

Ainsworth and Semali (1998) research proposed using a verbal autopsy method including four symptoms (fever, chronic diarrhoea, skin rash and weight loss). They suggested that having three or more of these symptoms indicates a high likelihood that AIDS was involved. In Rwanda, research attempted to identify adult deaths caused by AIDS. Many of the chronically ill, as well as those who died from chronic illness, had two out of the four symptoms, but few had three or more, so the results were inconclusive. (Donovan and Mather, 2003). Recent investigation suggests that a refined verbal autopsy approach may be effective in identifying AIDS-related adult deaths and recommends distinguishing between primary and secondary symptoms (Doctor and Weinreb, 2003).

In the absence of clear guidance from such alternative methods, chronic illness remains the most common proxy indicator for HIV/AIDS. As a general rule, chronic illness is appropriate if:

- HIV/AIDS prevalence in the country is high (e.g. official thresholds do not exist but in most of the Southern African countries, HIV prevalence justifies using chronic illness); and
- there are no other factors or illnesses leading to high incidence of chronic illness.

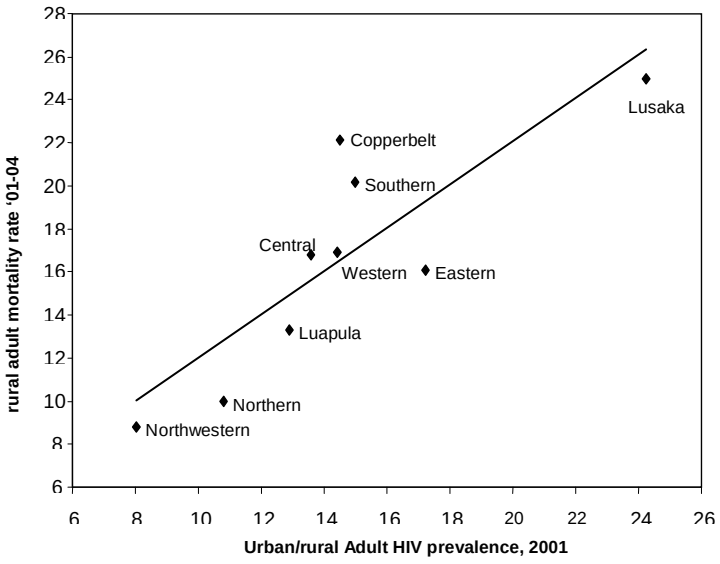
If these circumstances are not met, chronic illness should be interpreted better as an indicator of health-related shock within the household, rather than as a proxy indicator for HIV/AIDS.

Triangulating the information

It is good practice to triangulate the prevalence of the proxy indicators with the HIV estimates provided by other sources (e.g. HIV surveillance systems and population-based surveys that include blood tests, etc.).

An example of this type of triangulation can be found in Chapoto and Jayne (2006) who correlated the prime-age mortality rates from the provincially-representative panel survey conducted in rural Zambia with the provincial HIV prevalence from the antenatal clinics (see chart 2). In this study, the strength of the correlation was notable (r=0.84), thus suggesting that the adult mortality rates observed in the survey were likely due to AIDS.

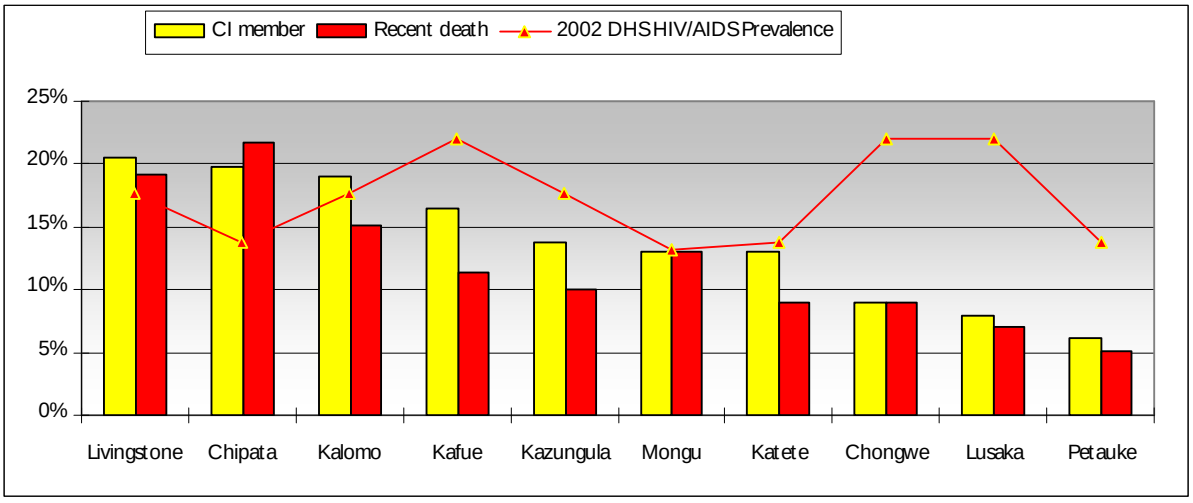
Chart 2 – Provincial adult mortality rates and adult prevalence rates



Source: Chapoto and Jayne (2006)

Another example of triangulation comes from the OVC Zambia report (WFP, 2006). In this report, the prevalence of households living with a chronically ill adult member or which experienced a recent death is compared with the HIV prevalence estimates derived from the 2002 DHS data.

Chart 3 – Prevalence of households with CI members and recent death by province in Zambia



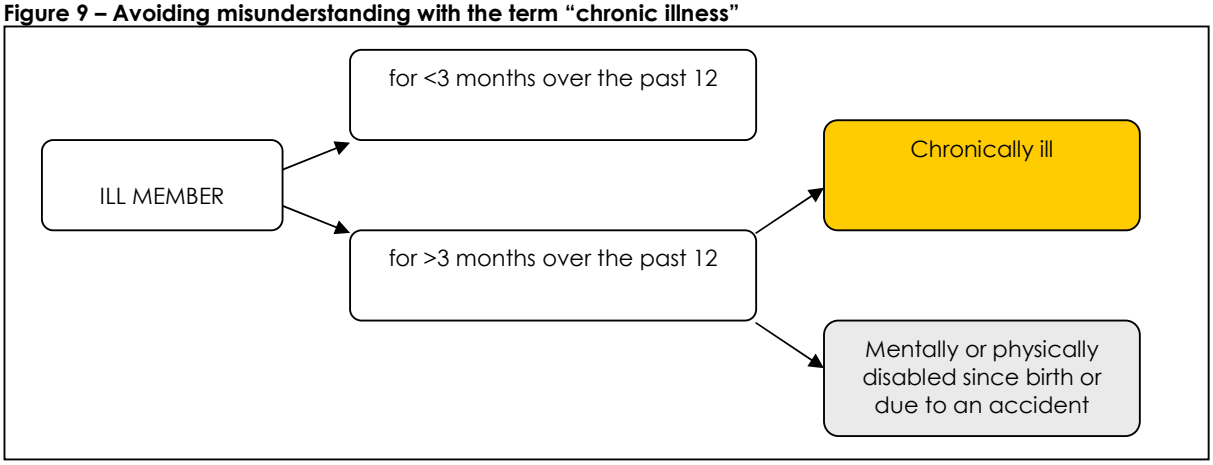
WFP, 2006, "Orphans and Vulnerable Children in Zambia", Johannesburg, South Africa

Reducing the error

Triangulation helps assess the validity of chronic illness as a proxy for AIDS, but it does not eliminate all error. The only way the error can be reduced is by improving data collection. In particular, it is important to:

- be cautious in using methods based on verbal autopsy or a list of symptoms until solid evidence emerges. Such methods deserve attention and need more investigation but they require careful training of enumerators.
- make sure that the questionnaire distinguishes between individuals who are mentally or physically disabled (due to accident or since birth) and chronically-ill individuals. This distinction is easy to make for the respondents and reduces the error by excluding household members who are not fully functional because they are disabled.
- provide the enumerators with a clear definition of chronic illness. They should clearly understand that different stages of chronic illness exist and that a CI individual can be either bedridden, not bedridden although completely unable to work or not bedridden and able to work for a few hours or days. Also, months of inactivity can be non-consecutive.
- urge the enumerators to rephrase the term "chronic illness" during data collection and adopt terms more suitable to the local context. For instance, enumerators can substitute the term "to be fully functional" with other terms, such as "to engage in daily activities as usual" or "to be operational". The important thing is to convey the meaning of the term "fully functional", not to use the same terminology everywhere.

Figure 9 – Avoiding misunderstanding with the term "chronic illness"



As mentioned above, it is good to see if other factors exist that may cause a high incidence of chronic illness. If they do exist, they may compromise the effectiveness of the proxy indicators.

A more detailed list of illnesses has been adopted in some surveys.[12] Along with the distinction "ill for less than three months/chronically ill/disabled", some surveys have included specific illnesses in their list of possible answers, such as malaria, asthma, TB, cancer and AIDS. The purpose is to improve the ability to distinguish between people suffering from HIV/AIDS and people who have been sick for more than three months due to other problems. The main challenge of this approach is that interviewees usually have no competence in medicine and are rarely aware of which illness they experience. If this approach is actually used, it becomes crucial to train the enumerators to describe the main symptoms of all the listed illnesses. Also, it is advisable in the analysis to consider individuals affected by TB as persons living with HIV/AIDS, since TB is frequently associated with AIDS.

Key attributes of chronically-ill or deceased adults

Literature on HIV/AIDS identifies some key attributes of chronically-ill or deceased adults that are crucial to properly study the impact of and responses to HIV/AIDS. They include age, gender, relationship to the household head, educational level, active role of the individual in the household and decreased capability to work. Ideally, a survey on the impact of HIV/AIDS should collect information on all these

[12] See: Technical Secretariat for Food Security and Nutrition of Mozambique, 2006, "Baseline Survey of Food Security and Nutrition in Mozambique", Maputo, Mozambique

attributes. Within the context of food security assessments, the minimum set of attributes to survey includes age, relationship to the head of the household and decreased capability to work.

Key attributes	Remarks
Age (current age for CI members; age at the time of death for deceased members)	To identify the prime-age category Prime age is important because: 1) adults in prime age contribute to household productivity much more than individuals in other age categories and 2) in this category there is a stronger correlation between HIV/AIDS and chronic illness (higher validity of the proxy indicator).
Gender	Gender of the CI or deceased members affects household response to AIDS. For instance, in some countries, the death of a female household head or spouse often results in a new adult female entering the household, while this happens less frequently if a man dies.
Relationship to the household head (current relationship for CI members; relationship at the time of death for the deceased members)	The position of the CI or deceased member is an important predictor of the amount of stress with which the survivors have to cope.
Educational level	-
Active role within the household	Active role should refer to the period when the person was still economically active. This is particularly relevant because people with chronic illness may be considered to be "inactive", having no profession.
Decreased capability to work	A decrease in the capability to work can be captured by asking whether the CI household member has been able to work as before. This attribute aims to assess the gravity of chronic illness and its impact on human labour resources within the household.

3. Orphans and Vulnerable Children: definitions and indicators

The definitions for 'orphan' and 'vulnerable child' currently adopted by WFP are based on the "Framework for the Protection, Care and Support of Orphans and Vulnerable Children Living in a World with HIV and AIDS" and the "Guide to Monitoring and Evaluation of the National Response for Children Orphaned and Made Vulnerable by HIV/AIDS".

An orphan is a child under 18 years of age whose mother, father or both parents have died from any cause. Double orphans are those who have lost both parents; single orphans have lost one parent. Single orphans can be further distinguished into maternal orphans (if they lost the mother) and paternal orphans (if they lost the father).[13]

A child is considered as vulnerable to HIV/AIDS if s/he is under 18 years old and has at least one of the following attributes: 1) is an orphan; 2) has a chronically-ill parent (regardless of whether the parent lives in the same household as the child); 3) lives in a household where in the past 12 months at least one adult died after chronic illness; 4) lives in a household where at least one adult is chronically ill; 5) lives outside of family care.[14]

Three of these five attributes for OVC can be included without major problems in the household questionnaire of a CFSVA (first, third and fourth). Therefore, within the context of a CFSVA, OVC are operationally defined as:

- children under 18 years old who are orphans;
- children living in a household with a chronically-ill adult;
- children living in a household where an adult member recently died from chronic illness.

The presence of at least one of these attributes is sufficient to classify a child as an OVC.

Box 4 – Chronic illness and child vulnerability

Chronic illness strongly contributes to child vulnerability because if parents or caretakers are chronically ill, children experience the burden of their illness. They are more likely to spend a large part of the day without adult supervision and to live outside of parental care. They sometimes provide physical care for ill parents, care for younger siblings and generate income. They receive little protection and take on adult responsibilities.

[13] Source: Global Partners Forum, 2004, "The Framework for the Protection, Care and Support of Orphans and Vulnerable Children Living in a World with HIV and AIDS"

[14] Source: UNICEF, 2005, "Guide to Monitoring and Evaluation of the National Response for Children Orphaned and Made Vulnerable by HIV/AIDS"

4. Household level data on HIV/AIDS and OVC in the CFSVA

When HIV/AIDS indicators are integrated into a food security vulnerability assessment, information can be used to:

- explore the relationship between HIV/AIDS, food consumption and nutritional outcomes;
- compare livelihood assets and strategies of households living with HIV/AIDS and non-affected households;
- highlight coping strategies frequently adopted by the affected households.

When information on OVC is collected during the assessment, data can be used to:

- identify shortcomings of OVC in education and nutrition, and see whether they are more likely to be involved in working activities (child-labour);
- compare food security status, livelihood assets, strategies and coping mechanisms of households with orphans and households without orphans.

This chapter suggests how to design the household questionnaire and analyse household data in a CFSVA to achieve the objectives listed above. Recommendations build on an extensive review of survey instruments that are typically used in population-based surveys addressing HIV/AIDS, livelihood and food security as well as WFP's monitoring surveys (i.e., the Community Household Surveillance and food security assessments which have already incorporated the HIV/AIDS-related indicators (see boxes 5 and 6).

Guidance will be provided regarding chronically-ill members (see 4.1), orphans (see 4.2) and data analysis in the context of food security and vulnerability analyses (see 4.3 and 4.4).

Box 5 – Vulnerability Assessment Committees

The National Vulnerability Assessment Committees (NVACs) operate within the Vulnerability Assessment Committee (VAC) system established by the Southern Africa Development Community (SADC). They work to: coordinate inter-agency vulnerability assessments in the country, strengthen vulnerability assessment capacity at the country level, establish and enhance livelihood-based monitoring systems and establish linkages with assessment and monitoring activities in sectors related to social services and HIV/AIDS. National VACs are formally established in Lesotho, Malawi, Mozambique, Swaziland, Zambia and Zimbabwe.

National VAC assessments have progressively included HIV/AIDS proxy indicators in the household surveys to explore the relationships between food security and HIV/AIDS.

Box 6 – Community & Household Surveillance

In 2003, the Community and Household Surveillance (CHS) system was established in six countries (Lesotho, Malawi, Mozambique, Swaziland, Zambia and Zimbabwe) to assess outcomes of WFP food aid distribution and track food security and livelihood trends. In 2006, Angola and Namibia joined the monitoring system.

Data are collected from WFP beneficiaries and non-beneficiaries in the same location in the post-harvest (October) and lean season (March). The twice-yearly approach allows WFP to capture important seasonal factors and trends in food security. CHS surveys have progressively included HIV/AIDS and HIV proxy indicators.

4.1. Proxy indicators for HIV/AIDS in the household questionnaire

The way we capture the presence and key attributes of CI or deceased household members depends on how demographic data are collected during the household survey. This chapter presents two options: option 1 can be used when demographic data are collected through a roster while option 2 can be used when data are collected without a roster.

Option 1: data are collected through a roster

If data are collected through a roster, ID, name, age, gender and relationship to the household head are typically collected. The table below shows how a roster can be adapted to capture information related to chronically-ill members (see columns in yellow).

Table 5 – Option 1: demographic data are collected through a roster

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
ID	**name**	**age** (in years, if<1yr. old, write 0)	**gender**	**relationship to the HH head**	**has s/he been not fully functional for at least 3 months over the past 12 months?**	if yes, **which kind of illness?**	**is s/he engaged in paid work (cash/in kind)?** if ill consider the period before illness	if chronically ill, **Over the past 12 months has s/he been able to work as before?**
01	_____	__|__|	__|	__|	__|	__|	__|	__|
02	_____	__|__|	__|	__|	__|	__|	__|	__|
03	_____	__|__|	__|	__|	__|	__|	__|	__|
04	_____	__|__|	__|	__|	__|	__|	__|	__|
05	_____	__|__|	__|	__|	__|	__|	__|	__|
…	_____	__|__|	__|	__|	__|	__|	__|	__|
…	_____	__|__|	__|	__|	__|	__|	__|	__|
N	_____	__|__|	__|	__|	__|	__|	__|	__|
		If 98 or more, write 98 99=NK	0=M 1=F	1=head 2=spouse 3=son/daughter 4=father/mother 5=brother/sister 6=grandparent 7=uncle/aunt/cousin 8=niece, nephew, grandchild 9=adopted/foster child 10=step-child 11=No relation	0=no 1=yes	0=mentally/physically disabled 1=chronic illness	0=no 1=yes	1=YES, able to work the same amount of hours/days 2= NO, working for fewer hours/days 3=completely unable to work

NK = not known

Questions in the roster have this informative value:

Q6 and 7 Identifies the presence of a chronically-ill member (Q6=yes and Q7=chronic illness)

Q3 Identifies the presence of a chronically-ill adult member (CI aged between 18 and 59)

Q4 Identifies the gender of the chronically-ill member

Q5 Identifies the position of the chronically ill within the household. For HIV/AIDS analysis, it is sufficient to distinguish between head, head spouse and other members.

Q8 To understand if the CI member had an active economic role within the household before getting sick

Q9 Identifies a decrease in the capability to work of the chronically-ill member

Data on deceased members require nesting a separate table in the questionnaire. The module below suggests how questions on recent deaths can be formulated. They are very similar to the questions on CI members.

Table 6 – Option 1: collecting data on deceased members

Q1	Did any adult (ages 18-59) member die during the 12 months before the survey after being sick for at least 3 months over the past 12?	
		|__| 0=no (skip the whole section) 1=yes

For each of the adult (ages 18-59) member who died after being sick for at least 3 months over the past 12, please report:

	Q2 Cause of death	Q3 Gender	Q4 Relationship to the HH head	Q5 Was s/he engaged in paid work (cash/in kind)? consider period before illness	Q6 In the period s/he was sick has s/he been able to work as before?
1	|__|	|__|	|__|	|__|	|__|
2	|__|	|__|	|__|	|__|	|__|
…	|__|	|__|	|__|	|__|	|__|
N	|__|	|__|	|__|	|__|	|__|
	1=after chronic illness 2=after a period of physical disability 3=old age 4=problems caused by pregnancy 9=other (spec. :_____)	0=M 1=F	1=head 2=spouse 3=other member	0=no 1=yes	1=YES, able to work the same amount of hours/days 2= NO, working for fewer hours/days 3=completely unable to work

Questions in the table have this informative value:

Q1 Filter question: it ensures that data are collected only on deceased members who belong to the relevant age category (18-59) and died after being sick for at least 3 months over the past 12

Q2 Identifies the cause of death. Only deaths following a period of chronic illness are to be considered as related to HIV/AIDS. To shorten data collection, Q2 can be used as a filter question: gender, relationship and work status can be asked for only the deceased members who died after chronic illness.

Q3 Identifies the gender of the deceased member

Q4 Identifies the position of the deceased member within the household. For HIV/AIDS analysis, it is sufficient to distinguish between head, head spouse and other members.

Q5 To understand if the deceased member contributed to the economic activities of the household before getting sick

Q6 To identify a decrease in the capability to work of the deceased member during the period s/he was chronically ill

Option 2: data are not collected through a roster

If the household questionnaire does not include a roster, questions on deceased members are the same as in option 1; questions on CI members need to be asked in a different format:

Table 7 – Option 2: demographic data are not collected through a roster

Q1	**Has any adult (ages 18-59) member been non-fully functional for at least 3 months over the past 12 months?**	|__| 0=no (skip the whole section) 1=yes

For each of the adult (ages 18-59) member who has not been fully functional, please report the following:

	Q2 Kind of illness	**Q3 Gender**	**Q4 Relationship to the HH head**	**Q5 Was engaged in paid work (cash/in kind)?** consider period before illness	**Q6 Over the past 12 months has s/he been able to work as before?**
1	|__|	|__|	|__|	|__|	|__|
2	|__|	|__|	|__|	|__|	|__|
…	|__|	|__|	|__|	|__|	|__|
N	|__|	|__|	|__|	|__|	|__|
	0=mentally/physically disabled 1=chronic illness	0=M 1=F	1=head 2=spouse 3=other	0=no 1=yes	1=YES, able to work the same amount of hours/days 2= NO, working f or fewer hours/days 3=completely unable to work

Alternative methods have been implemented to identify people living with HIV/AIDS (e.g. verbal autopsy method, list of symptoms and detailed list of illnesses). These methods require careful training of the enumerators and awareness of symptoms and illnesses from the respondents. If such methods are adopted for identifying people living with HIV /AIDS, questions on kind of illness and cause of death need to be modified accordingly.

Examples can be found in the 2006 VAC Mozambique study and the 2007 EFSA in Central African Republic's rural questionnaire. The first used a list of illnesses and symptoms; the latter a simplified verbal autopsy method (see figure 10). The roster below has been extracted from the household questionnaire used in the Zambia Rural Incomes and Livelihoods Survey 2004. It describes how cause of death and verbal autopsy can be included in a household questionnaire.

Figure 10 – Cause of death and verbal autopsy in the Zambia Rural Incomes and Livelihoods Survey (2004)

What was the cause of death?	ask only if the deceased were ill prior to their death. i.e. PD05<14 or is=20 oe =21 ask for the symptoms this person has. Leep prompting for possible answers 1=yes 2=no					
if PD05=14 np to 19, g o tp PD12	chronic diarrhea	fever for at least 1 week	substantial wieght loss	skin rash	thrush, frothy mouth, mouth infection	cough
PD05	PD06	PD07	PD08	PD09	PD10	PD11

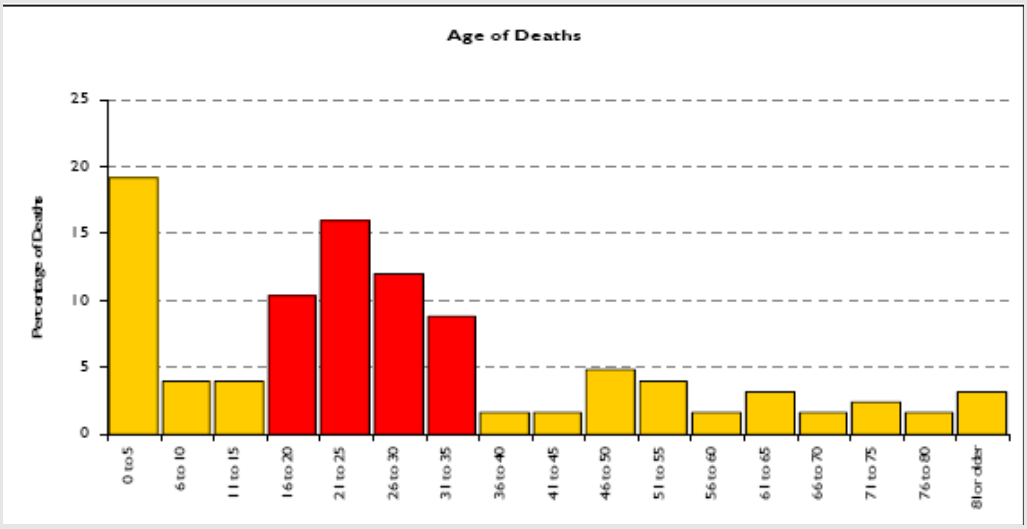
1=Pneumonia	7=fits	13=HIV/AIDS	20=NK
2=malaria	8=mental illness	14=accident	21=other (spec.)
3=TB	9=heart disease	15=suicide	
4=chronic diarrhoea	10=chest pains	16=murdered	
5=meningitis	11=stomach disease	17=snake bite	
6=anaemia	12=stroke	18=age	
		19=other sudden death within 4 days	

Source: Central Statistical Office of Zambia, "Second Supplemental Survey to the 1999/2000 Post Harvest Survey"

Within the context of HIV/AIDS, data on deceased members are usually combined with presence of chronically-ill household members to identify the households that likely live with HIV. However, data on deceased members can be used alone to illustrate the severity of the pandemic. The Swaziland National Vulnerability Assessment (September 2006) provides an interesting example of such an approach (see box 7).

Box 7 – Data on deceased members used to illustrate the severity of the pandemic

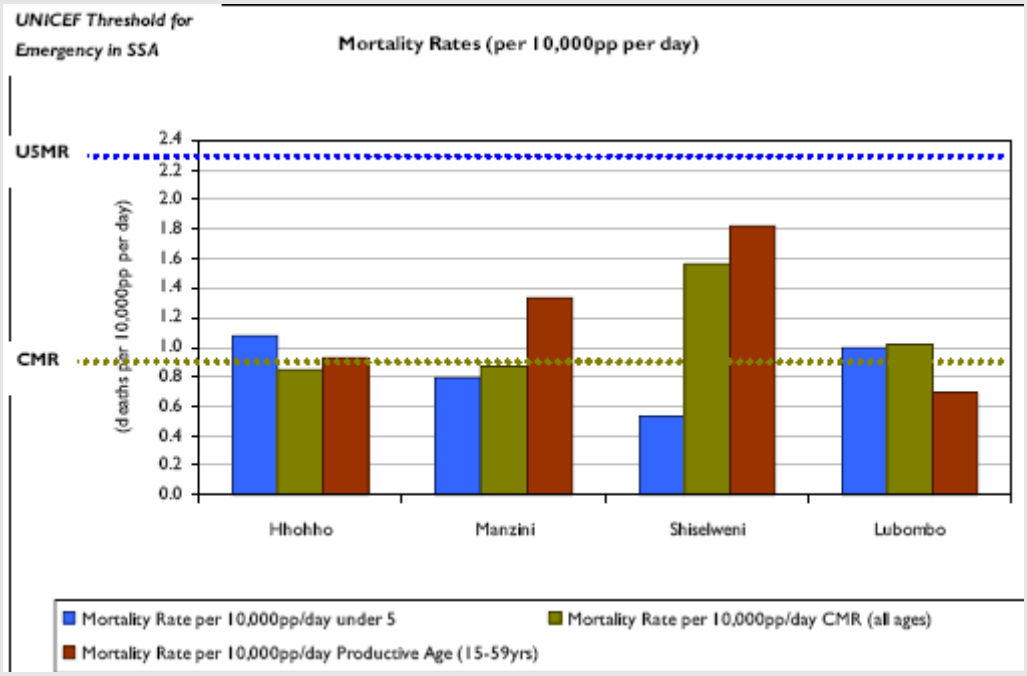
"The histogram of the number of deaths by age group shows the unusual peak of deaths in the prime-age groups between 20 and 40 years of age. The normal histogram of deaths would show the high number in children 0-5, as illustrated in this histogram, with a sharp decrease and low levels until the older age groups.



[…] In order to compare findings with standard thresholds, two types of mortality rates[15] were calculated: (i) under 5 mortality rate and (ii) crude mortality rate. The UNICEF emergency mortality thresholds for Sub-Saharan Africa (SSA) are 0.9 for Crude Mortality Rate (CMR) and 2.3 for Under 5 mortality rate (U5MR). […] the death rates (CMR and U5MR) were calculated for each administrative area and then compared to the UNICEF

[15] Mortality per 10,000 persons per day = (# deaths in surveyed households / (# persons in surveyed households*180 days)) * 10,000

standards. For Swaziland, all administrative regions are below the Under 5 mortality rate threshold for humanitarian emergencies in Sub-Saharan Africa which is good. However, for crude mortality, all regions are just at the threshold or above the emergency levels with Shiselweni being of specific concern. The difference in crude mortality rate between Shiselweni and Manzini is statistically significant *(p < 0.05)*."



Source: Swazi National Vulnerability Assessment Committee, 2006, "Swaziland National Vulnerability Assessment"

4.2. Orphans and Vulnerable Children in the household questionnaire

To conduct analyses on OVC, it is advisable to collect data for children under 18 years old at the individual level because:

- the key issues to analyse (education, labour and nutritional status) are properties of the individual, not of the household; and
- individual-level data allow exploring intra-household disparities between orphans and non-orphans.

If demographic data are collected through an individual roster, OVC-related questions easily can be added in the roster. If demographic data are not collected through a roster, it may be advisable to include a roster for children aged 0-17. The module below suggests how to formulate these questions. Ideally all the questions should be arranged in one table. If the module has to be split in two tables (like in the example below), make sure that the children ID is reported also at the beginning of the second table.

Table 8 – Individual roster with OVC-related questions (part one)

<table>
<tr><th colspan="5">BASIC DEMOGRAPHIC PROFILE
FOR EACH HH MEMBER</th><th colspan="2">ORPHAN STATUS
FOR EACH CHILD
(ages 0-17)</th><th colspan="6">EDUCATION
FOR EACH CHILD (official primary and secondary school age)</th><th rowspan="3">LABOUR (see part two of the table)</th><th rowspan="3">GRANT (see part two of the table)</th></tr>
<tr><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th><th>Q5</th><th>Q6</th><th>Q7</th><th>Q8</th><th colspan="2">Q9</th><th>Q10</th><th colspan="2">Q11</th></tr>
<tr><th>ID</th><th>name</th><th>gender</th><th>age in years

if<1ys, write 0</th><th>relationship to the HH head</th><th>parental status</th><th>time spent in the HH

(if adopted or foster child)</th><th>currently going to school?</th><th colspan="2">if never been enrolled or dropped out, why?

(report 2 reasons)</th><th>(if enrolled) did s/he miss at least 5 school days over the last school month? (days can be non-consecutive)</th><th colspan="2">(if yes) why?

(report 2 reasons)</th></tr>
<tr><td></td><td>___</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|__| |__|</td><td>|__|</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|__|</td><td>|__|</td></tr>
<tr><td></td><td>___</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|__| |__|</td><td>|__|</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|__|</td><td>|__|</td></tr>
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<tr><td></td><td>___</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|__| |__|</td><td>|__|</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|__|</td><td>|__|</td></tr>
<tr><td></td><td>___</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|__| |__|</td><td>|__|</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|___|</td><td>|__|</td><td>|__|</td></tr>
<tr><td></td><td></td><td>0= M
1= F

99=NK</td><td>99=NK</td><td>1=head
2=spouse
3=child
4=father/mother
5=brother/sister
6=other relative (grandparent, uncle, aunt, cousin)
7=grandchild/ niece/nephew
8=adopted /foster child
9=step-child
10=no relation

99=NK</td><td>0=both parents alive
1=mother dead
2=father dead
3=both parents dead

99=NK</td><td>1=1-3ms
2= 4-6ms
3= 7-9ms
4=10-12ms
5= 1-2ys
6= 3-4ys
7= 4-5ys
8= >5ys

98=NA
99=NK</td><td>1=NO, never been enrolled

2= NO, dropped out (this year or previously)

3=YES primary

4=YES secondary

99=NK</td><td colspan="2">0=cycle completed
1=marriage/pregnancy
2=paid work (cash/kind)
3= unpaid work
4= household chores
5= care for siblings
6=care for ill members
7=school fees/ cost
8=school far/in insecure area
9=no interest in school
10=Illness
11=Other (spec.:___)</td><td>0=no
1=yes

99=NK</td><td colspan="2">0=cycle completed
1=marriage/pregnancy
2=paid work (cash/kind)
3= unpaid work
4= household chores
5= care for siblings
6=care for ill members
7=school fees/ cost
8=school far/in insecure area
9=no interest in school
10=Illness
11=Other (spec.:___)</td><td></td><td></td></tr>
</table>

Table 8 – Individual roster with OVC-related questions (part two)

	LABOUR			GRANTS
	FOR EACH CHILD (official primary and secondary school age):			
Q1	Q12	Q13	Q14	Q15
ID	**no. hours per day s/he is usually busy with household chores**(cleaning, caring for siblings, etc.)	**no. hours per day s/he usually does family work** (HH field, HH business, etc.)	**no. hours per day s/he usually works for someone who is not a HH member** (paid and unpaid)	**does s/he receive any grant/food support?**
	|___|	|___|	|___|	|___|
	|___|	|___|	|___|	|___|
	|___|	|___|	|___|	|___|
	|___|	|___|	|___|	|___|
	|___|	|___|	|___|	|___|
	not working=0 NK=99	not working=0 NK=99	not working=0 NK=99	0=NONE 1=SF/THR 2= other food assistance 3=foster grant 4=disability grant 5=other grant 99=NK

Questions in the module can be modified to fulfil the specific objectives of the assessment or context. If data are collected through a roster, ID, name, age, gender and relationship to the HH head are typically collected. The informative value of the other questions is reported below:

Q6 Distinguishes between orphans and non-orphans.
It is also important to capture the position of the children in the household. Q5 identifies the relationship between the child and the head of the household. For instance, it can be used to distinguish orphans living with relatives and orphans fostered by not-related families.

Q7 Identifies the time spent in the HH by the adopted or foster child (time slots can be merged)

Q8 Main objective of WFP food for education programmes is to increase access to primary education. However, to identify over-aged children enrolled in primary school, it is useful to collect educational data on the official primary and secondary school-age group. Q8 aims to identify children currently not enrolled (i.e children who dropped out or children who have never been in school).

Q10 Identifies students who frequently (at least 5 days over the last month) miss class

Q9, Q11 Identifies reasons that prevent children from being enrolled (Q9) or attending class (Q11). Reasons are usually very similar; Q9 and Q11can therefore become one question.

Q12, 13, 14 Estimates the number of hours per day that a child is busy with household chores, family work (in the farm or other family business), or work outside the household. Type and amount of work provide information on the involvement of the child in the labour market. These questions have been adapted from MICS2. Instead of the number of working hours, respondents can be asked to provide more generic answers, such as every day, often (3-6 days per week), once in a while (1-2 days per week), hardly at all (<1 day per week) or never.

Until now, food security and vulnerability analyses have not systematically included children's exposure to labour in the household questionnaire. Yet, questions on children's involvement in working activities can be included.

Q15 To understand whether the child is benefiting from food aid or grants. This question is relevant especially in the monitoring surveys and allows capturing an important confounding factor. Types of food assistance and grants are country-specific.

4.3. Analysing data through an HIV lens

Proxy indicators for HIV/AIDS are typically reported at the household level (e.g. percentage of households with at least one chronically-ill adult member or percentage of households with one orphan). Food security and vulnerability analyses collect data at the household level on food consumption, food sources and stock, livelihood assets and strategies. As a consequence, analysis of the interaction between HIV/AIDS, food security and livelihoods has to be conducted at the household level.

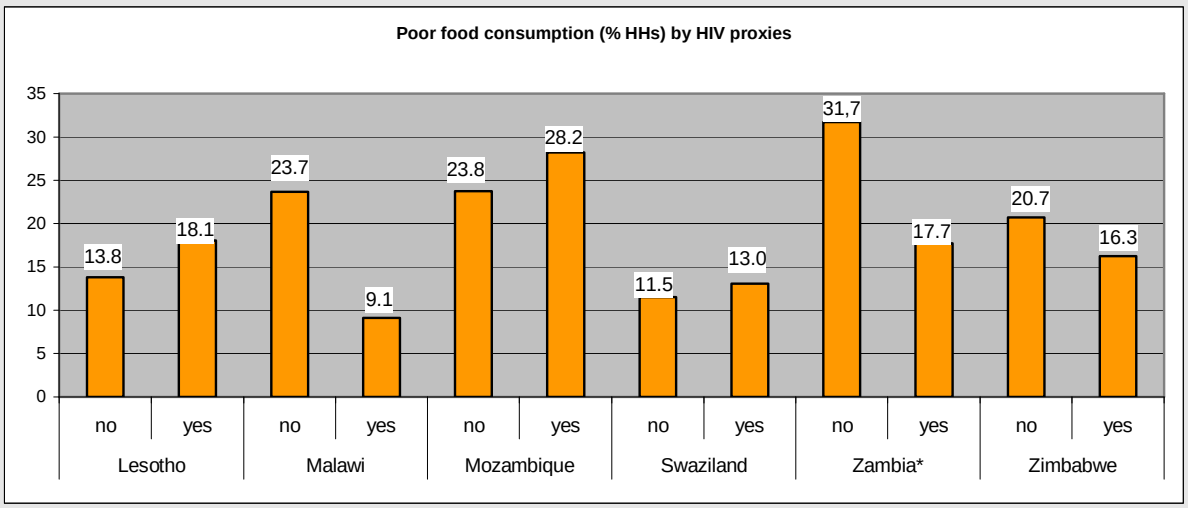
Nutritional data are collected on mothers and children under the age of five. The interaction between HIV/AIDS and nutritional outcomes can therefore be analysed at the individual level.

4.3.1. HIV/AIDS, food security and nutrition

To understand the relationship between HIV/AIDS and food security, analyses should focus on the key issues that are usually considered in food security analysis: current food consumption, dietary diversity, sources of food, food reserves, etc. The purpose is to identify differences in food security between affected and non-affected households. Some examples of analyses are reported below. They draw attention to the importance of combining data on current food consumption and sustainability of current food consumption.

Box 8 – Differences in food consumption between affected and non-affected households: data from CHS R8[16]

The interaction between current food consumption and HIV/AIDS proxies does not show the same pattern in all the countries surveyed. In Lesotho, Mozambique and Swaziland, the prevalence of poor food consumption is slightly higher among the affected households. Differences are not statistically significant and are indicative only of a trend. On the other hand, in Malawi, Zambia and Zimbabwe, the affected households are less likely to have poor food consumption. Results are statistically significant only for Zambia (p<0,05).



Analysis of the sustainability of food consumption provides a better understanding of the food security status of affected and non-affected households. In this analysis, affected households have less-sustainable food consumption compared with non-affected households. They are more likely to receive food remittances (27% vs 23%); more likely to get cereals from assistance or borrowing (25.5% vs 20.4%) and less likely to have cereals from their own harvest (15.8% vs 20.7%). Also, 47.6% of the affected households have never had staple food in stock compared with 32.8% of the non-affected households.

	Non-affected HHs (%)	Affected HHs (%)
Receiving food remittances (*)	23.0	**27.3**
Main source of cereals is own harvest (*)	**20.7**	15.8
Main source of cereal is assistance / borrowed / gift (*)	20.4	**25.5**
Never had staple food in stock (*)	32.8	**47.6**

(*) p< 0.05

In conclusion, affected households did not report eating less compared with non-affected households. Nonetheless, data on food sources and stock suggest that they have less-sustainable food consumption.

The unit of analysis for nutritional outcomes (i.e. women's and children's nutritional status) is the individual. In general, household-level factors have an impact on individual status. Thus, the analysis can control for the presence of HIV/AIDS proxies to assess the impact of HIV/AIDS on women's and children's nutritional status. The table below from the Swaziland Vulnerability Assessment report offers a clear and simple example of this kind of analysis.

Table 9 – Nutritional status by HIV/AIDS proxy indicators: findings from Swaziland Vulnerability Assessment 2006

	Death of HH member/s (ages15-49)		Chronic illness of HH member (ages 15-49)		Total
	No	Yes	No	Yes	
Number of HHs	743	226	857	112	**969**
Mean BMI of mother	27.5	26.7	27.3	26.8	**27.3**
% children (0-5) wasted	2.6%	2.8%	2.8%	1.2%	**2.6%**
% children (0-5) stunted	34.6%	38.6%	35.3%	37.7%	**35.6%**
% children (0-5) underweight	13.3%	12.9%	13.1%	14.1%	**13.2%**

*p < 0.05
Source: Swazi National Vulnerability Assessment Committee, 2006, "Swaziland National Vulnerability Assessment"

[16] Data analysis was conducted only on the non-assisted households. For the purpose of the analysis, a household is considered as "assisted" if it has received food assistance at least 3 times over the 6 months before data collection.

4.3.2. HIV/AIDS, livelihood assets and strategies

It is possible to identify differences in the current food security status of affected and non-affected households by examining food consumption, food sources and nutritional outcomes. However, to have a complete understanding of the impact of HIV/AIDS on household food security, it is crucial to consider livelihoods in the analysis. HIV/AIDS literature highlights the main effects of HIV/AIDS on livelihoods (see section II, chapter 1). Some of these effects can be analysed through the indicators that are typically collected during the comprehensive food security and vulnerability analyses.

The table below lists several key indicators that are usually collected during the CFSVAs and that should be considered when analysing CFSVA data through an HIV lens. The list also can be useful during questionnaire design, to make sure that the HIV/AIDS component is included in the assessment. This list is the result of a comprehensive review of household questionnaires used in the CFSVAs over the past two years as well as CHS survey questionnaires.

Table 10 – Analysing HIV/AIDS impact: indicators available from food security and vulnerability analysis

Human capital	▪ Household size ▪ Household composition (gender) ▪ Household headship (gender and age) ▪ Orphans (presence of, number of) ▪ Migration in (and reason) ▪ Migration out (and reason) ▪ Prevalence (%) of effective dependents ▪ Decrease in amount of land cultivated ▪ Reasons for not cultivating land (or for cultivating less land) ▪ Children's enrolment in school ▪ Children dropping out from school (and reason) ▪ Children's absenteeism (and reason)
Financial capital	▪ Expenditure on health, medicines, transport and funerals (e.g. per capita expenditures and household expenditures as a percentage of the total expenditure) ▪ Expenditure on seeds, fertilizers, etc. ▪ Income-generating activities and their contribution to the total income ▪ Access to credit ▪ Borrowing money (primary reason and source of credit)
Social capital	▪ Material support received from relatives or friends (e.g. money, food, clothing and agricultural inputs)
Natural capital	▪ Kind of irrigation system, fertilizers and pesticides used ▪ Quantity and kind of crops cultivated ▪ Access to land ▪ Proportion (%) of land cultivated (out of the total land owned) ▪ Proportion (%) of land rented or lent out (out of the total land owned) ▪ Selling land (and reason for)
Physical capital	▪ Assets and livestock owned ▪ Selling or bartering livestock (by kind of livestock and reason for selling or bartering) ▪ Selling assets (and reason for)

It is extremely important to note that:

- Literature on HIV/AIDS draws attention to changes and adjustments that can be captured only through longitudinal analysis. WFP food security and vulnerability assessments identify the current status and differences between affected and non-affected households. Since these assessments

are not meant to be longitudinal studies, they face challenges in understanding the vicious cycle between HIV/AIDS and livelihoods. CFSVA household data alone cannot answer questions regarding processes (e.g. "Are the households affected by HIV/AIDS less food secure due to HIV/AIDS or does their food insecurity expose them more to the epidemic?"; "What are the conditions that accelerate the decline in food security of the households affected by HIV/AIDS?", etc.)

- Some effects mentioned in the HIV/AIDS literature do not have a related indicator in the food security and vulnerability studies.[17]
- Some of the indicators reported in the table help identify negative consequences (e.g. disparities in labour force), while others highlight coping strategies (e.g. migration of household members). Still, coping mechanisms can serve as indicators for HIV/AIDS impact because as the impact becomes more severe, household strategies tend to become more desperate.

Examples of analysis are reported below.

The analysis on human capital recommends looking at the demographic profile of the households, migration and human labour availability. The box below includes an example developed using CHS Round 8 data.[18] Children's educational status is also important, especially for evaluating HIV/AIDS impact on the new generation. However, effects on education can be better measured analysing data at the individual level. Educational status of OVC will be discussed in 4.4.1.

Box 9 – Human Capital

Table 11 – Human capital of affected and non-affected HHs: findings from CHS R8

	HHs living with HIV/AIDS?		Sig
	no	yes	
(N)	*(1327)*	*(494)*	
% female-headed HHs	39.4	50.2	*
% elderly-headed HHs	33.9	21.5	*
average % of effective dependents[19]	39.8	49.5	*
average % of females in the HHs	53.7	52.0	
average HH size	5.8	5.6	
% HHs with no orphan	53.1	51.2	
% HHs with one orphan	17.4	17.4	
% HHs with 2 or more orphans	29.5	31.4	
% HHs with members migrating out	22.5	22.9	
% HHs with members migrating in	13.0	17.2	*
% HHs with access to land	84.8	73.5	*
% HHs cultivating no land or < 0.5 Ha	35.8	35.2	
% HHs cultivating less land	37.5	38.6	

(*) = p<0.05

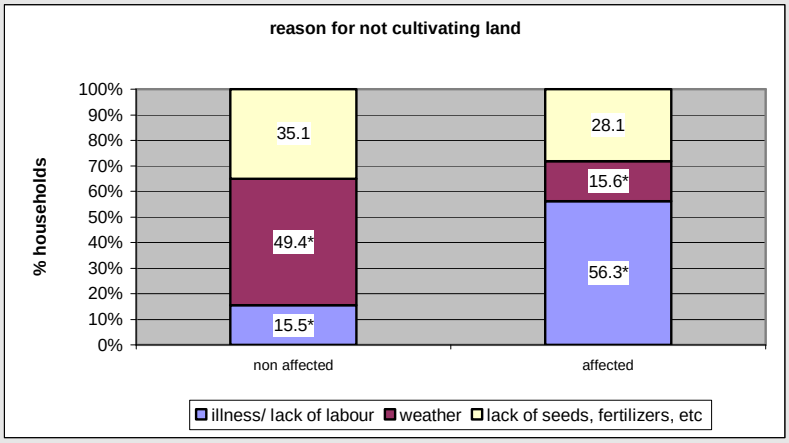
Households living with HIV/AIDS are more likely to be headed by women, to have a higher percentage of effective dependents and to have new people joining the household. They have a lower prevalence of elderly heads of household. This is likely due to the premature death of some household chiefs.

The affected households have less access to land compared with non-affected households (73.5% vs. 84.8%). However, when they have access to land, they tend to have the same cultivation patterns as the non-affected households.

[17] Indicators of human capital that are usually not available in the CFSVA are: 'time available for domestic labour and child-care', 'loss of agricultural knowledge, practices and skills'. Indicators of financial and social capital usually not available are: 'liquidation of savings accounts', 'pledging of future crops', 'increased reliance on community willingness to support educational / nutritional needs of orphans', 'decrease in time to participate in social/cultural activities'. Impacts on natural and physical capital usually not considered include 'reduction in soil fertility', 'fallow land returning to bush', and 'appropriation of land by relatives'.

[18] In all the examples only the non-beneficiary households were considered. The six countries have been analysed together.

The percentage of households cultivating less land than the past year is approximately the same for the affected and non-affected households (38.5% vs. 37.5%). However, the two groups reported different reasons for not cultivating land. For half of the non-affected households (49.4%), weather was the main reason for cultivating less land, whereas illness or lack of labour was the main obstacle for more than half of the affected households (56.3%).



(*) = p<0.05

The analysis on financial capital suggests looking at the average contribution of livelihood activities and focussing on the less-sustainable income-generating activities (e.g. food assistance, remittances, gifts and casual labour).

Box 10 – Financial Capital

It is possible to identify differences in livelihood strategies of affected and non-affected households by comparing the average contribution (%) of different income-generating activities to total income.

The average contribution of less-sustainable livelihood activities increases among the affected households. On average, 9.3% of the total income of affected households comes from remittances (vs. 7.2% of the total income of non-affected households). Moreover, 9.5% of the total income for affected households comes from food assistance compared with 6.3% for non-affected households.

Table 12 – Average contribution (%) of livelihood activities to the total income

	Non-affected HHs	Affected HHs
gifts	4.1	5.0
remittances (*)	**7.2**	**9.3**
food crops (*)	18.5	14.6
cash crops (*)	4.3	2.5
casual labour	23.8	22.9
begging	1.8	2.1
livestock	2.3	2.5
skilled trade	1.8	1.6
small business	6.4	7.4
petty trade (*)	7.1	9.3
pension	3.2	2.4
salary (*)	6.2	4.4
fishing	1.1	0.8
vegetables	2.9	2.8
food assistance (*)	**6.3**	**9.5**
brewing	1.3	1.7
other activities	1.6	1.5
TOTAL	100.0	100.0

(*) = p< 0.05

As mentioned above, CFSVA data can only be used for a cross-sectional analysis. To obtain insight on the process is it necessary to include explicit questions about consequences and coping mechanisms. There are three options for how to do that:

Option 1: Ask respondents to identify and rank strategies adopted by the household to minimize the effects of chronic illness(es) and death(s)

Respondents can be asked about the main coping strategies adopted by the household to minimize the effect of illness and death. This kind of approach has been adopted by the food security group working at Michigan State University in several survey instruments.[20] The example below has been adapted from a

[19] Effective dependents are individuals under 18, individuals over 59 years old and individuals between 18 and 59 who are either chronically ill or disabled.
[20] http://www.aec.msu.edu

study conducted in 2002 in Rwanda for the Ministry of Agriculture and Rural Development by the Directorate of Economics' Department of Statistics.

Figure 11 – Exhort respondents to identify and rank coping strategies related to chronic illness and death

If there is at least one adult (ages18-59) member affected by chronic illness or who died over the past 12 months due to chronic illness, what did the household do to minimize the effects of the illness and deaths? (give 3 answers in order of importance)		1st strategy: |_|
01=cultivated less land 02=cultivated less-intensive food crop 03=land rented / sold / gifted 04=increased labour of other HH members 05=hired workers to cultivate land 06=received labour support/help from other HHs 07=children asked to work 08=children sent to live with other HHs 09=children withdrawn from school	10=rely on charity 11=took on loans 12=spent HH savings 13=sold assets 14=sold animals 15=ate food of poorer quality 16=ate less quantities of food 17=other (spec.:_____) 18=other (spec.:_____) 19=other (spec.:_____) 99=nothing done	2nd strategy: |_| 3rd strategy: |_|

A question like this is more effective if asked immediately after the questions relating to the presence of CI or deceased members. Obviously, it can be adapted to meet specific information needs (e.g. options can be merged or added, it can be asked separately for CI and deceased members, or for each individual, if a roster is used). It has the advantage of covering the main effects reported in the literature on AIDS and ranking the main strategies. In addition, it explicitly links survival strategies to AIDS. On the other hand, since it addresses households living with a CI individual or having a deceased member, it does not provide the opportunity to compare coping mechanisms of affected and non-affected households.

Option 2: Include questions on specific coping strategies in the appropriate sections of the questionnaire.

This approach is more effective if the questionnaire also collects the reasons for adopting a specific coping strategy. The example below is taken from the CHS questionnaire, round 8. These types of questions explain how the household spent the money; they do not identify the problem that led the household to undertake such a response.

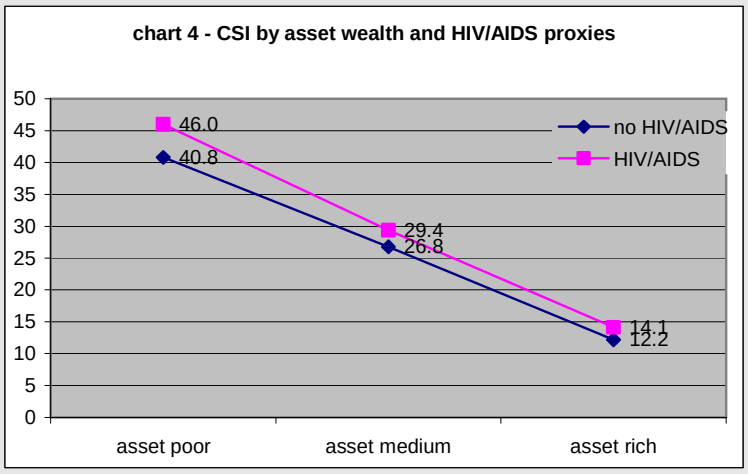
Figure 12 – Distress selling of animals: example from CHS Round 8

E3	How many of the following animals does your family own?			
	Cattle |__|__|	Donkeys/Horses |__|__|	Pigs |__|__|	
	Sheep/goats |__|__|	Poultry |__|__|__|		
E4	Have you sold or bartered any sheep, goats or pigs in the past 3 months?		1 = Yes	2 = No
E5	If yes, why?	*Reason 1* |__|__|	*Reason 2* |__|__|	
	Codes	1 = no longer needed 3 = buy food for HH 5 = other emergency 7 = pay social event 9 = pay school costs 11 = no second reason	2 = pay daily expenses 4 = pay medical expenses 6 = pay debt 8 = pay funeral 10 = other	

Option 3: Look at the Coping Strategy Index (CSI)

The CSI gives a simple numeric score in response to a series of questions about how households manage to cope with a shortfall in food for consumption. In the context of food security and vulnerability assessments, CSI is used to assess the level of stress on the household and the sustainability of current food consumption. The box below reports a possible way of conducting an HIV analysis using the CSI.

Box 11 – Coping Strategy Index (CSI)



Households living with chronic illness or with a recent death from chronic illness are more likely to adopt strategies to cope with a decline in food consumption. This is true for all the asset categories and becomes more evident among the asset-poor households (see chart).

Using a linear model approach, it is possible to estimate the impact of HIV/AIDS proxies on the CSI by controlling for other indicators (see table below). The demographic attributes with the strongest impact on the CSI are HIV/AIDS proxies and presence of at least two orphans. Being rich in assets and livestock and having salary as a main source of income decrease the household score on the CSI.

Table 13 – Impact of demographic and socioeconomic indicators on CSI score: Multiple Linear Regression (MLR)		CSI B values
Demography	**affected by HIV and AIDS**	**5.1***
	two orphans in the HH	**3.7***
	female-headed household	-2.6*
	percentage effective dependents	-0.1*
	elderly-headed household	1.5
	one orphan in the HH	-0.4
Socioeconomic	main income source is casual labour (vs. agriculture, fishing and livestock)	16*
	asset poor (vs. asset medium)	12*
	asset rich (vs. asset medium)	-10.9*
	main income source is pension, salary (vs. agriculture, fishing and livestock)	-8.9*
	livestock rich (vs. no livestock)	-5.8*
	livestock medium (vs. no livestock)	3
	livestock poor (vs. no livestock)	2.1
	main income source is trade or business (vs. agriculture, fishing and livestock)	1.7
	main income source is assistance (vs. agriculture, fishing and livestock)	-1.3

(*) = $p < 0.05$

4.4. Analysing data on orphans and vulnerable children

Subjects of the analysis

The analysis can focus only on orphans or be extended to vulnerable children. According to the definition of OVC provided in Chapter 3, if OVC are the subjects of the analysis, the analyst has to include orphans, children living in a household with a CI adult member and children living in a household where an adult member recently died from a chronic illness. Vulnerable children can be included in the analysis only if proxy indicators for HIV/AIDS have been collected through the household questionnaire.

Level of analysis

Data analysis can be conducted both at the individual and at the household level. It is not advisable to impose a universal rule on what should be analysed at which level as the choice depends upon the kind of indicators and the objective of the research. As a general suggestion, individual-level analysis is more

appropriate to explore individual attributes (e.g. shortcomings in education and nutritional status and exposure to labour). Household-level attributes (e.g. food consumption, livelihoods and coping mechanisms) can be analysed both at the individual and the household level.

Issues to analyse

Most of the studies suggest analysing the impact of HIV/AIDS on OVC by considering education, labour, nutritional and health status. Food security and vulnerability analyses also allow consideration of food consumption, livelihood assets and strategies.

Controlling variables

OVC literature discusses factors that increase OVC's exposure to shocks as well as circumstances that protect OVC from deprivations. There is clear understanding of how certain factors increase OVC's vulnerability, however evidence for other factors is mixed and it is therefore not advisable to propose general statements. It is important to be aware of these factors to properly design data collection and analysis methods.

The table below includes some key factors reported in the literature. These factors can be used as controlling variables during data analysis.

Table 14 – Factors that increase OVC's exposure to shocks

Factor	Explanation
Age	Age influences school enrolment and exposure to labour. It is crucial in correctly interpreting anthropometric data. Since orphans are older, on average, than non-orphans, it is particularly important to use age as a controlling variable in analysis of educational outcomes, child labour and nutritional status.
Orphan status	Double orphans usually are more exposed to shocks than single orphans. Moreover, the gender of the surviving parent influences the gravity and kind of deprivation experienced.
Position of the orphan in the HH	Orphans are at greater risk if they are fostered by distant relatives or unrelated caregivers because they are more likely to be discriminated against in favour of the non-orphans. It is therefore advisable to control findings by the position of the orphans in the households.
Number of orphans in the household	Households usually manage to care for one orphan without being impacted significantly, however, in many settings, they are unable to take on more orphans without affecting their livelihood.[21] It is therefore important to control the results by the number of orphans living in the household.
Percentage of effective dependents (and household composition)	The percentage of effective dependents and household composition affect the impact of HIV/AIDS on household human capital.
Household wealth	Household wealth is an important factor in understanding the environment in which orphans and vulnerable children grow up. It also plays a crucial role in determining shortcomings in education, nutrition, labour and food security. Within this context, it is a useful controlling variable.

Next paragraphs focus on specific issues. Each paragraph suggests the most appropriate level of analysis, key indicators and key controlling variables.

[21] A meta-analysis conducted by the Dept. of International Health and Development at the Tulane University School of Public Health and Tropical Medicine classified 38% of households with more than one orphan as "food insecure with child hunger", significantly more than households with only one orphan (7%) or no orphans (13%).

4.4.1. OVC and education

Individual-level analysis is useful to explore shortcomings in education for OVC. Orphans and non-orphans (or OVC and non-OVC) can be compared by looking at:

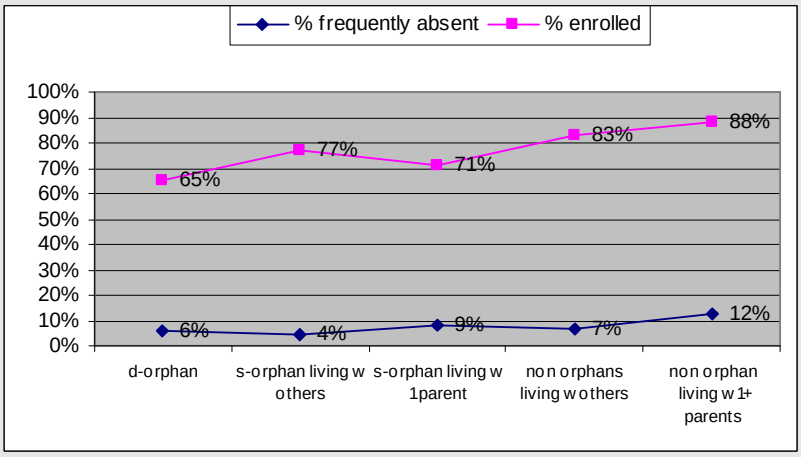
- enrolment;
- absenteeism (for the enrolled students);
- drop out;
- performance (through repetition and promotion);
- reasons for non-enrolment, drop out and absenteeism;
- over-age enrolment.

Some examples of analyses are reported below. They suggest how to compare the educational status of OVC and non-OVC and how to use controlling variables in data analysis.

The example below (box 12) highlights that it is also important to consider the impact of orphanhood on education in countries where HIV/AIDS is not the main cause for orphaned status. In these countries, it is advisable to focus the analysis on orphans only, rather than expanding it to also include vulnerable children.

Box 12 - Greater Monrovia Food Security and Nutrition Survey (CFSNS): education by parental status

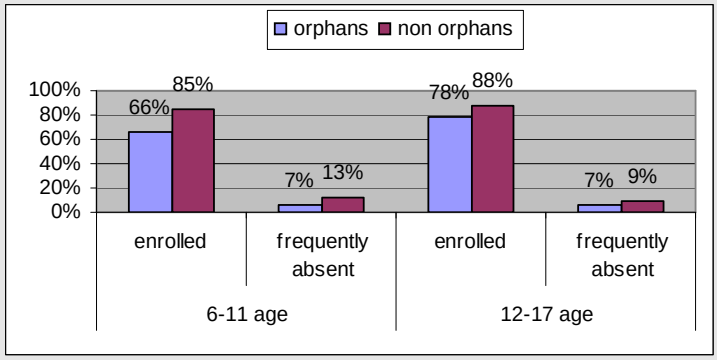
The CFSNS conducted in Greater Monrovia in 2006 found that 10 percent of children (ages 0-17) are orphans; 18 percent have both parents alive but don't live with the biological parents and 72 percent have both parents alive and live with at least one of them. The high prevalence of non-orphans living with relatives or acquaintances is a consequence of the social disruptions that Liberia faced during the civil war.



Overall, 85 percent of children (ages 6-17) are in school. The percentage decreases among orphans and reaches 65% among double orphans. Single orphans living with others are more likely to be enrolled than single orphans living with the survival parent.

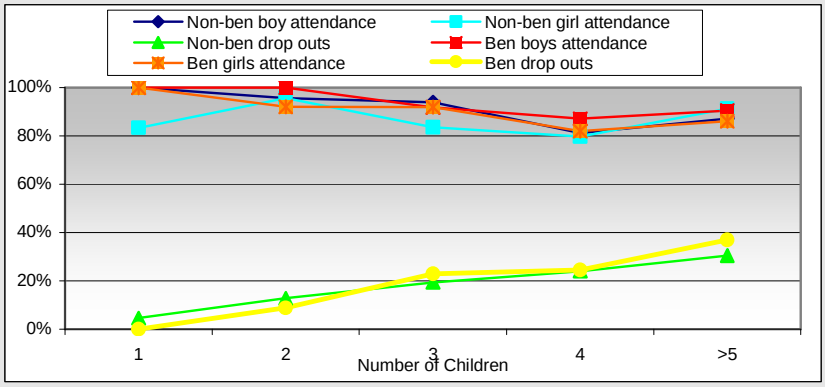
The chance of being enrolled increases among the non-orphans, and it is as high as 88 percent among the non-orphans living with at least one biological parent.

Since orphans are, on average, older than non-orphans, and non-enrolment is usually more frequent among older children, it is worth controlling educational outcomes by age. In both age categories, orphans have less access to education. The gap is more serious for the younger group where only 66 percent of the orphans are enrolled compared with 85 percent of non-orphans ($p<0.001$). Results on absenteeism are not statistically significant and are only indicative of a trend. Monrovia findings suggest that educational gaps between orphans and non-orphans affect enrolment, that younger orphans are more likely to experience educational disparities than older orphans and that single orphans living with relatives or acquaintances are more likely to be enrolled than single orphans living with the survival parent (due to the protective role of fosterage).



Box 13 illustrates that the number of children in the household is directly correlated with school attendance and drop-out rate. Therefore, the size of fostering households can play a role in determining orphans' educational status.

Box 13 – OVC in Zambia: number of children, school attendance and drop out



Source: WFP, 2006, "Orphans and Vulnerable Children in Zambia", Johannesburg, South Africa

"[…] As illustrated in the graph below, the greater the number of children in the household, the more likely that not all eligible school-age children were attending school and the higher the level of school drop outs. When looking at the number of orphans in orphan-hosting households, a similar relationship was found, although the reduction in attendance and increase in school drop outs was slightly higher".

4.4.2. OVC and labour

Food security and vulnerability analyses have not systematically included children's exposure to labour in the household questionnaire. If indicators of child labour are not collected, empirical evidence on this issue has to be retrieved through secondary data analysis or literature review. MICS2 and MICS3 don't report data on child labour disaggregated by orphan status. Nevertheless, it is possible to explore orphans' involvement in labour by conducting secondary analysis on the MICS data sets.

4.4.3. OVC nutritional status

Data collection issues

A number of food security and vulnerability assessments include a module on child (age < 5 yrs.) and maternal health and nutrition in the household questionnaire.

The nutritional status of orphans and non-orphans can be compared only if:

- the health and nutrition module captures children's parental status; or
- the questionnaire includes an ID code to link the nutritional module and the household roster.

The nutritional status of vulnerable and non-vulnerable children can be compared only if proxy indicators for HIV/AIDS are collected.

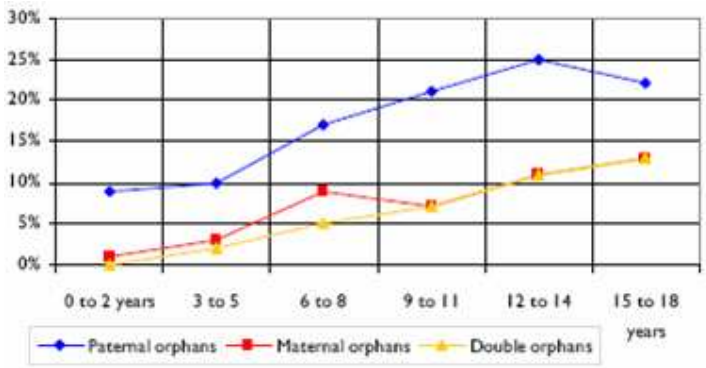
Data analysis issues

Individual-level analysis is most appropriate to identify nutritional and health shortcomings. The analysis can focus on the key indicators typically considered in the nutritional analysis. Some recommendations are needed with regard to age.

Orphan prevalence has an age pattern related to the duration of exposure to the risk of losing a parent. The chart extracted from the Namibia CHS report (October 2006) clearly represents this pattern.

According to the DHS 1997-2002 data for 40 Sub-Saharan African nations, the percentage of orphans in different age groups is 2 percent for 0–1 years old, 13 percent for 1–4 years old, 35 percent for 5–9 years old and 50 percent for 10–14 years old.

Chart 5 - Age distribution of orphans by orphan status



Source: Ministry of Gender Equality & Child Welfare of Namibia and WFP (2006)

This age pattern influences the nutritional analysis in two ways:

1. the small number of orphans included in the nutritional analysis limits the possibility of making comparisons between orphans and non-orphans;
2. the difference in mean age between orphans and non-orphans can jeopardize the findings of a nutritional analysis.

Some efforts have been made to address these issues. For instance, River et al. (2004) used adjusted comparison of means on two groups of children (ages 0-17 months and 18-59 months) to control for the age differences. It is not advisable to extend anthropometric data collection to older children as the interpretation of the findings can be misleading.

5. Community-level data on HIV/AIDS in the CFSVA

Food security and vulnerability analyses usually collect community-level data through key informant interviews and/or focus groups. Focus groups can enhance the understanding of household responses to HIV/AIDS. Interviews with key informants can help identify issues related to access and formal and informal support for people living with HIV/AIDS.

This chapter outlines topics relevant to food security and vulnerability analysis that can be studied through a qualitative approach. It also provides suggestions for data collection.

5.1. Issues

Issues worth exploring with communities during a comprehensive food security and vulnerability assessment include HIV/AIDS impact, household response and support to people living with HIV/AIDS. Under each of these topics, it is possible to identify specific objectives. While other relevant topics exist, they are related more to programme design than targeting.

The suggested techniques are selected from the toolkit "Techniques and Practices for Local Responses to HIV/AIDS". The toolkit, developed by UNAIDS and the Royal Tropical Institute, presents practices distilled from local responses worldwide (http://www.kit.nl).

It is not possible to prescribe a universal rule regarding who should participate in the discussion on HIV/AIDS. Much depends upon the context and the specific purpose of the exercise. However, some issues can be better explored by involving specific groups of people, such as health personnel or people living with a CI adult member. The table below links some specific objectives to a recommended group of participants, considered to be the best informants.

This guideline does not aim to provide an overview of qualitative instruments for data collection. Nonetheless, for each specific objective, the table below identifies an appropriate technique and, where appropriate, a proper group of respondents.

Table 15 – Main topics and specific objectives that can be addressed with the communities

TOPICS	Specific objectives	Suggested technique(s)	Recommended participants (where appropriate)
Impact & Response	Identify the impact of HIV/AIDS on the households as well as household responses (e.g. consequence on livelihood assets and strategies, impact on food security and changes in roles within the household). (example in Annex I)	Problem tree Problem and solution technique Story with a gap	People living with at least one CI adult member
Support	Identify institutions, formal and informal groups and places that play a role in HIV/AIDS mitigation, prevention and care. (example in Annex II)	Checklist	Key informants (e.g. health personnel)
	Measure the awareness of the community about the HIV/AIDS-related services present in the community. Understand their importance and interrelation.		
	Identify factors that prevent people affected by chronic illness from seeking care.	Force field analysis	People living with at least one CI adult member

Annex I reports an example on how to identify the impact of AIDS and household responses.

Annex II proposes a possible module for identifying institutions, formal and informal groups that play a role in HIV/AIDS prevention and care. Service availability is monitored in some countries; information on HIV/AIDS-related services can be also retrieved at the National AIDS Councils (NACs) or at the Ministry of

Health. A module on services can be useful when data are not available or when it includes information on access to and use of services to meet community needs.

While the table above is a general overview of topics that usually fit well in food security and vulnerability assessments, it is possible to address more specific issues. The box below summarizes the objectives and methodology of the study "Mobility, HIV/AIDS and Livelihoods: An Assessment of Informal Trade Activities on the Mozambique-Zimbabwe Border" conducted by WFP Southern Africa in cooperation with FEWSNET and SIMA.

Box 14 - Mobility, HIV/AIDS and Livelihoods on the Mozambique-Zimbabwe Border

The objectives of the study included improving understanding of the linkages between HIV/AIDS and the movements of people across the border and assessing the impact of these factors on food security for programme design and targeting. The study tested a quantitative tool for traders, consumers, suppliers and farmers. A qualitative question guide was used with key informants, provincial and district government officials, NGO representatives and the Mossurize medical staff. In-depth interviews, using a checklist adapted from the quantitative questionnaire, were held with young Zimbabwean girls working in the informal sectors, as well as with truckers and traders. Due to the nature of the border point (customs formalities are processed and finalized within a short period), it was impossible to locate groups of traders and truckers to conduct focused group discussions (FGDs). The team managed to hold FGDs with community members, some of whom had first-hand experience in the trade market or had interacted with mobile populations. Observations of activities were recorded and these also provided important input.

5.2. Data collection

If data collection requires the participation of people living with a chronically-ill member, it is crucial to adopt a quick and easy strategy to identify and contact these people. The researcher can consider the following options:

Option 1: through health centres

Participants can be found at a generic health centre(s) providing services related to HIV/AIDS, such as TB treatment, ARV treatment, a prevention-mother-to-child transmission programme, a milk bank, assistance to people living with AIDS, family planning, an HIV/AIDS prevention programme and home-based care service for chronically-ill people.

Health personnel can help identify participants.

Option 2: through community leaders or key informants

Participants can be identified through the community leader or during the key informant interviews, especially if doctors or health personnel are involved in the interview.

6. Challenges: general remarks

This section included technical recommendations on how to incorporate HIV/AIDS and OVC-related issues in WFP comprehensive food security and vulnerability analyses. Specific limitations that occur when including the HIV/AIDS component in a CFSVA were addressed. Additional general remarks include the following:

- **Lack of longitudinal data**
  A deep understanding of the vicious cycle between HIV/AIDS, livelihoods and food security can be reached only by analysing longitudinal data. CFSVAs are not meant to provide panel data. Even in those countries where food security assessments have been conducted several times, survey instruments are not necessarily developed to provide repeated cross-sectional data. As a consequence, CFSVAs are more suitable for capturing key disparities in livelihood assets, strategies and outcomes at a certain point in time rather than exploring dynamics.

- **Lack of country-wide results**
  CFSVAs are usually conducted in rural areas. The exclusion of urban areas represents a serious challenge to the HIV/AIDS analysis because HIV prevalence is often higher in urban settings and services for people living with HIV/AIDS are more frequently provided in urban areas.

- **Inference to the population**
  As a general rule, food security and vulnerability analyses sample villages through a probability-proportional-to-size approach and then select households randomly. The percentage of affected households that can be expected in a CFSVA depends upon the HIV prevalence in the country or region surveyed. In countries with low or medium prevalence, the number of households in the sample affected by HIV/AIDS can be very low. This increases the chance of findings that are not statistically significant and limits the possibility of conducting multivariate analysis.

7. Summary

This section provided recommendations on how to collect and analyse HIV/AIDS related data in the context of a comprehensive food security and vulnerability analysis. Main suggestions are summarized below:

Indicators

☞ Difficulty of blood tests, ignorance of HIV status and stigma suggest using proxy indicators to identify households with infected members.

☞ Methods based on verbal autopsy or list of symptoms deserve attention. Nonetheless they require more investigation and a careful training of the enumerators. Prudence is recommended until solid evidence emerges.

☞ Population-based surveys usually consider a household as affected by HIV/AIDS when there is an adult member(s) who is chronically ill and / or if the household experienced the death of an adult member due to chronic illness.

☞ Use of chronic illness as proxy indicator for HIV/AIDS leads to inclusion and exclusion errors. Chronic illness is an efficient proxy if:
  i) HIV/AIDS prevalence is high, and
  ii) there are no other factors/illnesses that cause high prevalence of chronic illness.
  Otherwise, it flags only the presence of a health-related shock within the household.

☞ Inclusion and exclusion errors can be reduced by strengthening enumerators' training and improving data collection tools. Magnitude of error can be assessed by triangulating the prevalence of the proxies with external data (e.g., surveys that include blood tests).

☞ Literature on AIDS suggests some attributes of the chronically ill/deceased members that are crucial to study the impact of HIV/AIDS on the affected households. Within the context of food security assessments, data should be collected at least on age, relationship to the household head, decreased capability to work.

☞ Within the context of comprehensive food security and vulnerability analyses OVC are operationally defined as: 1) children under 18 years old who are orphans, 2) children living in a household with a chronically-ill adult, 3) children living in a household where an adult member recently died from

chronic illness. The presence of at least one of these attributes is sufficient to classify a child as an OVC.

Data collection

- ☞ In the context of food security and vulnerability analyses, proxy indicators of HIV/AIDS and key attributes of infected people and deceased members do not compel using a roster as they can be captured through nested tables. Nonetheless, if the household questionnaire incorporates a roster for demographic data, HIV/AIDS related questions can be easily included in it.
- ☞ It is advisable to collect data on orphans and vulnerable children at the individual level. If demographic data are collected through a roster, OVC related questions can be easily added to the roster. If demographic data are not collected through a roster, a roster for children aged 0-17 should be added to the questionnaire.
- ☞ It is possible to study the status of vulnerable children only if data on chronic illness and deceased members are collected.
- ☞ Modules suggested in chapters 4.1 and 4.2 can be adapted, expanded or shortened in order to meet specific objectives of the analysis.

Data analysis

- ☞ The interaction between HIV/AIDS, food security and livelihoods can be better analysed at the household level whereas the relationship between HIV/AIDS and nutritional outcomes can be analysed at the individual level.
- ☞ Literature highlights the main effects of HIV/AIDS on livelihoods. Several indicators that are typically collected during the comprehensive food security and vulnerability analyses can be used to analyse some of these effects.
- ☞ Literature on HIV/AIDS draws the attention to changes and adjustments. They can be captured only through a longitudinal analysis. WFP food security and vulnerability assessments do not collect this type of information. As a result they face challenges in identifying process and dynamics and can only analyse differences between affected and non affected households.
- ☞ Explicit questions on consequences and coping mechanisms help reaching an understanding of the process set off by the epidemic.
- ☞ Data analysis on orphans and vulnerable children can be conducted both at the individual and at the household level. As a general suggestion, individual-level analysis is more appropriate to explore individual attributes while household-level attributes can be analysed both at the individual and the household level.
- ☞ Most of the studies suggests analysing the impact of HIV/AIDS on OVC by considering education, labour, nutritional and health status. Food security and vulnerability analyses also allow consideration of food consumption, livelihood assets and strategies.

Section III – Linking food security assessments to programme targeting and design in high prevalence countries

Identifying areas that are food insecure is the first step in targeting areas that receive WFP assistance. However, targeting all WFP interventions is a complex exercise which takes place at different levels and different stages of the programme design process. The purpose of this section is to clarify how findings from a food security and vulnerability assessment can inform targeting and design of WFP interventions in high-prevalence countries.

In the context of HIV/AIDS, WFP interventions can be categorized in two main groups:
1) food assistance for universal access to care, treatment and support;
2) other interventions with food security objectives.

1. Food assistance for universal access to care, treatment and support

Attempts to address the epidemic are typically grounded in the four core pillars of AIDS policy: prevention, treatment, care and mitigation. Through food assistance for access to care, treatment and support programmes, WFP seeks to ensure that those persons at risk of infection or currently infected by HIV/AIDS have access to proper nutrition and adequate food consumption.

The table below outlines main activities supported by WFP in Southern Africa for universal access to care, treatment and support. The information in this table is extracted from the paper "Social Protection and Human Security for Chronically Food Insecure Populations in Countries with a High Prevalence of HIV and AIDS".

Table 15 – Food support for universal access to care, treatment and support: main activities supported by WFP in Southern Africa

Intervention Type	Activity Type	Population Prioritized	Intended Outcome
Food support for universal access to care, treatment and support	Home-based Care Support	Households with a chronically-ill household member	Alleviation of the impact of HIV and AIDS-related illness on the household
	ART Support	Take-home rations provided to food-insecure mothers at risk	Supporting adherence to and uptake of ART
	PMTCT Support	Pregnant and lactating mothers living with HIV	Prevention of parent-to-child transmission of HIV and AIDS
	Paediatric Aids Support	Children living with HIV and AIDS	Supporting adherence to & uptake of paediatric ART
	TB Support	Individuals with TB	Adherence to DOTS

WFP Southern Africa, 2007, "Social Protection and Human Security for Chronically Food Insecure Populations in Countries with a High Prevalence of HIV and AIDS", Johannesburg, South Africa

The type of activities varies with the specific context of the prioritized, affected population. Home-based care support interventions sustain households caring for chronically-ill persons. Treatment support interventions provide support to people living with HIV and AIDS (PLWHA) who are assisted through programmes for the prevention of mother-to-child transmission of HIV (PMTCT) and anti-retroviral therapy (ART and paediatric ART). Tuberculosis (TB) treatment and control programmes are also institutionally-based programmes. In these therapeutic programmes, food is used mainly as a dietary supplement for increased nutritional requirements or as an incentive or enabler to help people adhere to their treatment and access other related services.

Implementing these kinds of interventions, which are strictly linked to services supporting PLWHA, does not depend on the findings from a food security and vulnerability analysis. Geographic and community targeting are still needed for targeting food assistance to therapeutic programmes and home-based care. WFP policy is to give first priority to the most insecure areas that also have high prevalence of HIV and second priority to areas that are generally food secure but have high prevalence rates (under the hypothesis that the disease will increase their food insecurity). Therefore, food security and vulnerability

analysis can inform programme targeting by combining data on food security and HIV prevalence and by identifying food-insecure areas with high prevalence of HIV.

Food assistance for universal access to care, treatment and support is meant to sustain medical treatment of people living with HIV/AIDS. Selection of beneficiaries is therefore done by prioritizing the most food-insecure people who are enrolled in TB or ARV treatments, PMTCT or HBC programmes. WFP's implementing partners are encouraged to adopt a multidimensional approach based on clinical, social and demographic criteria for identifying individuals eligible for food assistance.

2. Other interventions with food security objectives

In Southern Africa, the epicenter of the global HIV and AIDS epidemic, HIV and AIDS considerations are included in several programmes with food security objectives. In particular:

- OVCs are prioritized to receive take-home food rations through school feeding programmes;
- child-headed households and households hosting orphans with a high child-to-adult dependency ratio are eligible for a household food ration to support skills development for older orphans to create livelihood options.

The process of targeting programmes with food security objectives includes the following steps:

- Step 1 – Geographic targeting to identify areas with high food insecurity (first priority) and high HIV prevalence
- Step 2 - Community targeting to identify districts and communities with greater food-security needs (similar criteria as step 1)
- Step 3 - Household targeting to identify food-insecure households and households vulnerable to food insecurity. Household targeting can be done through community-based targeting or partnering with medical facilities. In the context of HIV/AIDS, targeting criteria should look at HIV indicators.

The table below summarizes WFP programme interventions most relevant in Southern Africa for providing assistance to at-risk populations. Intervention types, activities, populations and intended outcomes have been extracted from the paper "Social Protection and Human Security for Chronically Food Insecure Populations in Countries with a High Prevalence of HIV and AIDS". The last column has been added to suggest how vulnerability analysis mapping (VAM) can contribute to each type of activity.

Table 17 – Interventions with food-security objectives supported by WFP in Southern Africa

Social Protection Interventions				
Intervention Type	**Activity Type**	**Population Prioritized**	**Intended Outcome**	**VAM Contribution**
Food support to vulnerable households emerging from or at risk of shocks to their food security and well-being.	Vulnerable Group Feeding	Chronically food-insecure populations regularly unable to meet their food needs	Alleviation of household food insecurity	Provide geographic and social targeting criteria
	School-based Take Home Rations	Orphaned and Vulnerable Children	Safeguarding orphaned and vulnerable children's access to primary education	Provide information on reduced access to education for OVCs and reasons for this (e.g. child labour)
Nutritional support to groups particularly vulnerable to malnutrition	Supplementary Feeding	Pregnant, lactating and child-rearing mothers and children under 5 years of age (MCH)	Prevention of maternal and child malnutrition and improved pregnancy outcomes	Identify areas with high levels of maternal and child malnutrition and possible linkages to household food security

	School Feeding	Children attending basic education programmes in formal and non-formal schools	Safeguarding the enrolment, attendance, and retention of orphaned vulnerable children in formal and informal schools	Identify areas with lower educational outcomes Identify areas where access to education is reduced for orphans and other vulnerable children
	Early Childhood Care and Development	At risk children under 5 years of age	Prevention of early childhood malnutrition	Provide evidence on levels of child malnutrition Support monitoring and evaluation for nutritional rehabilitation centres
Protection to agricultural-based livelihoods	Conservation Agriculture	Rural poor agricultural-based households in areas affected by declining yields	Sustaining agricultural yield and soil quality	Provide evidence on the link between HIV/AIDS and • reduced labour at household level • decline in quantity and quality of crops; • fallow land returning to bush • reduction in soil fertility • decline in on-farm conservation and / or irrigation practices • reduced expenditure on agricultural inputs
	Food-for-Work/Assets/Training	Communities in areas with generalized food insecurity that require development of the local agricultural infrastructure	Preservation of agricultural production with access to appropriate infrastructure and training	Identify areas with short-term food insecurity for FFW interventions in the lean season
	Junior Farmer Field and Life Schools	Orphaned and vulnerable children who require education in basic farming practices	Safeguarding the capacity of children to engage in agricultural-based livelihoods	Identify areas with higher numbers of OVC Provide evidence on the drop-out rates of orphans and/or vulnerable children Provide evidence of the loss of agricultural

				knowledge, practices and skills in the affected households and communities

WFP Southern Africa, 2007, "Social Protection and Human Security for Chronically Food Insecure Populations in Countries with a High Prevalence of HIV and AIDS", Johannesburg, South Africa

As outlined in the table, food security and vulnerability assessments can inform the design of these interventions in several ways:

- identify food-insecure areas which have a high prevalence of HIV and a high concentration of OVC;
- provide evidence on educational gaps for OVC;
- provide evidence on the need to support skills development and create livelihood options and to prioritize households affected by HIV and AIDS.

Empirical evidence about the impact of HIV/AIDS on livelihoods and food security can also be used to guide selection of beneficiaries. The box below describes how findings from WFP monitoring surveys have been used to inform the selection of beneficiaries under the Vulnerable Group Feeding (VGF) programme in Zimbabwe.

Box 15 – Beneficiary targeting for VGF programme in Zimbabwe

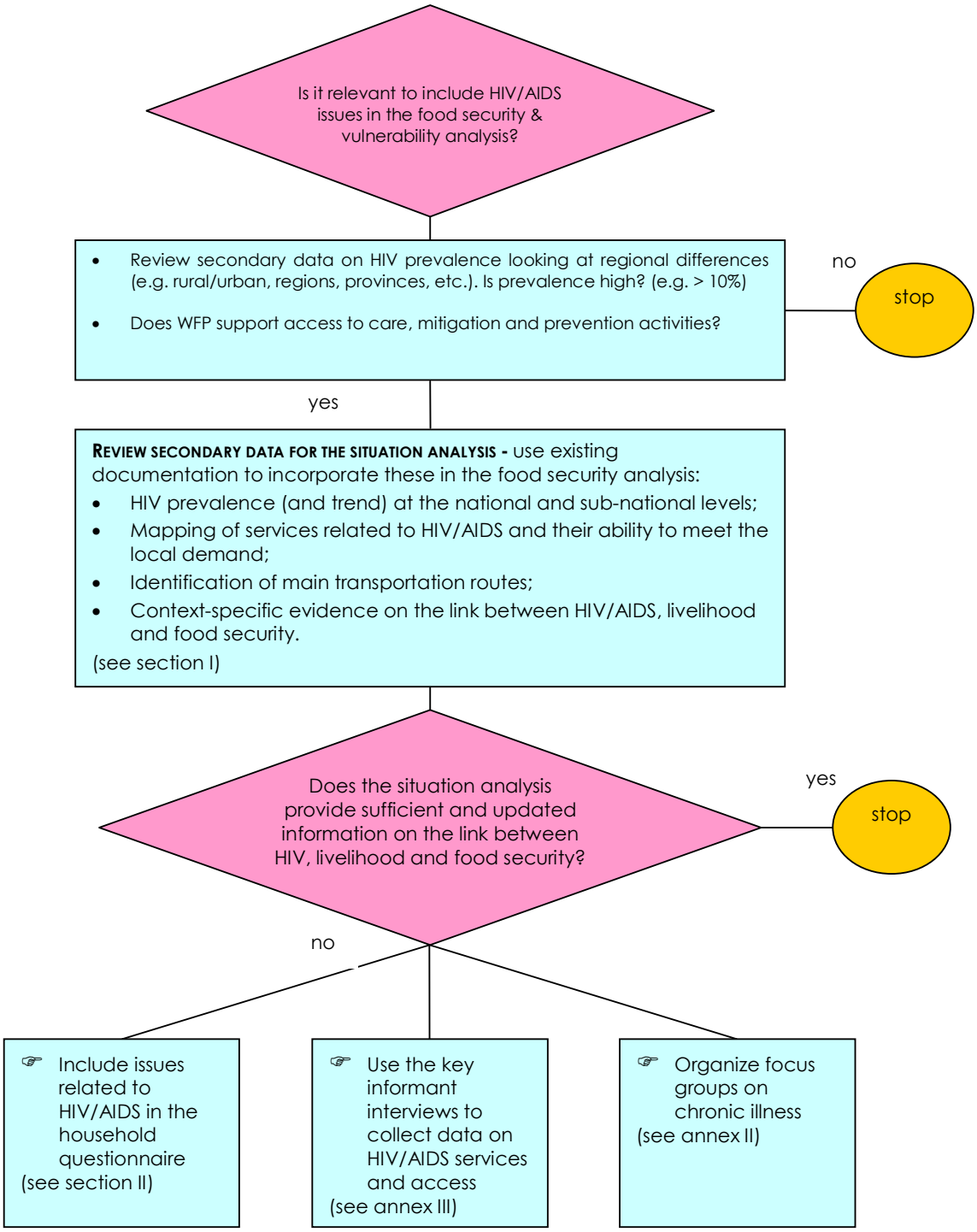
In 2007, WFP Zimbabwe and its cooperating partners revised the process of selecting beneficiaries for the vulnerable group feeding (VGF) programme. The major objective of the revised targeting system was to ensure that food assistance is received on the basis of need, to avoid any harm that might result from food distribution and to ensure the efficient and effective use of WFP resources.

The revised system includes a number of different mechanisms to identify target groups. It conducts geographic targeting and household selection using a hybrid community-based and administrative model.

The household selection system includes (but is not limited to) using a registration form to capture information on basic demographic and socioeconomic indicators. CHS Round 8 data have been used to weight the indicators included in the beneficiary form, understand the specific impact of HIV/AIDS proxies and compute a weighted score.

Annexes

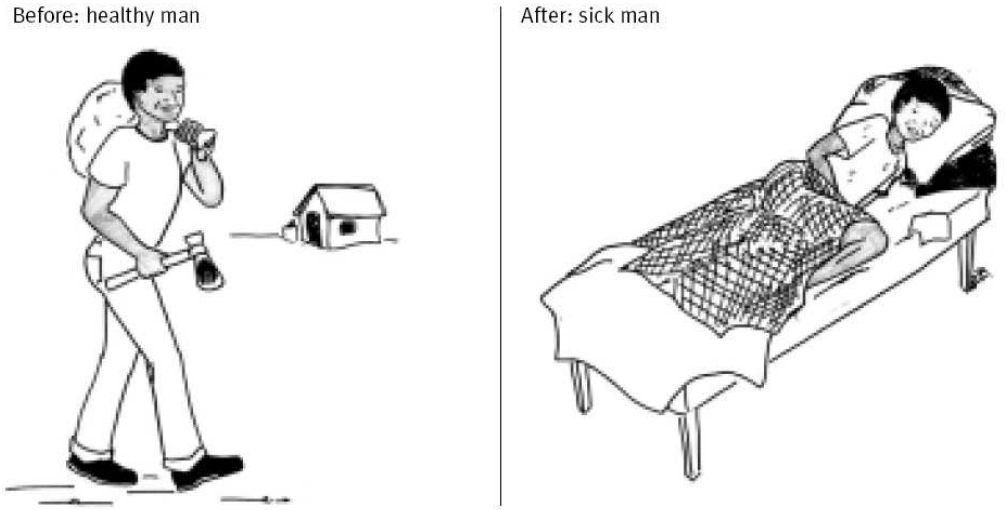
Annex I – Decision tree for integrating HIV/AIDS into a food security & vulnerability analysis



Annex II – Identifying AIDS impact and household response: an example

1. WRITE "HOUSEHOLD MEMBER CHRONICALLY ILL" ON A BIG SHEET OF PAPER AND REMIND THE PARTICIPANTS WHAT CHRONIC ILLNESS IS

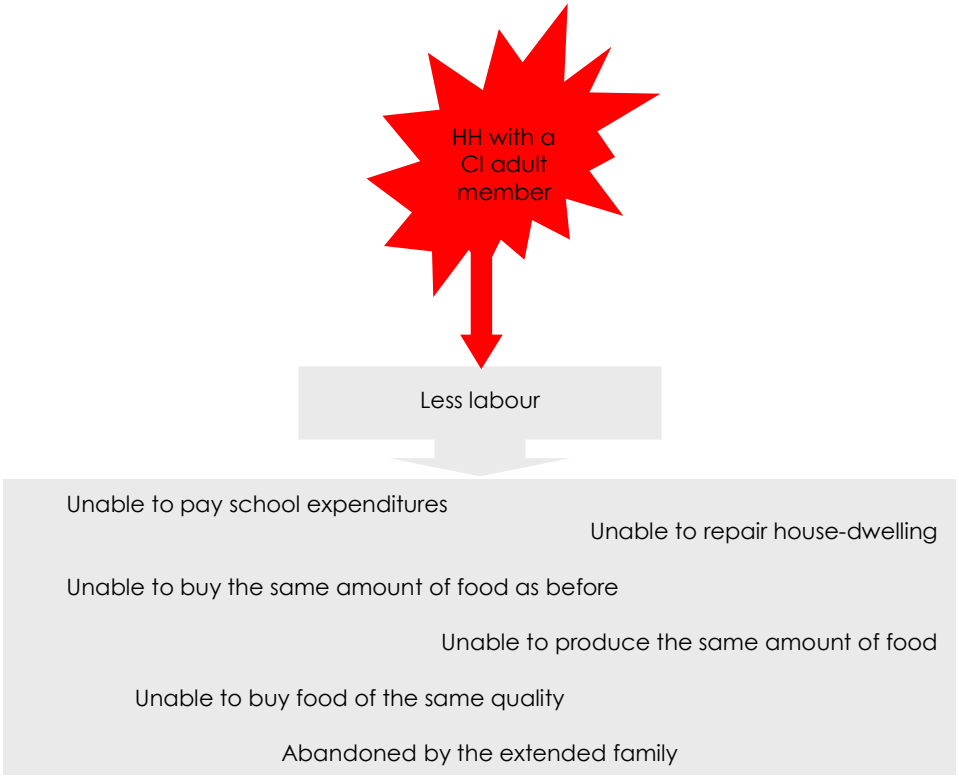
Example:
Enumerator says: "An individual is chronically ill if s/he hasn't been fully functional for at least 3 months over the past 12 months. Different types and degrees of chronic illness exist: some chronically-ill persons are bedridden, some are not bedridden but are completely unable to work and some manage to work but for fewer hours and / or in a less productive way.



2. ASK THE PARTICIPANTS TO LIST THE EFFECTS THAT THE PRESENCE OF A CHRONICALLY-ILL ADULT MEMBER HAD ON THE HOUSEHOLD WELFARE (AS MEN OR WOMEN BELONGING TO A PARTICULAR HOUSEHOLD, NOT AS INDIVIDUALS). TAKE NOTES OF THE ANSWERS.

Example:
Enumerator says: "Could you list the negative consequences (effects) the presence of a chronically-ill adult member had on your household? Please take into consideration all the aspects of your life: labour, education of children, income, food production, food consumption, relationship with the community, etc.
Please mention only those problems that came out (or became more serious) with the onset of chronic illness. Do not consider the problems caused by other events (e.g. conflicts, drought, etc.), nor problems that your household has always lived with."

Results of the discussion can look as follows:



Suggestions for the facilitator:

- Do not suggest the answers or lead the conversation. Suggest dimensions only if the participants do not talk.
- Encourage them to provide specific answers and concrete examples. For instance, it is not enough to say: "The presence of a CI adult member affected food consumption"; it is crucial to specify whether the HH had less quantity of food or food of poorer quality.
- Help participants avoid obvious answers and identify the ultimate and concrete consequences of chronic illness. For instance, it is obvious that chronic illness affects labour capabilities and income; it is more relevant to identify which dimensions of HH life have been concretely affected by the decline in labour and income. Hence, if the participants report "decline in labour", ask them to identify the further consequences of this decline, such as whether it affected food, education, assets, etc.

3. RANK THE EFFECTS

Suggested procedure:

1. List all the negative consequences reported during the previous exercise.

2. Ask the group to identify the three most recurring consequences and rank them on a scale of 1-3 (with 1 being the most frequent). Ranking can be done in several ways; one method is ***forced ranking***.

▪ On a sheet of paper, list the reported negative effects on the left-hand side of the paper and draw a 3-level scale on the right-hand side (see picture).

Unable to pay school expenditures Unable to repair house-dwelling Unable to buy the same amount of food as before Unable to produce the same amount of food Unable to buy food of the same quality Abandoned by the extended family	1st 2nd 3rd

- Ask the participants to vote. Fill in the levels of the scale by putting the most frequent effect at the top of the scale and the least frequent at the bottom. Only 3 effects can be located – one for each level of the scale. If the group identified more than 3 effects during the previous exercise, the less frequent consequences will be left out from the scale.

Result of the exercise can look as follows:

Unable to repair house-dwelling Unable to buy the same amount of food as before Abandoned by the extended family	1st Unable to pay school expenditures 2nd Unable to buy food of the same quality 3rd Unable to produce the same amount of food

4. ASK THE PARTICIPANTS TO DESCRIBE HOW THEIR HH RESPONDED TO THE FIRST EFFECT

Suggested procedure:

1. Ask participants to think about their responses to the first effect (e.g. I would like to know what the HHs did to solve the problem with school expenditures. Please report all the strategies you have adopted. If you did nothing to solve the problem, we put "nothing". This answer is acceptable).

Participants can mention as many strategies as they want. However, at the end of the discussion they have to rank the strategies (maximum of 3) using the forced ranking procedure reported above.

Ask participants to report the objective of the coping strategies.

Results of the discussion can be as follows:

Household response to "unable to pay school expenditures"	Ranking	Objective
Children dropping out from school	1	To save money and have children working
Attend with no material	2	To save money

2. For the most important strategies (e.g. the first three), ask the participants to report whether the strategies have been effective in solving the problem and if they cause other problems or negative consequences. For instance, the enumerator says: "Regarding the problem with school expenditures, to what extent were the strategies (i.e. drop out and children attending with no school material) effective in solving the problem? If they have been effective, did they cause other problems or negative consequences?"

Results of the discussion can be as follows:

Household response	Ranking	Objective	Effectiveness of the response
Children dropping out from school	1	To save money and have children working	VERY USEFUL (money saved and children working) but children are not educated
Attend with no material	2	To save money	MODERATELY (money partially saved) but children suffer discrimination and do not learn well

Annex III – Community mapping of services related to HIV/AIDS: an example

The module below lists main services for people living with HIV and AIDS or who are at risk of infection.
A similar module can be submitted to key informants (e.g. health personnel) for gathering information on presence and access. Main constraints can be also discussed with the community through focus group discussions.

	Do HHs living in the village have access to the following services?	Source support	How far away from the village is the closest service provider ?	Is public transport available to reach the service?	Main difficulties people face in accessing the service
ART					
Pediatric ART					
MTCTP					
Milk bank					
TB treatment					
Assistance to people living with HIV/AIDS					
HBC for CI patients					
VTC					
Condom distribution					
Information/education material distribution					
Positive life counseling					
Other (spec.: _____)					
Other (spec.: _____)					
	no = 0 yes = 1	1=public health centre 2=private health centre 3=NGO 4=community-based organization 5=faith-based organization 6=other (spec.:___) 7=other (spec.:___)	(0 = service in the village)	99=NA (service in the village)	1 = not aware 2 = afraid of being stigmatized 3 = cannot afford cost implications (e.g. public transport) 4 = cannot afford losing working hours 9 = other 99 = NK

Annex IV – Knowledge and awareness of HIV/AIDS: module in the MICS3 surveys

HIV/AIDS module extracted from women's questionnaire – MICS 3

HIV/AIDS MODULE		
HA1. NOW I WOULD LIKE TO TALK WITH YOU ABOUT SOMETHING ELSE. HAVE YOU EVER HEARD OF THE VIRUS HIV OR AN ILLNESS CALLED AIDS?	Yes ..... 1 No 2	2⇨ NEXT MODULE
HA2. CAN PEOPLE PROTECT THEMSELVES FROM GETTING INFECTED WITH THE AIDS VIRUS BY HAVING ONE SEX PARTNER WHO IS NOT INFECTED AND ALSO HAS NO OTHER PARTNERS?	Yes ..... 1 No ..... 2 DK 8	
HA3. CAN PEOPLE GET INFECTED WITH THE AIDS VIRUS BECAUSE OF WITCHCRAFT OR OTHER SUPERNATURAL MEANS?	Yes ..... 1 No ..... 2 DK 8	
HA4. CAN PEOPLE REDUCE THEIR CHANCE OF GETTING THE AIDS VIRUS BY USING A CONDOM EVERY TIME THEY HAVE SEX?	Yes ..... 1 No ..... 2 DK 8	
HA5. CAN PEOPLE GET THE AIDS VIRUS FROM MOSQUITO BITES?	Yes ..... 1 No ..... 2 DK 8	
HA6. CAN PEOPLE REDUCE THEIR CHANCE OF GETTING INFECTED WITH THE AIDS VIRUS BY NOT HAVING SEX AT ALL?	Yes ..... 1 No ..... 2 DK 8	
HA7. CAN PEOPLE GET THE AIDS VIRUS BY SHARING FOOD WITH A PERSON WHO HAS AIDS?	Yes ..... 1 No ..... 2 DK 8	
HA7A. CAN PEOPLE GET THE AIDS VIRUS BY GETTING INJECTIONS WITH A NEEDLE THAT WAS ALREADY USED BY SOMEONE ELSE?	Yes ..... 1 No ..... 2 DK 8	
HA8. IS IT POSSIBLE FOR A HEALTHY-LOOKING PERSON TO HAVE THE AIDS VIRUS?	Yes ..... 1 No ..... 2 DK 8	
HA9. CAN THE AIDS VIRUS BE TRANSMITTED FROM A MOTHER TO A BABY? HA9A. DURING PREGNANCY? HA9B. DURING DELIVERY? HA9C. BY BREASTFEEDING?	Yes No DK During pregnancy ..... 1 2 8 During delivery ..... 1 2 8 By breastfeeding 1 2 8	
HA10. IF A FEMALE TEACHER HAS THE AIDS VIRUS BUT IS NOT SICK, SHOULD SHE BE ALLOWED TO CONTINUE TEACHING IN SCHOOL?	Yes ..... 1 No ..... 2 DK/not sure/depends 8	
HA11. WOULD YOU BUY FRESH VEGETABLES FROM A SHOPKEEPER OR VENDOR IF YOU KNEW THAT THIS PERSON HAD THE AIDS VIRUS?	Yes ..... 1 No ..... 2 DK/not sure/depends 8	
HA12. IF A MEMBER OF YOUR FAMILY BECAME INFECTED WITH THE AIDS VIRUS, WOULD YOU WANT IT TO REMAIN A SECRET?	Yes ..... 1 No ..... 2 DK/not sure/depends 8	
HA13. IF A MEMBER OF YOUR FAMILY BECAME SICK WITH THE AIDS VIRUS, WOULD YOU BE WILLING TO CARE FOR HIM OR HER IN YOUR HOUSEHOLD?	Yes ..... 1 No ..... 2 DK/not sure/depends 8	

HA14. *Check MN5: Tested for HIV during antenatal care?* ☐ *Yes. ⇨ Go to HA18A* ☐ *No. ⇨ Continue with HA15*		
HA15. I DO NOT WANT TO KNOW THE RESULTS, BUT HAVE YOU EVER BEEN TESTED TO SEE IF YOU HAVE HIV, THE VIRUS THAT CAUSES AIDS?	Yes ..... 1 No 2	2⇨HA18
HA16. I DO NOT WANT YOU TO TELL ME THE RESULTS OF THE TEST, BUT HAVE YOU BEEN TOLD THE RESULTS?	Yes ..... 1 No 2	
HA17. DID YOU, YOURSELF, ASK FOR THE TEST, WAS IT OFFERED TO YOU AND YOU ACCEPTED, OR WAS IT REQUIRED?	Asked for the test ..... 1 Offered and accepted ..... 2 Required 3	1⇨NEXT MODULE 2⇨NEXT MODULE 3⇨NEXT MODULE
HA18. AT THIS TIME, DO YOU KNOW OF A PLACE WHERE YOU CAN GO TO GET SUCH A TEST TO SEE IF YOU HAVE THE AIDS VIRUS? HA18A. *If tested for HIV during antenatal care:* OTHER THAN AT THE ANTENATAL CLINIC, DO YOU KNOW OF A PLACE WHERE YOU CAN GO TO GET A TEST TO SEE IF YOU HAVE THE AIDS VIRUS?	Yes ..... 1 No ..... 2 Yes ..... 1 No 2	

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