

HIV and AIDS and Food and Nutrition Security Linkages in Mozambique

DISCUSSION DOCUMENT
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**Background document for mainstreaming HIV and AIDS considerations into the
National Food and Nutrition Security Strategy.**

**Prepared for the Technical Secretariat for Food and Nutrition Security
(SETSAN)**

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Abstract

The objective of the current document is to act as a working and discussion paper to assist in mainstreaming HIV and AIDS considerations into the Mozambique National Food and Nutrition Security Strategy (1998).

The first part of the document uses a livelihoods framework to examine the linkages between HIV and AIDS, food security and nutrition. This contributes to an improved understanding of how livelihood strategies are adapting and changing in response to the impact of HIV and AIDS and how in turn, this affects livelihood outcomes in terms of income security, and food and nutrition security. The second section of the document assesses current and proposed food and nutritional security interventions in the context of HIV and AIDS through a review of key government and sectoral HIV and AIDS strategies. The document then provides a broad orientation of how food and nutrition security interventions can contribute to addressing the impact of HIV and AIDS. Finally, key recommendations are made with respect to the evaluation and revision of the Mozambique National Food and Nutrition Security Strategy.

It is anticipated that this review will contribute to a preliminary understanding of the linkages between HIV and AIDS and food and nutritional security in Mozambique. It is intended to provide a basis for further debate on how food and nutrition security interventions at different levels can contribute to reducing susceptibility to HIV infection and vulnerability to the impact of HIV and AIDS on food security.

Acronyms

ARV	Antiretroviral
BMI	Body Mass Index
CBO	Community Based Organisation
CNCS	National Council to Combat HIV/SIDA
DHS	Demographic and Health Survey
EC	Complete Primary Education
EP1	Primary Education (First level)
EP2	Primary Education (Secondary level)
ESAN	National Strategy for Food and Nutrition Security
FAO	Food and Agricultural Organisation
HKI	Helen Keller International
IAF	National Household Survey
IMR	Infant Mortality Rate
MINED	Ministry of Education
MADER	Ministry of Agriculture and Rural Extension
MISAU	Ministry of Health
OVC	Orphans and Vulnerable Children
PARPA	Action Plan for the Reduction of Absolute Poverty (PRSP)
PDAER	Provincial Directorate of Agriculture and Rural Extension
PEN I	National AIDS Strategy 2000-2002
PEN II	National AIDS Strategy 2004 (under formulation)/ PNCS
PLWHA	People Living with HIV/AIDS
SETSAN	Technical Secretariat for Food and Nutrition Security
UNICEF	United Nations Children's Fund
STI	Sexually Transmitted Infection
WFP	World Food Programme

Extended Summary

1 Situation analysis: livelihoods, food & nutrition security & HIV/AIDS

1.1 Overview

The link between food and nutritional security and HIV and AIDS is bi-directional: HIV and AIDS can increase vulnerability to food and nutrition insecurity; and food insecurity can increase susceptibility to HIV infection and the progression from infection to illness. However these dynamics vary by stage in the evolution of the epidemic, agro-ecological region and household gender and socio-economic characteristics.

The HIV and AIDS epidemic will have multi-sectoral impacts and will threaten the progress that Mozambique has already made in poverty reduction. The impact of HIV and AIDS on the agricultural sector in particular needs to be assessed. This sector accounts for 32% of GDP, 77% of the population live in rural areas, and 95% of the workforce is in the agricultural sector. Given this context, agricultural production makes a key contribution to food security.

1.2 Risk and vulnerability to food and nutrition food insecurity

In Mozambique, there are diverse sources of risk that influence vulnerability to food and nutritional insecurity, these include: agricultural production risks associated with drought, floods, plant and animal disease, food access risks associated with poverty, fluctuating market dynamics, and unemployment; health related risks associated with malaria and epidemics such as cholera and HIV and AIDS; and social risks associated with crime, violence and separation/divorce.

Vulnerability Assessments (VAC 2004) and analysis of agricultural production risks using data from TIA 2002 (Walker et. al) have increased our understanding that different groups and areas face a diverse range of risks. However information is limited in terms of the probability and extent of each type of risk, how different risks interact, and the severity of impact of the risk event on gender disaggregated livelihood strategies and food and nutritional security outcomes.

HIV prevalence rates

The estimated HIV prevalence amongst adults has risen from 3.3% in 1992, to 13.6% in 2002 and has been projected to be 14.9% in 2004. It is estimated for 2004 that there are 500 new cases per day with 40% of these new infections in the central region. The regional pattern of estimated HIV prevalence is: 16.7% in the Central Region; 16.4% in the Southern Region, and 11.5% in the Northern Region. Of the 1,258,000 adults (15-49

years) living with HIV, 62% are women. The gender disparity is even more striking within the age group of 20-24 years where women living with HIV outnumber men by three to one.

Poverty

The consumption based poverty indices from the recently published household survey show a significant reduction in extreme poverty from 69.4 percent in 1996-7 to 54.1 percent in 2002-3. The provinces with larger than average reduction in poverty headcounts were: Niassa, Zambezia, Nampula, Tete, Manica and Sofala. These include provinces in the central region, which are estimated to have the highest HIV prevalence rates.

Nutritional well being

The findings from the 2003 DHS classified 41% (urban: 29%; rural 46%) of children under five years as stunted (low height for age). Therefore while poverty levels may have reduced dramatically between 1997 and 2003, levels of malnutrition do not appear to have altered significantly. Without improvements in nutritional well being, poverty reduction rates will stagnate and will not be sustainable. This situation will be increasingly exacerbated by the HIV and AIDS context.

1.3 Estimated impacts of HIV and AIDS on food and nutritional security

The following sections summarise recent studies conducted in Mozambique to identify whether and how the impacts of HIV and AIDS are affecting efforts to achieve food and nutritional security.

Mortality and labour availability

Mather et. al. using 2002 TIA data found that only one-third of the adults who died through illness in “affected” households were heads or spouses, while two-thirds of non-affected prime age (PA) adults were in this category. Affected households did not uniformly appear to have less available prime age labour than non-affected households. The analysis concluded that this appeared to be either because affected households were able to attract new PA members (in particular after a female spouse death) or because they had more PA adults prior to death. This finding supports anecdotal findings from Mozambique and neighbouring countries whereby widowers remarry very quickly, while widows tend to be left to fend for themselves or are assimilated into the husband’s brother’s household. However, these “coping mechanisms” have implications for the continued spread of HIV, particularly in social and cultural environments where early girl marriage is common, and there are beliefs and practices associated with “ritual cleansing” after a death.

The analysis found a relatively low proportion (3%) of households that had experienced a death from chronic illness, in conjunction with a household member who was currently chronically ill. The study also reports that few households (7%) had experienced more than one prime age adult death from illness. However, these findings may merely be reflecting the early stage of the epidemic in Mozambique, and the lag effect between HIV infection and AIDS mortality impacts.

Mortality and cultivated area

The analysis of TIA 2002 by Mather et. al. found that median cultivated area per adult equivalent (AE) is similar for most affected and non-affected households. The authors suggest that although the amount of land allocated for staple and cash crop production may have fallen for some affected households, it did not fall more than what might be expected given that affected households have lower adult equivalents and thus lower consumption requirements.

Caring practices and labour demands

Labour demands for caring practices within the family may also increase with chronic illness. Mather et.al. analysed this and found that the majority of caregivers to ill adults in the survey were either the spouse of the ill adult (44%) or his/her mother/father (30%). In addition, about 60% of caregivers were female reflecting the fact that women traditionally perform the vast majority of domestic tasks – including care for children, the elderly, and the ill – and are more likely than men to work on the farm rather than off. This suggests that domestic, farm and non-farm activities of women in the household will more likely be constrained by the time devoted to care giving than male activities. This has implications for the sustainability of coping mechanisms currently employed.

Knowledge transfer and HIV and AIDS

An ICRISAT study investigated the impact of HIV and AIDS on local knowledge and management of seeds in Chókwè District. The study found that gender differences in the tasks and priorities in agricultural labour meant that women were the main retainers and transmitters of local knowledge on the seed selection and conservation process. Men were responsible for the construction of granaries, and as the main sources of income (through labour migration and petty trading) had greater access to income and markets to purchase seed.

The study found that access to information and knowledge varied by sex, age, social class and the health status of the household. Although women interviewed in Chókwè generally knew more about local varieties than men, they had weaker access to new information. Findings showed that, when people lose their seed stocks and are forced to rely on markets or handouts, knowledge around traditional varieties and seed management tended to erode.

The gender division of labour in seed systems, together with the constraints that women face in accessing information and sources of new seed and planting material varieties also emphasises the importance of gender specific strategies and interventions in the development of seed systems in the context of HIV and AIDS.

Household response to mortality

The TIA 2002 analysis of strategy responses of affected households found that 44% of affected households indicated crop area reduction while 22% indicate reduced weeding as adjustment strategies. Some affected households attempt to replace lost agricultural labour through hiring, arrival of new members, or mutual help.

Study findings also led to the conclusion that households begin to adjust agricultural activities during the period of a woman's illness, while the adjustment for a man is more likely to occur after death. This could be explained by the fact that women tend to supply more overall labour to the household economy, thus when a woman falls ill; the household is less likely to be able to maintain the household's former levels of domestic and on-farm labour. This has implications for the timing and gender orientation of possible interventions, i.e. interventions during the period of chronic illness to protect key activities, may help to reduce vulnerability after death, and different types of interventions (domestic, livelihood based) may be necessary depending on the sex of the chronically ill person.

Mortality and income

Mather et. al. found that although affected households may have incurred significant losses of income and/or land access, the available survey data demonstrated that as a group they were not considerably poorer *ex post* than non-affected households. However, this finding should be seen in the context of relatively low levels of socio-economic differentiation among rural households.

Analysis of the 2002 TIA by Walker et. al. found that most (rural) families rely heavily on crop income, but off-farm income was also important. The highest income households had diverse sources of income. The most important source of off farm income was micro enterprises, which was more important than wage income or remittances. Income from livestock only contributed about 2-3% of total household income and this share did not vary by income level. The authors reported significant interactions among income sources that reinforce and multiply growth in the agricultural sector. Households with more members working in own self-employment off the farm were characterised by increased net crop income. This has implications for identifying appropriate poverty reduction and income improvement strategies in the context of HIV and AIDS.

2 Conclusions

2.1 Livelihoods, food security and HIV/AIDS linkages

The review of current information and data sources in Mozambique illustrates that at this stage in the evolution of the epidemic in Mozambique not all households that have been affected by morbidity and mortality are necessarily “worse off” with respect to labour availability, income, and cultivation rates, than “non-affected” households. However, it is also necessary to appreciate that the impacts of AIDS mortality, not only lag behind estimated HIV prevalence rates, but also are accumulative and systemic.

Vulnerability to the impacts of AIDS depends on: the existing asset base of the household; the position and status of the family member who is chronically ill and how the household has been able to respond to the demands made by that illness. These findings illustrate that the linkages between HIV and AIDS and food and nutritional insecurity will vary depending on the interaction of three groups of factors:

- The determinants, and characteristics of the evolution of the AIDS epidemic, estimated HIV prevalence, and age, gender and socio-economic patterns of morbidity and mortality. For example, there is the need to assess whether or not the more critical impacts experienced in the Centre are illustrative of what will also happen in the other regions even with differences related to: religion, isolation, and the origins of the epidemic.
- The nature of food and nutrition insecurity i.e. whether there is chronic or transitory food insecurity, the relationship to structural poverty and existing patterns of child and maternal malnutrition.
- The livelihood system and the range and likelihood of different risks to food and nutrition security. Thus for example, different livelihood systems in urban and rural areas will have different levels of exposures to multiple risks. The HIV and AIDS epidemic will have a bearing on how different resources or assets can be combined. In turn that process will be affected by the capacities and influence of various formal and informal institutions, which will lead to varying levels of achievement of livelihood security.

Epidemiological data indicates that the HIV epidemic in Mozambique has particular regional characteristics, and that estimates of prevalence are higher in younger women. The Southern Central and North Regions present different origins and pathways of the epidemic. While households may be employing strategies to cope with the loss of family members this does not imply that they can necessarily maintain their former levels of agricultural output, income, or other measures of welfare. The experience in neighbouring countries indicates a lag between estimated HIV prevalence and mortality impacts. Therefore, while the epidemic in Mozambique remains uncontrolled, a rapid rise in mortality can be expected which will result in increased impacts on the factors

discussed above. The lag time between HIV infection and AIDS mortality impacts, highlights the need to consider different combinations of responses, with impact mitigation being more crucial in the central region of the country, and effective prevention measures required in the northern region. The age group of 10-14 years remain relatively uninfected and offer a “window of hope” for a future HIV free generation, who however will still have to grapple with the impacts of AIDS mortalities.

In Mozambique, studies on the impacts of HIV/AIDS on the agricultural sector have either focused on the household level and, or, used non-random samples. As the impacts of AIDS are accumulative at the community level and systemic at the national level, studies using the household as the unit of analysis can only provide one piece of the jigsaw.

2.2 Government and sectoral responses

A review of food and nutrition actions in key government and sector strategies on HIV/AIDS concluded that:

- While strategies and activities in the different sectors are relevant, the opportunities for greater impact are being lost, because the potential for multi-sectoral synergies are not identified nor articulated and subsequently acted upon.
- The potential of food and nutrition counselling, care and support interventions either appears to be underestimated (as in the case of the health sector), almost overlooked (as in the case of the education sector) or fail to be sufficiently prioritised (as in the agriculture sector).

The **PRSP/PARPA** is the key orientation document for the government and therefore needs to embrace a more holistic analysis. This should examine the risks that households face which make them more vulnerable to the impacts of poverty and food and nutritional insecurity, and in turn the bi-directional interface with HIV/AIDS.

The second national plan for combating HIV/AIDS (PNCS I) needs to be able to provide a multi-sectoral framework and mechanism to ensure that food and nutrition actions in the context of HIV/AIDS are harmonised across different sectors for greater impact and synergy.

3 Recommendations

3.1 General orientation

Strengthening poverty reduction

Households that are already poor are likely to be less resilient to meet the shock of AIDS mortality. Women are more biologically, socially and economically susceptible to HIV infection and more vulnerable to AIDS impacts and associated poverty. Poverty levels are higher in rural areas, and the direct and indirect costs of HIV/AIDS have been and will increasingly be borne in the rural areas. Yet rural areas, the poor, and women have less access to the health, welfare, transport and communication infrastructure, and formal and informal institutions to support them in their efforts to deal with the epidemic.

Poverty reduction remains a key challenge in Mozambique. Further work is needed to understand if and how recent successes in poverty reduction have reduced gender inequalities (e.g. disparities in literacy rates, morbidity levels and patterns). This is crucial to understand given the larger share of HIV infection among women and the disproportionate impact of HIV/AIDS on women.

Poverty reduction remains one element in reducing susceptibility to HIV infection and strengthening the resilience at both household and community level to the impacts of HIV and AIDS.

Focusing on nutrition

Poverty levels may have reduced dramatically between 1997 and 2003, however, levels of malnutrition do not appear to have altered significantly. While people with HIV and AIDS have special nutritional requirements, all people can benefit from adequate nutrition. Good nutrition increases resistance to infection and improves energy, thus making people, stronger, more productive and able to realize a better quality of life. Gender sensitive poverty reduction interventions in rural areas, that also have a nutrition focus have the potential to:

- increase the opportunities of breaking the intergenerational cycle of poverty;
- enable targeting of the socially and biological vulnerable; and,
- provide a platform for multi-sectoral action.

Balancing long term productivity and growth and targeted assistance

There is a need for an appropriate balance between investments in long-term gender specific rural income opportunities that will contribute to rural economic productivity and growth, together with targeted assistance to AIDS-affected households and communities.

Given scarce financial and human capital resources in Mozambique, there is the need for continued economic analysis so that decision makers can identify which potential interventions in agriculture and food security are likely to provide the highest returns to land, male and female labour and inputs. There is also the requirement to identify those interventions, which if scaled up could have a significant impact on the greatest number of poor households that are facing multiple risks to their food and nutritional security.

3.2 Specific recommendations in the context of the National Strategy for Food and Nutrition Security

- ▶ **Recommendation:** continue to strengthen vulnerability and early warning information systems for livelihood, food and nutritional insecurity. Validate indirect indicators for HIV/AIDS and support in-depth and longitudinal analysis of the linkages between livelihood, food and nutritional security and HIV and AIDS.
- ▶ **Recommendation:** build a common communication platform among committed stakeholders in order to raise the level of dialogue and advocate for actions around food and nutrition counselling, care, support and mitigation interventions in the context of HIV/AIDS.
- ▶ **Recommendation:** the evaluation and revision process for the National Strategy for Food and Nutritional Security should take the opportunity to provide the overarching framework for addressing the bi-directional linkages between food and nutrition security and HIV and AIDS. This will then provide guidance for individual sectors to meet their responsibilities according to their comparative advantage.
- ▶ **Recommendation:** the determinants, and characteristics of the evolution of the AIDS epidemic should guide the response. A decentralised planning and response capacity is needed to ensure that the changing needs of different geographical areas and population groups are met.
- ▶ **Recommendation:** the nature and characteristics of food and nutrition insecurity must be factored into the response to HIV and AIDS. Investments must be made to enhance the human capital (and in particular girls and women) that is both the work force of tomorrow, and the basis for resilience to HIV and AIDS.
- ▶ **Recommendation:** The revision of the ESAN should provide guidance to government, non-government and civil society organisations in urban and rural areas to be able to mainstream the identification and management of food security related risks (drought, floods, social, economic and HIV infection) into their activities.
- ▶ **Recommendation:** The revision of the ESAN should argue for an appropriate balance between investments in long-term gender specific rural income opportunities that will contribute to rural economic productivity and growth, in addition to targeted assistance to AIDS-affected households and communities.
- ▶ **Recommendation:** Each policy, strategy and programme needs to ensure that the necessary opportunities are provided to communities, households, women, men, boys and girls so that they can:

- Resist poverty induced risks of contracting HIV infection, by building on options and capacities for strengthened livelihoods and improved food and nutritional security.
- Access and act upon information and resources to ensure age and gender appropriate food and nutritional counselling, care and support for infected and affected household members.
- Strengthen resilience to the potential impact of HIV and AIDS on current and future food and nutritional security.

HIV and AIDS and Food and Nutrition Security Linkages in Mozambique

1 Introduction

The objective of the current document is to act as a working and discussion paper to assist in mainstreaming HIV and AIDS into the Mozambique National Food and Nutrition Security Strategy (1998). The document will assess the current evidence base in Mozambique in order to determine whether and how the impacts of HIV and AIDS are affecting efforts to achieve food and nutritional security. The document will also provide a broad orientation of how food and nutrition security interventions can contribute to addressing the impact of HIV and AIDS.

The first part of the document uses a livelihoods framework to examine the linkages between HIV and AIDS, food security and nutrition. This will contribute to an improved understanding of how livelihood strategies are adapting and changing in response to the impact of HIV and AIDS and how in turn, this affects livelihood outcomes in terms of income security, and food and nutrition security.

Policies and the institutional environment at the macro and meso levels mediate whether or not households can follow particular livelihood pathways that can lead to positive outcomes. The second section of the document therefore assesses current and proposed food and nutritional security interventions in the context of HIV and AIDS through a review of key government (Plan of Action for the Reduction of Absolute Poverty and the National Strategy to Combat HIV/AIDS) and sectoral HIV and AIDS strategies. These will be reviewed against our current understanding of HIV and AIDS and food and nutritional security (FSN) linkages, and will help to identify the major opportunities and constraints to the current efforts of addressing the impact of HIV and AIDS through food security and nutrition interventions.

The third section of the document presents a general orientation for addressing HIV and AIDS through food security and nutrition actions. The final section of the document makes recommendations for discussion during the evaluation and revision of the Mozambique National Food and Nutrition Security Strategy.

It is anticipated that this review will contribute to a preliminary understanding of the linkages between HIV and AIDS and food and nutritional security in Mozambique. It is intended to provide a basis for further debate on how food and nutrition security interventions at different levels can contribute to reducing susceptibility to HIV infection and vulnerability to the impact of HIV and AIDS on food security.

2 Analytical framework: livelihoods, food & nutrition security & HIV/AIDS

The link between food and nutritional security and HIV and AIDS is bi-directional: HIV and AIDS can increase vulnerability to food and nutrition insecurity¹; and food insecurity can increase susceptibility to HIV infection and the progression from infection to illness. However these dynamics vary by stage in the evolution of the epidemic, agro-ecological region and household gender and socio-economic characteristics.

Topouzis (1999) argued for the need to go beyond reducing individual risk to HIV infection and to focus on the underlying societal, cultural and economic factors that increase and perpetuate the vulnerability of some individuals and sections of society to HIV/AIDS, more than others. Recent work by Gillespie and Loevinsohn (2003) separate susceptibility to HIV infection from the vulnerability to the impacts of AIDS.

Susceptibility relates to the chance of an individual becoming infected by HIV. It has two components: a) the chance of being *exposed* to the virus, which in turn relates to i) the risk environment and specific situations of risk that the person confronts and ii) the *riskiness* of her/his behaviours, and b) the chance of being *infected* with the virus once exposed. **Vulnerability** refers to the likelihood of significant AIDS impacts occurring at different levels (individual, household, community, institutional). These impacts have a temporal component, in that they are processes that may be punctuated by events (e.g. sale of assets), but are accumulative over time.²

Gillespie and Loevinsohn have developed an “HIV/AIDS Lens” through which to view the determinants of HIV infection and impacts of AIDS at different spatial and social scales. The Lens also provides a tool for examining **resistance** to HIV infection, which implies the presence of active characteristics at different levels ranging from the microbiological to the national level. Seeking out **resistance** to HIV infection implies the need to understand why some individuals, households, and communities remain HIV free in similar risk environments where others are infected.

In turn, while some individuals, households and communities are more **vulnerable** to the impacts of AIDS, others are more **resilient** to these impacts. **Resilience** refers to the active responses that enable people to avoid the worst impacts of AIDS at different levels, or to recover faster to a level accepted as normal.³

¹ Food security exists when all people at all times have physical and economic access to sufficient safe and nutritious food to meet the dietary needs and food preferences for an active and healthy life (FAO 1996)

² Gillespie and Loevinsohn. 2003.

³ Ibid

Bishop-Sambook⁴ has developed useful tools for diagramming the HIV/AIDS vulnerability pathway, with “gateway markers” that help to identify models as to who and why certain people move from susceptibility to infection, the subsequent progression to AIDS, and then AIDS related death. (See diagram in Annex?)

In this paper *risk* is discussed in the context of the natural, economic, social and health risks to food and nutritional security, of which HIV infection may be a risk in its own right, or compounded by the interaction with other risks. *Susceptibility* to HIV infection is used in the context of the biological, individual, household and community level determinants that influence the risk environment. *Vulnerability* is used in the context of *vulnerability* to short term and long- term food and nutritional insecurity due to the impacts of HIV/AIDS.

Within this framework responses need to: reduce the risk that HIV infection, alone or in combination with other risks poses to food and nutrition security; decrease vulnerability to food insecurity in order to reduce both risk and impact; and mitigate impact in order to decrease vulnerability. Mitigating impact makes individuals and communities less susceptible to the risk of infection.

This brief review of how our understanding and use of the concepts of risk and vulnerability are changing, also underlines the importance of analysing the linkages between HIV and AIDS and food and nutritional security within a holistic framework that also incorporates the bi-directional linkages with livelihoods and poverty.

A livelihood “comprises the capabilities, assets and activities required for a means of living; a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets and provide sustainable livelihood opportunities for the next generation”.⁵ In the context of HIV and AIDS, women play a central role in this cycle, paradoxically both as the core of household resilience but also as an actor subject to exploitation. When faced with limited livelihood options, women may turn to commercial and transactional sex. External shocks can make the problem worse: as women and girls resort to ‘survival sex’, exchanging sex for food, money or consumption goods.⁶

A livelihoods framework can be used to identify and understand how HIV and AIDS related morbidity and mortality may impact on the different types of household assets (i.e. human, natural, financial, physical, social) in Mozambique. The document reviews information concerning how households, and their male and female members are responding to HIV and AIDS impacts and the resulting livelihood outcomes (e.g. food

⁴ Bishop-Sambook, C. 2003.

⁵ Chambers and Conway 1992.

⁶ United Nations, High Level Committee on Programmes. 2003. Organizing the UN Response to the Triple Threat of Food Insecurity, Weakened Capacity for Governance and AIDS, particularly in Southern and Eastern Africa.

and income security, nutritional well-being). This can contribute to a better understanding of how the risk of HIV infection and the progression from infection to illness may be influenced by household decisions concerning trade-offs around livelihood strategies. This then provides a basis for identifying the multi-sectoral implications and effective entry points for food and nutritional security policy and programming that are explored in Sections III and IV.

3 Data and information availability and limitations of current document

Key information sources that have been used in this review include:

- Analytical reports using data sets from the National Agricultural Household Survey (TIA 2002), and preliminary data from TIA 2003.
- Reports from the national household budget surveys (IAF) of 1996/7 and 2002/3.
- Reports on the Demographic and Health Survey (DHS) of 1996/7 and the preliminary report from the 2003 DHS.⁷
- Discussions with key researchers and informants

In order to begin to analyse the linkages between HIV and AIDS and food and nutrition security it is necessary to have data sets containing a variable that identifies the HIV status⁸ of key members of the household (e.g. women aged 15-49 years and men aged 15-59 years) or a variable to determine whether the household has experienced an AIDS related mortality. It is then possible to examine associations between the presence of HIV infection or mortality and various food security and nutrition variables. To date, in Mozambique, there is no nationally representative study that has used serological methods, saliva tests or “verbal autopsies”⁹ to determine HIV status¹⁰.

An alternative is to use a proxy variable for HIV status or AIDS related mortality. “Chronic illness”, is often used as a proxy variable for AIDS related morbidity. However the definitions of “chronic illness” and their applications, are often vague, non-specific and with varying recall periods.¹¹ In addition in studies where quasi -medical criteria have been used, the enumerators do not necessarily have a medical background. Studies where serological data have been collected have tended to be on small sample

⁷ See list of documents consulted.

⁸ The HIV status of an individual assessed through serological methods or saliva tests.

⁹ A verbal autopsy is conducted when medical fieldworkers interview caregivers of the deceased as to signs and symptoms of the terminal illness.

¹⁰ In contrast, the Zambia 2002/3 DHS contains a module that collected serological data.

¹¹ UNAIDS, 2000 uses the following: An adult (15 – 59 years) who has been too ill to work or perform their normal duties for a total of 3 months (i.e. illness could be persistent or recurring) during the last 12 months. C-Safe uses: persistent or recurring illness for three months or more, which has decreased an individual’s productivity.

sizes, on a non random basis, facility as opposed to population based, and, or in geographical areas known to have high HIV prevalence. It is not possible to extrapolate these types of studies beyond the sample population.

In Mozambique, the 2002 National Household Agricultural Survey (TIA 2002) included for the first time, data collection on a sub-sample in order to analyse the agricultural impacts of prime age adult mortality, (15-49 years). The total sample of 4,908 rural households was drawn using a stratified, clustered sample design that was nationally representative. The sample households were interviewed over a period of several weeks in August - September 2002 concerning a range of aspects: agricultural and livestock production and sales, off-farm activities, land use, and income sources and services. Several demographic sections were also included to capture the impacts of prime age adult mortality. This included the socio-economic characteristics of each current member of the household, and documented recall data on incidents of death (covering 1999-02) and chronic illness (illness during 3 of the prior 12 months) within the household, as well as the arrival (since 1999) and departure (1999-02) of individuals to and from the household.¹² Prime age morbidity and mortality were used as proxies for HIV status and AIDS related mortality.

¹² Some of the limitations to the analysis of prime age adult mortality in the 2002 TIA include: the recall period of just under 4 years is too short to be able to capture the usual lag time of 3-10 years between HIV infection and mortality; the data were collected from a cross-sectional survey rather than using a panel data set to follow specific households; it is difficult to assess whether the regional differences found in the analysis reflect different stages in the evolution of the epidemic in Mozambique or the differences reflect matrilineal and patrilineal inheritance systems.

Part I: Livelihoods, food and nutrition security and HIV and AIDS

1 Overview

The HIV and AIDS epidemic will have multi-sectoral impacts and will threaten the progress that Mozambique has already made towards poverty reduction. An understanding of the impact of HIV and AIDS on the agricultural sector is crucial as this sector accounts for: 32% of GDP; 77% of the population that live in rural areas, and 95% of the workforce that is in the agricultural sector. Given this context, agricultural production makes a key contribution to food security.

1.1 Risks

Livelihoods involve multiple strategies, and are dynamic in that they respond to external and internal influences. Negative external events are referred to as “shocks”, which are brought about by exposure to different types of hazards. Risks can be classified as covariant (those affecting all the community e.g. drought, floods) or idiosyncratic (those experienced only by individual households, e.g. illness, unemployment). A household’s vulnerability to food insecurity depends on the resource base (human, natural, financial, physical, social) that it had prior to the risk event occurring and its ability to engage in various coping strategies. The characteristics and resilience of a household’s livelihood strategy are key determinants of its food security status. Not all types of shocks will affect a household and its male and female members in the same way. Moreover, the impact of a shock will be experienced in various ways depending on the socio-economic status of the household and its individual members.

In the HIV and AIDS context, there is the need to be able to identify how the risk of HIV infection and the shock of AIDS related morbidity, mortality and their aftermath, interact with other potential short and long-term risks to different livelihood systems. It is then necessary to consider how this results in different food and nutrition security outcomes. This understanding may also highlight situations where areas and households oscillate between periods of crisis and chronic vulnerability, and how this may lead to cumulative impacts on household well-being.¹³

In Mozambique, there are diverse sources of risk that influence vulnerability to food and nutritional insecurity. These include: agricultural production risks associated with drought, floods, plant and animal disease; food access risks associated with poverty, fluctuating market dynamics, and unemployment; health related risks associated with malaria and epidemics such as cholera and HIV and AIDS; and social risks associated with crime, violence and separation/divorce.

¹³ FAO 2004. Protecting and Promoting Good Nutrition in Crisis and Recovery: A Resource Guide. ESNP. Rome.

Box 1: Focus group perceptions of risks to food security in Mozambique

Focus groups on vulnerability conducted by the SETSAN focal points in Maputo Province in November 2003 reported a wide range of risks in addition to natural, economic and health risks. Social risks were associated with: crime, violence, divorce or separation. Environmental risks were associated with deforestation and illegal hunting. Political risks were associated with failure to achieve rights to land.

Source: FAO. UTF/MOZ/071/EC. 2004

Preliminary data from TIA 2002/2003¹⁴ indicates that 55% of households lost a significant part of their crops, animals or goods due to drought, in comparison to 16% of households affected by floods, and 11% of households with fields affected by uncontrolled burning. TIA 2001/2¹⁵ reported that risks related to drought and floods were substantially less than the risk of animal disease, mostly Newcastle's disease in chickens.

The demographic modules of TIA 2001/2 collected morbidity and mortality data on household members. Analysis by Mather et. al. found 4.2% of households experienced a prime age death, and 2.7% of households experienced a prime age illness over the last 3.75 years.¹⁶

There is therefore an increasing understanding that different groups and areas face a diverse range of risks, however information is limited in terms of the probability and extent of each type of risk, and the severity of impact of the risk event on gender disaggregated livelihood strategies and outcomes.

1.2 Demographic trends and HIV prevalence

The estimated HIV prevalence amongst adults has risen from 3.3% in 1992, to 13.6% in 2002¹⁷ and is projected to be 14.9% in 2004¹⁸. It is estimated that for 2004, there are

¹⁴ MADER/DE, 2004 Preliminary data from the 2002/3 TIA. Presentation April 23, 2004.

¹⁵ Walker et.al. 2004.

¹⁶ Prime age deaths from illness accounted for 217 of the 230 prime-age deaths.

¹⁷ The data for the 2002 surveillance round was collected from 36 sentinel sites (10 in the South, 16 in the Centre and 10 in the North, which included the sentinel sites used in the 2001 surveillance round. Three hundred pregnant women were sampled consecutively as they presented themselves for their first antenatal consultation during the months of September and November 2002.

500 new cases per day with 40% of these new infections in the central region. The regional pattern of estimated HIV prevalence is: 16.7% in the Centre, 16.4% in the South, and 11.5% in the North. Of the 1,258,000 adults (15-49 years) living with HIV, 62% are women. The gender disparity is even more striking within the age group of 20-24 years, where women living with HIV outnumber men by three to one. Mather et. al. in their analysis of the TIA 2002 also found that rural mortality rates are slightly different by both gender and age group. Affected prime-age (PA) women tended to be younger than affected PA men, and PA women were more likely than men die from illness (62 % of PA deaths from illness were female), even considering that PA women account for 54 % of PA adults in the general population. Women are more vulnerable to HIV infection than men, both biologically and due to economic and social inequalities, such as lack of employment opportunities, poor access to education and information, and weak control over resources.

In 2004 there are estimated to be 228,000 maternal orphans (0-17 years) due to AIDS.¹⁹ This represents 28% of total maternal orphans²⁰. It is projected that by 2010 there will be 500,000 maternal orphans as a result of AIDS. The rate of vertical transmission (from mother to child) is estimated to be 25%²¹, with 90 new infections per day. The total HIV prevalence in adults (15-49 years) is expected to increase, and then plateau at 16.8% in 2009 with 178,000 new cases of AIDS in 2010. The central southern and northern regions are projected to plateau at 18% (2009-2010) 17% (2007-8) and 15% (2010) respectively.

It has been argued that Mozambique is showing three phases of the epidemic simultaneously. (RdM 2003)²² The central region of the country (with the exception of Zambezia) has reached a mature phase of the epidemic. The southern region is in an intermediary phase and in the northern region the epidemic is in the growth phase.²³ The determinants of HIV prevalence have varied both geographically and temporally with different “waves” of the epidemic. Factors include: refugee return, transport routes, markets, gender, socio-cultural, ethnic and religious issues. The origins and initial trajectory of the epidemic may be in contrast to other countries in southern Africa.²⁴ Historically there have been greater movements of migrant labour to and from the South

¹⁸ INE, MISAU, MPF, CEP/UEM, FM/UEM, CNCS. May 2004. Updated projections based on the 2002 surveillance round.

¹⁹ Ibid

²⁰ The number of orphans in Mozambique was already high due to the war.

²¹ Saide, Mouzinho, 2004 Presentation to SETSAN HIV/AIDS em Moçambique. MISAU

²² RdM 2003. INE/MISAU technical working group

²³ These terms are not used as such by epidemiologists who prefer terms such as “generalised” epidemic (when HIV infection rates exceed 1% of the general adult population),

²⁴ In some other Southern Africa countries the epidemic has been characterised as starting as an urban phenomenon affecting better-paid and more mobile professional groups. In Mozambique rural areas have been affected from the beginning, although the coverage of the surveillance system may not be able to detect this.

African mines in particular from the southern region for example Gaza Province, which recorded an earlier and higher estimated HIV prevalence than other provinces in the south. During the war, which ended with the Peace Accord in 1992, internal movement of the civilian population was restricted. This contributed to a delayed and slower start to the epidemic in some areas. After 1992, the provinces which were among the first to register higher estimated prevalence of HIV infection were those with higher concentrations of refugee exodus and return, bordering the neighbouring countries of Zimbabwe, Malawi and Zambia, i.e. Manica, Tete Provinces. With the return to normality after the war, market development was most pronounced in the areas with good transport and communication links. Estimates of HIV prevalence are increasingly higher in areas adjacent to the main transport corridors: the Maputo corridor, the Beira corridor and the Nacala corridor. Relative isolation together with cultural and religious mores may have influenced the slower evolution of the epidemic, and lower estimated HIV prevalence in the north of the country, e.g. Cabo Delgado.

The war years also left a legacy of family dislocation, orphans and female-headed households, which in turn has influenced individual susceptibility to HIV infection and household resilience to the impacts of AIDS. Post conflict societies may also present peculiar characteristics and evolution of the HIV/AIDS epidemic,²⁵ adding new determinants of susceptibility at different levels. Examples of these include, demobilisation, the rapid expansion or re-opening of transport infrastructure, change in rural-urban dynamics, or the existence of specific vulnerable groups due to the nature of war. Post-conflict conditions may also reinforce factors that increase vulnerability, such as the breakdown of mentoring systems that guide young people in the societal norms of acceptable sexual behaviour. Non-family members normally undertake this responsibility, as it is taboo for parents to talk to their children about sex²⁶, however, changing household-community dynamics may have disrupted positive cultural practices. An understanding of this web of factors and their implications is critical to the design of policy and programming responses to the HIV/AIDS epidemic. Box 2 provides an example of the range of determinants in one area.

²⁵ Nancy Mock. Pers. Com.

²⁶ UNESCO 2002. HIV/AIDS Prevention and Care in Mozambique, A Socio-Cultural Approach.

Box 2: Household Livelihood Changes in the last Twenty Years in the District of Changara, Tete Province.

The reasons for the high levels of HIV infection were stated as:

- *The mobility of the population during and after the war. Many people spent over ten years in Zimbabwe, Malawi and Zambia all countries with high sero prevalence rates.*
- *The district is on a busy corridor between the aforementioned countries, and Changara is one of the main stopping off points for the truckers. This has an impact on the commercial sex trade in the district.*
- *A long history of migratory labour that dates back to colonial times with subsequent prolonged separation of couples leading to multiple sexual partners.*
- *The powerless position of women in the area where it is practically impossible for them to negotiate safe sex with partners*
- *Polygamy is common place and this places women in a vulnerable position in terms of negotiation of safe sex and increases the risk of HIV.*

Source: Selvester, K. and Fidalgo L. 2004.

NB. The province of Tete was estimated to have an HIV prevalence of 14.2% in 2002.

As the projections of HIV prevalence and incidence of AIDS cases show levels of morbidity and mortality impact currently being seen will increase and change over time and geographical area. This has implications for how the types and priorities for interventions by gender, age, occupation, and by region will need to be continually reviewed and revised on the basis of information from surveillance and monitoring systems. More understanding is also needed on the impact of urban-rural migration patterns on the spread of HIV infection and the impacts of AIDS morbidity and mortality.

1.3 Macro economic growth and poverty reduction

According to preliminary estimates, real GDP grew by 7.1 percent in 2003. GDP growth was about 8 percent annually on average between 1996 and 2002. In 2003 the main sources of growth were registered in agriculture (6.4%), extractive industry (11.9%), energy and water (9.3%), trade (9.2%), transports and communication (13.6%), and public administration (18.3%), which is a sign that growth is broad-based.²⁷

²⁷ Joint Review (G15) Aide Memoire 2004.

The consumption based poverty indices from the recently published household survey²⁸ show a significant reduction in extreme poverty from 69.4 percent in 1996-7 to 54.1 percent in 2002-3. Preliminary data suggests that equity may have improved, as witnessed by greater progress in poverty reduction in rural areas, and in the north and centre of the country. However, as the baseline was extremely low, levels of poverty remain high, with more than half the population failing to attain a basic standard of living.

Walker et. al. in their analysis of the determinants of rural income (using TIA 2002 data) found that women headed households were significantly disadvantaged in income compared to households headed by men. This applied particularly to widow headed households who had 30% less income than male-headed households. The authors argue the need for two different populations of women farmers for gender related programmes. To date there has been limited analysis of the gender dimensions of poverty using the IAF 2002 data.

Spatial analysis of poverty inequalities²⁹ from IAF 1997 data has illustrated that inequalities are as pronounced at the Administrative Post (i.e. "within communities") as between districts and provinces. However, Walker et. al. found that the high altitude north-central agro-ecology stood out as a dynamic region for rural income level, poverty reduction and perceived improvement in economic conditions. Rural income in this interior region was stimulated by both input and output markets in neighbouring countries and by favourable conditions such as access to animal traction. This finding is also supported by the 2002/3 IAF which found that the provinces with larger than average reduction in poverty headcounts were: Niassa, Zambezia, Nampula, Tete, Manica and Sofala. However, whether this reduction in poverty can be continued or sustained should be critically questioned, as these provinces (with the exception of Niassa and Nampula) have the highest HIV prevalence rates, which will lead to increased mortality impacts within three to ten years. DNPO et. al. note this apparent contradiction and argue that given the projected curve of the HIV epidemic evolution, accumulated AIDS deaths up to 2002/3 are still relatively few, and full impacts of epidemic will be felt in the near future. The report also argues that there is still substantial uncertainty about the economic impacts of the epidemic especially on per capita basis. Even if per capita growth reduces from 4% to 3%, while having considerable economic impact, the report argues that a growth rate of 3% can still allow considerable poverty reduction impacts.

There are a number of issues that need to be explored further with respect to the interaction between the downward trend in poverty levels and the upward trends in HIV prevalence and AIDS impacts. Programme and policy measures are required to ensure that HIV/AIDS impacts do not exacerbate existing poverty and gender inequalities. Measures are also required to safeguard against increased exposure to new and

²⁸ DNPO, MPF 2004 (IAF 2002/3)

²⁹ Simler and Nhate 2003.

repeated infections, with the promotion of market development approaches and increased commercialisation.

2 Human capital

2.1 Labour availability

The loss of adult on- and off-farm labour is one of the most widely discussed effects of the HIV/AIDS epidemic. The loss of experienced agricultural workers affects both individual households and communities, which may result in labour shortages and declines in productivity both on and off the farm. The death of one or both parents may affect the acquisition of various types of knowledge and skills by their surviving children. Adolescents who have lost their parents have less pressure to continue farming. This may lead to a trend where agriculture as a livelihood may be abandoned but no new alternative created in the context of orphanhood.³⁰

In Mozambique, the TIA 2002 collected data on changes in household composition between 1999-2002 from households experiencing a death through illness (“affected households”) and households that had not experienced the death of a household member (“non-affected households”). In their analysis, Mather et. al. found that only one-third of the adults who died through illness were heads or spouses, while two-thirds of non-affected prime age (PA) adults were in this category. This is contrary to the conventional wisdom that AIDS related mortality is predominantly among household heads. This analysis showed that affected households did not uniformly appear to have less available prime age (PA) labour than non-affected households. The study found that labour availability in affected households varied according to the sex and status of the deceased person, and the stage of the household in its development cycle. The authors concluded that differences in available prime age labour were either because affected households were able to attract new PA members or because they had more PA adults prior to death. Households with a PA female death were nearly three times as likely as non-affected households to bring in a new PA female. By contrast, households with a PA male death were no more likely than non-affected households to bring in a new PA male. This finding supports anecdotal findings from Mozambique and neighbouring countries whereby widowers remarry very quickly, while widows tend to be left to fend for themselves or assimilated into the husband’s brother’s household. Obviously these “coping mechanisms” have implications for the continued spread of HIV, particularly in social and cultural environments where early girl marriage is common, and where there are beliefs and practices associated with “ritual cleansing” after a death.³¹

The study also found that there were regional differences, with affected households in the central and northern regions appearing to have reduced prime age labour available

³⁰ Topouzis: pers.com.

³¹ UNESCO. 2002 and Martins, H. et. al. 2004.

compared to the southern region. However further work is necessary to understand whether this is due to existing differences in family size due to cultural and social factors, and the implications of labour requirements for different types of farming or livelihood systems (e.g. predominantly cropping or livestock systems). The regional differences found in this study may also reflect the more advanced stage of the epidemic in the Central Region.

The analysis found a relatively low proportion (3%) of households that had experienced a death from chronic illness, in conjunction with a household member who was currently chronically ill. The study also reports that few households (7%) had experienced more than one prime age adult death from illness. However, these findings may merely be reflecting the early stage of the epidemic in Mozambique, and the lag effect between HIV infection and AIDS mortality impacts. As an example: the study was not able to take into account the probability that adults who died from chronic illness, were likely to have surviving spouses or partners who were HIV positive but asymptomatic.³²

Labour demands for caring practices within the family may also increase with chronic illness. Mather et.al. found that the majority of caregivers to ill adults in the survey were either the spouse of the ill adult (44%) or his/her mother/father (30%). In addition, about 60% of caregivers were female reflecting the fact that women traditionally perform the vast majority of domestic tasks – including care for children, the elderly, and the ill – and are more likely than men to work on the farm rather than off. Moreover the babies of infected parents have a 25-30% chance of being infected, necessitating increased labour requirements for childcare. This suggests that domestic, farm and non-farm activities of women in the household will more likely be constrained by the time devoted to care giving than male activities. This has implications for the sustainability of coping mechanisms currently employed.

2.2 Knowledge systems

ICRISAT has recently conducted a study that investigated the impact of HIV and AIDS on local knowledge and management of seeds in Chókwè District.³³ The study found that gender differences in the tasks and priorities in agricultural labour meant that women were the main receptacles and transmitters of local knowledge on the seed selection process (periods for planting and harvesting seed, testing of germination capacity, separation of seed on the basis of pest attack, bolting, selection of similar seeds) and conservation (physical and treatments). Men were responsible for the construction of granaries, and as the main sources of income (through labour migration and petty trading) had greater access to income and markets to purchase seed.

³² While two-thirds of the prime age adult deaths in this data set were not heads of households, and the study did not determine the marital status of the non-head adult deaths, it is likely, as adults they were sexually active.

³³ Waterhouse, R. 2003. Seminário de Divulgação de resultados do estudo sobre “O impacto do HIV/SIDA no conhecimento Local e Gestão de Sementes” ICRISAT/CGIAR.

The sources of knowledge and skills were: parents, relatives, neighbours and friends, visits to neighbouring areas, casual work, experience on own fields, government or NGO extension services, social communication informal markets, schools, migration. The study found that access to information and knowledge varied by sex, age, social class and the health status of the household. Although women interviewed in Chókwè generally knew more about local varieties than men, they had weaker access to new information. Findings showed that, when people lose their seed stocks and are forced to rely on markets or handouts, knowledge around traditional varieties and seed management tended to erode.

This study found that 45% of affected households³⁴ reduced their area of cultivation, and 60% reduced the number of crops grown. The impact of HIV and AIDS related morbidity and mortality was likely to reinforce other factors, increase social polarization and add to the existing trend towards knowledge loss around traditional farmer varieties (evidenced in the knowledge gap between elder and younger generation adults) with a parallel increase in dependence on non-local varieties. These varieties may be less well adapted to local agro-ecological conditions or may only be suitable when other inputs such as a reliable water supply, fertilizer and pesticide are available and accessible to the farmer. In this case, affected households are likely to have least capacity to access these inputs.

The population perceived the knowledge and skill transfer process as one that was inherent and natural in the case of learning by doing. The study recommendations highlighted the need for a more systemised way to protect and trace changes in local genetic resource base, and a formal system to store and transmit local seed knowledge. The gender division of labour in seed systems, together with the constraints that women face in accessing information and sources of new seed and planting material varieties also emphasises the importance of gender specific strategies and interventions in the development of seed systems in the context of HIV and AIDS.

2.3 Agricultural extension and rural institutions

This raises the issue of how to ensure knowledge and skill transfer in the HIV and AIDS context. Estimated household coverage for agricultural extension (government and NGO) was 15% in 2002 (TIA 2002) and 13% in 2003 (TIA 2003). Formal extension coverage is therefore very low. PROAGRI II envisages a strengthened and extended system of agricultural research and extension through partnerships with the private and NGO sector. However how appropriate, feasible and sustainable this will be in the HIV and AIDS context should be widely debated. NGOs already have different extension

³⁴ In this study “affected households” were purposively selected to reflect the demographic impact of HIV/AIDS: households headed by widows/widowers, caring for terminally ill or orphans were selected. Therefore the study is only representative of these types of households, i.e. not of households where it is not the head of household or spouse that has died.

models, and FAO has been piloting the Farmer Field School, and Junior Farmer Field and Life School approaches. Further information and analysis is needed to understand the impact of the privatisation of some agricultural extension services, (e.g. specific cash crops and veterinary services) in particular whether and how the needs of agricultural marginal areas, poorer households, and those affected by HIV/AIDS (e.g. orphans, elderly, widows) are addressed. With around half of families owning a radio, and actual listening audiences higher,³⁵ the expansion of community radio networks may be an option. The interactions between formal and informal agricultural extension mechanisms (e.g. "farmer-to-farmer") together with assessing the costs and benefits of alternative approaches to extension (and IEC and behaviour change activities) need to be explored and systematically evaluated within the HIV/AIDS context.

3 Natural capital

The loss of human capital can have important effects on a household's use and preservation of its natural capital. Access and ownership of land is fundamental to the rural social and economic structure. Land may lapse into unmanaged fallow, and user rights may be lost through lack of cultivation or appropriation by relatives. At the community level commonly owned or managed resources (forests, water bodies, wildlife) may deteriorate through unsustainable use e.g. charcoal production, firewood collection, collection of non wood tree products or because community management systems begin to break down through loss of indigenous technical knowledge. This may lead to environmental degradation and reduced biodiversity.

3.1 Cultivated area

Walker et. al. found a lack of differentiation in the small-holder sector, with only 3-4% of farmers exceeding 5 ha; and the use of improved inputs negligible and production levels very low.

The analysis of TIA 2002 by Mather et. al. found that median cultivated area per adult equivalent (AE) is similar for most affected and non-affected households.³⁶ However this finding needs to be interpreted in the context of a country that is still at a very early stage of AIDS impact. The authors suggest that although the amount of land allocated for staple and cash crop production may have fallen for some affected households, it did not fall more than what might be expected given that affected households have lower adult equivalents and thus lower consumption requirements.

³⁵ Provinces with highest radio ownership were Sofala and Manica, with Niassa having the lowest (44%).

³⁶ This was with the exception of male death in the south and north, and female-death households in the centre and north.

3.2 Common resources

As discussed below, Mather et. al. found that the most important source of off farm income was micro enterprises of which a third came from the exploitation of natural resources (tree felling and charcoal production). Traditionally these are activities of young males, requiring considerable strength and carried out in the dry season, or in cases of family crisis. More information is needed as to the potential impact of AIDS mortality on household patterns of common natural resource utilisation. There is increasing awareness and use of non-timber forest products (plants, nuts, fruits, roots, honey) in ameliorating and contributing to the management of some AIDS related conditions (diarrhoea, ulcers, nausea). Some NGOs are working to ensure that knowledge concerning the role and utilisation of different natural resource products is systematically retained and transferred to the next generation.³⁷

4 Financial capital

The loss of human capital may lead to a loss of financial capital, and household assets. Incomes may decline as HIV infections and AIDS deaths are disproportionately concentrated in the most productive age groups (15-49). Income may decline from both farm and off-farm sources, further rendering the household vulnerable to food insecurity.

Despite a considerable reduction in the number of people below the poverty line, rural incomes remain very low in Mozambique, with mean income about \$280 per household and \$65 per capita. Median per capita income is around \$30 and median household income is \$140. There is very little differentiation in rural income. Analysis of the 2002 TIA by Walker et. al found that most (rural) families rely heavily on crop income. This is particularly in “good years” where there have been no drought or flood risk events. Value of production from crops was the dominant source of rural household income. Roots and tubers (mostly cassava) made the largest contribution to household income closely followed by cereals, predominantly maize. Income from livestock only contributed about 2-3% of total household income and this share did not vary by income level. Goats make the largest contribution followed by cattle. Off-farm income was also important. The most important source of off farm income was micro enterprises, which was more important than wage income or remittances. About a third of the micro enterprise income came from the exploitation of natural resources (tree felling and charcoal production), and the rest from small businesses (e.g. production of local beverages). Casual agricultural labour was the most frequent form of wage labour, but 10-15% of households had access to more permanent off farm jobs. Remittance income contributed 3-5% of total income, with no variation by wealth group. The highest income households had diverse sources of income. The authors reported significant interactions among income sources that reinforce and multiply growth in the agricultural sector. Households with more

³⁷ Examples are: Kubatsirana, and Africa Environment in Manica Province.

members working in own self-employment off the farm were characterised by increased net crop income.

Mather et. al. found that although affected households may have incurred significant losses of income and/or land access, the available survey data demonstrated that as a group they were not considerably poorer *ex post* than non-affected households. However, certain sub-groups within the affected households such as those in the Central Region which had suffered the death of male head/spouse, for example may well have had lower median incomes or land holdings after the death, as may some widow-headed households or those with high dependency ratios.

The Swaziland VAC study found that a qualitative shift was occurring whereby affected households are changing their income sources to cope or compensate for losses of income from crop sales and remittances. Non-farm casual labour and livestock sales are being ranked as relatively more important than other sources. This may reflect a shift to more flexible forms of work that require a different labour type and input. The increased relative importance of income from livestock sales may reflect an unsustainable draw down of assets, but also highlights potential intervention areas. This study found that household ranking of the importance of food sources did not appear to be related to proxy HIV and AIDS status.

5 Physical capital

Households' physical capital refers to those tangible assets and producer goods other than their natural capital. It includes their housing, household goods, furniture, tools and equipment, as well as livestock. Depending on gender and age characteristics, AIDS related morbidity might affect the ability of the household to maintain housing and related structures (e.g. re-thatching, fencing, construction of latrines etc.), and repair productive equipment. Households attempt to conserve their productive resources in distress situations for as long as possible. Thus, once savings and credit resources have been exhausted and liquid assets have been disposed of, households resort to selling of other assets e.g. clothes, household utensils, furniture and productive equipment.

The distress sale of physical capital leaves households in a precarious position in terms of their ability to adapt to future shocks. Moreover, with the disposal of physical assets and equipment needed for agricultural production, households' ability to generate income in the short term is also compromised. Coupled with the disposal of natural capital, particularly land, in the general literature it is posited that households that reach this state are frequently dissolved.

The 2004 VAC in Mozambique examined household asset levels and found 95% of households with agricultural implements and 42% with bicycles. This varied by province and gender of head of household. Ownership of bicycles was highest in Manica, the interior of Zambezia Province, Tete and Sofala, corresponding with the data on poverty reduction levels. The interior of Inhambane Province and the south of Gaza Province had the lowest levels of bicycle ownership. 21% of women headed households had bicycles. The 2004 VAC also collected data on HIV/AIDS, but further analysis is needed to understand how asset levels (such as bicycles) vary for affected and non-affected households. Mather et.al. found that the sale of animals and other assets varied depending on the sex of the chronically ill person, and noted that draw down of assets during the chronic illness of a household member, would leave less to sell to mitigate the impacts after death. This points to the need to protect the asset base of households during the time of chronic illness, for example through ensuring information on and access to health and school fee exemptions.

Community level physical capital includes infrastructure such as market, education, health, social and cultural facilities, as well as transport and communications. Depending on the type of infrastructure, investments may increase or reduce susceptibility to HIV infection and vulnerability to AIDS impacts. For example: in Mozambique the estimated prevalence of HIV infection is higher in areas adjacent to transport corridors, yet the ability of the national health system to expand its coverage of VCT and provision of ARVs is dependent on investments in health infrastructure and related access.

PARPA indicators show that both physical and economic access to the health network continue as constraints to improved health well-being: distances to be travelled to health posts continue to be great and the user fees charged for health services are frequently higher than those set officially. Both these factors will influence the capacity of PLWHA to access health facility based testing, treatment for opportunistic infections and anti-retroviral treatment roll-out. This points to the need to extend the coverage of community based health agents, and pilot the provision of ARVs through specialist NGOs or specifically trained para-medics.

6 Social claims and capital

The illness and death of household members particularly in the context of HIV/AIDS stigma can disrupt a household's links to their extended family and the larger community. The capacity of kin and neighbours to provide material and moral support may become overstretched. This depends on the strength and extent of "traditional" support networks, history of household and community relocation or resettlement, and emergence of different forms of social networks (faith based groups, producer associations etc.).

The 1997 study on mutual assistance and informal networks by Dava et. al. found that practices have changed over three time periods (pre-Independence, 1975-1986, and post-1986) Practices could be broadly divided into those characterised by “mutual assistance” and those helping “vulnerable groups” (defined as the permanently poor and vulnerable that needed and deserved assistance as opposed to “the lazy”). An emerging pattern was that of practices gradually evolving away from those based on friendships and communal co-existence and the exchange of labour-for-labour to those involving monetary transactions. The reasons cited for not participating in “mutual assistance” activities were: “no money”, illness, or “not a drinker”.

This study did not explicitly consider access and utilisation of informal safety nets by households affected by HIV/AIDS. However, it shows that there are factors other than HIV/AIDS that may influence the capability of social networks to assist the most needy. These include: the increasing monetarisation of the economy, rural-urban migration, and the ability to transfer resources and communicate between kin. This study found that social ties were concentrated within the immediate family unit, and income-earning opportunities were key in the ability to develop ties beyond the family unit. In the HIV/AIDS context, households may recognise the chronically ill as “vulnerable”, but stigma may place them in the category of the “non-deserving”. Income, which is increasingly needed to facilitate social networks, may rely on external employment opportunities. This both continues the disruption of family ties and increases the transaction costs for material, financial and social transfers.

A 2003 study on informal home based care practices in Morrumbala, Zambezia,³⁸ found that in the initial phases of an illness, the immediate family provide most of the care, but that the household receives material support from the extended family, religious groups, neighbours and donations from the community. However, as the illness became prolonged, this support reduced. The affected family became isolated from the rest of the community and the members of the extended family abandon the family because of fear, stigma or the support that they can offer is exhausted and they do not see any hope for improvement.

However, communities and their leaders may be responding to changing circumstances and seeking innovative ways to support vulnerable groups. Anecdotally the number of community-based organisations is increasing both in rural and urban areas. Faith based organisations (Christian and Muslim) are developing home based care models to provide a range of psycho social, material and practical assistance. Examples from home based care programmes in Malawi,³⁹ show that with information on the modes of HIV transmission, training in health and hygiene and some additional external material

³⁸ Breslin, L. 2003

³⁹ Maren Lieberum, Oxfam Regional HIV/AIDS Advisor. Oxfam Web-site:

support, fear and stigma can be reduced, and community driven responses to HIV/AIDS impacts can be strengthened.

Box 3 below illustrates an example of how social capital through family and women in a similar position can help a widow to adjust to the impact of the death of her husband.

**Box 3: The impact of HIV/AIDS on livelihoods: the role of social capital
The case of Anna from Sussundenga (Manica Province)**

Anna is about 30 years old. Her husband, who was employed as a driver, died in 2001. She has three daughters aged from 5 to 17 years and a baby of 1. Her compound is large and well maintained, and is surrounded by mangoes, bananas and other fruit trees.

Before her husband became sick, Anna worked exclusively on the farm. The family cultivated around 4 hectares, and also had 0.5 ha mdimba, where they grew vegetables. They produced up to 5,000kg of maize in a good year, with a value of around 9,000,000 Mts. Her husband earned a salary of 4,800,000 Mts, giving the household an annual income of around 14,000,000 Mts in non-drought years.

Anna now works 2.5 ha. and meets household cereal needs with a small surplus. Since her husband's death, she has put her main efforts into trading activities and now has a successful, medium sized business selling bananas, tomatoes and yams. She was able to capitalize this business with a loan of 300,000 Mts. from her brother. She currently shares major expenses (i.e. hire of transport) with two other women. The initial loan has now been repaid. Anna gains additional income from brewing and has a total income of around 6,000,000 Mts per year.

Source: SCF-UK 2004

In this example Anna is well connected (she has a good stock of social capital) and the personal skills and capacities to adapt to change; despite the loss of a driver's income, the household remains in the top half of the wealth distribution. However, her household is extremely vulnerable, and if she were to become sick, her family could very quickly become destitute. Although she might reduce their insecurity by saving income for secondary schooling and possible medical expenses, the children's long-term security cannot, in present conditions, be assured.

A community's level of social capital can have major impacts on mitigating the effects of HIV/AIDS. Communities with high levels of social capital can provide affected households with a variety of social support activities that permits families to adjust to the illness or loss of members. Conversely, communities with low levels of social trust and solidarity can leave households and families to fend for themselves or even to isolate and ostracize those households affected by HIV/AIDS.

Box 4 illustrates some agricultural related support mechanisms from Mabalane District in Gaza Province.

Box 4: Social claims and informal institutions

Kuvikissa, the outplacement of cattle, is fundamentally a strategy to reduce risk (such as drought, a flood, a disease, or theft). Reciprocity may simply consist of returning the same service.

Kuthekela is, similarly to **kuvikissa**, an escape route from a localized crisis by recurring to kin living in an area where conditions are better.

Kukushela is essentially a form of pooling farming tools, and thus enables a reduction of the total investment made by the community in their acquisition. The reciprocity is hidden in the fact that by lending one tool one gets access to another.

Kurimela and **kulusela** are fundamentally relations of labour. In the first case, a person without a plough and animal traction works in someone else's fields and in compensation has his or her land ploughed by a span of this person's cattle. In the second case, a household makes available a herder whose labour is paid by in cattle. Obviously, this is a payment as well as a means to get access to livestock, traditionally in particular very important for young males: the bride's parents would ask a bride price (**lobolo**) in the shape of a certain number of heads of cattle.

Source: Brouwer and Nhassengo 2004 (forthcoming)

Through community discussion and dialogue, these existing practices could be adapted to support households affected by HIV/AIDS. For example, orphaned youths could herd animals for better off households, providing the youth the opportunity to establish their own herds and independence.

The 2002 TIA reported that around 4% of households were members of organisations, which was usually a farmer's association. However, classical formal survey methodologies may not be able to capture the nuanced benefits and obligations that membership of formal organisations and participation in informal networks brings. A better understanding of how social claims, networks and support mechanisms are changing in response to risk events and HIV and AIDS in Mozambique requires the use

of appreciative enquiry techniques and an understanding that households rarely exist as discrete social and economic units. In the early 1990s, studies carried out in Zambia to examine the effects of HIV/AIDS on agricultural production systems built upon the concept of a cluster of individual households that had overlapping relationships.⁴⁰ A **cluster**, was defined as: “A group of producers between which there are multiple resource exchanges, usually based on the factors of kinship, labour and food exchange, and or common access to draught power.” This concept allows one to understand clearly the relationship between individuals of different generations, gender, marital and kinship status within a cluster, and how an individual household may “dissolve” due to the impact of AIDS mortality, but the members are redistributed among other households within the cluster.

7 Household coping strategies

In TIA 2002 each household which had experienced the death, departure, or chronic illness of a household member was asked to identify three principal strategies⁴¹ undertaken by the household to adjust their agricultural and livestock activities in response to the loss or illness of the given individual.

The study analysed household strategies in response to adult illness and death. The reported household strategies were similar to others found in the general literature: i.e. reduction in cultivated area, labour applied and assets; labour replacement or shifting among remaining household members, reduced consumption and increased use of children for income activities. The analysis of strategy responses of affected households found that 44% of affected households indicated crop area reduction while 22% indicated reduced weeding as adjustment strategies. Around one third of households with either adult illness or mortality stated that they had “no strategy” response. However the authors point out that this response might be due to survey fatigue. The authors suggest that the findings imply that not all affected households appear to face a binding labour constraint in agriculture. The report points to other strategies and characteristics of the affected households to indicate why this may be the case. Some affected households attempt to replace lost agricultural labour through hiring, arrival of new members (such as widowers remarrying), or mutual help.

While the practice of “ganho-ganho” (daily piece work paid in cash or in kind) is a very common coping strategy during “normal” hungry periods, it is dependent on a patron-client type relationship with a web of demands and obligations on either side. Further examination of the sustainability of the strategy for hiring in and hiring out casual labour in the context of expected increased AIDS mortality impacts is needed as these coping

⁴⁰ Drinkwater, M. et. al. 1993.

⁴¹ The response mechanisms considered in analysis are restricted to those that can be quantified, social and cultural responses are more difficult to explore and understand.

strategies have been observed to get weaker and weaker as epidemics become more mature.

There were several important gender differences in household responses to adult death. A male death was more likely to force the household to adjust their agricultural activities due to the loss of that individual. In addition, a male death was more likely to result in efforts to replace/shift labour, reduce area cultivated, and to reduce weeding labour, than a female death. On the other hand, a female death was more likely to result in child-related strategies, which may be due to the fact that women typically provide most child care duties for the family, and that children may be closer substitutes for a typical rural woman's labour activities (weeding, gathering water, firewood, cooking, etc) than for those of a man (especially non-farm activities).

Households with female rather than male illness were more likely to reduce area cultivated (48% to 28%); yet in response to death, the percentage for females stays the same while that for male death jumps to 52%. This suggests that households begin to adjust agricultural activities during the period of a woman's illness, while the adjustment for a man is more likely to occur after death. This could be explained by the fact that women tend to supply more overall labour to the household economy, thus when a woman falls ill, the household is less likely to be able to maintain the household's former levels of domestic and on-farm labour. This emphasises the need to consider the interface between productive and domestic labour, when addressing AIDS impacts. This has implications for the timing and gender orientation of possible interventions, i.e. interventions during the period of chronic illness to protect key activities, may help to reduce vulnerability after death, and different types of interventions (domestic, livelihood based) may be necessary depending on the sex of the chronically ill person.

Strategy use also varied considerably by region. For example, affected households in the North were much more likely to reduce area cultivated and weeding labour, possibly because household size and number of PA adults is somewhat smaller ex ante. Households in the Centre region had larger area and weeding effects than in the South, perhaps because southern households tend to be more diversified into off-farm income and livestock, with agriculture a less important activity.

It is also interesting to compare the preliminary analysis of a recent study in Swaziland⁴² investigating the links between HIV/AIDS, current demographic status and livelihoods. The study did not find a strong consistency in the relationship between the HIV/AIDS proxy indicators and: cropping areas, inputs and yields. It is reported that the data tentatively indicates that affected households are in general more protective of tubers than non-affected households and are less concerned or able to preserve or increase cash crop and cereal production.

⁴² Swaziland VAC. 2004.

While there does seem to be increasing evidence that households are employing strategies to cope with the loss of family members this does not imply that they can necessarily maintain their former levels of agricultural output, income, or other measures of welfare, indefinitely in the future, especially if other household members are likely to progress from asymptomatic infection to full blown AIDS. Household responses are heterogeneous; vary according to household composition, characteristics of the deceased, and region. This accentuates the need to investigate further “successful” adaptations to AIDS mortality impact, and the factors that increase household resilience both in the short and long term. This heterogeneity has implications for the appropriateness and/or the targeting of interventions to mitigate the effects of adult mortality, however, as impact levels rise, this heterogeneity may become less important.

The implication of these findings is that interventions designed to mitigate the loss of labour in Mozambique should be aware of regional differences in household labour availability, on-farm labour demands, and household responses to adult mortality. The translation of this analysis into feasible policy and programming options will be explored in section III.

8 Livelihood outcomes and well-being

The following section reviews information on current achievements in livelihood outcomes and well being, in the areas of education, health and nutrition. At present the available data is considered at the macro level, and it is only possible to hypothesise on the linkages with HIV and AIDS in the Mozambique context.

8.1 Education: HIV/AIDS impacts on demand and supply

HIV and AIDS affect the possibility of improved education outcomes through both demand and supply side impacts. Demand is reduced through: decreased fertility; cuts in enrolment as child mortality increases; and lower schooling uptake from vulnerable groups e.g. girls and orphans. Supply is affected through: staff absenteeism and mortality; increased costs in conjunction with greater constraints on resources available from the state, communities and households.⁴³ The output is likely to be a reduction in educated and trained citizens and reduced access to the very knowledge required to be able to develop the strengthened and improved livelihood strategies needed to respond to the impacts of HIV and AIDS.

Mozambique is facing this challenge against the backdrop of very low formal education attainment levels during the colonial period, and the investments and progress made in

⁴³ Barnett, T and Whiteside, A. AIDS in the Twenty-First Century. Disease and Globalization. 2002.

the early years of Independence being destroyed and disrupted by the war. However, the opportunities that education can bring to addressing the HIV and AIDS epidemic are also being grasped. The cross sectoral “new curriculum” and “20% local curriculum” have an emphasis on life-skills, vocational training and increased relevance and responsiveness to local level conditions and needs.

8.1.1 Projections of supply side impacts

In 2000 MINED undertook a study of the impact of HIV/AIDS on the education sector.⁴⁴ The study estimated that over the decade 2000 and 2010, the sector would lose around 17% of its personnel (9,200 teachers). The study emphasised that the majority of new infections was among the 15-24 year age group, which also corresponded with the age group of newly graduated primary school teachers at the start of their professional life. In addition, due to the interruptions to the education system during the war, many students are in this age group as well. The report projected that the higher prevalence of HIV infections together with a higher concentration of teachers in the central region of the country would result in around 50% of teachers being lost from this region. The report recommended that it would be necessary to train 25% more teachers than previously estimated and that the universities would need to increase higher-level trained teachers by 28%.

Teachers, who in the past were seen as role models and sources of innovation and information in a community, may now be perceived as a source of infection. In Mozambique where distances to schools have meant that students use formal or informal boarding facilities, parents are now increasingly concerned about the risk of sending girls to school.

8.1.2 Education outcomes

The IMF/IDA 2003 Joint Staff Assessment of the PRSP/PARPA reported that although school construction was running far behind its targets, other key measures were on track, including: increases in public expenditure, improvements in teacher training, increased textbook availability, and curriculum revision.

These investments in increasing the “supply” of education have had a positive effect on key education indicators: the number of EP I students increased by 5 percent in 2002, with the gross enrolment rate rising from 70 percent in 1998 to 104 percent in 2002. At the same time, girls represented 44 percent of enrolment in 2000, meeting the PARPA target. Cohort survival rate for the last year of EP1 increased significantly, reflecting a reduction in dropout and repetition rates.⁴⁵ While there have been these noted

⁴⁴ MINED, 2004

⁴⁵ IMF/IDA Mozambique. Poverty Reduction Strategy Paper—Progress Report Joint Staff Assessment. June 3, 2003

improvements; efficiencies and the quality of education are still low. In the rural areas, more than half the teachers are untrained. Progress to the next level of education (EP 2, or grades 6-7) has been significantly slower than in EP 1, with the EP 2 gross enrolment rate remaining below 30 percent.

There are also continuing gender inequalities in access to schooling and educational attainment. The 2002 IAF found that female literacy levels have increased from 26% to 32% between 1997 and 2002 compared to an increase in male literacy rates from 55% to 63%.⁴⁶ These rates are still below the literacy levels Mozambique achieved before the civil war. Literacy levels are higher in the south of the country compared to the north. The DHS 2003 found 7% of women, and 14% of men with secondary education. Four out of ten women in comparison to two in ten men had never been to school.

These gender inequalities are contributing to the perpetuation of intergenerational poverty and malnutrition⁴⁷. Higher maternal education levels are associated with higher monetary income⁴⁸ and smaller family size⁴⁹. The 1997 DHS found an inverse relationship between maternal education and stunting. Children under three years, whose mothers had received secondary school education, had significantly less stunting than those whose mothers had received no education. These findings point to the need to continue and increase commitment and resources to improving the access to and relevance of education for girl children as the mothers and principle caregivers of the next generation.

8.2 Health and nutritional outcomes

While there is an increasing theoretical knowledge of how HIV/AIDS affects health and nutritional outcomes at the individual level, understanding and interpreting the contribution of AIDS related morbidity to population level statistics on health and nutritional status is more difficult. Direct effects are linked to the AIDS related metabolic changes that lead to wasting. Indirect impacts can be wide ranging, and may be accumulative over time. They include: the deterioration of household income and asset levels that can contribute to increased poverty; and, or, increased burdens on principle caregivers reducing the time and resources available for childcare. Some issues that need investigation are: how does paediatric AIDS affect the age pattern of growth faltering, and how do different risks (e.g. structural poverty, drought and HIV infection) interact and result in changes to the geographical distribution of malnutrition.⁵⁰ In addition more research is needed to determine if and how existing high levels of chronic

⁴⁶ IAF 2002.

⁴⁷ Early marriage and pregnancy have a higher risk of low birth weight outcome, and greater probability of childhood stunting.

⁴⁸ GOM, MPF, UEM, IFPRI. 1998. Understanding Poverty and Well-being in Mozambique: The First National Assessment. (1996-7)

⁴⁹ DHS 2003. Preliminary Report.

⁵⁰ Mason et. al. 2003

malnutrition influence susceptibility to infection and the progression from HIV infection to full blown AIDS, in both child and adult populations.

Mozambique, in contrast to some other Southern African countries has experienced positive economic growth, and improvements in social sector (e.g. education and health) infrastructure over the last ten years. This has led to improvements in some health outcomes but may also contribute to a masking of AIDS impacts on health and nutrition indicators.

Over the period 1997 to 2003, the infant mortality rate (IMR) has decreased from 145.7 per 1000 live births to 125/1000 births (DHS 2003). However, while the global IMR is reducing, there remain wide provincial and urban/rural disparities. In 2003 the IMR in rural areas was 136/1000 live births compared to 97/1000 live births in urban areas. The provinces with the highest IMR were: Cabo Delgado with 182/1000 live births; and Nampula with 166/1000 live births. Maputo City had the lowest IMR (51/1000 live births). The IMR among mothers with no education was 143/1000 and with secondary education 62/1000.

A mother's nutritional status affects her ability to successfully carry, deliver, and care for her children and is also of concern in its own right. The 1997 DHS found that 11% of mothers were malnourished (BMI < 18.5), with the highest percentage in Zambezia (18%) followed by Nampula (16%). Provinces with the lowest maternal malnutrition (3%) were Inhambane and the City of Maputo. Approximately 5% of mothers of children less than three years of age are too short (under 145 cm), which is very high for sub-Saharan Africa. The maternal mortality rate has decreased since 1998 and is around 1.6 per 1000 live births. This indicator deteriorated slightly in 2000, mainly due to the impact of the floods. Afterwards a recovery to the level of 1.6 took place.

Poor maternal nutritional status is also reflected in the lack of significant change in the percentage of babies with low birth weight. It was above 12% in 1999, and only fell to just below 11.5% in 2002.

8.2.1 Acute malnutrition

Acutely malnourished or wasted children have low weight for height. Wasting represents the failure to receive adequate nutrition in the period immediately preceding the survey and may be the result of recent episodes of illness. Illness may lead to anorexia, reduced absorption of nutrients and higher requirements for "catch up growth". The short-term implications of malnutrition include weight loss and growth faltering. In children, under nutrition impairs learning ability, school performance and health status.

The 2003 DHS reported that the prevalence of wasting in children less than five years was 4% (urban: 3% and rural 4.3%). Sofala Province had the highest prevalence (8%),

followed by Gaza (7%) and Nampula (6%) Provinces. Maputo Province (0.5%) had the lowest prevalence of wasting. There was no difference in prevalence between male and female children and the mother's education level did not make a difference. There are difficulties in comparing these results with the 1997 DHS due to the differences in age grouping. The 1997 DHS reported a prevalence of 8% of children less than 5 years with acute malnutrition, (urban 10%; rural: 7%). At the provincial level the prevalence ranged from 16% in Cabo Delgado and Tete, to 2% in Inhambane and Maputo Provinces.

8.2.2 Chronic malnutrition

Chronically malnourished or stunted children are too short for their age (low height for age). Stunting reflects the outcome of a failure to receive adequate nutrition over a long period or time, and is also affected by recurrent and chronic illness. Long-term chronic malnutrition is associated with impaired mental development. Stunting has intergenerational implications. Stunted girls who reach motherhood are more likely to give birth to low birth weight (< 2.5 kg.) babies, who in turn are more at risk of becoming malnourished.

The findings from the 2003 DHS classified 41% (urban: 29%; rural 46%) of children under five years as stunted. Cabo Delgado: 56%; Zambezia (48%), Niassa and Tete (46%) were the provinces with the highest prevalence of stunting. The southern provinces had the lowest levels of stunting with the following prevalence levels: Maputo City: 20%; Maputo Province: 25%; and Gaza and Inhambane Provinces both around 33%. The prevalence of stunting in males (43%) is higher than females (39%), although the reasons for this are not understood. Chronic malnutrition rises with age and is relatively low among children whose mothers have secondary education (15%).

In 1997 the DHS reported 36% of children less than three years as stunted. Cabo Delgado (57%), Niassa (55%) and Tete (46%) were the provinces that had the highest prevalence levels. In the southern region, prevalence ranged from 16% (Maputo Province) to 26% for Inhambane and 30% for Gaza Province. At this stage it is not possible to make direct comparisons between these two surveys as the results are reported for different age groups.

8.2.3 Underweight

Children are classified as being underweight if they have low weight for age. This is a composite indicator that takes into account both acute and chronic undernutrition. The 2003 DHS reported that 24% of children less than five years were underweight with the prevalence being higher in the rural areas (27%). compared to urban areas, (15%). The provincial prevalence ranged from: 35% in Cabo Delgado to 8% in Maputo City. The prevalence among males was higher than females. The 1997 DHS found 26% of children less than three years were underweight.

Prevalence of acute malnutrition and underweight peak between 15-18 months of age, while stunting only starts to decline after 24 months.

8.2.4 Infant and child feeding practices

The DHS 2003 found that 30% of children less than 6 months were exclusively breastfed, with an additional 40% taking plain water and breast milk. This compares favourably to the situation in neighbouring countries. 80% of children more than 6 months were receiving complementary foods in addition to breast milk.

The preliminary data from the DHS 2003 indicate that: half the children under three consumed fruits and vegetables rich in vitamin A in the 7 days preceding the survey, and half the children 6-59 months are reported to have received vitamin A supplements in the previous 6 months. This ranged from 35% in Niassa Province to 78% in Maputo City. Consumption of fruits and vegetables rich in Vitamin A by children under three years varied by province: 41.9% in Nampula, 63.7% in Sofala.

8.3 Implications of poor nutritional status for poverty reduction and strengthened livelihoods in the context of HIV and AIDS


Poverty levels may have reduced dramatically between 1997 and 2003, however levels of malnutrition do not appear to have altered significantly. Without improvements in nutritional well-being, poverty reduction rates will stagnate and will not be sustainable. This situation will be exacerbated by the HIV and AIDS context, where both levels of poverty and malnutrition are likely to increase. Failure to invest in enhanced human capital which is the work force of tomorrow, will not only be a lost opportunity to accelerate poverty reduction but will also incur the economic and social costs of dealing with malnutrition.⁵¹

The determinants of malnutrition are normally classified in three groups of interrelated factors: food security, the maternal and child caring environment and the health and sanitary environment. Shrimpton, on the basis of multivariate analysis of the 1996/7 DHS dataset, argues that maternal and child caring practices have a more important influence on child nutrition status in Mozambique than the availability of food, or of income (poverty) per se, and the influence of prenatal conditions seems to be greater than that of postnatal factors. Shrimpton found that for both stunting and underweight, the most

⁵¹ Shrimpton (2002) has argued that malnutrition costs a conservative estimate of 2% of GDP in terms of lost productivity. For Mozambique this would be around US\$84 million a year. Successful nutrition interventions are estimated to cost a value of US\$10 per beneficiary. The costs to cover all pregnancies and newborn children for one year would be around US\$16.5 million a year. Obviously, such programmes can be targeted to the most needy, such that these annual costs could be less.

influential predictors of differences across the provinces were the ratio of boys to girls in primary school entrance rates and the absence of latrines in the household. The importance of the gender education ratio is that it indicates how girls are treated differently to boys with regard to schooling, and is an indication of how women are valued and treated by men and families. The importance of latrines is likely to be related to the effects of gastrointestinal infections and parasites on the health and nutritional status of mothers, especially during pregnancy.

Prevention of stunting, and consequently the cutting of the intergenerational transmission of poverty associated with small size, requires attention to prevention of low birth weight. Most growth failure is concentrated in the foetal and infant stages of life with little or no potential for later recovery. This points to the condition of the mother, not the condition of the child, as the most important area to invest in if stunting and child under nutrition is to be reduced. This implies that poverty reduction interventions also require specific measures to improve the situation of women in general and maternal nutrition and reproductive health in particular in order to improve child nutrition at the population level.



Part II: Review of use of food and nutrition interventions in current multi sectoral and sectoral HIV/AIDS strategies

This section provides a rapid review of how existing multi-sectoral and sectoral HIV and AIDS strategies address food and nutrition security linkages. The documents were assessed against the following criteria:

- Use of a holistic framework linking the specific sector HIV/AIDS policy and, or strategy to a poverty, vulnerability, food and nutrition insecurity, and gender analysis.
- Identification and justification of target areas and groups that are vulnerable to food and nutrition insecurity.
- Inclusion of strategies and interventions showing sector specific contribution to address food availability, access and utilisation.
- Use of specific food and nutrition security indicators.
- Identification of multi sectoral institutional coordination mechanisms.
- Consistency between food and nutrition security related policy statements, strategies and interventions.

1 Multi-sectoral strategies

1.1 National Strategic Plan for Combating STI/HIV/AIDS (2000-2002)

1.1.1 Framework

The Conselho Nacional de Combat ao SIDA (CNCS) was created in 2000, with the mandate to coordinate the implementation of the National Strategic Plan to Combat AIDS, 2000-2002. (PEN I)⁵². The PEN I presented a review of the macro-meso-micro determinants of the epidemic. Reference was made to the need to integrate the PEN I into the Poverty Reduction Strategy (PARPA) and the National Food and Nutrition Strategy (ESAN). The impact of the epidemic in rural areas and the reduction in agriculture's contribution to the GDP was mentioned. The epidemic was linked to estimated increases in national food insecurity and an anticipated increase in malnutrition rates in young children. It was stated that there was likely to be a higher impact of the epidemic in districts with higher vulnerability to food and nutritional insecurity. There was limited overall gender analysis in the PEN I, in particular in relation to gender related constraints to agricultural production and the achievement of food and nutritional security.

1.1.2 Target areas and groups

Urban areas and food insecure districts adjacent to the north centre and south transport corridors were identified as high priority areas for interventions. Groups that were more

⁵² The PEN II or PNCS is currently under formulation.

susceptible to HIV infection were identified on the basis of occupation, biological and, or socio-economic status that increased risk: long distance truckers, miners, police, military, soldiers and the paramilitary; and the wives of these groups; sex workers and their clients; prisoners; street children (in particular girls); out-of-school youth; and people with sexually transmitted infections (STIs). The document also included orphans and PLWHA as groups that were vulnerable to the impact of AIDS. Food security and nutrition criteria were not included in the definitions of vulnerable groups.

1.1.3 Strategies and interventions

The analysis of the existing and on-going HIV/AIDS related activities in 2000 was predominantly based on an analysis of the impact of the epidemic on health and the response is health sector focused. There was a very limited profile on food and nutrition security related activities. This reflected the low level of awareness of the potential contribution of non-health and social welfare sectors in contributing to prevention efforts and in mitigating the impacts of the epidemic.

The responses from civil society and NGOs were mainly focused on prevention and information dissemination activities and support and care provision for people with or affected by AIDS. This included psycho-social, economic support, home based care, and projects supporting street children and orphans.

In the PEN I (2000-2002), the Ministry of Agriculture and Rural Development (MADER), and specifically the National Directorate for Rural Extension was tasked with goals and targets. The first related to ensuring that 106,000 adults and children in key districts along the transport corridors were covered by essential activities. These included: peer education, treatment of STIs, promotion of the use of condoms, and support to PLWHA. However, how these actions were to be implemented by MADER was not specified. The second related to ensuring that districts vulnerable to food insecurity were covered by essential activities related to reducing the impact of AIDS and integrating actions into the National Strategy for Food and Nutritional Security. The strategic steps to meet these goals were:

- Preparation of a multi-sectoral strategy for HIV prevention and reducing the impact of AIDS in rural areas (in collaboration with the Ministry of Health (MISAU) and NGOs)
- Study on the impact of HIV and AIDS on the agricultural sector
- Evaluation of prevention activities in rural areas
- Adaptation of “good practices for preventing HIV/AIDS” into local languages
- Training of 700 extensionists in HIV prevention and AIDS mitigation

Related activities included:

- The organisation of a working group on food security and HIV/AIDS (CNCS, MISAU, NGOs)
- The identification of partners for sociological and anthropological studies in the target areas
- Compilation of KAP studies conducted in rural areas on HIV/AIDS.

1.1.4 Indicators

The National AIDS Council (CNCS), regional support groups and the relevant ministry were all to be responsible for monitoring coverage of vulnerable groups, but it was not indicated how this would be done. Indicators related to the achievement of the targets in the general strategies.

1.1.5 Multi-sectoral coordination

In the PEN I, the stated areas of responsibility for MISAU did not include nutrition (food utilisation and caring capacity). Home based care activities were included but with no detail of specific components, for example nutritional support. MISAU strategies or related activities were not cross-referenced to MADER activities.

1.1.6 Internal coherence and consistency

In conclusion, the PEN I focused on information dissemination as an HIV prevention strategy and the provision of “essential services” in priority geographical areas, through ministries and “dynamising projects”. MADER (DNER) extension workers were viewed as one of the mechanisms by which this strategy would be implemented. However, there is no rationale or comparative advantage of MADER attempting to provide essential services such as: peer education, treatment of STIs, promotion of use of condoms, and support to PLWHA.

Other responsibilities for MADER included “anticipation of the impact of AIDS on food security” and there was recognition of the need for a multi-sectoral strategy to address this. However, “food security” and its linkages to HIV and AIDS were not defined. The responsibilities of other key ministries (in particular MISAU, and the NGOs) did not reflect the need for a multi-sectoral approach, and the mechanism to ensure coordination and collaboration between MADER, MISAU and NGOs was not clearly specified. One of the implementation strategies for the PEN I was based on the concept of “dynamising projects”,⁵³ but no project was indicated for MADER. This has contributed to the limited degree of implementation of the strategies and activities.

Other factors that contributed to the low levels of implementation included:

⁵³ Dynamizing projects would have guaranteed political and financial support from the PEN for three years and would be expected to: promote good practices in prevention and reduction of impact in specific social or geographical areas; have the capacity to train others, and provide institutional support; capacity to manage, monitor and evaluate actions; and the capacity to increase coverage at the local level.

- Limited capacity of the CNCS to fulfil its coordination role and to monitor and follow up the implementation of the PEN I
- The credibility gap of the CNCS in dealing with its partners and stakeholders
- Limited awareness and priority for HIV/AIDS prevention and mitigation activities among high level management in MADER.
- The use of a “HIV/AIDS focal point” approach in MADER while low cost was not effective. The focal point was not in a full time dedicated HIV and AIDS position, and the focal point was within one Directorate of MADER, which had no mandate or authority over other Directorates in the Ministry.
- The need for linkages to both the PARPA and the ESAN were highlighted, but the strategy to do this was not indicated.
- There was the lack of an effective coordination mechanism at the operational level
- There was a lack of an HIV/AIDS work place policy, and medical and drug assistance for infected and affected professionals in MADER.

1.2 The Second National Plan to Combat HIV/AIDS (PNCS II)

The PEN I (2000-2002) has been in the process of revision since 2003. The current draft provides an exhaustive background to the determinants and evolution of the epidemic in Mozambique. The current draft⁵⁴ outlines the following priority areas:

- i. Prevention
 - a. Reduction of vulnerability of women to infection for socio-cultural and socio-economic reasons
- ii. Advocacy
- iii. Stigma and Discrimination
- iv. Treatment
 - a. Extend network of services of HBC. (However, the definition of services does not include nutritional counselling care and support).
- v. Mitigation of the consequences
 - a. Reinforce capacity for income generation in particular for women
 - b. Research and dissemination of high yielding varieties
 - c. Research and dissemination of post harvest conservation and food processing technology that will reduce the labour burden on women.
- vi. Reinforce food security in individuals, households and communities affected by HIV/SIDA
 - a. Systematically monitor the food security conditions in particular in provinces with high HIV prevalence.
 - b. Nutrition education and support in particular for PLWHA.

⁵⁴ 30/6/04

- c. Increase the nutrition, medical, and psycho-social emotional support of PLWHA in particular households headed by women, the elderly or children
- d. Reinforce the capacity to provide nutritional supplements to PLWHA and in particular those on ART
- e. Update the criteria for the poverty certificate in the context of families affected by HIV/SIDA and disseminate information
- vii. Research
- viii. Coordination of the National Response

1.3 Poverty Reduction Strategy Paper

The government's Action Plan for Reducing Absolute Poverty (PARPA) that serves as Mozambique's Poverty Reduction Strategy Paper (PRSP) for 2001-05 was approved by the Council of Ministers in April 2001.

1.3.1 Framework

The PARPA addresses HIV/AIDS in its overall context, in particular that of the demographic context of poverty, i.e. it looks at scenarios with and without HIV/AIDS in relation to life expectancy and population growth. The PARPA acknowledges the risks that natural disasters pose to the vulnerability of the poor. However, neither HIV/AIDS, nor food and nutritional security are included as one of the six fundamental areas for action. These areas are: education; health; infrastructure; agriculture and rural development; good governance; and macroeconomic and financial policies. HIV/AIDS is addressed in two of these areas, education and health, and is viewed primarily from the perspective of its direct impact on both of these sectors. A broader multi-sectoral view has not been incorporated.

1.3.2 Strategies and interventions

Nutrition objectives in the PARPA include that of improving food and nutritional security together with other partners, and to reduce the incidence of micronutrient deficiencies in children and women of reproductive age. However, the principal nutrition actions as presented in the PARPA are focused on distribution of vitamin A capsules, promotion of the availability and consumption of iodised salt; and the provision of "milk, oil and sugar formula" (LOA) for the rehabilitation of severely malnourished children. These actions while addressing specific nutrient deficiencies in the short term are unlikely to achieve the broader objective of improved food and nutritional security.

The agriculture and rural development component of the PARPA reflect the priorities and preoccupation of PROAGRI I; i.e. institutional reform, and a decentralised planning and budget process. It is now recognised that PROAGRI I did not succeed in translating institutional reform into major improvements in the availability or quality of the services

provided to farmers. Moreover, despite efforts to expand and modernize extension services, effectiveness and coverage remain limited. While reference is made to the National Food and Nutrition Security Strategy, there are no specific actions. Actions in the agriculture and rural development component remain production orientated.

1.3.3 Indicators

The outcome indicators for the health area of action include the low birth weight rate amongst hospital births. The process indicator for this is the number of inhabitants per health centre. The two indicators are not logically linked. The PARPA indicators for rural and agricultural development relate to percentage increases in crop production, livestock number and coverage of animal health interventions. The number of districts suffering from food insecurity is included as an indicator. However there is no indicative target or intermediate (process) indicator or means of measurement mentioned. The link to improved food and nutrition outcomes is not clear.

The number of malnourished children is one of the principal impact indicators of the PARPA, and it is envisaged that this will be provided by the annual questionnaire for indicators of well being survey (QUIBB). There is a great opportunity to improve the food security and nutritional content and orientation of future PARPAs. As an evolving programming tool, PARPA would benefit from an increased understanding of how the various actions in the strategic plan will contribute to the achievement of the principal evaluative indicator, i.e. reduction in child malnutrition⁵⁵.

1.3.4 Multi-sectoral coordination

While the PARPA is meant to reflect a broad multi-sectoral approach, in practice it acts as an umbrella to a number of sector wide approaches (SWAPs). The application of a food security policy is seen as a critical element of the strategy of rural development and agriculture for poverty reduction, and one which links agriculture to the achievement of health sectors outcomes. However both the first agriculture and health sector SWAPs found it difficult to embrace more than their respective ministries. Since HIV/AIDS, food security and nutrition are not a single sector responsibility, they tend to be dealt with only partially or completely fall between sectors.

1.4 National Food and Nutrition Security Strategy (ESAN)

The National Food and Nutrition Security Strategy was approved by the Council of Ministers in 1998.

⁵⁵ The PARPA 2000-05, only mentions “anthropometric” indicators for children as the evaluative indicator, and has not stated whether it will be stunting or wasting, or underweight that will be used. Shrimpton argues that the opportunity to use low birth weight rates still exists.

1.4.1 Framework

The national strategy for food security and nutrition uses a conceptual framework around food availability, access to food and utilisation of food. The document argues that a stable macro economic environment that encourages growth of the private sector and increases employment will contribute to poverty reduction. It also argues that the government should be primarily responsible for the provision of public goods and an environment that promotes the market as the engine of growth. The agricultural sector is seen as critical to economic growth and social development due to the large proportion of the population that depends on it. The document does not analyse the HIV/AIDS and food and nutrition security linkages.

1.4.2 Target areas and groups

The document does not discuss or identify target groups.

1.4.3 Strategies and interventions

Strategies are identified for each area: availability, access and utilisation. Gender analysis in the strategy is weak, particularly in identifying the roles of men and women in production marketing, income generation and the maintenance of social networks, and then the implications for appropriate strategies and interventions.

A Plan of Action for Food and Nutritional Security 2002 (PASAN) has been elaborated, and is largely made up of sectoral activities developed by national level sectors, i.e. it has no funds of its own.⁵⁶

1.4.4 Indicators

Measurable targets and indicators are not included so it is difficult to assess the degree or success in implementation.

1.4.5 Multi-sectoral coordination

At the provincial level the activities included in the provincial food and nutrition security plans are those already planned in the provincial socio-economic plans (PESP). However, the conceptual issues and linkages around poverty and food and nutritional insecurity have not been adequately delineated. This has led to difficulties in the institutional and operational aspects of PASAN in relation to the PARPA at provincial level, and a failure to ensure that relevant actions in different sectors are delivered in a targeted and coordinated manner for synergistic impact.

1.5 The Economic and Social Plan (PES)

The Economic and Social Plan (PES) is the annual government planning instrument.

⁵⁶ There is a common misunderstanding by the sectors outside of agriculture that the PASAN has its own budget

The HIV/AIDS related activities included in the PES are representative of those highlighted in the first National Strategic Plan to combat HIV/AIDS (PEN I) and the more recent Ministry of Health Strategic Plan for Care and Treatment for HIV/AIDS. Apart from a number of brief references to HIV/AIDS in other sectors, e.g. Women and Social Action, and Youth and Sports, the PES does not satisfactorily address the issue of HIV/AIDS in a comprehensive, integrated manner. A more inclusive approach, linking the economic and social responses needed to address HIV/AIDS is required with a clearer delineation of areas of responsibility and potential influence. The PES also has the opportunity to bring a short-term multi-sectoral planning perspective to specific areas of concern, i.e. gender, orphans and vulnerable children, etc.

2 Key sectoral HIV and AIDS strategies

This section reviews the HIV/AIDS strategies of three key sectors (Agriculture, Health and Education) to assess how food and nutritional security considerations are incorporated.

2.1 Agriculture

Three key documents have been considered: the “Visão do Sector Agrário” (2003-4) The draft HIV/AIDS strategy (2002), and PROAGRI II (March 2004). The three documents show the changing appreciation of the potential impacts and need for actions to address HIV/AIDS impact in the agricultural sector. In the “Vision” statement for the agricultural sector, HIV/AIDS is mentioned as a cross-cutting issue in the context of information dissemination to economic agents and agricultural producers. It is stated that the demographic and economic impact of HIV/AIDS should be considered on development programmes. However the epidemic is not identified as a risk to the achieving the goals set out in the “Vision” and there does not seem to be a real appreciation of the need to reassess the agricultural sector’s goals, priorities and strategies in the light of the HIV/AIDS epidemic.

HIV/AIDS in PROAGRI II is dealt with in a separate chapter that outlines the epidemiological surveillance data for Mozambique and provides a generic description of potential impacts of HIV/AIDS on the sector⁵⁷. The document states that MADER recognises the strong position it is in to both prevent and mitigate the impacts of AIDS and that it has a responsibility to those that depend on agriculture for their survival. The chapter on “the silent threat of HIV/AIDS” lays out the case and steps for mainstreaming HIV/AIDS in MADER, but this is not reflected consistently in the rest of the document. An example of this is in the proposed evaluation of outcome and impact of extension

⁵⁷ The document states that there has been no study of the HIV/AIDS impact on agriculture in Mozambique, overlooking the prime age adult mortality data collection and analysis conducted using the TIA 2000.

systems used by the public sector, private sector and NGOs and their link with the national research system. In this evaluation there would be the need for wide and systematic debate as to the most appropriate and relevant extension system and research linkages in the context of HIV/AIDS, where the characteristics of the client groups will change, the types of technologies required will change and the capacity to deliver through formal or informal institutions will diminish. Within the annual activity planning and budget (PAAO) format and appraisal, HIV/AIDS *specific* activities are included as a category, rather than assessing all activities through an HIV/AIDS “lens”.

However, the document shows that there are lessons that can be learnt from the previous attempts of mainstreaming gender into MADER during PROAGRI I, which could be applied to current efforts to mainstream HIV/AIDS in all sectors. These include:

- The need to ensure technical understanding of the issues at all levels, from which to develop a consensus on the significance of HIV/AIDS for the sector.
- The need to assess the advantages and disadvantages of establishing a separate unit to help to ensure that HIV/AIDS is adequately addressed within the ministry.
- The role and status (e.g. full time or part time, and seniority) of “focal points” for HIV/AIDS
- The need to ensure HIV/AIDS sensitive analysis at all steps in the programme and project cycle: planning, implementation and the monitoring and evaluation process
- The need for accountability structures, i.e. that HIV/AIDS objectives are linked to the existence of institutional targets and objectives
- Visionary and committed leadership
- Funding for activities incorporated into budgets for general interventions and as well as a specific budget line

2.1.1 Framework

The MADER HIV/AIDS strategy provides a generic analysis of the likely impacts of AIDS on the agriculture sector:

- Scarcity of adequate labour force
- Loss of knowledge of appropriate techniques
- Reduction in family income and erosion of productive assets
- Loss of support or capacity in formal and informal institutions.

2.1.2 Target areas and groups

Two target groups are identified: MADER’s target group i.e. agricultural producers and MADER staff members at all levels.

2.1.3 Strategies and interventions

The HIV/AIDS chapter in PROAGRI II and the MADER HIV/AIDS strategy can be seen as complementary documents. PROAGRI II provides a general orientation for steps in the mainstreaming process. The HIV/AIDS strategy provides examples of proposed activities:

- Improving the distribution of varieties and crops that require less labour and give good yields in local conditions.
- Promotion of a quality diet through the promotion of crops rich in vitamins and proteins, the increase in consumption of animal products and more training in how to combine different foods in order to achieve a balanced diet.
- Development and provision of tools and equipment that demand less labour and reduce the burden of hand agro-processing.
- Orientate training and extension programmes towards new types of agriculturalists (youth, elderly) and actively recruit their participation.
- In order to maximise the use of limited resources, components about various aspects of HIV/AIDS should be integrated into the training and extension programmes.
- Emphasise the diversification of family income sources in order not to depend on one type of labour.
- Guarantee through policies and programmes that widows will be protected in terms of access to land in the case of the death of their husband.
- Experiment with insurance mechanisms that permit farmers and their own activities to reduce risks.
- Coordinate with food for work programmes, school lunches and other funded programmes to help the most affected communities to maximise the use of local agricultural and livestock products.
- Coordinate with the private sector to encourage that the families of permanent workers can be resident and that their extension agents can be included in training and dissemination programmes of relevant material.
- Monitor impact of HIV/AIDS on the agricultural sector.

Recently there have been efforts to implement positive living (Vida Positiva) programmes, and the testing and implementation of labour saving technologies at community and household levels. HIV/AIDS is being integrated into MADER's plans at national and provincial levels.⁵⁸

2.1.4 Indicators

Indicators are included under the heading Gender and HIV/AIDS. There are two: the promotion of labour saving technologies in agriculture and simple agro processing methods; and, incentives for the use of technologies that reduce HIV/AIDS impacts on

⁵⁸ Albertina Algae: Presentation at 2003 VETAID conference on Mitigating the impacts of HIV/AIDS on Agriculture

production. Annual benchmarks are indicated but not specified. Neither gender nor HIV/AIDS appear to be mainstreamed into the monitoring and evaluation process.

2.1.5 Multi-sectoral coordination

PROAGRI II suggests liaison between SETSAN and DNER, and proposes provincial links with the health sector and NGOs, however past difficulties in achieving this are not discussed or new approaches identified. It is also stated that the Gender Unit should emphasise nutritional aspects the role of women in food security and access to land by widows.

2.2 Health

2.2.1 Framework

The Ministry of Health (MISAU) developed their first National Strategic Plan in 1999. This had a vision of the multi-sectoral impacts of AIDS and the need to incorporate the response within a poverty reduction framework.⁵⁹ This plan was revised in 2003 in view of: demographic projections that showed a rapid increase in HIV prevalence; the likely increase in demand for health services; and new and cheaper treatment opportunities. The MISAU PEN (2004-8) used the criterion of cost effectiveness to assess which interventions under its responsibility would have most impact on the evolution of the epidemic. As a sector document, the discussion of causality is understandably focused on medical causes and determinants of HIV/AIDS (sexual transmission, vertical transmission and bio-security of health workers). The plan identifies fifteen components in the general areas of prevention, care and support and related areas. Nutrition is placed under “related areas” as a “quality of life” issue. There is no appreciation of the bi-directional link between nutrition and the progression from HIV infection to symptomatic AIDS.

2.2.2 Target areas and groups

The document highlights the regional variations in the evolution of the epidemic; and this is carried through into the prioritisation of the central region, commercial corridors and frontier areas. The plan also recognises that while some provinces may have relatively low prevalence levels (e.g. Nampula), they may rank high in terms of the proportion of projected AIDS cases out of total cases, due to population density. Target groups are disaggregated by gender and age, with special services for youth, women and children. Nutrition interventions focused on HIV positive mothers, infants and PLWHA.

⁵⁹ When the first MISAU PEN was prepared CNCS had not been established, nor the first CNCS National Strategic Plan to combat HIV/SIDA. At this stage, MISAU was arguably the lead Ministry in the National response to HIV/AIDS.

2.2.3 Strategies and interventions

Three levels of services are proposed, which are based on the capacity of the health facility and population density of the area. Nutrition is dealt with as one strategic objective, which is to guarantee adequate nutrition for patients with AIDS as part of the general efforts for mitigating its impacts on the quality of life and survival of infected persons. It is recognised that PLWHA whether under treatment or not will have higher nutritional requirements. However the plan also states that it is beyond the mandate of MISAU to guarantee adequate food consumption of patients with AIDS. It states that in many cases this type of support will be linked with HBC interventions implemented by NGOs with a strong social component.

The nutrition component of the Plan includes the following strategies:

- Provide technical assistance to organisations distributing food at community level.
- Guarantee that micro-nutrient supplementation is treated as a medication with the provision of prescriptions.
- In collaboration with PMTCT and infant health interventions, counsel mothers on breastfeeding practices, and ensure availability of alternatives where necessary.
- Provide information to different stakeholders on the nutritional requirements of PLWHA.
- Contribute to ensuring that hospital diets meet the nutritional needs of PLWHA.
- Disseminate and train health personnel on the national policy on infant feeding in conjunction with infant health.

Potential linkages to other nutrition care and support actions such as food hygiene, environmental and personal hygiene practices, food preparation techniques for PLWHA and management of food related disorders (ulcers, fat malabsorption) are not included. One of the risks identified in the plan is poor adherence to ART. However there is no discussion on the need to address drug-food interactions and to help PLWHA plan workable and acceptable food and drug regimes, that would help to support ART adherence.

The document does recognise the important role that Traditional Medical Practitioners and Traditional Birth Attendants⁶⁰ could play in HIV/AIDS, prevention, care and support and mitigation, with training and adequate referral mechanisms. This includes the recognition of AIDS and TB: the treatment of simple infections, and nutrition counselling and awareness. There are no targets or budget for nutrition activities.

2.2.4 Indicators

Monitoring and evaluation indicators are not specified. Nutrition is included in general monitoring and evaluation.

⁶⁰ 50% of births occur outside of the formal health system.

2.2.5 Multi-sectoral coordination

The nutrition component does not explicitly address the need for multi-sectoral actions or coordination. However, under the objective of prolonging and improving the quality of PLWHA in the Home Based Care Component, there is a specific objective related to creating a multi-sectoral coordination and referral system for HBC to ensure that there is a strategy that encompasses the range of socio-economic needs of PLWHA and affected families such as the problems of orphans and vulnerable children, food, legal aspects etc. It also recognises the need to harmonize the home-based care strategies among the various donors

2.3 Education

2.3.1 Framework

The sector's first strategic plan for combating HIV/AIDS was prepared in 1999, and was updated in 2002 for the period 2002-2005. In 2002 the ministry implemented a study to assess the impact of the epidemic on the sector (see section 8.1). MINED Communication Strategy was developed in 2003. The Ministry of Education's policy on HIV/SIDA was prepared in 2004. It recognises that the epidemic is one of the major threats to the achievement of the goals of the PRSP/PARPA and also the government's decision to provide quality basic level education for all. The policy serves to encompass these other documents. The Ministry recognises the key role the education sector should take in both the prevention of infection and mitigation of the impacts of HIV/SIDA. The document takes a human rights and gender equality approach, emphasising that men and women, boys and girls face different risks in relation to HIV infection, and therefore interventions should be gender appropriate.

2.3.2 Target areas and groups

In addition to MINED personnel there are three different target groups. The first group are pupils less than 12 years old, who are regarded as "the window of hope" as the majority will not have started sexual activity, and who should receive education concerning gender, care and health in general. The second group are pupils between 12-15 years, who need to acquire the knowledge and skills to make safe choices; and the third group are pupils over the age of 15, who it is assumed have started engaging in sexual activity. One of the specific objectives within the MINED strategic plan is to identify priority geographical areas within provinces.

2.3.3 Strategies and interventions

There are no specific food and nutrition objectives or strategies included in the MINED policy on HIV/AIDS. However, the following objectives could be developed to include food and nutrition actions relevant to developing life skills to make healthy life choices in the context of HIV/AIDS:

- Contribution to the relevant care and support of infected and affected staff and students
- Contribute to the well-being and good health of the families of MINED staff and students
- Prevention through learning low risk livelihood skills
- Link with other ministries and partners to provide for the needs of OVC in terms of food, clothes and psycho-social support
- Development of life-skills for both staff and students and positive living

In the MINED strategic plan there are also two strategic areas where food and nutrition activities could be incorporated. The inclusion of topics related to HIV/SIDA in the local curriculum and extra-curricula activities related to life-skills and peer education.

2.3.4 Indicators

The plan includes a strategy to develop a monitoring and evaluation system, with indicators integrated into both the overall indicators of MINED and also the CNCS PEN.

2.3.5 Multi-sectoral coordination

MINED recognises the need for a multi –sectoral response and includes strategies to ensure that MINED activities are in support of and consistent with the national response. Activities are included related to the establishment of coordination mechanisms between different partners, and with school councils. A specific objective is included related to the development of a referral system and information flow concerning health and social services targeted to youth.

2.4 NGOs, Faith Based Organisations and Civil Society

There are an increasing number of NGOs, FBOs and CSOs involved in, or dedicated to activities in relation to HIV/AIDS. Many of these have food and nutritional security interventions to address the impacts of the epidemic. Some examples of these are training in nutrition and home gardens by Vida Positiva and training in utilisation of medicinal plants by Kubatsirana in Manica Province. At this stage, this document cannot do justice to reviewing these activities.⁶¹

⁶¹ FAO Project OSRO/RAF303/SAF is investigating NGO and community level experiences in successful actions that households are taking to maintain their livelihood and food and nutrition security in the context of HIV/AIDS.

3 Conclusions: status of food & nutrition interventions in HIV/AIDS strategies

The above review of key sector strategies on HIV/AIDS points to the following conclusions and need for further follow up:

- While strategies and activities in the different sectors are relevant, the opportunities for greater impact are being lost, because the potential for multi-sectoral synergies are not identified nor articulated and subsequently acted upon.
- The potential of food and nutrition counselling, care and support interventions either appears to be underestimated (as in the case of the health sector), almost overlooked (as in the case of the education sector) or fail to be sufficiently prioritised (as in the agriculture sector).

The **PRSP/PARPA** is the key orientation document for the government and therefore needs to embrace a more holistic analysis. This should examine the risks that households face which make them more vulnerable to the impacts of poverty and food and nutritional insecurity, and in turn the bi-directional interface with HIV/AIDS. The PARPA is crucial in ensuring that there is a continued focus on the goal of poverty reduction, but recognition that the epidemic is a fundamental threat to the achievement of that goal. The Ministry of Planning and Finance (MPF) is intending to collect regular panel data on well-being, which will include risk events and mitigation activities. This analysis would contribute to the identification of necessary actions within the mandates of different ministries, and monitor whether interventions are both reducing poverty and mitigating the impacts of HIV/AIDS on food and nutrition security.

The second national plan for combating HIV/AIDS (PNCS I) needs to be able to provide a multi-sectoral framework and mechanism to ensure that food and nutrition actions in the context of HIV/AIDS are harmonised across different sectors for greater impact and synergy.

The revision of the National Food and Nutrition Security Strategy needs to provide a strong platform for advocacy and communication on the importance of food and nutrition interventions in:

- Halting the intergenerational transmission of poverty
- Preventing the estimated 84% of the population who are currently HIV free from becoming infected
- Caring, supporting and treating people living with AIDS
- Mitigating the impact of HIV/AIDS on food security for affected families.

Part III: General orientation for addressing HIV & AIDS through food security and nutrition actions

1 Preliminary findings

The preliminary findings provided by this working document illustrates that the linkages between HIV and AIDS and food and nutritional insecurity will vary depending on the interaction of three groups of factors:

- The determinants, and characteristics of the evolution of the AIDS epidemic, estimated HIV prevalence, and age, gender and socio-economic patterns of morbidity and mortality. For example, there is the need to assess whether or not the more critical impacts experienced in the Centre are illustrative of what will also happen in the other regions even with differences related to: religion, isolation, and the origins of the epidemic.
- The nature of food and nutrition insecurity: i.e. whether there is chronic and, or transitory food insecurity; the relationship between food insecurity and structural poverty; and existing patterns of child and maternal malnutrition;
- The livelihood system and the range and likelihood of different risks to food and nutrition security. Thus for example, different livelihood systems in urban and rural areas will have different levels of exposure to multiple risks. The HIV and AIDS epidemic will have a bearing on how different resources or assets can be combined. In turn that process will be affected by the capacities and influence of various formal and informal institutions, which will lead to varying levels of achievement of livelihood security.

The determinants of HIV prevalence have varied both geographically and temporally with different “waves” of the epidemic. Factors include: refugee return, transport routes, markets, gender, socio-cultural, ethnic and religious issues. Epidemiological data indicates that the HIV epidemic in Mozambique has particular regional characteristics, and that estimates of prevalence are higher in younger women. The lag time between HIV infection and AIDS mortality impacts, highlights the need to consider different combinations of responses, with impact mitigation being more crucial in the central region of the country, and effective prevention measures required in the northern region. The age group of 10-14 years remain relatively uninfected and offer a “window of hope” for a future HIV free generation, who however will still have to grapple with the impacts of AIDS mortalities.⁶²

⁶² HIV/AIDS Multisectorial Working Group, MISAU .

The studies that have been reviewed in this paper have predominantly focused on the household as the unit of analysis and have examined those impacts that can be measured through formal survey techniques. Mather et.al. argue, on the basis of their findings, that not all households which have been affected by morbidity and mortality are necessarily “worse off” with respect to labour availability, income, and cultivation rates, than “non-affected” households. However, it is important to assess this conclusion in context: Mozambique is at an early point in the recognised AIDS mortality impact curve⁶³, and moreover the household may not be the most appropriate unit through which to assess AIDS impacts and different levels of response to those impacts.

A livelihoods approach recognises that there is need for action at household and community levels to address AIDS within a context that is most often defined by poverty and chronic food insecurity. However, the same community structures that are necessary to cope with crises and assist in the prevention, care and treatment of AIDS are also those being weakened by poverty.⁶⁴ A livelihood approach also recognises that policies and the meso and macro institutional environment mediate whether or not households can follow particular livelihood pathways that can lead to positive outcomes. AIDS-specific interventions can only be successful if they are integrated with those actions designed to address the long-term causes and consequences of poverty and related development challenges, e.g. achievement of macro-economic stability, economic growth and poverty reduction measures.

1.1 Reducing risk and vulnerability: social risk management

Part I of this document discussed the diverse range of idiosyncratic and covariant risks that communities, households and individuals are facing in Mozambique, and how HIV/AIDS can both be a unique risk, but also interact with and compound other risks. This leads to an accumulative and systemic impact, which will jeopardise attempts to achieve and sustain food and nutritional security. Each shock further weakens the resilience and ability of households, communities and institutions to cope, and poorer households are least able to cope.

Risk can be managed in three ways: prevention strategies that reduce the probability of the risk, mitigation strategies that decrease the potential impact of the risk, and coping strategies to relieve the impact of the risk once it has occurred. There are three levels of formality of risk management: informal, market-base and public. Many actors can be involved in risk management, from individuals and households, to governments and

⁶³ Jayne, T. et. al. 2004

⁶⁴ United Nations, High Level Committee on Programmes. 2003. Organizing the UN Response to the Triple Threat of Food Insecurity, Weakened Capacity for Governance and AIDS, particularly in Southern and Eastern Africa.

NGOs and international organisations.⁶⁵ This approach to social protection can also be applied to the generally recognised “pillars” of HIV and AIDS interventions: prevention; treatment, care and support; and impact mitigation. Food and nutritional security interventions can contribute to all three pillars.⁶⁶

1.2 Strengthening poverty reduction

Households that are already poor are likely to be less resilient to meet the shock of AIDS mortality. Vulnerability to the impacts of AIDS extend over time and will depend on the existing asset base of the household, the gender, position and status of the family member who is chronically ill and how the household has been able to respond to the demands made by that illness, and in turn the relationships between the household and its members with community level social, cultural, economic and institutional mechanisms. Women are biologically, socially and economically more susceptible to HIV infection and more vulnerable to AIDS impacts and associated poverty.

Poverty levels are higher in rural areas, and the direct and indirect costs of HIV/AIDS have been and will increasingly be borne in the rural areas.⁶⁷ Yet rural areas, the poor, and women have less access to the health, welfare, transport and communication infrastructure, and formal and informal institutions to support them in their efforts to deal with the epidemic.

Poverty reduction remains a key challenge in Mozambique. Further work is needed to understand if and how recent successes in poverty reduction have reduced gender inequalities (e.g. disparities in literacy rates, morbidity levels and patterns). This is crucial to understand given the larger share of HIV infection among women and the disproportionate impact of HIV/AIDS on women.

These factors emphasise the importance for Mozambique of strengthening the focus on gender sensitive poverty reduction in rural areas. Poverty reduction remains one element in reducing susceptibility to HIV infection and strengthening the resilience at both household and community level to the impacts of HIV and AIDS.

1.3 Focusing on nutrition

Poverty levels may have reduced dramatically between 1997 and 2003; however, levels of malnutrition do not appear to have altered significantly. While people with HIV and AIDS have special nutritional requirements, all people can benefit from adequate

⁶⁵ Holzmann, R. and S. Jorgensen. *Social Risk Management: A new conceptual framework for social protection and beyond*. World Bank. 2001

⁶⁶ See separate SETSAN document on “Options for food and nutrition interventions in the context of HIV/AIDS.” 2004

⁶⁷ Topouzis, D. 1998

nutrition. Good nutrition increases resistance to infection and improves energy, thus making people, stronger, more productive and able to realize a better quality of life. Gender sensitive poverty reduction interventions in rural areas that also have a nutrition focus have the potential to:

- increase the opportunities of breaking the intergenerational cycle of poverty;
- enable targeting of the socially and biological vulnerable; and,
- provide a platform for multi-sectoral action.

1.4 Balancing long term productivity and growth and targeted assistance

There is a need for an appropriate balance between investments in long-term gender specific rural income opportunities that will contribute to rural economic productivity and growth, on the one hand, together with targeted assistance to AIDS-affected households and communities.

Given scarce financial and human capital resources in Mozambique, decision makers need to be able to use economic analysis, in order to identify the trade-offs between potential interventions in agriculture and food security; and which are likely to provide the highest returns to land, inputs, and male and female labour. There is also the requirement to identify those interventions, which if scaled up could have a significant impact on the greatest number of poor households that are facing multiple risks to their food and nutritional security.

As Mather et. al. have emphasised, it may be more effective to invest in technologies which could reduce labour demands for household domestic tasks such as food processing (hammer mills or other food processing technologies for maize and cassava) and collecting water and gathering fire-wood (community-level provision of safe water sources, donkeys for transport; fuel-efficient stoves).

There is also considerable scope for developing the livestock sector, and in particular to identify the synergies (veterinary services, marketing, disease control) between investments in the commercial sector and support to programmes promoting small-stock for those resource poor households most impacted by AIDS. Livestock provide food and income, are a savings mechanism, can bridge social divides and cement social bonds. If protected (from property grabbing and disease), livestock can act as a means of asset accumulation, which can contribute to reducing vulnerability to AIDS mortality and its aftermaths.

2 The role of nutrition in the HIV and AIDS context

The simultaneous presence of malnutrition and infection results in an interaction that increases the impact of either state existing alone. Dietary deficiency diseases may reduce the body's resistance to infections and adversely affect the immune system so that the body has reduced ability to defend itself against infections. Infection affects nutritional status in several ways: there can be an increased breakdown of tissue protein and mobilisation of amino acids, leading to wasting; anorexia or loss of appetite can lead to reduced food intake; and infections and infestations can reduce absorption of specific nutrients, e.g. iron. Any immune impairment, as in the case of HIV infection can lead to malnutrition, and malnutrition can lead to immune impairment, worsen the effects of HIV and contribute to a more rapid progression to AIDS.

2.1 Nutrient requirements

HIV/AIDS accelerates the vicious cycle of inadequate dietary intake and disease that leads to malnutrition. Metabolic alterations, reductions in food intake, nutrient malabsorption and loss may culminate in the weight loss and wasting that is common in people with AIDS. Nutrient requirements for people living with HIV and AIDS will vary depending on: whether the individual is asymptomatic or symptomatic; the simultaneous presence of other infections (e.g. TB, malaria), and the age, sex and stage in the life-cycle (e.g. pregnant, lactating, elderly) of the person. People who are HIV positive have from 10% to 30% higher requirements for energy compared to HIV-negative individuals.⁶⁸ Micronutrient deficiencies may contribute to disease progression, and these deficiencies are more common in people who are HIV positive. Supplementation of such micronutrients as vitamins B, E and C, beta-carotene and selenium are important for preserving immune function. While some studies have found increased survival rates in adults with low CD4 counts, and a reduction of MTCT in nutritionally vulnerable women, further research is needed to determine optimum levels of supplementation, especially in among population groups with pre-existing high levels of malnutrition. While people with HIV and AIDS have special nutritional requirements, all people can benefit from adequate nutrition. Good nutrition increases resistance to infection and improves energy, thus making people, stronger, more productive and able to realize a better quality of life.

2.2 Antiretroviral therapy and nutrition

Some ARV therapies improve nutritional status, independent of their effects on viral suppression and immune status. Interactions between ARVs and food and nutrition can affect medication efficacy, nutritional status and adherence to drug regimes. Drug-food interactions consist of the effects of foods on medication efficacy, the effects of medication on nutrient utilisation, the effects of medication side effects (e.g. nausea and vomiting) on consumption and unhealthy side effects caused by medication and certain

⁶⁸ WHO, TAG, 2003

foods.⁶⁹ In industrialised countries strategies are being developed for the management of the consequences of ARV side effects, however work also needs to be done in resource limited settings where management options and follow up monitoring may be more limited.⁷⁰ This would require the identification of the specific food and nutrition requirements of different medications and work with PLWHA to develop feasible food and drug plans to meet these requirements.

2.3 Child malnutrition and HIV infection

Children living with HIV or born into families affected by HIV are a high-risk group with special needs. Maternal malnutrition (particularly vitamin A deficiency) increases the progression of HIV infection and the risk of HIV transmission from mothers to babies. HIV positive women have a higher incidence of pre-term and low birth weight deliveries, and as a result HIV exposed infants may start life with impaired nutrition. HIV positive infants experience slower growth and are at greater risk of severe malnutrition. Severe malnutrition in HIV positive children can be reversed with hospital and home based therapeutic feeding, though the time to recovery is longer that with uninfected children. Studies also indicate that periodic vitamin A supplementation reduces morbidity and mortality in HIV positive children and improves their growth.⁷¹

2.4 Infant and child feeding practices

Breastfeeding practices may also affect the health of HIV-exposed children. The risk of HIV transmission through breastfeeding is directly related to the health, viral load and immune status of their mothers. If replacement feeding is feasible, affordable and safe, HIV positive mothers are recommended to avoid breastfeeding. However, in resource-limited settings, such as Mozambique, these conditions may not be met, and therefore HIV positive women are recommended to practice exclusive breastfeeding and early breastfeeding cessation. Infants who are not breastfed, or who stop breastfeeding early and do not have access to safe and nutritious replacement foods are at increased risk of malnutrition, diarrhoea and other illnesses.⁷² Mixed feeding is not recommended for children less than 6 months, as it is thought to increase the risk of HIV transmission and other infections. From six months onwards, complementary foods should be introduced, which are diverse and nutrient rich.⁷³ Feeding frequency and food and environmental hygiene are also important elements of infant and child feeding practices. However, adequate food and nutrition practices for infants, children and other family members also require knowledge, time, water and fuel. The responsibility to meet these needs falls principally on women, who may already be over-burdened with dealing with the chronic

⁶⁹ Castleman, et. al. 2003

⁷⁰ Piwoz, E. et. al. 2004. Nutrition and HIV/AIDS: Evidence, Gaps and Priority Actions. SARA/FANTA. AED.

⁷¹ Ibid.

⁷² FANTA. 2002

⁷³ However, the provision of nutrient dense appropriate complementary foods is already a challenge in Mozambique.

illness of themselves or others. Domestic labour saving technologies may need to be adapted to the needs of HIV/AIDS affected households.

2.5 Nutrition counselling and support

HIV/AIDS-infected individuals may find it difficult to meet increased nutritional requirements owing to nutrition related symptoms of common HIV-related illnesses or opportunistic infections (e.g. loss of appetite, oral ulcers, fat malabsorption). Home Based Care programmes can provide advice and support to manage these symptoms through making optimal use of available foods, medicinal plants, and traditional remedies.⁷⁴ This support can also enhance the quality of life of people living with HIV and AIDS. Cash and, or food supplements may be necessary to ensure that HIV/AIDS infected people in resource poor households can meet their increased food and nutritional requirements.

⁷⁴ FAO and WHO. 2002.

Part IV: Conclusions and recommendations for ESAN processes and linkages

The preliminary analysis presented in this document has showed that HIV/AIDS will have impacts not only on the agricultural sector, but also more particularly on the achievement of food and nutritional security. The evaluation and revision of the National Strategy for Food and Nutritional Security (ESAN) which is currently underway, provides and opportunity to ensure that the implications of the bi-directional linkages between food and nutrition security and HIV and AIDS are drawn into the policy dialogue process. The analysis from this document highlights the following areas for special consideration.

The specific nuances of the linkages between food and nutrition security and HIV and AIDS and their impacts remain to be fully understood, at macro-meso and micro levels. This implies the need to continue to strengthen vulnerability and early warning information systems for livelihood, food and nutritional insecurity. This should include the validation of direct and indirect indicators of HIV and AIDS, which will allow in-depth and longitudinal analysis of the linkages between food and nutritional security and HIV and AIDS.

► **Recommendation:** continue to strengthen vulnerability and early warning information systems for livelihood, food and nutritional insecurity. Validate indirect indicators for HIV/AIDS and support in-depth and longitudinal analysis of the linkages between livelihood, food and nutritional security and HIV and AIDS.

This understanding will not only contribute to better planning and design of policies and programmes, but will serve as a communication platform to advocate for improved action around the increasing impacts that HIV/AIDS will have on the achievement of food and nutrition security. The importance of investing in food and nutrition actions as a contribution to all four “pillars” of HIV/AIDS responses⁷⁵ should not be overlooked or underestimated.

► **Recommendation:** build a common communication platform among committed stakeholders in order to raise the level of dialogue and advocate for actions around food and nutrition counselling, care, support and mitigation interventions in the context of HIV/AIDS.

The systemic and accumulative impacts of HIV and AIDS on agriculture and food and nutrition security underline the need to address the actual and future impacts of HIV and AIDS as “core business”. This implies urgent action to reassess each policy, strategy and programme intervention in the light of two questions. Firstly, will it still be possible to

⁷⁵ Prevention of new or repeated infections; care and support of PLWHA; treatment for HIV/AIDS; and mitigating the impacts of HIV/AIDS during chronic illness or after death.

achieve the objectives of any specific policy, strategy, and programme in the context of HIV/AIDS? Secondly, how will the specific policy, strategy, programme influence the evolution of the HIV/AIDS epidemic? The ESAN evaluation and revision process is crucial in being able to provide the overarching framework whereby each sector can respond to food and nutrition security needs in the context of HIV/AIDS based on its particular comparative advantage. The opportunity and responsibility provided by the ESAN evaluation and revision process is key in stepping up the dialogue to ensure that food and nutrition security concerns do not fall into the abyss between the agricultural and health sectors.

► **Recommendation:** the evaluation and revision process for the National Strategy for Food and Nutritional Security should take the opportunity to provide the overarching framework for addressing the bi-directional linkages between food and nutrition security and HIV and AIDS. This will then provide guidance for individual sectors to meet their responsibilities according to their comparative advantage.

The lag time between HIV infection and AIDS mortality impacts, highlights the need to consider different combinations of responses, with impact mitigation being more crucial in the central region of the country, and effective prevention measures required in the northern region. The age group of 10-14 years remain relatively uninfected and offer a “window of hope” for a future HIV free generation.

► **Recommendation:** the determinants, and characteristics of the evolution of the AIDS epidemic should guide the response. A decentralised planning and response capacity is needed to ensure that the changing needs of different geographical areas and population groups are met.

Poverty levels may have reduced dramatically between 1997 and 2003, however levels of malnutrition do not appear to have altered significantly. Without improvements in nutritional well-being, poverty reduction rates will stagnate and will not be sustainable. This situation will be exacerbated by the HIV and AIDS context, where both levels of poverty and malnutrition are likely to increase.

► **Recommendation:** the nature and characteristics of food and nutrition insecurity must be factored into the response to HIV and AIDS. Investments must be made to enhance the human capital (and in particular girls and women) that is both the work force of tomorrow, and the basis for resilience to HIV and AIDS. Failure to invest will not only contribute to the progression of HIV and AIDS, but will be a lost opportunity to accelerate poverty reduction.

The HIV epidemic and AIDS mortality interact with other sources of risk, resulting in an accumulative and systemic impact. This will jeopardise attempts to achieve and sustain

food and nutritional security. Each shock further weakens the resilience and ability of households, communities and institutions to cope, and poorer households are least able to cope.

▶ **Recommendation:** The revision of the ESAN should provide guidance to government, non-government and civil society organisations in urban and rural areas to be able to mainstream the identification and management of food security related risks (drought, floods, social, economic and HIV infection) into their activities.

Poverty reduction remains one element in reducing susceptibility to HIV infection and strengthening the resilience at both household and community level to the impacts of HIV and AIDS.

▶ **Recommendation:** The revision of the ESAN should argue for an appropriate balance between investments in long-term gender specific rural income opportunities that will contribute to rural economic productivity and growth, in addition to targeted assistance to AIDS-affected households and communities.

Communities, households and individuals in Mozambique have shown the capacity to respond and adapt to a broad range of risk situations including: conflict, isolation, market transformation, drought, and floods. These capacities need to be harnessed in the face of HIV and AIDS.

▶ **Recommendation:** Each policy, strategy and programme needs to ensure that the necessary opportunities are provided to communities, households, women, men, boys and girls so that they can:

- Resist poverty induced risks of contracting HIV infection, by building on options and capacities for strengthened livelihoods and improved food and nutritional security.
- Access and act upon information and resources to ensure age and gender appropriate food and nutritional counselling, care and support for infected and affected household members.
- Strengthen resilience to the potential impact of HIV and AIDS on current and future food and nutritional security.

In conclusion, the evaluation and revision of the ESAN provides the following opportunities to ensure that the linkages between food and nutrition security and HIV and AIDS are addressed through:

▶ Advocating for a more holistic framework to address the linkages between HIV and AIDS and food and nutritional security in the poverty reduction strategy (PARPA).

- ▶ Strengthening multi-sectoral coordination on HIV and AIDS and Food and Nutrition Security linkages.
- ▶ Promoting participation of PLWHA and community driven approaches that strengthen social capital and networks.
- ▶ Promoting specialized training for the people implementing HIV/AIDS and Food and Nutrition security programs.
- ▶ Ensuring that impact mitigation and risk and susceptibility reduction strategies reflect the regional, socio-economic and gender characteristics of the epidemic through decentralised and participatory approaches.
- ▶ Prioritising interventions with respect to their costs, benefits and capacity to mitigate HIV & AIDS impacts on food and nutritional insecurity at a scale commensurate with the epidemic.
- ▶ Monitoring and evaluating interventions in order to draw out lessons and case studies for enhanced institutional learning.

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