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Advocating for Policy Change

The impact of HIV and AIDS has been as devastating as the impact of drought or famine on agriculture and food security, although it has not been immediately visible or quantifiable. In previous chapters, FANRPAN has presented the results of the seven-country study, which attempted to quantify the impact of HIV and AIDS on several dimensions of household livelihoods. In this section, the conclusions of the study are presented and key policy recommendations for the region and specific countries discussed. In addition, recommendations for future research are presented.

1. The major findings from the study

Quantifying vulnerability - Throughout the SADC region, HIV has introduced new levels of vulnerability to households, and challenged household livelihood strategies. Yet the exact nature, extent and depth of this impact remains unclear, especially within the context of household agricultural performance and food security outcomes. Each HIV-affected household experiences the impact of the epidemic differently. Responses, however, have been designed as though one-size-fits-all. The overall outcome is increased vulnerability – and the key challenge lies in being able to quantify this vulnerability in order to enhance the development of policies and programmes to mitigate the impact of the epidemic.

A regional set of indicators - Responding to the need to quantify vulnerability, FANRPAN collected data for seventeen impact areas, from seven countries,

including Botswana, Lesotho, Namibia, South Africa, Swaziland, Zambia and Zimbabwe. After collating all the data into a regional database, a descriptive and comparative analysis was completed, as a first step towards a more concerted advanced regional analysis. The regional database represents an important data source which can be used for further analysis.

Integrated losses - Four losses were identified - 1. Skilled labour; 2. Reduced utilisation of arable land; 3. Reduced access to finances; and 4. Loss of productive assets. These losses were identified as integrated in affected households. Significant evidence demonstrates that households and communities in the region are increasingly vulnerable, as they experience the illness and death of skilled and productive individuals due to HIV. The loss of skilled labourers is too often accompanied by a reduction in the utilisation of arable land, reduced access to finances, and the sale of assets to pay medical and funeral expenses.

The remaining members of such households have a reduced capacity to cope with the social and economic impact of the epidemic.

Gender interacts with all variables - The results from several countries identified gender as an important factor (i.e. through interactions with other variables), accounting for the observed variability in productivity, food security and self-sufficiency across households. The important interactions between land rights, production, income and productive assets, reflect possible areas for policy attention to safeguard the livelihoods of women farmers affected by HIV.

Need to shift focus of HIV programmes - An additional challenge is that the bulk of HIV and AIDS programmes are focused on awareness campaigns, orphan care, and prevention of mother-to-child transmission. Few NGOs have been involved in programmes that seek to increase incomes and mitigate the impact of HIV and AIDS especially in rural areas. While NGOs should remain independent of government interventions, it is important that co-ordination is emphasised to ensure equitable access of services and support programmes for the rural poor.

2. Policy implications

The HIV and AIDS epidemic is currently undermining regional and national efforts to alleviate poverty and to reduce food insecurity. Without immediate and large-scale interventions, the severity of the epidemic will be experienced throughout the region for many years to come.

Based on the research results, the following section presents the policy recommendations arising from the seven countries: Botswana, Lesotho, Malawi, South Africa,

Swaziland, Zambia and Zimbabwe. A wide variety of potential interventions exists, yet to have the greatest impact, policy makers and programme implementers need to develop interventions that create synergies in prevention, care, treatment and support efforts.

Firstly, the agriculture sector has an important role to play in the response to HIV and AIDS. Empowering farming communities and agricultural extension workers with relevant, high-quality, gender sensitive information will assist in changing the perceptions of rural communities toward HIV and AIDS. Equally, refocusing rural home-based care groups to include more livelihood-centred activities may help to de-stigmatise HIV and AIDS by building community competences to cope with the epidemic, as well as providing opportunities for employment and training.

There is need for policies that ensure access to appropriate health services, care and treatment. Governments should focus on community-based programmes, which revive and support labour-saving cultural practices. Small loan facilities should be readily available to affected households to help them purchase agricultural inputs, or start small business ventures. Formal and informal training should accompany all initiatives to enhance farming knowledge and skills. In addition, there is a need to develop policy interventions derived from food security and rural development programmes. There is need to ensure that relief programmes distributing food aid, target HIV affected households.

Gender inequality plays a significant role in the HIV and AIDS epidemic. It is therefore important for policy makers and programme implementers to address the cultural practices that expose women to HIV as well as to support the land rights of women. From the seven countries included in the study, recommendations on the need for policies and programmes that address gender inequality are emphasised.

3. National Policy Recommendations

Based on the analysis undertaken at a national level, there are a number of policy implications arising from the research. The following section presents the country specific policy recommendations requiring urgent attention from policy planners and programme implementers.

Botswana - Policy Implications

Based on the results of the study, the policy implications for Botswana are classified into two categories: 1) HIV and AIDS prevention, care and management and 2) Protection from agricultural decline.

HIV AND AIDS: Prevention, care and management

1. **Focus on the elderly** - Based on the data collected and feedback from key stakeholders, programmes on HIV and AIDS prevention and care, as well as information products, should be made relevant to the elderly. Throughout the research, it was shown that farmers and home-based caregivers tended to be older adults. There is a need to enhance their knowledge on HIV and AIDS so as to reduce the risk of transmission to care-givers.
2. **Increased access to HIV and AIDS information** - Research evidence indicates that infected individuals working off-farm tend to return to their home village when they are incapacitated by AIDS. Thus, there is an urgent need for timely and relevant programmes on HIV prevention, care and treatment for farmers residing at the lands and cattle posts. Development practitioners should ensure that HIV and AIDS information is part of all agricultural training activities. It is recommended that the relationship between HIV and the environment form part of education and extension messages.

Protection from agricultural decline

1. **Focus on youths** - Based on responses from the youth, it is recommended that agricultural assistance and support for agricultural production be age-specific. It is recommended that alternative agricultural training is provided at a lower academic level than that currently provided at the Botswana College of Agriculture, in order to encourage youths to participate. Equally, it was emphasised that youths and young people require additional training on HIV and AIDS. It is essential that such programmes take into consideration out-of-school youth and are sensitive to their unemployment and poverty situation.
2. **Review buying prices** - The Botswana Agricultural Marketing Board buying prices should be reviewed to protect local small farmers against unfair competition from heavily subsidised foreign imports.
3. **Develop less labour-intensive technologies for women/orphan headed households** - In the past, technologies like the Extruder Machine relieved many rural women from the energy demanding hand-stamping of cereals, significantly reducing the woman's workload. There is need to work with women to develop and promote less labour-intensive technologies for ploughing, weeding, harvesting, and processing. For smallholder farmers, it may be important to recommend the keeping of small stock, which is less demanding than cattle.
4. **Consider non-farm employment strategies** - Based on the research, it is recommended that policy makers and programme implementers consider non-farm employment strategies to diversify from the traditional farming system.

5. The impact of widespread **income transfer schemes** on agricultural production and food security needs to be investigated.

Lesotho - Policy Implications

Key recommendations for Lesotho include:

1. **Consider heterogeneity of households** - There is need to develop a policy that considers the varying needs of households with respect to the amount of land, labour, capital assets, skills and location. The policy should consider the varied resource constraints experienced by different communities and individual households.
2. **Assistance with appropriate technology** - There is a need for labour-saving technologies that are user friendly and can help to reduce the burden of crop production without compromising the quality, quantity and variety of crops produced.
3. **Address food insecurity** - In Lesotho, food insecurity is attributable to many causes, including drought and animal theft, all of which have been aggravated by the impact of HIV and AIDS. With chronic food insecurity and transitory hunger affecting primarily poor and rural households, there is a risk that individuals lack essential micronutrients, often referred to as 'hidden hunger' (FAO & CSF: 2005/2). As a result, individuals have a reduced capacity to cope physically and are more susceptible to opportunistic infections. It is crucial that the dynamics of risk and factors attributed to food insecurity are understood and government policies and programmes provide resources to support households.
4. **Eliminate gender inequalities** - Women face the dual burden of caring for ill family members as well as generating an income for the family, household maintenance, childcare and nursing work.

Policies and programmes are needed to develop women's knowledge and skills, as well as providing direct access to financial loans and decision-making in agriculture issues.

5. **Enhanced supervision and education from agricultural extension workers** - For enhanced agricultural productivity among communities, it is essential that extensive supervision and education by agricultural extension workers exists. As in all sectors, HIV and AIDS have affected the number and productivity of agricultural extension workers. It is therefore imperative to establish HIV and AIDS workplace policies and prevention programmes for agricultural extension workers. Such programmes should include voluntary counselling and testing, access to ARV treatment, prevention and education.
6. **Strengthening household coping capacity** - The loss of family 'bread-winners' deprives households of productive capital assets. Most of the available household resources are spent on care and support, funeral expenses and the sustaining of very basic standards of living. Expenditure on farming inputs is reduced. There is a need for policies that enable diversification of household income, to help reduce dependency on donations.

Namibia - Policy Implications

The HIV epidemic has had a severe impact on Namibia. In rural settings, where communities are often bound by extended kinship and close social relations, households not directly affected by illness or the loss of a relative, have nonetheless in some way been tasked to support a family or neighbour. The focus is on three main elements that this study has highlighted:

- Dynamism in terms of both the epidemic and that of the response by affected people,

- Different levels of impact of the epidemic on households' ability to produce, and different levels of interventions required to meet the needs of these households, and
- Identifiable gaps in knowledge about the pace of the disease and the response by Namibians.

1. Dynamism - In Kavango results show that female-headed households may be on the increase, a phenomenon linked to the higher rate of deaths among males. The treatment of widows, who are often removed or forced off their marital land and sent back to their own families, may be contributing to this. Clearly defined responses to this kind of process will, given the cultural and productive variation in Namibia, require additional work to understand the matter in both its broader and localised contexts.

2. Different Levels of Impact and Support -

Poverty has long been viewed as widespread among communal farmers in Northern Namibia. Most of the households interviewed were poor, and the crucial factor is the extent to which the condition of poor households has worsened due to HIV. If communal farmers in Northern Namibia are considered “subsistence” farmers, then the majority of the households surveyed are not coping. This survey found that almost 80% of households are not producing enough food. The AIMS survey found that 43% of the households surveyed had times when they experienced hunger, and that HIV affected households were more likely to experience food shortages.

Households which have been defined previously as “collapsed communal farming,” require immediate intervention. The status of these households is critical. Those households which are defined as “near collapse”

may not be in a critical phase at the moment, but exposure to a major “shock,” such as the death of a productive adult, or a bad farming year brought on by drought, will result in disaster.

With adults dying because of the epidemic, the period of intervention may span decades, as younger household members require support to obtain an education and employment. Near-collapse households too, require sustained assistance. The levels of vulnerability should be assessed in order to pace interventions in line with capacities. Households that are coping may not require immediate attention. They may require longer-term interventions such as changing the farming systems, and introducing less labour intensive crops. Vulnerability assessments for these households are recommended. Households that are able to maintain their farming operations might require shorter term interventions with longer periods of monitoring.

3. Gaps in Our Knowledge of the Epidemic -

Understanding the impact of the epidemic on the regions and communities throughout the country, requires data that is harmonised with national level surveys. In cases such as the National Household Income and Expenditure Survey (NHIES) using the same instruments and analysis on a targeted population will yield crucial data for policy formulation, though it is recommended that modifications be made to such instruments to include questions of relevance of the impacts of HIV. Methods of incorporating these kinds of data into national surveys need to be brought into mainstream development planning.

South Africa - Policy Implications

Understanding the impact of HIV and AIDS on agriculture and food security can allow for effective

interventions to address the challenges and create opportunities to enhance development and security within South Africa and throughout the region. Policy recommendations in South Africa include:

1. **Secure land ownership** - Harnessing the political will to secure land ownership, and to provide security from internal or external threats, including market forces.
2. **Increased access to land for women** - Enable women in rural areas to access deeds to land in order to cultivate subsistence and cash crops.
3. **Promote the importance of nutrition** - Promote awareness and understanding of the importance of nutrition in caring for HIV-infected individuals and other household members.
4. **Agricultural markets** - Advocate nationally and internationally for more equitable access to agricultural markets.
5. **Stratified subsidies** - There is need for more efficient and equitable access to markets for sustainable solutions to combating and to moving beyond, the challenge of HIV and AIDS in agriculture.
6. **Support enhanced knowledge management and skills transfer within families** - particularly women and children who are often currently excluded. Wealthier landholders can protect productivity and provide food security while ensuring sustainability in the longer-term, through the provision of inputs, practicing less labour-intensive cultivation, cash cropping, livestock rearing and domestic employment. Through knowledge sharing, there can be a diversification of skills, crops, labour and knowledge.
7. **Promote co-operation** - Co-operative intervention between agriculturalists, livestock farmers, extension officers, NGOs and others could

be promoted to enable maximal protection of productive cultivation and food security.

8. **Changing the strategic aim of agricultural and rural support services** - It is recommended that the government explore the possibility of changing the strategic aim of agricultural and rural support services, in particular in the nodal areas, to include achieving food security and poverty alleviation. These support services may focus more extensively on land allocation and reclamation issues as well as public works and employment.
9. **Recognising and utilising indigenous ability and availability of agricultural knowledge** - There is need for both 'top-down' and 'bottom-up' approaches in addressing the impact of HIV and AIDS on agriculture. Policies and programmes should recognise and use indigenous knowledge to support the educational and nutritional needs of people living with HIV and AIDS.
10. **Capacity investment** - there is a need to develop micro-finance opportunities and encourage investment in the development of physical and technical infrastructure as well as indigenous knowledge.

Swaziland - Policy Implications

In Swaziland, the government has adopted the Primary Health Care (PHC) strategy to provide preventive and promotional health services, particularly in rural areas. However, fewer resources are channelled towards the provision of antiretroviral drugs and food assistance that can help to prolong the lives and enhance the productivity of the affected. To complement these types of policies, there is need to develop interventions focused on food security and rural development. In pursuing these policies, the government, in collaboration with NGOs, could intensify food distribution programmes by ensuring that HIV and AIDS affected households receive quotas of adequate rations.

Key recommendations for Swaziland include:

- 1. Support home-based care centres** - In households affected by HIV and AIDS, women provide the bulk of the care. The time they spend providing care reduces the time and energy they have for agricultural and income-generating activities. There is need to develop and support home-based care programmes that ease women's disproportionate care burden in HIV-affected households.
- 2. HIV policies should address agricultural issues** - There is need for policy interventions, such as agricultural policy, food-aid policy and rural development policy that will assist HIV-affected households to maintain their agricultural production and food security status. These interventions should be aimed at mitigating the negative effects of HIV on agricultural output. For example, agricultural extension workers could be trained to introduce and promote equally nutritious and less labour-intensive crops. Farmers could grow cassava instead of maize.

To bridge the farming knowledge gap between the affected household members and the survivors there is need for both formal and informal training to help cope with the situation.

- 3. Promote labour-saving practices** - The government should consider the promotion of labour-saving practices through its community-based programmes. This may include reviving cultural practices such as communal labour to assist labour-constrained households. Small loan facilities should be made readily available to the affected households in order to help purchase agricultural inputs, fertilisers or even start some income-generating activities.

- 4. Advocate for women's land rights** -. The study has clearly indicated that land rights are biased against women who, following death of a husband, are not allowed to own or acquire land for agricultural production. It is important for policy makers and development practitioners to support the land rights of vulnerable women and further assist them to maintain usage of the land. In addition, in line with empowering women, cultural practices that make women more vulnerable to contracting HIV need to be considered. On the cultural side, the mourning period for women also needs to be reviewed to allow them to engage in productive work after the death of a husband.

Zimbabwe - Policy Implications

The Zimbabwean government has been proactive in enacting HIV and AIDS legislation and fiscal responses such as the AIDS levy. Like other countries, it has established a National AIDS Council (NAC). While NAC was instrumental in the successful co-ordination of an education awareness campaign, especially in urban areas, programming for rural areas and for the agricultural sector has been less effective. In addition, there remains an overwhelming need for treatment, care, research and counselling on HIV and AIDS in rural areas. Resource and other institutional challenges facing both the Ministry of Agriculture and NAC, limit effective policy and programme co-ordination.

Consequently the development of specific educational and mitigation programmes for the agricultural sector, particularly the rural farming communities and service institutions, is severely compromised.

The Zimbabwe study was undoubtedly undertaken under the most unfavourable conditions. The study applied a sampling frame which controlled for common stress factors so as to generate robust data

on production, consumption and investment choices of both affected and non-affected households. From the analysis undertaken and feedback from stakeholders, there are a number of policy challenges that need urgent attention.

Key recommendations for Zimbabwe include:

- 1. Mitigating the Impact of HIV and AIDS on Agriculture** - The Government of Zimbabwe has long acknowledged the potential adverse impact of HIV and AIDS on agriculture and on the national economy. It has however been slow in taking policy actions to mitigate the impacts of HIV on agriculture. The National AIDS Council administered through the Ministry of Health and Child Welfare has been careful to avoid programmes that encroach on the turf of other Ministries. The Ministries have also been too ready to implicitly defer serious policy matters on HIV and AIDS to the National AIDS Council. Thus, important matters of planning agricultural mitigation programmes have been left on the periphery and without effective leadership.

It is recommended that the Ministry of Agriculture negotiates with NAC to assume technical leadership in planning policies and programmes to mitigate the impact of HIV and AIDS on Agriculture, given the importance of agriculture for national development. Greater collaborative engagement between the Ministry of Agriculture and Rural Development and NAC would also help NAC's operational division to focus on the impacts of HIV and AIDS on agriculture.

- 2. Create a national data bank for monitoring HIV and AIDS impacts on agriculture** - One of the major challenges to strategic planning around

the impact of HIV on agriculture is provision of timely, accurate and consistent information for planning purposes. There is need for the creation of a shared national data bank with the capacity and resources to undertake regular surveys for monitoring the trends of key HIV and AIDS stress and impact variables essential for tracking the impact of HIV on agricultural performance. At present there are two institutions conducting comprehensive regular surveys on agriculture - CSO and ZIMVAC but neither is sufficiently comprehensive in their treatment of the impact of HIV on agriculture. NAC has a Monitoring and Evaluation (M&E) Division with a mandate to co-ordinate monitoring and evaluation of HIV and AIDS intervention programmes. The M&E Division of NAC can conceivably host this communal data bank and have it managed collectively by participating institutions.

- 3. Sustain a domestic market and policy environment for smallholder farmers living with HIV, which is conducive for successful farming** - For smallholder farmers living with HIV in the rural areas to thrive on farming, domestic agricultural marketing and pricing policies must stop taxing and start supporting farmers. Zimbabwe's current domestic maize marketing and pricing policies pay maize producers less than 10 percent of the landed cost of imports. Cotton farmers who market their crop through non-competitive and yet liberalised domestic markets are also implicitly taxed. Farmers living with HIV already suffer income loss, due to the impact of HIV on agriculture and cannot afford to receive producer prices that are lower than import parity prices for the same goods. The implicit transfer of income from maize producers, through poor prices, has a social cost in terms of worsening the income and consumption possibilities of rural farmers.

4. Improve access to agricultural finance programmes

In addition to paying farmers competitive prices for their produce, the policy environment must improve farmer access to markets by eliminating market failures. In Zimbabwe, the financial institutions are completely inaccessible to rural farmers. Special agricultural finance programmes set by government and operated by the Reserve Bank are equally inaccessible to rural farmers. Yet access to modest grants, to assist young families living with HIV to buy productive assets, can permanently improve lifetime agricultural production possibilities, as well as the food security situation.

5. Enhance the agricultural productivity of smallholder farmers living with HIV -

Smallholder farmers in the rural areas presently achieve maize yields ranging from 500 to 1,500 kgs per hectare, with the average for the non-affected being 800kgs per hectare, while that of most-affected families is modestly lower, at only 740kgs per hectare.

The government should assist to double the yields of farmers in the rural areas by exposing them to labour saving and low-cost agronomic practices for stimulating the yields of the maize-based farming system. Application of agricultural lime (or other traditional liming materials - manure, leaf litter) to neutralise the inherent soil acidity of over-cropped rural farmlands is expected to increase maize yields by as much as 100%.

With current low producer prices, rural farmers have been applying only two bags of fertiliser per hectare of maize. If producer prices for maize are increased to the import parity world price of US\$200 (i.e. Z\$9million to Z\$18million), smallholder farmers would once again find fertiliser application rates of four to six bags and the corresponding increased yields of 1,500 to 2,500kgs per hectare, profitable.

6. Facilitate and safeguard productive asset investments of farmers living with HIV -

The diminishing holdings of productive farm assets, including cattle, must be seen to be an issue of serious policy concern in Zimbabwe. At a time when HIV and AIDS has rendered hand-powered land preparation unfeasible, the majority of the rural agricultural population has to rely on the relatively more expensive, yet poorly developed public and private tractor service delivery system, for tractor-powered land preparation. The result has been a chronic and persistent bottleneck, which limits cropped areas and production levels at both household and national levels.

The social benefits of effectively addressing the cattle crisis in rural areas are immense in the face of HIV and AIDS. The solution to the challenge is multi-pronged.

- (a) Political pressure on traditional leadership to discourage the customary practice of dispossessing the widows of the remaining cattle holdings upon the death of a spouse.
- (b) Targeted roll-out of comprehensive HIV and AIDS support programmes for rural families living with AIDS.
- (c) Expansion of livestock investment support programmes in rural areas to encourage restocking and commercialisation of rural herds.

7. Special policy attention to HIV and AIDS-affected female-headed households in agriculture -

The analysis revealed that impacts do not arise from the direct relationships between HIV, women and agriculture. Key impacts are often indirect, through the pervasive interactions of women with social and economic institutions that define their social relationships with men, their income realisations, land holdings and the security of their assets. Thus, a

significant policy challenge is to address gender inequities in all social, economic and political spheres of human interactions.

Female-headed households seem to do more for society while asking less from it. At present, community-based care is dominated by women, who provide the bulk of the care required by people living with HIV and AIDS in rural areas. Despite their own vulnerable income situations, women are donating time and services. The least society can do is to ensure that the caregivers are provided with adequate supplies for effective and safe execution of their duties. NAC must assume a greater role in co-ordinating non-governmental organisations to ensure equitable distribution of programmes and resources for HIV and AIDS care across all districts of Zimbabwe.

4. Regional Policy Recommendations

Key recommendations arising from the research include:

1. Develop a regional agricultural policy which mainstreams HIV and AIDS - Agricultural policies which promote productive growth in the region are critical, irrespective of HIV and AIDS. However, the severe impact of the HIV epidemic on agricultural productivity and rural income growth, makes it essential that agricultural policies take into

consideration strategies that raise the standard of living within households, in particular those affected by HIV. The most effective agricultural policies within the context of HIV and AIDS should include: (1) investing in agricultural research to generate improved technologies capable of raising the productivity of crop and livestock systems; (2) rehabilitating agricultural extension services; and (3) instituting crop and input marketing systems that contribute to small scale farm productivity and food security.

By considering the impact of HIV and AIDS, a regional agricultural policy can contribute to the prevention and mitigation of the epidemic as well as improve the ability of households to cope with the social and economic stresses the epidemic is causing.

2. Develop guidelines for governments and international organisations - There is a need for the development of a guideline for governments and international organisations on the value of cost-effective investments that address HIV and the chronic poverty that characterises the region. Resources are scarce. There is a gap between desired and available levels for HIV prevention and treatment, and for mitigating the impacts of AIDS (e.g. social and economic programmes to protect the living standards of affected households and hard-hit communities).

The Maseru Declaration (SADC, 2003) - The HIV epidemic represents the region's greatest development challenge. SADC Member states have demonstrated their commitment to addressing HIV and AIDS by signing the Maseru Declaration (2003) as well as through their participation in the WHO initiatives to provide universal access to care, treatment and support. Numerous non-governmental organisations (NGOs), community-based organisations (CBOs), faith-based organisations (FBOs) and AIDS service organisations (ASOs) support various aspects of the regional and national responses to HIV and AIDS. Despite these efforts, prevalence remains high in many of the SADC countries. The epidemic will thus require increased attention and resources.

3. **Increase awareness of the impact of HIV and AIDS on agriculture** - There is a need for greater regional advocacy to raise awareness among regional and international policy makers on the impact of HIV within the agricultural sector. The loss of capital and knowledge within the agricultural sector is a growing concern, which unless addressed, will become a more severe impediment to the sustainability of agricultural output and productivity for the next generation.

4. **Encourage interventions that enhance labour availability** - Within the household, the key impact of HIV and AIDS is on labour availability and the transfer of skills and knowledge. HIV-affected households are more likely to have limited labour availability and will experience competing demands between caring and productive activities. Therefore, interventions should not place additional burdens on households' time and labour. Equally, interventions that improve treatment for HIV and opportunistic infections can assist, as less labour and time is lost due to recurrent illnesses.

5. **Support interventions that address financial capital** - An illness or death related to HIV and AIDS can reduce the financial capital of a household through healthcare costs accrued during chronic illness, funeral costs, reduced income, or increased costs from adopting orphans. Possible interventions include:

- Establishing safety nets and direct welfare support, e.g. cash transfers, food aid, agricultural input provision, support for costs of health and education;
- Providing assistance with micro-credit, taking into account the particular difficulties that may be faced by AIDS-affected households in meeting repayment requirements and

considerations regarding their labour constraints;

- Grant assistance with livestock multiplication or re-stocking.

6. **Explore interventions that support social capital** - There is a need to identify and test interventions that support social capital. For example, the following interventions could be considered:

- Provide support to households to repay local loans and maintain the viability of such support systems;
- Support households, communities and CBOs that are caring for orphans by providing direct safety nets, or by supporting community initiatives such as communal fields and vegetable gardens;
- Provide organisational support and capacity-building to relevant community-based organisations;
- Advocate for gender equality and children's rights in an effort to reduce any cultural, social or stigma-related limitations on participation in economic activities;
- Promote greater involvement of children and child-headed households in community activities.

7. **Support interventions that protect physical capital** - Most of the interventions in support of human and financial capital, support physical capital by reducing the need for households to sell productive assets, or by increasing the stock of assets. Additional responses can include:

- Direct provision of physical assets or of services for maintaining assets (e.g. veterinary and other services)
- Advocating for changes or greater enforcement of inheritance laws to reduce asset losses following the death of an adult male or both parents.

8. **Consider the heterogeneity of households -** Not all HIV-affected households are in need of support. Equally, there are many households not affected by HIV who are in need of support. It is essential that policies and programmes respect the heterogeneity of households. In developing household specific responses to HIV and AIDS, it is important to consider the specific conditions of the household.

5. Future Research Recommendations

The extent of the impact of HIV and AIDS on smallholder agriculture makes it necessary for urgent action to be taken to assist communities to mitigate the effects of the epidemic. While the current study has provided insights on the impact of HIV within the agricultural sector, there is a need for regional policy makers, governments and other stakeholders to commission additional research in this area. Future research on the impact of HIV in the agricultural sector should consider the following:

- **The heterogeneity of agricultural systems -** Researchers investigating the impact of HIV and AIDS on agriculture and food security need to take into consideration the context in which they are working. There is great heterogeneity within Africa and results

should not be generalised to other farming systems.

- **Monitoring over time -** To more effectively assess the impact of HIV and AIDS on the agricultural sector, there is a need to monitor households that have been affected by HIV and AIDS over a longer period. A longitudinal study would enable evaluation of various mitigation strategies and existing programmes.
- **Focusing on HIV and AIDS variables -** The impact of HIV on key variables such as productivity, food security and self sufficiency appeared to be somewhat contradictory or ambiguous in some of the country results. Consequently it is recommended that further analysis on specific HIV and AIDS variables be conducted to explore if they play a role in significantly explaining differences among important impact variables such as productivity, food self-sufficiency and food security.
- **Further research on the Household Vulnerability Index -** more research is needed to support the development of this tool, for use as a national and regional yard-stick for quantifying the different degrees of vulnerability introduced into different households by the epidemic. The research must be directed towards how this tool can support the regional vulnerability assessment and early warning systems – by providing a statistical yardstick which includes HIV and AIDS as a co-factor.



