HIV and Aids affect all communities – both urban and rural. This article looks at how urban agriculture can be a way to integrate the HIV/Aids-infected and -affected households in a community. The article starts by highlighting some of the issues relating to HIV/Aids and their impact before presenting case studies that demonstrate how urban agriculture has been used to integrate HIV/Aids-affected households into communities.

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Local food production contributes to mitigating the effects of HIV/Aids

HIV/Aids, Urban Agriculture and Community Mobilisation: cases from Zimbabwe

Families affected by HIV/Aids tend to have higher expenses due to costs related to treatment of the infections. Meanwhile, family income tends to go down due to loss of strength and status of the HIV/Aids-affected family members leading to further socio-economic deterioration.

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In their effort to try to cope with this situation, these families often also apply survival strategies that in the long run have negative effects on family livelihood and increase the vulnerability of the family. Although the presence of HIV-infected persons requires more food and better diets, in practice resource-poor HIV/Aids-affected families tend to save money by reducing food expenditures (since these constitute 50-70 percent of expenditures of poor families). Other survival strategies include: taking children out of school, young women becoming sex workers, reallocation or splitting up the family, taking loans to fill the gaps, etc. The consequence is deepening poverty and malnutrition, which make the remaining family members more at risk of becoming HIV infected. Young women are especially susceptible to contracting HIV/Aids. In South Africa, Zimbabwe and Zambia, young women are three to six times more likely to be infected by HIV than young men, in part due to their subservient status in the household/community and in part because becoming a sex worker is used as a survival strategy. Orphans are also particularly susceptible since they are likely to be more malnourished and more exposed to unsafe sexual behaviours.

URBAN AGRICULTURE AS A RESPONSE TO HIV/AIDS

Urban agriculture projects can make important contributions to mitigate the impacts of HIV and Aids at the individual, family and community level. Its benefits include improved nutrition of HIV/Aids-affected families, savings on food expenditures, added income from the sale of surpluses, and community mobilisation to respond to HIV and Aids.

Nutrition

There are several reasons why local food production contributes to mitigating the effects of the HIV/Aids pandemic:

- HIV-infected adults and children have increased energy (10-30 percent) and protein needs (up to 15 percent) (FANTA-AED, 2004) and need a sufficient amount of vitamins and minerals to compensate for losses and increasing inefficiency of the body. However, most urban poor families find themselves unable to cope with the nutrition requirements of the sick members of their families and themselves due to income losses and lack of access to fresh and nutritious food.
- A person with HIV who is malnourished is likely to progress faster to full-blown Aids and finally to death. Adequate nutrition cannot cure HIV-infection, but it can substantially enhance the life expectancy and quality of life of HIV-infected persons. Balanced diets are essential to maintain body weight and muscle tissue, replace lost vitamins and minerals, and strengthen the immune system, which in turn reduces the person's susceptibility to co-infections, enhances his or her ability to fight infections such as

diarrhoea, TB, and respiratory infections, and delays the onset of full-blown Aids.
- Adequate nutrition also improves the response to treatment. Antiretroviral drugs (ARVs) are much more effective if the treated persons are well-nourished, which is normally not the case in low-income neighbourhoods. *"It is like building a house. If you have a roof but there are no walls and no foundation, the house is not very useful. If you include drug therapy but you do not have adequate nutritious food, you will not be able to fight the infection" (UN-Aids, 2001).*
- Hence, proper attention to enhancing access to nutritious food is a key to effective HIV/Aids mitigation programmes. Urban agriculture offers a very good opportunity for families affected by HIV/Aids (or others caring for them) to produce enough food to satisfy the nutrition requirements of the sick and themselves. Just providing nutrition education is not effective as long as food supply programmes are not sustainable.

Savings/income
HIV/Aids-affected families frequently turn to urban agriculture not only to provide food, but also to save scarce cash resources by reducing food and medicine expenditures (by growing their own food and medicinal herbs). It also provides them with an accessible opportunity to earn some income by selling the surplus produce.

Exercise, fresh air, the reduction of stress
Exercise and fresh air, spin-offs of the food-growing activities, help to strengthen the immune system in the fight against Aids, TB and poor mental health, among other illnesses. Residues of agro-chemicals stress the body and may lead people with malfunctioning immune systems to many infections such as diarrhoea and intestinal problems. Hence, local production of organic food adds to reducing stress for people living with HIV/Aids.

Community mobilisation
Urban agriculture contributes in a number of ways to the mobilisation of communities against HIV and Aids, enhancing support to HIV/Aids-affected households and their integration in the community:
- Urban agriculture can be used as a strategy to provide an occupation to high-risk groups, thereby reducing their vulnerability (e.g. it can prevent girls from entering into prostitution).
- Community agriculture is also a strategy to organise community groups and provide services to HIV-affected households in the community (e.g. soup kitchen for orphans or free distribution of fresh food and medicinal herbs to the most needy HIV/Aids-affected families).
- Community gardens are a learning ground for issues related to nutrition and health and caring for HIV/Aids patients.
- HIV/Aids patients (who are often socially isolated due to loss of self-esteem and social prejudice) can become reintegrated by working in garden allotments along with other community members who are not affected by HIV/Aids.

CASE STUDIES

The case studies below highlight some of these community integration and building mechanisms involving HIV-affected households.

New Dawn of Hope Community Gardens, Harare
The New Dawn of Hope gardens were formed by a group of HIV/Aids-affected households as a way of producing cheap but nutritional food whilst at the same time trying to raise funds for sustenance from the sale of surplus produce. The gardens started operating in Mufakose, one of the low-income areas of Harare in Zimbabwe. The group has been able to galvanise communities in Mufakose around urban agriculture. The HIV/Aids-affected families have now been joined by other resource-poor community members who are keen to produce nutritional crops for their own consumption. The participation of other members who are not HIV-positive has removed the stigma from HIV-infected members. Other members of the community have benefited from the free lessons in nutrition offered by members of the New Dawn of Hope group. The group has also offered its services for free to people in other communities within Mufakose and the city of Harare who are interested in starting nutrition gardens involving the HIV/Aids households in their community.

Through urban agriculture HIV/Aids-affected families gain improved access to organically grown, nutritious and fresh food. Such commodities are available now at lower prices since transport and handling are minimal.
Growing Positively- A handbook on Developing Low-Input Gardens –
Snow John International 2005 New Dawn of Hope – Mufakose, Harare, Zimbabwe

Allotment Gardens, Bulawayo
In Bulawayo 12 allotment gardens were established by the city council in selected areas throughout the high-density (low-income) areas of the city, e.g. West Park, Makoba, Mpopoma and Mabutweni. The beneficiaries of the garden allotments are HIV-affected households, the elderly, widows and the destitute. In order to avoid the stigmatisation associated with HIV, the gardens draw from a mixed group of beneficiaries as highlighted above. The size of each allotment garden ranges from 0.42 ha to 2 ha. Treated wastewater is used for irrigation. The availability of this water tends to be erratic for various reasons including breakdown of pumps, faulty taps and vandalisation of equipment. The garden allotments, which largely produce vegetables have contributed to local community development. The HIV-affected households feel less discriminated against as they work with other community members in their gardens.
Mr. J.J. Ndebele, Bulawayo City Council, Tower Block, 7th Floor, Bulawayo.

School gardens, Harare and Bulawayo
Since 2003, Action Aid International (AAI) has been stimulating the establishment of school gardens in order to improve and diversify the diets of poor vulnerable households affected by HIV/Aids. Local community volunteers and teachers are

Community gardens are a learning ground

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trained in the specific nutritional and care requirements of people living with HIV/Aids as well as the establishment and management of low-input gardens for the production of green leafy vegetables and herbs (nutritional and medicinal), which are particularly important for people living with HIV/Aids. Food produced at the schools is provided to selected HIV/Aids households in the community.

An assessment of the project results has found that the benefits of the approach include economic returns, increased food security and nutrition as well as psychosocial benefits, such as increased self-esteem, improved group cohesion, decreased stigma, and increased community support for the HIV/Aids-affected families. Furthermore, the herbs produced in these gardens have been used for medicinal purposes, thereby improving the health of HIV-affected beneficiaries. Urban gardens are an essential part of urban livelihood systems, particularly of the poor and vulnerable.

Household gardens, Harare
The Zimbabwe Projects Trust (ZIMPRO) has been involved with HIV-affected households in Mbare, Harare, for some time. Initially they assisted families with hygiene kits. However, they soon realised that nutrition was an important aspect and had palliative effects on HIV-positive people. They therefore established gardens with over 200 HIV/Aids-affected households in Mbare. They call them nutrition gardens. Other (non-HIV-affected) households have also been involved in order to remove the stigma of the families working in the gardens. The gardening activities provide the platform for life skills training and a strong peer education component is built in.
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Integration of former Commercial Sex Workers, Gweru
The city of Gweru started a recycling and organic farming project as a way of rehabilitating and integrating former commercial sex workers (including those from HIV/Aids-affected families) into society. Some agricultural plots close to the dump were allocated to the group of over twenty where they practice agriculture using organic wastes salvaged from the dump. They grow a variety of crops including leafy vegetables, tomatoes, beans and maize. The surplus crops are sold and income shared amongst the group.
Gweru Municipality, 8th Street, Gweru Zimbabwe

CONCLUSION

HIV and Aids pose challenges to individuals, communities and governments. The issues around HIV/Aids are complex and responses should be multi-pronged. Nutrition, stress management, treatment of opportunistic infections and poverty reduction all contribute to effective management of the pandemic.

Urban household gardens and community food gardens on the grounds of community centres, schools, churches and vacant public land as well as institutional food gardens (health care centres, clinics, etc.) can make important contributions to mitigating the negative effects of HIV/Aids by enabling participants to improve their nutrition, reduce stress, save money and enhance their incomes. The gardens also mobilise community support, facilitate integration and help reduce the stigma.

References
FANTA 2004. HIV Aids, a guide for nutritional support. Washington DC
UN-Aids 2001. Nutrition Policy Paper, Volume 20
Snow John International 2005. Growing Positively – A Handbook on Developing Low-Input Gardens
World Bank 2003. Local Government Responses to HIV/Aids: A Handbook

The Municipal Development Partnership (MDP) organised a three-day regional workshop from 21 – 23 March 2007, in Harare, Zimbabwe, with participants from East and Southern Africa. Participants discussed the findings of studies on mainstreaming HIV/Aids and mainstreaming gender with the AMICAALL (Alliance of Mayors and Municipal Leaders on HIV/Aids) chapters from these regions, specifically focussing on issues related to HIV/Aids.

A report on the workshop can be found at http://www.mdpafrica.org.zw/hivwrkshop2007.htm.

Main conclusions and recommendations of the 2004 Workshop on Urban agriculture and HIV/Aids

In 2004 the International Network of Resource Centres on Urban Agriculture and Food Security (RUAF Foundation), the EU-ACP Technical Centre for Agricultural and Rural Cooperation (CTA) and the South African NGO Abalimi Bezekhaya organised a workshop and study visit on urban gardening projects at the household and community level for 30 participants from 10 countries in Southern Africa.

The **main conclusions** of this workshop regarding the relation between urban agriculture and HIV/Aids are the following:

1. Adequate nutrition cannot cure HIV-infection, but it can substantially enhance life expectancy and the quality of life of HIV-infected persons. Adequate nutrition is also essential to optimise the benefits of antiretroviral (ARV) treatment.
2. Many HIV-affected households find it difficult to follow the nutrition recommendations provided to them due to poverty and lack of access to fresh nutritious food.
3. Food aid is not a sustainable solution.
4. Local food production projects enhance access to nutritious food at low cost. Such projects are especially effective during the early stages of HIV-infection before the disease develops into stages requiring ARV treatment.
5. Communities are willing to work hard to provide food to HIV/Aids sufferers and other affected community members as long as they receive a subsidy to enable initial investments. Participants normally provide their labour for free with the hope of receiving food and income in the future.
6. No large tracts of land are needed for successful urban agricul-

ture projects (20 m^2 of land per family already improves nutrition substantially, while 150 m^2 per family can provide most of their vegetables year round). Many community groups have successfully acquired access to land by approaching local councils (public land), or by acquiring land leases from local schools, hospitals, clinics, community centres, etc.

7. Next to higher food intake / better diets and savings on food expenditures / raising of complementary income, urban agriculture projects also lead to community building, reduction of stigma and improved quality of life (less stress, greater self-esteem, social inclusion, skills development) for people living with HIV/Aids.

Recommendations: The participants concluded that the social and nutritional impacts of local food production initiatives can be greatly enhanced in the following ways:

1. ***A well-coordinated multi-stakeholder approach*** should be followed involving NGOs and community centres (lobbying, group and leadership development, technical and management training, monitoring, problem solving), the national health department (link with conventional HIV/Aids programmes, promotion of local food/herbs production by health workers, care and nutrition training, etc.); municipal council (provision of land, compost, access to water, etc.) and the agriculture department (provision of irrigation equipment, seeds and seedlings, training/technical advice).
2. It is also important to increase ***access to vacant public and private land*** in or close to low-income neighbourhoods (under power lines, on grounds of community centres, schools, churches and factories) for community gardening by HIV/Aids-affected families and other vulnerable households.
3. In order to prevent stigma and to overcome the problems related to the limitations of HIV-infected persons in providing labour on a regular basis, it is *recommended wherever possible that beneficiaries work in groups and share labour tasks. Urban farming groups should be open and accessible to all poor and vulnerable households in the neighbourhood,* rather than restricted to HIV-infected households. Community-driven gardens have stronger social benefits than home gardens, since they contribute to community building and the individual gardeners can expect more support from fellow gardeners during critical periods and in times of illness. The group undertaking has a high therapeutic and instructional value for the participating people living with HIV/Aids. The community garden also makes it easier to jointly buy tools and inputs at cheaper rates and to market surpluses. One of the disadvantages of the allotment garden for HIV-infected households may be that they have to invest time and money in meetings and in maintaining the joint infrastructure of the allotment garden. Compared to home gardens, the allotment garden may also need more investments in fencing, irrigation infrastructure, sheds, etc., which makes it more difficult to get started and increases the participants' dependency on external sources of funding.
4. ***Existing community gardens can also be used as local demonstration plots, training centres and seed production units in order to promote home gardening*** in available micro-spaces by vulnerable households (on home plots, in containers, on the roof and in small sheds for small animals and mushrooms, etc.). Starter packages can also be distributed to the participating households. In addition to those noted above, home gardens also have the following advantages: they are easier to protect from thieves; require less travelling time; farming activities can be performed at the most convenient moments and are more easily combined with household chores and resting; and each family can grow the crops and raise the animals that they prefer. Storm water harvesting and reuse of household waste and grey water can easily be practiced. However, the amount of food produced in home gardens is often small due to the very limited space available for farming activities around the homes in low-income neighbourhoods. Although, with techniques such as trench bed gardening, use of vertical spaces, container farming, hydroponics, etc., good results can be achieved. Since many urban people, especially male adolescents, have a negative attitude towards farm work, it is important not just to promote plot gardening (which has a strong association with traditional field farming), but to *involve the youth in more "modern" types of urban micro-farming* (e.g. mushroom growing, organic hydroponics, growing and processing medicinal herbs, vermiculture, aquaculture, raising small animals, etc.) *as well as in non-farming activities related to the garden* centre like running a soup kitchen, a visitors' service and restaurant, arranging for marketing and transport, waste collection and production of compost, etc. In this way the garden will become a vibrant centre of a variety of agriculture-related, food and income-earning activities for people with varying interests.
5. Emerging gardening groups in low-income neighbourhoods require ***advice and support*** for group formation and management, training in basic gardening techniques in combination with nutrition, cooking and HIV/Aids training as well as the initial ***provision of starter packages*** (especially seeds and compost and simple tools) preferably in the form of a group revolving fund. Regular visits during a prolonged period of time have proven to be of critical importance (problem solving, reinforcement of initial training).
6. External financial support for ***investments in water harvesting infrastructure*** (gutters for rainwater collection from roofs, drains to divert street storm water into water tanks in the gardens, wells) or a supply of water from other sources at a subsidised rate is needed in order to lower recurrent costs of local food production. Water-saving irrigation (drum, bottle and drip irrigation) and cultivation practices (ridging, mulching, no till, use of compost and teas, etc.) can reduce water needs substantially.
7. In order to overcome apathy and low esteem among HIV/Aidssufferers and -affected households and to create a spirit of community cooperation and volunteerism it is important to build in ***mobilisation of group resources and savings.*** This will develop feelings of ownership, group discipline and accumulate some money for investments needed for the next season (seed, compost, etc.). Training in *joint decision making, action planning and monitoring,* conflict management, lobbying and resource mobilisation are also important. The inclusion of *"celebration"* ("ilima") type of activities helps enhance group building. It is also very important to develop *linkages between gardening groups* so that they can learn from each other (horizontal action learning) and can develop partnerships (joint buying of inputs or selling of surpluses, joint lobbying, etc.). Formalisation and registration of community groups may enhance the group's access to resources (e.g. subsidies), but this should not be done in the initial stages nor be the main driver of group formation.

The full proceedings plus the papers of the workshop and study visit are available on: http://www.ruaf.org/node/743.