Urban Agriculture and the Livelihoods of the Poor in Southern Africa:

Case Studies from Cape Town and Pretoria, South Africa and Harare, Zimbabwe

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Adrienne Martin
Nicoliene Oudwater
Kate Meadows

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1. INTRODUCTION

This paper focuses on three dimensions of the social, institutional and planning context of urban agriculture. Firstly, an analysis of the contribution of urban agriculture to the livelihoods of urban and peri-urban residents; secondly, factors affecting the outcomes of urban agriculture projects, and thirdly, the linkages between households, communities and the planning authorities. The paper is based on research carried out since November 1998 in informal settlements in South Africa (Cape Town and Pretoria) and Zimbabwe (three sites in Harare, one peri-urban setting with strong market linkage to the central food market, a resettlement area and a high density township). The purpose of the research project was to develop methodologies and criteria for improved resource management in order to promote income generating vegetable growing in urban and peri urban areas and to provide guidance for policy formulation.

2. URBAN AGRICULTURE AND LIVELIHOODS

We argue in this paper that it is important to understand the livelihoods of urban dwellers in order to contribute effectively to urban planning, development and policy formulation. In the field of urban agriculture and planning, the livelihoods framework can be a useful conceptual tool for facilitating cross-sectoral discussion and planning. It puts people at the centre and considers all the diverse activities and concerns of their livelihoods, recognising that in order to bring about change there has to be a policy commitment to transforming the conditions under which poor urban producers operate. An important aspect of the approach is the emphasis on local people's own views and definitions of their situation.

In applying livelihoods analysis to an urban context, some of the essential elements to explore are the assets which urban dwellers can access (for example land, housing, social support and information), the social and political institutions and processes through which they operate and through which policies impact upon them.

A definition of a livelihood is that it "comprises the capabilities, assets, and activities required for a means of living" (Carney 1998). Stated as a simple question, "How do people live their lives and make ends meet?"

The livelihoods framework (see appendix 2) makes explicit the multiple dimensions of livelihoods which are pursued by individuals and social groups. It draws attention to the fact that a livelihood is more than monetary income, but embraces local value systems, preferences and the strategies people adopt to fulfil their aspirations.

For poor people trying to make a living, there is great value in the proximity of different livelihood opportunities, where formal and informal employment are available in the same area, where there are opportunities for agriculture and informal trade. Such diversity assists the construction of multiple livelihood strategies and helps to spread risk.

Livelihoods are not just analysed at household level. Wider social relations beyond household and community underpin the circumstances in which people are vulnerable. Intra-household relationships between men and women and between the different generations are highly

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significant. Membership of networks can influence access to resources and are further discussed below under social capital. Household strategies and individual decisions are linked with policies, institutions and processes outside the household.

Some of the factors which increase the vulnerability of urban dwellers are political conflict, market fluctuations which affect prices of essential goods and demand for labour, environmental damage, rapid urban growth and limited resource availability. An important constraint in the Southern African urban context is insecurity of land tenure, and limited access to land.

2.1   Methodology and approach

Our methods of enquiry included key informant interviews (for example with NGOs, school staff, health workers, community leaders, city council departments, and town planners), attendance at planning workshops, community meetings, informal interviews with leaders and members of gardening groups, household interviews along transect walks, and sketch maps of house compounds. Soil samples were also taken. No lists of households were available as a basis for sampling, hence our decision to sample households along a transect walk across the settlement. Secondary data sources were also used. Field studies of urban gardening present some interesting methodological problems, individually not unique to the urban context, but in combination quite a challenge.

- **The nature of the "household".** Households are complex and often multi-locational with household members in different places in different seasons, and multiple occupancy of house stands. Our study selected households initially on the basis of house stands, then families within stands, including absentees supported by or supporting the family in some form.

- **Timing of surveys** – interviews carried out in the townships during weekdays risk the bias of overrepresentation of unemployed or home-based workers, and excluding the fully employed.

- **Rural/urban linkages** – It is important to explore ways in which household livelihood strategies cross the rural/urban divide (Tacoli 1998). The determinants of rural and urban poverty are inter-linked rather than two separate spheres. In southern Africa, the fluidity of occupation between rural "farmers" and urban wage earners is long established, yet the notion of a rural/urban dichotomy had an important role in apartheid policy where the construction of rural "homelands" was used to define and locate divergent racial identities (James, 2000).

- **Capturing trends** – A major limitation of the fieldwork is that it records a snapshot in time rather than enabling trends to be distinguished. Directions of change are not always easy to identify – particularly distinguishing short term responses from longer term trends. However, such studies can establish the diversity of livelihoods and contribute to planning for the future, based on the directions of change envisaged and sought after by urban populations.

- **Building trust** – One-off surveys do not allow for the build up of trust and familiarity necessary for more detailed exploration of livelihood activities and "hidden income" from illicit activities such as those involving crime or sexual services. (Naidoo, 2000:21).

- **Problems of quantification** - In small-scale production systems where production is seasonal, harvesting is piecemeal for household consumption and sales are intermittent it is very difficult to get an accurate picture of the quantities and value of production from urban agriculture. This is compounded by the well-known difficulties of estimating

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income for urban households due to the multiple nature of income earning activities and sources.

Brief descriptions of the areas studied in Harare, Capetown and Pretoria are given in boxes 1 to 4 below.

Box 1: Epworth, Harare, Zimbabwe

Box 1: Epworth

Epworth, located 15km south east of Harare, is one of the fastest growing high density areas of Harare. At the beginning of 20th century, the rural and sparsely populated area was administered by the Methodist church. During the struggle for independence, people from rural areas came to seek the relative security of urban areas such as Harare. Refugees were attracted to Epworth by the opportunity for free access to plots of land from the Methodist Church (Zinyama et al, 1993). In 1985, the Mission handed the jurisdiction over to the government and the Epworth Local Board was established as the local authority to manage local affairs, including the administration and development of land for residential, industrial and commercial purposes. The development plans drawn up by the Board included areas for private kitchen gardens and arable land for irrigated allotments and woodlots, however, most of the plans have not been achieved. Epworth is seriously lacking in infrastructure, health care, education and other services such as electricity, sewage and, in some areas, potable water. Ironically, its unplanned status has triggered a fast population growth as people move in from other residential areas in Harare due to availability of stands, and cheap accommodation. By 1995, over 80,000 people were living in Epworth (Plan International). Epworth has the lowest average income per capita in Harare (Zinyama et al, 1993). Levels of unemployment are very high and informal activities such as vending, craft work, and unskilled wage labour provide the main sources of income. During the summer, the majority of households grow maize, sweet potatoes and green leafy vegetables in their backyards. In addition there is some cultivation on areas outside backyards, especially in the lower lying areas. During the winter, crop production is limited by access to water, which varies among the different sections of Epworth. Epworth could be characterised as a peri-urban area, rapidly urbanising, that faces serious socio-economic problems and highly volatile, complex politicised land disputes.

Box 2: Porta Farm, Harare, Zimbabwe

Box 2: Porta Farm

'.. the City toilet where all unwanted and undesirable elements of the City are flushed into...'
(Chakanyuka, 1999). A rather strong descriptive wording but unfortunately it does hold some truth. Porta Farm is a relatively recently established informal peri-urban settlement situated some 35km west of Harare. The circumstances of its establishment explain its classification by the government as a temporary holding camp. Prior to the Commonwealth Heads of Government Meeting in 1991, the government decided to remove all 'eyesore' settlements. Several squatter settlements in and around Harare were bulldozed and their occupants and other homeless people were removed to Porta Farm with the promise that the government would relocate them to a new residential area within 3 months. However, almost a decade later, many of them are still there and new people are still brought in by the police. By October 1998, the total population was 3,547 (Save the Children Fund, 1999). Because of its temporary status, there is no legal obligation for the government to provide services for Porta Farm, such as housing, education, sanitation, and basic health care. A number of NGOs operate the health services in Porta Farm. Responsibility for the area is currently contested between two different town councils. In 1995 an attempt was made by the government to evict Porta Farm residents on the grounds that the settlement was a health hazard to the city's water source. This was halted by a High Court Order, initiated by Zimrights, a human rights organisation, with support from the University of Zimbabwe. Although the future of Porta Farm is still uncertain, people have started to change their 'temporary' homes into a more permanent settlement. There are few formal employment opportunities and most people make a living out of fishing, selling fish, fruit and vegetables and wage labour on neighbouring commercial farms. Where people have access to land or sufficient space around the house, they grow maize, sweet potatoes and green leafy vegetables and in some cases, cassava, mainly for home consumption.

Box 3: Cape Flats, Cape Town, Western Cape

Box 3: Cape Flats

The Cape Flats is situated in the Western Cape Province of South Africa, and is part of the Cape Metropolitan Area (CMA), the southern-most metropolis on the African continent. Historically, settlement on the Cape Flats was avoided due to its exposed aspect and poor soils, but over the last 60-70 years, it has undergone urban development, a growth influenced by apartheid planning policies and population pressure. In 1996, the population of the CMA was approximately 2.56 million. The Cape Flats is one of the areas under the greatest settlement pressure. Despite the Western Cape's economic status as one of the most favoured areas in South Africa, poverty and unemployment are widespread in the Cape Town area, particularly in the Cape Flats townships, with almost the entire African population of Cape Town falling within the low-income category. There are particular inequities in employment and access to services. The distinctive patterns of residential settlement inherited from the apartheid era feature the segregation of Africans and coloureds into separate peri-urban communities which continue to proliferate due to the influx of migrants from rural areas, particularly the Eastern Cape. Movement between townships and informal settlements accounted for over half movements within CMA, particularly the townships area of Crossroads, Nyanga, Gugulethu, Browns Farm and Philippi. (Cross et al 1999). There are a number of local based organisations in and around Cape Town that are involved in the facilitation, development and support of urban agricultural initiatives. About a third of households are involved in gardening activities. Spinach, cabbage and potatoes are the most popular vegetables, a good reflection of local nutrition preferences.

Box 4: Mamelodi, Pretoria, South Africa

Box 4: Mamelodi

Mamelodi is located in the eastern part of the municipal area of Pretoria City Council, approximately 20 kilometres to the east of the central business district. There are varying estimates of the population of Mamelodi, but the most realistic official figure is 270,000. This represents about 25% of the total population of Pretoria living in only 6% of the total area of the Pretoria Municipality. The residents are almost exclusively black. The per capita income is estimated at around R2,150[1] per annum with only 45% of the residents economically active, making it one of the poorest residential areas in the Pretoria Municipal area (IDP PZF5, 1998). An integral part of people's livelihood strategies, especially for women, is activity in the informal sector, such as selling fruit, vegetables and clothes, operating small shops and drinking places. After abolition of apartheid laws, in particular influx control, the population size increased significantly as migrants from the rural areas and outside South Africa came in search of employment and improved living standards. The formal established residential area of Mamelodi West could not absorb the migrants who settled in thousands of illegal backyard units and after 1990, squatters started occupying land east of the railway line. In response to the high unmet demand for housing among low-income groups, it was recognised as a new settlement area and named after a black activist, Stanza Bopape, from Mamelodi who had been killed by the police. The 1994 census gives a population size of 40,000 for Stanza Bopape, but considering the rapid growth of the occupied area, the actual population size must be considerably higher at present. The government faces the challenging task of developing the informal settlements into planned, serviced residential areas in addition to the upgrading of the established formal areas. Despite the uniform character of the formal established area and the rather depressing living conditions in the informal settlements, most people are house proud and try to improve their yards by growing ornamentals, flowers, maize and vegetables. Maize cultivation and vegetable production also takes place in off-plot allotments and public areas along railway lines, in river valleys and next to schools and clinics.

2.2 The asset base

The livelihoods approach focuses on what the poor have rather than what they lack. It helps to identify opportunities upon which interventions can build and the conditions under which improvements can be sustained. Therefore, we explored the extent to which people have access to different kinds of assets - natural, physical, financial, human and social and the ways in which these are combined in making a living.

2.2.1 Natural capital

Urban areas vary in the degree to which households have access to natural resources in the form of agricultural land for production of staple and horticultural crops, water for irrigation, trees, livestock etc. The reliance of rural dwellers on natural capital is well recognised, but its importance in urban and peri urban areas is less understood. Families with natural assets have the means of absorbing surplus labour, and partially covering their food and energy requirements and reducing consumption costs. Urban dwellers may retain access to land in rural areas, returning in the cropping season to cultivate. Urban contexts can damage natural capital —pollution from industries, waste dumping and soil mining affect air and land quality and can have serious effects on human health. Illegal digging of sand for building construction had a negative impact on the quality of off-plot land in Epworth, Harare.

Access to land is critical, especially in the informally settled areas. Yet urban space is contested among various uses - for housing, industry, commerce or horticulture. Depending

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[1] Exchange rate (June 2000): U$ 1.00 equals R 7.05

on the policies and influences on local development and planning, the competing commercial demands may lead to displacement of informal housing and open areas under cultivation.

For many families in the three urban areas studied, access to land for gardening is limited to the house plot (as in Mamelodi). Gardeners in the Cape Flats who wish to extend their area can join gardening groups which are given access to land by town councils, schools or churches. 43% of gardeners in the Cape Flats study participated in local gardening projects. Some households (mainly in Harare) had accessed plots on low lying land along stream banks where they were able to grow maize and other crops. Access to such plots was gained either through inheritance or by clearance of vacant, public land. In general, the principle of 'first come, first served' seems to be the main rule, which resembles practices of an informal customary tenure system. Newcomers have to find out first whether the area has already been cultivated, and if so seek permission from the original cultivator before accessing such an area. Generally, off-plots are free but the survey also revealed a few isolated examples where such plots have been sold.

Table 1:   Access to agricultural land - Harare (Epworth and Porta Farm)

Type of land	Number & % of respondents		Given	Inherited	Cleared vacant land	Not allowed by land lord	No space	Other reasons for no cultivation
Backyard only	47	53.4						
Backyard and off plot*	22	25.0	2	6	14			
No access	18	20.5				9	5	4
Off plot only	1	1.1			1			
Total	**88**	**100**	2	6	15	9	5	3

* Only those who settled in Epworth before 1981 had access to off-plots; residents who came in later did not have access to land outside their stand. For Porta Farm, there was no significant correlation between year of arrival and access to land for cultivation.

In Epworth, it was evident that only early migrants and original settlers had access to off-plot land, which illustrates that for newcomers, access to off plot for cultivation is rather difficult[2]. Although tenure arrangements might be clear at the local level, these do not necessarily coincide with the government perspective which regards all public land as state land and therefore restricted for private use by individuals/the public. In addition, the older, more established areas of Epworth had a rather peri-urban/rural character compared with recent settlements, having far larger residential stands and occasionally kraals with cattle. Especially in those established areas, the original settlers are suspicious about newcomers and complained that squatters were taking away their land and should therefore be removed. It would leave them with less land for future generations, negatively affect their children's opportunities for off-plot cultivation and reduce grazing areas.

The majority of households in the Cape Flats obtained their house plots from the government. A few lived in homes that had been purchased from previous homeowners (8% without gardens, 21% with gardens). No households with gardens rented their homes.

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[2] Foeken and Mwangi (1998) described a similar process of accessing off plot land in Nairobi. For new migrants to obtain a plot of land, a established personal network is a prerequisite through which land can be acquired. In addition, ethnicity seems to play a major role as land is more likely to be sold/given to a fellow tribes wo/man.

In South Africa plots are generally small and include ornamentals. In Harare, a larger proportion of the area is allocated for crops and in the established parts of the settlement, plot areas can be up to 1250m^2

Soil fertility was low in all three locations. In the Cape Flats, farmers were using organic waste from the kitchen, manure and mulch and soil improvers bought from the market. Only one was using inorganic fertiliser. No individuals or groups were using chemical pesticides in Cape Flats but in Epworth people were using pesticides against aphids and cut worms. In Harare investment in soil fertility was very low, if not non existent due to financial constraints, non availability of manure and shortages of land. As one man put it, he would rather buy clothes and food for his family than buy fertilisers or labour to find manure, which are not easily available.

Very few households keep any kind of livestock, mainly poultry and rabbits (owned by 6% of households or less in Cape Flats, Mamelodi and Porta Farm). Ownership was higher in Epworth (28%) and some cattle were also kept.

2.2.2 Physical capital

This includes basic infrastructure needed to support livelihoods, such as housing, water and sanitation, which are often highest on urban dwellers' list of priorities. Of particular importance to people in the settlements studied were the quality of housing, sanitation, distance to water supply and access to inputs. Lack of physical capital can negatively impact on human capital through ill health especially among children.

Although in formally developed urban areas people are usually charged for domestic water and energy supply, with the risk of excluding the poor from access through lack of cash, water was free in our study areas, with the exception of the formally recognised sections of Epworth. In South Africa, the issue of provision and payment for services has been highly politically charged. Similarly in Porta Farm, Harare, there was the expectation that the City Council should provide improvements in housing and sanitation since it was they who brought people to Porta Farm.

The way people obtained access to their stands depended very much on the year of arrival, their origins and their social and institutional linkages. In Epworth, Porta Farm and Mamelodi, the early arrivals claimed that they got their residential plots, generally for free, through allocation by the responsible authorities either directly or through their representatives. Over the years, land has become very scarce and access to land is mediated in multiple ways, including allocation by friends or relatives, from local grass root organisations such as street committees, sale by previous or resident owners, individuals informally claiming unused land (labelled as 'squatting') or through political affiliations.

Table 2: Means of acquisition of residential land

How was residential land acquired?	Number & % of respondents (Epworth)		Number & % of respondents (Porta Farm)		Total Number	%
Bought	14	23.3	5	17.9	19	**21.6**
Lodgers	17	28.3			17	**19.3**
Given by Local Board/City Council	7	11.7	6	21.4	13	**14.8**
Inheritance	10	16.7			10	**11.4**
Given by mission	9	15.0			9	**10.2**
Allocated by Chairman (free)			7	25.0	7	**8.0**
Informally self allocated	2	3.3	5	17.9	7	**8.0**
Allocated by ZANU PF			3	10.7	3	**3.4**
Given by friend/relatives	1	1.7	1	3.6	2	**2.3**
Not applicable			1	3.6	1	**1.0**
Total	**60**	**100**	**28**	**100**		**100**

In the case of Epworth, the Mission used to allocate stands to new settlers in areas unoccupied by the so-called original settlers. However, by the mid-eighties, land became scarce and became subject to illegal land speculations that are currently a major source of land disputes. Descendants of original settlers mainly get access to land through inheritance or allocation of new serviced stands by the Local Board as happened in 1996. However, outsiders or those without established social linkages can acquire a place to live either by buying land, through political affiliation or by invading vacant land. Actual practices of land selling are rather blurred as several stakeholders have become involved, from the original settlers increasingly using their land to construct units for lodgers to supplement incomes and meet demand for cheap housing, and people seeking ways of making quick money or gaining political power. Several cases of illegal land speculations have been reported to the police in which land merchants pretended to be the entitled owners or act on behalf of the Local Board.

Although a few respondents said that they spontaneously laid claim to the land themselves, it is unlikely that outsiders can invade a piece of land without any linkages or support locally. In one informal settlement area, most respondents gained access to a piece of land after becoming a member of the dominant national party ZANU PF and stands were allocated to them by local political branch leaders, and from their perspective thus a legal transaction. However, the original settlers viewed them as squatters[3], illegally occupying land. Efforts of the Local Board to evict people, backed by a High Court ruling of December 1999, gained national political momentum when President Mugabe personally intervened by stating that: *"As from now onwards, we will live together in harmony. There are no squatters and there are no original settlers. The government will soon move in to take the land so that you are settled in an orderly manner."* It is obvious that political priorities are at stake, further triggered during the running up to the national elections. 'Squatters' form a much larger political constituency than the smaller group of original settlers and rate payers, particularly if the large number of lodgers are considered as potential squatters[4.]

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[3] A local definition of squatters is *'those illegally occupying land and not paying rates to the Local Board'*.

[4] The political rights of 'squatters' is currently contested as the Epworth Residents' Association recently successfully applied for a High Court interdict to have council elections stopped as they requested government clarification on the squatter status, whether they are allowed to vote during local elections. It is obvious that the originals fear their interests to be at stake, in particular the issue of land ownership, as the number of squatters and lodgers far outnumber their population size.

A similar situation exists in Mamelodi where access to land is in some ways controlled by local political leaders. Newcomers have to ask permission first before moving in which might also include the payment of a small 'fee' and/or political loyalty and possibly a payment to an 'owner' as well.

Housing types and quality embody social status definitions. In Porta Farm most people live in shacks made from wood and other materials, plastic and brick. In South Africa the government has operated a housing subsidy. The renting out of additional accommodation within house compounds is an important source of income in both formal and informal areas in each of the study locations.

Other dimensions of physical capital are also important in urban areas, for example, transport and roads, markets for supply of inputs and tools and for informal trade. It is important to note that in both countries, small-scale urban vegetable production takes place against a backdrop of capital intensive export horticulture which contributes significant amounts to national income and foreign currency earnings[5]. Export horticulture industry is also a major employer, particularly of women (Chan & King 2000), and people from several households in Porta Farm were employed as workers on nearby commercial horticultural farms. Most small holder urban and peri-urban production is for home consumption and local markets. Serious obstacles prevent access to export markets, including input supply, quality control, finance and credit, and regulations on pesticide residue levels.

Ownership of physical capital in the study areas was mainly limited to housing and tools of the trade – for gardeners this included hoes, harrows, shovels and buckets. Seeds and tools were obtained from commercial stores or borrowed from friends and relatives. Some saved their own seed, while NGOs supplied gardening groups.

2.2.3 Financial capital

Financial capital is critical in the urban context, where cash transactions predominate in accessing food, transport, housing and energy. Managing cash flows constitutes a major difficulty, and poor urban households typically have high levels of hire purchase and indebtedness. Financial linkages between rural and urban areas are a means of accessing cash through remittances from urban employment to support family members in rural areas, especially children and aged parents. They may receive agricultural products in exchange. However, this ideal of complementarity may not always be realised in practice, due to low urban incomes and contraction of employment in industries and mines.

A regular cash flow is important as the urban poor rely on small purchases of daily requirements and cannot take advantage of the better prices of bulk buying. Therefore reliability may be a more important feature of income than the annual amount. Pensions in South Africa, provide the economic underpinning of many households. Credit facilities are absent and therefore people are unlikely to be able to invest in expanding small enterprises. Income is spent on education, household consumption, health care, travel and clothing. Among gardeners there was a general complaint about the expense of inputs. Very few vegetable growers use fertilisers for this reason.

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[5] Horticulture is the 2nd largest forex earner in Zimbabwe 3.5-4.5% of GDP. In South Africa it accounts for 2.7% of the value of total exports

2.2.4 Social capital

It refers to the social relationships in which individuals and communities are involved, including networks, membership of groups and levels of trust and reciprocity. These are important ways to gain access to other forms of capital and also provide means of controlling and defending it. Social structures in urban areas (and increasingly rural too) rely on forms of interaction based on market transactions or common interest among neighbours rather than structured through kinship. The cohesiveness of the extended family is threatened as urban families lack the money to visit rural relatives. Poverty tends to threaten cohesiveness; as people in Mamelodi commented *"the poor do not think of themselves as a group, its everyone for himself"*.

Involvement in some form of community organisation is for some, an important part of their livelihood system. People are often motivated to join organisations by the opportunities for mutual support and for access to services, for example housing co-operatives, church groups providing welfare, gardening groups facilitating access to land and inputs etc. An example is the limited growth of community organisations in Mamelodi, where the few grassroot organisations which operate skills training schemes (sewing groups, brick making, nutrition and health awareness training) have been initiated from outside with incentives such as free food packages. Other active groups include social welfare organisations which run counselling services.

Social capital in the form of trust and co-operation becomes particularly important to the success of community enterprises, yet in the urban context, mobility and diversity of population makes it difficult to establish enduring community structures or self help initiatives. There is a link between poverty and the absence of social connections and wider group membership.

Household relations are aspects of social capital with household members involved in various relations of co-operation and joint strategising. Households are often fragmented, poor urban areas have high rates of poverty-linked divorce and female headed households. However, the specific nature of households in urban areas needs careful analysis; sharing of space does not necessarily imply joint economic decision making, nor does spatial separation of household members indicate the absence of economic and social support and obligation.

We explored the importance of rural linkages for households in the three study areas. The forms of support or exchange from urban to rural, included gifts of household goods or groceries (soap, salt, sugar). Some also provided agricultural inputs, seeds and fertiliser, cash for grinding maize, and gave money for absent children's clothes and school fees. In return, they received maize meal and other farm products (pumpkins, groundnuts, roundnuts). Relatives in rural areas were said to be poorer and lacking money. Reasons for lack of visits or infrequent visits and lack of support for relatives, relate to economic hardship and transport costs. Several people mentioned that rural visits were decreasing, restricted to funerals and parties.

Table 3: Urban-Rural linkages

% of households	Porta Farm	Epworth	Mamelodi
with rural relatives	85.7%	90%	54%
who visit	75%	88%	45%
who give support	46%	78%	44%

A further aspect of urban rural linkages is the retention of rights to land for cultivation. It is quite common in Epworth for people to return to rural areas for maize cultivation rainy season.

Awareness of local organisations and NGOs was quite high in all locations, but membership and participation is generally low in Harare and Mamelodi although there was active membership of NGO-run gardening groups in the Cape Flats. The Harare NGOs were mainly involved in service provision, rather than in facilitating community action for development. Lack of trust in leadership and the political affiliations of some organisations were disincentives to participation. In South Africa informal women's group have mobilised actively against crime, domestic violence and rape.

Social linkages between households in rural and urban areas and also intra-urban relationships are important in facilitating moves. Back yard renting to newcomers is common. In Pretoria and Harare, movements <u>within</u> the township from backyard to informal stand, preceded access to a permanent housing and having the right contacts with social and political influence was perceived as being very important. Social capital is also significant in accessing employment opportunities, through personal networks. An important question for policy makers is to consider how community initiatives could best be supported.

2.2.5 Human capital

Human capital refers to human capacity in terms of education, skills and health to undertake activities. One of the most significant factors affecting success in gaining urban employment is education and skill levels. Those who have the qualifications and skills to work, combined with health are at an advantage. Poverty can increase vulnerability to ill health, and the informal urban sector is characterised by insecurity of employment and lack of social security.

Among the Harare gardeners, 79% had some education, 38% beyond primary level. In the Cape Flats sample 93% of the gardeners had some education, but again only 38% had education beyond primary level. In all areas, women predominate in the less educated groups.

Opportunities for skills training in agriculture were absent in the Harare case study areas. Gardeners lacked information, both technical and financial and on marketing. However, many people originally from rural areas have past experience of farming, although this experience may not always be appropriate for urban small-holder conditions.

Around 2/3 of gardeners in the Cape Flats had had previous experience in gardening. In all locations, additional advice was rarely sought (Cape Flats), or was not available (Mamelodi, Harare). Gardeners' own experience and that of family and friends were the main sources of information. For gardening group members, NGOs were also important source of information and training.

2.3   Policies, institutions and processes

The livelihoods of urban people are shaped by institutions, organisations, policies and legislation. These are in turn conditioned by the macro-economic and broader political context.   Some examples of policy areas which affect people's access to assets and opportunities are:

- Environmental policy and land tenure security (natural capital).
- Policies on provision of urban infrastructure – housing, water, electricity, sewage. Politics on urban service charging (physical capital).
- Employment creation, credit provision, savings, business support, training (financial and human capital).
- Local governance mechanisms, city councils and people's representation in planning processes (social and political capital).
- Social security, education and health provision and support for the extreme poor (social and human capital).

The extent to which community level structures, local organisations, households and individuals can influence the policy process is very limited at present in our three study areas. Community organisations are based around meeting immediate needs rather than lobbying for policy transformation. Four areas were of particular significance:

- The limited extent of participation and consultation
- Problems of governance and the legitimacy and responsibilities of leaders and spokespeople
- Contested jurisdiction – where city councils were unwilling to take responsibility for informal urban areas
- Lack of political commitment

The major issue is the need for improved integration of different stakeholders into planning processes and to promote intersectoral planning which recognise links between for example, land access, cultivation and nutrition, water and sanitation and health, etc. Policies on urban agriculture in the three study areas are discussed in detail in section 3 of this paper.

2.4   Livelihood strategies

Livelihood strategies can be understood at different levels, from the macro population and labour statistics, to micro household level activities and incomes. It is important to recognise that ownership of assets does not always translate into effective livelihood strategies. A balance between assets is critical to make best use of opportunities, e.g. where access to land of reasonable quality exists, credit, markets and access to inputs are critical in order to expand agricultural production.

Some writers have distinguished between different kinds of livelihood strategies, for example, survival, "coping" and accumulative. There are problems in drawing this distinction, not the least because it is analytically suspect to read intentions from livelihood outcomes. For example, most poor people intend to accumulate, but few are successful. It is difficult to distinguish between explicit household level strategies intended to promote change and development, from people's reactions to their circumstances with various kinds of "coping mechanisms" which constitute a short-term response to an immediate problem,

within the existing rules and conditions. It has been argued that the lowest socio-economic groups undertake vegetable gardening out of absolute need as a survival strategy (Eberhard 1989), while others are primarily concerned with maintaining current standards of living and minimising vulnerability to breakdown in formal food supplies. (Thorgren 1998:11).

According to Rogerson (1998), the interest in urban agriculture is related to the economic opportunities available to people as part of their livelihoods. One hypothesis is that urban agriculture is a last-resort coping activity. An alternative view is that diversity of income sources helps to create livelihood security and that urban agriculture is undertaken as an additional activity where some basic resources and household labour are available. Hence it could be interpreted as a diversification strategy where some form of income already exists (pensions, income from informal trade, etc).

The comments of a group of gardeners in Mamelodi discussing the characteristics of poverty provide insights into the practical experience of poverty and some of the strategies of dealing with it. Their main ways of surviving in urban areas are selling, stealing and casual work. A poor person;
- does not have money
- does not have property
- does not work
- is always asking for food and money

" *Women suffer most as they look after children; men don't suffer, they just drink too much. Many survive out of pension money and growing vegetables like us.*"

A second group from the informal settlement in Mamelodi discussing the same topic, came up with this description of a poor person:
- lives in squatter area
- lives in a shack, single lady with no children, little space
- children suffer most as parents go and drink beer and come home and sleep
- wives and kids staying alone suffering
- high crime because of poverty, do not have anything to eat
- people are unemployed, they go back to farms to grow crops and come back to sell their crops
- no money in pockets to pay to go and look for a job. Nobody will give you a loan because they know you don't have money to repay.
- parents and relatives in rural areas do not know about that; you hold it inside your heart, you don't expose it.
- lack of self esteem: you don't dare to go and ask for help, how are they going to classify me?

The relative poverty of rural compared with urban dwellers was a subject of some debate. In Mamelodi formal area they thought that poor people in rural areas were worse off than people in urban areas since they lacked support programmes, clean water, electricity or nearby hospitals. In contrast, a group in the informal settlement, considered rural people to be better off, having a large land area, growing crops for their own food, owning animals, and general in less poverty. The urban poor have little space to grow crops, and have to buy all inputs. People who are unemployed, go back to rural areas to grow crops, returning to sell them in town.

Culture and values influence the particular choices and combinations of livelihood components and strategies. For example, growing crops is part of people's identity in Harare. However, cultural values are also subject to change (Tacoli 1999), particularly gender and generational roles (see later section on motives for involvement in urban agriculture). .

The main enabling factors for increased participation in urban agriculture include, availability of information and training, low input labour efficient technologies, access to land of suitable quality, tenure security, group organisation and structures, leadership, good facilitation and communication, community trust and networks, a separation of political and development interests, market demand for vegetables and supportive local government policies. Policies need to be supportive of diversified strategies.

2.4.1   Characteristics of participants and non-participants in urban agriculture
There are a number of generalisations about participants in urban agriculture, e.g. predominantly women, the elderly and those with limited education. Our study has thrown some light on these stereotypes.

The notion that gardening is an activity of larger households with available labour and predominantly a female activity was examined. There is no particular association of gardening with household size in the Cape Flats. However, in Harare gardening households were on average larger than non-gardening (4.75 for gardeners and 3.47 for non gardeners). There are marked differences in household structure between Cape Flats, Mamelodi and Harare, the most significant being the low proportion (39%) of married household heads and the higher proportion of single people (37%) in the Cape Flats, compared with 78% and 2% in Harare.

Table 4: Household heads – gender and marital status

	Households in survey	Male headed	Female headed	Married	Widow	Divorced Separated	Single
Harare	88	78%	22%	78%	7%	13%	2%
Mamelodi*	68	63%	37%	53%		43%	4%
Cape Flats*	119	57%	43%	39%		24%	37%

* For Mamelodi and Cape Flats, in most cases the survey did not specify between widowed, divorced or separated.

Findings in all three study areas confirmed that women were frequently involved in gardening activities. Nevertheless, men are active in gardening, particularly older men in some of the gardening groups. The majority of female-headed households are involved in gardening and in male headed households it was interesting to note that the main gardener was not necessarily the head of the household. In Cape flats just over half (57%) of the gardeners were female. In Harare 68% of garden managers are women whereas only 22% of household heads are women.

In Harare, among the family members assisting with gardening 64% are women or girls and 36% are men or boys. Children also assist in gardening in Mamelodi although their interest is limited.
" 'They can't use their hands to work. The only thing they know is clothes, money and school.'
"The thing is that they can't work, they only work with pens and paper, just like you!'

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Gardening as an occupation for the elderly was not supported by the Harare information, and only partly relevant to the Cape Flats and Mamelodi. (see table 5).

Table 5: Proportion of gardening households and average age

	Households in survey	Gardening households Number	%	Average age garden heads
Porta Farm	28	23	82%	40
Epworth	60	46	77%	36
Mamelodi	68	43	63%	42
Cape Flats	119	42	35%	45

Urban agriculture tends to be associated with lack of formal sector employment. The urban poor, both men and women, find most of their employment opportunities in the informal sector, and this also applies to the gardening households. The informal sector has the advantage of flexibility but it is very insecure. The range of employment undertaken by the households in the three locations is shown in table 6. Men appear to have more opportunities in formal employment; in Epworth, 39% of men's occupations were in formal employment, while 40% of women's were in informal trade.

Table 6: Main occupations and sources of income

Porta Farm	Epworth	Mamelodi	Cape Flats
	Formal employment (health, army, security guard, local board, companies, transport) (mainly men)	Formal employment (factories, companies shops)	Formal employment (manufacture, electricity and water, hotels etc)
Selling fruit and vegetables	Informal vegetable and fruit traders (mainly women)	Informal fruit and vegetable traders	
Building construction	Mechanics/builders/ carpenter - self employed (men)	Self employed (builder, transport, electricity)	Self employed /informal labour agriculture, fishing, construction,
Informal trade (clothes, firewood, fish)	Informal trade	Sale of cold drinks, ice blocks etc	
farm labour	Piece jobs, farm wage labour	Piece jobs	
	Domestic work	Domestic workers, security guards	Domestic work, security services
Sewing, weaving carpentry, basket work, metal work	Sewing, knitting, hairdressing		Hairdressing, knitting, sewing
	Pensions	Pensions	Pensions
	Remittances	Remittances	Remittances
	Rent		Rent

2.4.2 Livelihood strategies - motives for involvement and non-involvement
The advantages of urban agriculture are commonly assumed to be in improved nutrition, a source of income/substitute for cash purchases of the household, and social and environmental benefits. Urban agriculture has a role in helping to build social and human capital, as a possible entry point for community development, increased social interaction,

health and nutrition improvement, increased environmental awareness and improved social and technical skills. It can contribute to the alleviation of poverty, enhance the quality of life, provide alternative and improved environmental conditions. One women from Mamelodi expressed her reasons for gardening as follows;

"I grow food, for home consumption and to cut expenditure on food. The money I save on buying tomatoes can be used for something else. Also my husband passed away in 1994, so I needed to do something to feed myself and my family. It also helps me to settle my mind. If I just stay at home I spend my time thinking and worrying about many things, like I need to buy so and so and I need to buy this. When I am at the garden I can just concentrate my mind on something else. If it is 1 o'clock I think I want to finish this piece and if it is 3 o'clock, I want to have done this piece of land. It also keeps me fit, otherwise my body becomes old and stiff. I also like flowers very much. I enjoy talking to them and then they become very big!. " (Woman from Mamelodi.)

Motivations for gardening vary across the different case study areas (table 7). The role of social and aesthetic factors are important in Cape town, whereas survival strategies are uppermost in Porta Farm and Epworth. In Zimbabwe, urban agriculture serves an important cultural function as cultural and social identities are shaped to a large extent by access to land and cultivation of major crops and vegetables. As one respondent put it very clearly, *'you can't buy what you can grow yourself'*. Another women emphasised that it was African culture for women to till the land and thus her involvement in urban agriculture was also a step towards maintaining her culture'. (ENDA, 1996). In all areas, expenditure substitution and income generation play an important role. Community development and assistance was a motivation for some groups, who felt they could build other initiatives by starting with gardens.

Table 7: Ranking of reasons for gardening

Cape Flats		Mamelodi	Porta Farm	Epworth
Gardening Groups	Individuals	Individual gardeners		
Income	Save money	Home consumption	Save money	Save money
Subsistence	Pleasure	Exchange with relatives/neighbours /friends	Survival strategy	Food for home
Community development	Home grown food	Sale	Food for home	self sufficient
Previous experience	Beautification	Enjoyment	self sufficient	Income
Employment	Helping others	Trial	Income	Survival strategy
Pleasure	Income	Save money		Enjoyment
Food security	Employment	Likes onions		Utilisation of land
Interest	Previous experience			

Views in the communities were varied - some see people involved in agriculture as wasting time on unproductive work which does not bring quick money.

"Some think the garden is too small and a waste, but if they see the products and don't have anything themselves, they come to ask, and this is when they start to appreciate." Gardener, Porta Farm.

Other negative attitudes to agriculture in South Africa were associated with the low status attached to agriculture in the past, the slowness of returns from agriculture compared with the more rapid benefits from trade. On the other hand, many felt that people who are growing crops are benefiting their families and the community at large as they are improving the nutritional status of the poor. Those involved say they have managed to feed their families through the growing of crops, while others have managed to sell something, and used the proceeds to cater for other households needs. In households without gardens in the Cape Flats, 89% of those without employment said that they wanted a garden.

Reasons for not gardening were similar in all locations. Lack of space was the highest ranking reason why some families did not garden. The limited space available to individual gardeners has to compete with other uses, such as a children's play area, construction of further dwellings, fruit trees, lawns, ornamentals, a shop, workshops etc.

The status and security of tenure of the land was also important, as one resident, living in a zinc and wood house, stated:

'I want to change things in my garden, but my problem is that the council will come and build new houses and stand on and kill my plants when they are building' (Khayelitsha Resident).

However, permanent structures do not necessarily encourage urban vegetable production because the increased social status associated with permanent housing could promote ornamental rather than vegetable gardens.

Other reasons for non gardening were - problems with the soil (described as too sandy), lack of time or energy to work in the garden, lack of experience, lack of access to inputs and resources, lack of security, a preference for non-vegetable gardens and proximity to sources of vegetables (such as shops or market places)

Table 8: Main crops grown by gardening households

Mamelodi	Spinach (76% of gardeners), onions, pumpkin, beetroot, cabbage, maize and tomatoes, sweet potatoes, potatoes, carrots, peppers, sugar cane, fruit trees
Cape Flats	Potatoes (75%), cabbage, spinach, tomato, onions, maize, carrots, beetroot.., beans, pumpkin, peas, green peppers, flowers, trees
Harare	covo, rugare,[6] sweet potatoes, rape, beans, viscose, tomatoes, okra, pumpkin onions and potatoes, fruit trees, traditional vegetables (*Cleome gyandra, Corchorous spp*), pumpkin leaves, cowpea leaves

Preferences of the gardening groups were rather different. Lettuce which is among the top four crops favoured by gardening groups is not generally grown by individual gardeners (ranked 21st). This may reflect the availability of seed from NGOs and market demand. Potatoes, the most popular crop for home gardeners is only tenth for gardening groups.

2.4.3 Livelihood outcomes: the contribution of urban agriculture?
In contrast to the advantages claimed, urban agriculture, at least in the Cape, has been considered by some to play an economically insignificant role in poor households (Eberhard 1989). Others believe it is "highly significant in terms of creating a supply of food for the family which procures substantial household savings (Small, quoted in Sandler 1994:28).

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[6] covo, rugare, rape and viscos are *Brassica rapus/oleracea* varieties

Our findings illustrate ways in which urban agriculture contributes to livelihoods across a range of dimensions, many of which are more significant to participants than financial profit. In the Cape Flats, people commented on a sense of well-being arising from an improved environment and productive use of time. Informal exchange of vegetables bartered for other products or services increased their ability to survive. It made an important contribution to the intake of fresh vegetables and reduced food expenditure.

Vegetable production does appear to substitute for expenditure. We looked at the weekly expenditures on vegetables and other foods for gardening and non-gardening households. The Capetown and Harare data both show average weekly expenditure on vegetables is lower for those households who are gardening than those who are not. However, the levels of cost of inputs and gardeners time (even at low opportunity cost) have not been factored into this discussion.

Table 9: Household expenditure on vegetables - Harare (Epworth and Porta Farm)

	Average weekly expenditure on vegetables			Average weekly expenditure on vegetables, fish and meat		
	All households	Gardening	Non gardening	All households	Gardening	Non gardening
Epworth (per HHld)	48.54	40.77	74.07	187.8	192.27	173.14
Porta Farm (per HHld)	35.1	26.1	76.6	102.7	99.78	116.4
Epworth (per head)	10.30	7.78	24.7	39.81	36.70	57.70
Porta Farm (per head)	8.9	6.9	15.9	25.92	26.38	24.25

£1=59-61Z$

In the Cape Flats study, average expenditure (including all extreme values), for non-gardening households was approximately R32. When the outlying extreme values are excluded, the figure drops to R27 compared with R19 for non gardening households.

The most significant factor in determining participation in urban agriculture and positive outcomes was secure access to land of sufficient size. In the Cape Flats, individuals increased their access by joining a gardening group, most of which had accessed vacant land through agreements with local schools or churches. In Harare, access to land was a complex political issue around which most people felt unable to actively engage.

In summary, the following appear to be critical enabling conditions for effective participation in urban agriculture.
- Access to natural capital – secure access to land and water, suitable soil conditions
- Available physical capital - tools, fencing, irrigation, inputs and markets
- Social capital in the form of co-operation and participation, exchange of inputs and products
- Financial capital- cash for inputs
- Human capital – availability of information, training in gardening skills and labour.

The next section explores some experiences of initiatives which have tried to promote urban agriculture.

3. FACTORS AFFECTING OUTCOMES OF URBAN AGRICULTURAL INITIATIVES

Our study of different urban agricultural initiatives (government and NGO) illustrates the political complexity of group mobilisation, the need for training and capacity building, the difficulties of achieving sustainability and reducing dependency on external funding.

The study locations varied greatly in the extent to which agricultural projects had been initiated. In Epworth, two women's farming groups producing horticultural crops for sale were trained by the NGOs Plan International and were visited weekly by the extension officer. No urban agriculture groups were operating in Porta Farm. There were a number of agricultural initiatives encountered in Mamelodi, receiving some intermittent support from NGOs. Urban agriculture projects in Cape Flats were more structured and organised than those for Mamelodi, although comparisons should be made with caution due to the different histories and cultural and economic circumstances of the two areas. All those investigated had links with NGOs who directly support grassroots urban agricultural projects. Case studies of eight gardening groups in the Cape Flats were carried out, covering four townships (Langa, Nyanga, Philippi, Khayalitsha).

The process of obtaining land and other forms of support for group agricultural initiatives can be long and complex as problems of group action are compounded by the difficulties of negotiating official land application procedures. Few township residents have the resources, networks and knowledge to take their applications forward without support. For the Cape Flats groups, access to land was obtained through churches or schools. One group was using servitude land (open space designated for urban service supply infrastructure.

The groups were receiving different forms of support from a number of NGOs, the Land Development Unit, the Food Gardens Foundation, Tsoga, Abalimi Bezakhaya, and Quaker Peace. Some were specifically focused on urban gardening (Food Gardens Foundation) while others dealt more widely with agriculture and environmental issues in the urban context (Abalimi and Tsoga) or in the urban and rural areas (LDU) while the Quaker Peace Centre included urban agriculture within its broader remit of peacemaking and community development. Groups varied in size between 7 and 113 members, most of whom were women. The initiatives for founding the groups in most cases came from an individual from within the community, who enlisted the assistance of the NGO.

Some group initiatives maintain a policy of joint cultivation and work allocation while others favour individual management of plots and work input. In the latter case, group membership gives access to benefits, but is not so dependent on group collaboration and cohesion. The largest gardening group planted and marketed its crops on individual basis; all the others worked collectively. Four of these distributed income earned to individuals, in the other three the benefits remained the property of the group to be used for further purchases.

There were important variations in group management. The group took responsibility for its decisions and activities in 4 cases, (three of which had dominant leaders). Two groups expected individuals to be responsible, although with some NGO supervision, while in the other two cases the NGO took responsibility for collective plots while individual plots were the responsibility of the individual gardener. Problems included lack of motivation especially among younger people, lack of access to land, group conflict, no remuneration for volunteers.

The case study in box 5, illustrates the organisational and capacity building problems faced by NGOs and community groups in establishing such gardens. While the more hands-on style of NGO management secures the operation of the group, it can endanger the group's sense of ownership.

Box 5. Siyazama Community Allotment Garden

Box 5: Siyazama Community Allotment Garden

Siyazama Community Allotment Garden (SCAGA), Khayelitsha was started in 1997 after the local council agreed to let the group use an area of land lying beneath a power line. Although they do not have a formal lease, the group feel reasonably secure in the land, since it has no alternative use. Initially SGAGA was a very strong group with a strong leader, but differences over financial issues disrupted the group dynamics causing disagreement and de-motivation. The problems were also influenced by the departure of the NGO (Abalimi) staff member who had worked closely with SCAGA. There was diversity among the members of the group both in their level of education and their expectations of the garden. The educated who tended to dominate the committee, were less interested in the practical activities of gardening, but rather saw the group as means to access other resources, not necessarily connected with gardening. The group was about to collapse, but the NGO agreed to take over the management of SGAGA for a three year period, because of interest from potential funders and government departments, and the value of the garden as a demonstration model.

NGO policy on group support is interesting as it relates to the sustainability of the groups. Several support the establishment of gardens, but do not provide inputs, payment or incentives for group members, although they might help groups to organising funding raising events. Others provide subsidised inputs, food parcels etc. This can be problematic where production is a group activity, income is reinvested and no direct individual benefit is received. In the latter case, there is a risk of the NGO being used by groups to access resources rather than providing opportunities for needy to be involved in agriculture.

The facilitating role of the NGO can encourage the gardening groups to become involved in other income generating activities through information, training and linking with donors and publicity. An example of this kind of facilitation is in box 6.

Box 6: The Masizakhe gardening group

> *Box 6* *The Masizakhe gardening group*
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> The Masizakhe gardening group is part of the Masizakhe environmental project, which is in turn part of a larger community movement started in 1990, a period of civil unrest and rent boycotts in New Crossroads. A local community member initiated an after-school and pre-school care programme which later developed into a community action group, including from 1997, the Masizakhe Gardening Group which has a particular focus on youth. Among the youth members of the gardening project are a number of artistically talented youths who are also part of a self-initiated artists group. They have completed a number of projects including a mural depicting gardening activities, painted on one of the walls surrounding the Masizakhe garden. This has contributed to local interest in the activities taking place on the premises. The group has received training in a variety of art forms and were assisted through the provision of cargo containers to house their activities. They have begun teaching children from the adjacent primary school and hope to involve others in their projects, especially destitute street children and the unemployed. This vision is complementary to the soup kitchen planned by the Masizakhe gardeners and it illustrates how the developmental nature of urban agriculture may be more than simply supply of vegetables for food security but may include and even result in extensive social networking and support bases for disadvantaged communities.

Most South African NGOs and welfare organisations have recognised the importance of small scale urban agriculture in terms of food security and its social function and seek to promote gardening activities through extension, training, and occasional input supply (seeds, fertilisers). However, town planners and policy makers tend to view urban agriculture as a way of promoting economic development and are in favour of highly organised and intensive production systems. An illustrative example is the urban agriculture project implemented and funded by the Directorate of Metropolitan Economic Development, part of the Greater Pretoria Metropolitan Council. Their main objective is employment creation with sustainable commercial incomes through promoting high input and capital intensive production systems with hydroponics and growing tunnels to produce flowers and tomatoes for the main produce market in Pretoria. Implementation of the project has been rather problematic due to communication problems, conflicting interests, lack of training or development of management capacity.

A similar perception can be found with the Harare town planners as the Master Plans mainly stress the importance of intensive agricultural production systems at the periphery of and within urban areas to sustain urban food supply and export. Although the Department of Agriculture in South Africa has recently launched its Food Security Programme, which is geared towards small scale backyard farming, it is not clear whether this is part of a long term strategy considering the recent policy shift at national level with regard to agriculture and land reform.

For many urban areas, the social and economic factors relating to poverty and which constitute a good reason for participation in urban agriculture (unemployment, low education levels and organisational experience, lack of social connections etc.) are likely to be those which make group development most difficult. This is a very important challenge for NGOs or government departments who wish to support such groups.

Some of the factors supporting successful initiatives included;
- A community member with vision and initiative, supported by the NGO
- Building on existing community initiatives
- Training given at outset
- Facilitation of supply of inputs seeds, manure, fertilisers and technical advice
- Land access through churches or schools.
- Support from other donors, including private sector e.g. for fencing, tools and sheds.
- Members from same neighbourhood and already socially linked.
- Transparency over financial issues.
- Consensus over objectives

4. LINKAGES BETWEEN URBAN AGRICULTURE AND PLANNING

Appropriate policy responses to support urban agriculture as part of sustainable urban livelihoods are needed. In Southern Africa there is increasing awareness and interest among policy makers concerning the potential of urban agriculture, but present policies provide limited support. Government and private sector (and some NGO) interventions tend to promote profit-driven and capital intensive agricultural enterprise. These approaches tend to underestimate the social transformation and capacity building required for collaboration in and management of such enterprises. Urban development planners need to develop appropriate supportive policies for the different kinds of urban agriculture based on consultation with the different social groups. For informal agriculture the relevant issues include access to land and water, tenure security, gender sensitive extension information and training and labour efficient technologies, while for group initiatives, support to develop group organisation, leadership, management and financial skills and market information are important.

4.1 Historical and political context of urban land use planning policies in Southern Africa

The institutional context of urban agriculture in South Africa and Zimbabwe is quite specific as land use planning and urban development have been very much influenced by previous colonial and subsequent former apartheid policies. Although new governments have attempted to design and implement policies based on principles of equity and equality, progress so far is very limited and the past is still negatively reflected in today's urban people's livelihood and their highly skewed access to natural resources.

Well known characteristics of the apartheid politics were:
- Legislation based on racial definition: differential access to resources according to race
- Imposition of a geographical and spatial separation of races in terms of place of residence, land ownership and work
- Services and benefits for indigenous people should be financed by the township residents themselves (e.g. levies on locally brewed beer)

Land ownership in South Africa is among the most racially skewed in the world. Large capital intensive farmers dominate much of the rural areas, with only 28% of the population living on 88% of the agricultural land. In both countries, urban areas were mainly allocated to and designed for whites; the indigenous population was only allowed in towns to supply cheap labour and had to return to the rural area upon retirement[7.] Colonial urban planning ensured a spatial separation of black and white residential areas and initial housing provision for the indigenous population was very basic and only catered for single men. However, despite apartheid laws to regulate migration patterns, the industrialisation that took place after World War II resulted in an influx of rural migrants in search of work in urban areas. Women also moved into towns to stay with their husbands. The rural-urban migration triggered population growth resulting in a significant increase in population size and changes in composition of households (Zinyama et al., 1995). As a consequence of inadequate and ad

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[7] These labour reserves were called *Homelands* or *Bantustans* in South Africa and Communal Areas in Zimbabwe.

hoc housing and urban development policies, black high-density townships emerged, which lacked infrastructure, amenities, health care, education and leisure services and opportunities for employment and business. These characteristics continue to challenge present-day Southern African town planners.

In both countries, South Africa and Zimbabwe, those involved in urban agriculture were facing similar constraints to the uptake of urban agriculture. Their main concern was access to land and insecurity of land tenure, followed by lack of institutional recognition and governmental support. These concerns will be explored and illustrated with examples from the case studies in the following sections.

4.2 Institutional constraints of Urban Agriculture

4.2.1 Insecurity of land tenure:

Several papers on urban agriculture have referred to insecurity of land tenure as a major draw back for the development of a sustainable urban agriculture for the benefit of the urban poor. Especially in peri-urban areas undergoing rapid urbanisation, with an accelerated land use shift from agricultural to urban, access to land becomes a crucial issue as new people move into the area in search for land to settle. A major constraint identified for urban agriculture is the high demand for the available land for residential development since gardens require resources that could be otherwise utilised creating high opportunity costs, from both an individual and governmental perspective. Utilisation of land for industrial, commercial and housing purposes corresponds to a widely shared modern image of what cities should be like and is usually associated with higher levels of return.

Table 10: Gardeners' opinions of the role government should play in Urban Agriculture

What role should the government play towards urban agriculture?	Number & % of respondents (Epworth)		Number & % of respondents (Porta Farm)		Total	
					No.	%
Allocation of land	22	29.3	7	21.9	29	27.1
Support with inputs	12	16.0	10	31.3	22	20.6
Support as poverty alleviation (food, work)	11	14.7			11	10.3
Support training	8	10.7	3	9.4	11	10.3
Recognise UA as survival strategy and promote			7	21.9	7	6.6
Support like in the rural areas	4	5.3	1	3.1	5	4.7
Nothing*	3	4.0	2	6.3	5	4.7
Forming co-operatives	3	4.0			3	2.8
Prevent soil erosion	1	1.3			1	0.9
Improve access to water	1	1.3			1	0.9
Not applicable	10	13.3	2	6.3	12	11.2
Total	75	100	32	100	107	100

* 5 respondents felt that the government should not do anything to support urban agriculture as they did not see it as a solution for current poverty, it was more seen as a stop gap measure. They argued for the government to focus on employment creation and development of housing and services, the demand and value of land was considered to be too high to encourage urban agricultural activities.

The Harare study found that most respondents felt that the City Council should allocate suitable land for agricultural activities (table 10) whereas the council claims that there is no

land available for cultivation because of the need for development of industries, housing and commercial activities. However, a study by Masoka (1997) showed that large tracts of land had been purchased by the government but had not been developed. Moreover, the City Council is not informed about the quality and potential development opportunities for these areas due to limited technical and financial resources.

In South Africa, the National Department of Land Affairs has been proactive in developing land reform policies to facilitate access to land by the poor and disadvantaged communities. Based on the White Paper on South African land Policy (DLA, 1997), the Department offers several grants and services to improve access to land and restructure some of the highly skewed land distribution inherited from the previous apartheid era. One process identified is the relocation of municipal commonage property to poor residents, who wish to supplement their incomes with agricultural activities, that could assist to address local economic development (Meadows, 2000). However, recent evidence suggests that it is highly unlikely that it will have served the urban poor at all. In 1999, the Department had to admit that they only had been able to deliver 1% of their services due to inadequate budget, shortage of staff and lack of wider institutional support for land reform in other spheres of the government. Furthermore, land reform policies have been criticised for being mainly oriented towards the rural areas, neglecting the specific context and needs of the urban population. 'While sections of the document [White Paper, 1997] do address the questions of urban land reform, they tend to depict urban people as dwelling within a different world' (James, 2000).

Recently, the new Minister for Land Affairs and Agriculture under President Mbeki has postponed the land distribution activities in process, including the passing of the long awaited tenure reform bill. Instead he has called for financial support for black commercial farmers which clearly marks a shift away from the needs of the poor (James, 2000). It is not yet clear how this policy change will affect access to land for urban agriculture, but is likely that it will be even less accommodating than it was before.

In addition, insecurity of land tenure is especially an issue in the marginalised informal settlements because of the very high concentration of the urban poor and vulnerable social groups living in those areas. Several authors have mentioned that the importance of tenure tails off with increased incomes as these groups have access to other forms of security in their daily lives (Zinyama et al, 1993). The need for access to land and security was also confirmed during fieldwork as the majority of the respondents mentioned the possibility of having a stand of their own as the most important reason to move into the informal areas, taking the risk of being evicted in the first place. The survey has shown that a large number of the 'squatters' are not necessarily newcomers to the areas but have moved in from the more established areas as they are second generation of either long term residents (originals) or migrant households who came over 15- 20 years ago. They are often young couples in search for their own place to start their own family/nuclear household. The most important housing-related needs of low-income households are access to, or linkages with, the wider urban environment.

4.2.2 Access to land linked to political processes

Our case studies have shown that within such a dynamic peri-urban and urban context, access to and/or ownership of land becomes a crucial asset (see also Foeken and Mangwi, 1998, Zinyama et al., 1993). Land was incidentally described as "gold" and access to it is intrinsically linked to political processes. Land allocation is an arena for obtaining, establishing and consolidating local political power through regulating access to permanent

serviced stands that are in high demand. The government seeks to develop serviced permanent stands, including subsidised low-income housing. However, applications for such stands far outnumber the supply and are therefore subject to speculation and local conflict.

In Mamelodi, although the area is mainly ANC dominated, local politicians are in competition and some of the serviced sites have become a medium to ensure political support/power. Procedures put in place for applications for permanent stands were 'misunderstood' and two different waiting lists of selected applicants, spearheaded by competing politicians created confusion over who was actually entitled to a permanent stand. In February 1999, it caused a violent outbreak in parts of Stanza Bopape; people invaded the area under development and were finally forcibly removed by police, army and bulldozers. Also internally, violence took its toll as private properties and community sites such as children's playgrounds and kindergartens were destroyed and burnt down. In September 1999, the court had yet to rule about the case.

The high demand for land for residential and commercial development and the ambiguity surrounding land tenure, has tended to create conflict situations. There are several examples of conflicts over land use, especially related to off plot cultivation. In Mamelodi, the City Council had earmarked an area under cultivation for recreational purposes and intended to develop a park and children's playground. In one area the cultivators were ordered to leave whereas in another area, the cultivators were more fortunate and the City Council compromised by reducing the area for recreational purposes and allowed continuation of cultivation.

Land tenure is especially a contested and political issue in Epworth, as three different types of ownership co-exist and conflict with each other; customary land tenure, individual land ownership and state land ownership. In Zinyengere, an established area of Epworth, the situation became volatile when newcomers had settled in an area that the original settlers claimed was under their ownership and used for cultivation and grazing. They attacked the new settlers and burned down their houses. The Epworth Local Board decided not to intervene, tacitly acknowledging the original settlers entitlement to these vleis[8] and perhaps adding weight to their own generally unsuccessful attempts to control the influx of new people. In addition, vleis are considered to be unsuitable for residential development due to a high underground water table. The relationship between the Local Board and the same original settlers became tense when land was taken from them for upgrading a local primary school without any compensation and consultation. The original settlers claimed that it was their land, held under customary tenure rights, referring to the fruit trees planted by their 'grandfathers'. In contrast, the Land Board claimed it to be state land that had been handed over by the Methodist Mission in 1985. In addition, the Board stated that public interest precedes individual interests, and therefore improving primary education was of higher priority than individual needs for land for cultivation.

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[8] Vleis, also called *dambo's*, are low lying, often vacant areas, with a high water table and therefore not suitable for residential development. The soils provide very unstable foundations because of heaving and shrinkage during wetting and desiccation. Most off plot cultivation takes place in the vleis, although people who need a place to live have constructed mud houses for living in a continuous battle to save their houses from cracking and crumbling down.

4.2.3 Policies on land applications are complex and poorly understood by intended beneficiaries

In both countries, legitimate access to land for cultivation is hampered because of complex, non-transparent or non-existing procedures for land application. The existing procedures are highly bureaucratic, time consuming and complex, which makes it very intimidating for gardeners, who generally lack the knowledge, information and contacts to file an application. In Pretoria, applicants can be either individuals or co-operative bodies who have to prove that they will be able/willing to pay the monthly rents. These applications for land allocation[9] need to be approved by the 18 different city council departments and by local representatives such as the Ward Councillor and the Planning Zone Forum (see box 7). Efforts of an established gardening group in Mamelodi to get legal entitlement to the land they had been cultivating for the past ten years were repeatedly frustrated by the complex and time consuming procedures. Only through the recent involvement of a committed local NGO staff member and the Department of Agriculture (as part of their Food Security Programme), does their request for official recognition appear to have a good chance of approval through the cumbersome government machinery.

In an effort to control the spread of urban agricultural activities and in line with the favoured socialistic framework, the Zimbabwean government tried to encourage the formation of farming co-operatives that could apply for land rather than allocate land on an individual basis. Although the government and City Council claim to have procedures as such, they are not transparent and accessible to either government officials or the intended beneficiaries. Most, if not all, co-operatives are utilising the land without official permission as they are not aware of existing channels for application, neither did the government seek to actively implement them (ENDA, 1996). Another illustrative example is of a Mr. X who has committed himself to put the issue of urban agriculture on the political agenda to work towards a controlled and regulated environment for sustainable urban agriculture. Based on the City Council officials' information that procedures for land allocation were laid down, he tried to apply for a plot, as a test case, as no one could really outline these procedures to him. However, he was passed from pillar to post and finally he was referred to himself by a helpful official (personal com).

4.2.4 Promotion of urban agriculture as a temporary use of vacant public and private lands

Rather than allocating land to permanent use for cultivation activities, City Councils tend to favour urban agriculture as a temporary use of vacant public and private land until the land is earmarked and developed for a different, usually higher status, purpose. Bakker et al (2000) mention that organised groups have been assigned undeveloped public arable land for fixed periods of time in the cities of Harare and Gweru in Zimbabwe. However, in reality it has never been properly implemented due to lack of clear procedures for land allocation (see also section on policy).

In the few cases that groups have been allocated land, people have often organised themselves for the sake of gaining access to land, and once access is granted, they immediately divide the land into individually managed plots. Our survey indicated that there is a strong preference for farming on an individual basis. The major reasons for lack of interest in group initiatives, were that individuals felt they had sufficient knowledge for independent operation, time constraints, a preference for independence, the lack of mutual trust and co-operation, and the perception that gardening is merely a subsistence rather than a cash generating activity.

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[9] Depending on the case, the lease contract can vary from few years up to 99 years.

Among those who were interested in joining a gardening group, the main incentive was to share knowledge. Only a few respondents mentioned the financial benefits that might result from joining a group, for example from improving access to land, receiving donor assistance and economies of scale.

Some of the Harare City Council staff members felt that temporary use of vacant public land hampered them in carrying out their work appropriately, as construction or upgrading development projects were often delayed because of cultivated plots and the removal and damage of early pegging and measurement work.

In contrast to Harare, urban producers in Cape Town and Pretoria have often negotiated access to land with owners of private or semi public estates such as schools, clinics and social welfare organisations. Schools often encourage garden activities within their compound as a way of creating awareness and interest among school children in agriculture, a subject that is generally perceived as having a very low socio-economic status.

4.2.5 Lack of clear policy with regard to urban agriculture
In South Africa, there is no comprehensive policy specifically geared towards to urban agriculture as urban town planners in general do not view it as a potential land use within the urban areas. Individual sections or Departments might develop activities related to urban agriculture but it has not yet been institutionalised and integrated within other policies. Pretoria's City Council's attitude is neither prohibitive or accommodative, but seems largely centred around the issue of conflicting land uses. Utilisation of vacant land for agricultural purposes does not seem to be prohibited as long it does not interfere with other planned development activities.

The Provincial Administration of the Western Cape has drafted a policy with respect to land use for agricultural purposes. Although primarily focussed on peri-urban areas it might also be applied to the urban areas. It intends to facilitate access to land for development of agricultural holdings and give guidelines to local authorities on how to encourage and/or implement such urban agricultural projects in conjunction with the Department of Agriculture and the Department of Land Affairs. However, the scale of farming activities can range from subsistence to commercial and the bottom line is that public land, earmarked for disposal will be sold at market prices. One of the underlying procedures is that people have to organise themselves into legal entities before they are allowed to act on behalf of the local communities (Meadows, 2000). Again it assumes a fairly advanced level of local grass root organisation which might exclude individual initiatives, especially of the urban poor who tend to be disadvantaged in terms of access to information, political, social and financial capital.

In Zimbabwe, although land is a crucial issue, environmental concerns are the core issue in policy discussions around urban agriculture, dating back to the previous colonial government. Despite the fact that the opportunities and limitations of urban agriculture have been part of the public debate in Zimbabwe for many years and the City Council have made initial attempts to address the issue, to date they have failed to develop a appropriate framework for the regulation of urban agriculture. Urban agriculture has generally been tolerated and even supported in Harare, although it has not been formally integrated as one of the City's official land use options. Both in literature and fieldwork, 'politicking' is often referred to as the main factor hampering the policy process and underlies the political unwillingness of city

councillors to take the issue forward[10.] In addition, there is no coherent view among the different City Council Departments and government departments about the role of urban agriculture and how it should be regulated which makes it more complicated to reach a consensus. Lack of interest to tackle the issue is also related to the City Council's lack of resources and technical skills to actually enforce any regulations coming out of this policy.

Overall, both central and local government's view on urban agriculture in the sense of cultivation on public land is negative with nuances among the different departments and differences in opinions about each other's actual responsibility and role to play vis a vis urban agriculture. First of all, the central government does not have the mandate for natural resource management in Harare but it lies with the City of Harare as specified in the Regional, Town and country Planning Act, sections 10 and 15 (Gvt of Rhodesia, 1976). However, the central and local government are linked together through the Ministry of Local Government, Housing and Public Construction that allows the central government to control, interfere and monitor local government's activities in urban land use planning, housing and finance. In addition, although the Urban Councils Act empowers the Local Authorities to formulate their own by-laws, they have to fit in the existing framework (Mbiba 1995, ENDA, 1996, Government of Zimbabwe, 1995).

However, the national legislation on natural resources management does not provide for an enabling framework as it consists of 18 pieces of legislation administered by at least 8 different ministries with hardly any co-ordination and linkages across the different Departments. Most of the environmental regulations date back to colonial times and therefore fail to address the current dynamic and socially economic complex context of the (peri)-urban areas (ENDA, 1996). The government has realised the need for a more holistic approach to natural resource management and has requested the Ministry of Mining, Environment and Tourism to develop the New Environmental Bill. Ideally, the new Bill seeks to be holistic in nature including environmental rights and incentives and further to harmonise the current fragmented environmental legislation, the overall responsibility, co-ordination and supervision with the Ministry of Mining, Environment and Tourism. The process is seriously delayed and frustrated by the national elections in 2000 and unwillingness of few departments to hand over some of their powers (pers comm.).

Within the local government, there is no commonly shared view on urban agriculture among the different departments and sections and interaction between the planners and policy makers is lacking. Planners often feel that policy makers prioritise their political ambitions[11] without anticipating their own responsibilities to advise policy makers on alternative land uses (Masoka, 1997). Although a few sections acknowledge the positive contribution urban agriculture can make to peoples' livelihoods in terms of food, income and informal employment, the wider perception on urban agriculture seems to be rather negative as it is believed that:
- Open space cultivation causes land degradation (not grounded in formal research insights)

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[10] The role of politicians was a major issue brought up in a Harare workshop organised by ENDA in 1996, bringing together urban managers, politicians, micro farmers. The question was '*Are political statements policies?*' referring to farmers who had their maize slashed by council officers after having been given green light for cultivation by their MP.
[11] During fieldwork and in literature, councillors were often associated with getting away with a dual agenda. Few councillors are allocating land for cultivation to their residents which is in direct violation with the City Council standing by laws.

- Open space cultivation interferes with planned urban development (housing, commercial and industry) as land is perceived as a limited resource
- It has implications for health issues, such as increase in rodents and malaria.

Differences in views on urban agriculture do not only prevail across the different Departments but also within them. For example, the Town Planning Section welcomes open space cultivation as an alternative land use although stressing the need for proper planning, facilitation and implementation but has not taken it up due to lack of human, technical and financial resources. However, its home department, the Department of Engineering and Works, mainly conceives of urban agriculture as a nuisance as it interferes with their engineering works (e.g. clogging of drainage works by sediments from cultivated plots) (Masoka, 1997).

Urban agriculture was already taking place prior independence, however under the strict control of the colonial government that allowed it as an excuse to maintain low wages for the black population. Regulations with a strong environmental concern were stipulated and enforced by the Natural Resources Board, a central government institution in conjunction with the Department of Engineering and Works. For example no cultivation of dambo and stream bank was allowed within 30 meters of stream banks, and land suitable for agriculture was identified and pegged (Mbiba, 1995). After independence, these regulations were more or less taken over by the new government. *'Cultivation is for many a question of life and death. We do not seek to take away the livelihood of honest people but rather to protect our local environment from illegal cultivation for the benefit of all.* (Executive Mayor of Harare, Mr. Tawengwa in: Property and Development, 1997)'

However, it has proven inappropriate as the scope of urban agriculture has changed immensely. Due to a high increase in population and the severe impacts of Economic Structural Adjustment Programme (ESAP) triggered by an ambiguous, inconsistent response from the government[12], the extent of off plot cultivation has grown beyond government's control. There have been several attempts to arrive at an integrated approach to urban agriculture by setting up committees commissioned to look into matters and to come up with recommendations, such as the Greater Harare Illegal Cultivation Committee (1983), the Harare Environment and Education Committee (1992) and the Urban Agriculture Committee in 1996. These have not been successful so far. The earlier attempts were mainly initiated by the Natural Resources Department, which is primarily concerned with the environmental impact of agriculture on land degradation and silting of water resources. All committees came up with similar recommendations but never got beyond the consultation phase since they lacked technical, institutional and political support for implementation.

In general, it was recommended that the City Council[13]:
- identify land suitable for cultivation and provide a mechanism for land allocation to those interested and in need (not for commercial purposes)
- identify areas of prohibited cultivation (30 meters from stream bank areas and proper cultivation areas

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[12] In 1996, the Mayor handed 6,000 tonnes of maize seeds over to the councillors for distribution in their constituencies (Chaipa and King, 1998).

[13] See minutes of the Urban Agricultural Committee for 12 December 1997, 17 December 1997, 4 February 1998, 20 May 1998 and 3 July 1998.

- educate people on the importance of the environment and consequences of land degradation
- put measures in place to stop siltation of dam catchment areas and encourage proper cultivation methods
- enforce the Natural Resources Act and council by laws to prevent land degradation, water pollution and siltation
- encourage political support by councillors: 'to speak the same conservative language'[14].

Every year before the start of a new cultivation season, the government warns through announcements on radio and in national newspapers, that cultivation within the city without permission is illegal, that crops might be destroyed and the cultivators be prosecuted. The Government's awareness campaign has been successful to a certain extent as the survey confirmed that most people are aware that cultivation in certain areas is prohibited for either environmental or safety reasons[15]. However, the majority do not really bother as enforcement of these regulations is minimal. On several occasions the Natural Resources Board has put up notices saying 'no cultivation' but are either ignored or removed by cultivators. As one cultivator said after admitting having seen the warning sign: *'Who is going to stop me?* (Property and Development, 1997).

Table 11: Respondents' awareness of local government policy

Knowledge of local government's attitude towards urban agriculture	Number & % of respondents Epworth		Number & % of respondents Porta Farm		Total Number %	
No contact/don't know*	31	51.7	27	96.4	58	65.9
Allow it	12	19.9			12	13.6
Not allowed near streams and on other people's land	4	6.7			4	4.5
No encouragement	1	1.7	1	3.6	2	2.3
Concerned about gullies and misuse of water	1	1.7			1	1.1
Take land away for development	1	1.7			1	1.1
Not applicable	10	16.6			10	11.4
Total	60	100	28	100	88	100

* Epworth residents often stated that the Local Board had no other interest than the monthly rate collection. Porta Farm residents felt neglected and ignored by the CC; apart from piped water, all other support/services are delivered by NGOs and donors.

Enforcement through slashing of crops is done on a rather ad hoc basis and is subject to political manipulation. The destruction of maize tends to be done at a relatively mature stage of the crop, causing uproar and outrage among the public. It is argued that from an environmental perspective, damage to soil and water bodies has already been caused anyway and destroying food about to mature is ethically and culturally unjustified. In response, councillors are inclined to make popular political statements such as: *'Cutting the maize at this stage is like cutting off your own nose. We should have prevented people from planting in those areas. We should now be talking of punishing those people who were supposed to stop residents from planting along the streams. (...)* and *'taboo to destroy the maize which was about the mature and such a move would make the ruling ZANU (PF) party and Government*

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[14] Conservative language refers to environmental conservation.
[15] Safety was the main concern as cultivation of maize near roads was perceived as dangerous because of increased muggings and higher risk of traffic accidents.

unpopular with residents.' (The Herald, 23 Feb 1998). Also Harare's Mayor underlines these feelings by urging the need for a proper policy and strict enforcement stating that it is '(...) *politically, morally and in terms of tribal customs unacceptable to destroy mature crops before harvest. This can be misinterpreted as taking food out of the mouth of a hungry man'.*

Table 12: Local perceptions of enforced crop removal

Local perceptions on slashing of crops	Number & % of respondents (Epworth)		Number & % of respondents (Porta Farm)		Total Number %	
Never heard of it	15	25.0	13	46.4	28	31.8
Heard of it, agrees if illegal	19	31.7	6	21.4	25	28.4
Heard of it	8	13.3	7	25.0	15	17.0
Heard of it, but disagrees	2	3.3	2	7.1	4	4.5
Heard of it, does not know reasons for slashing	3	5.0		10.7	3	3.4
Never heard of it, but agrees	2	3.3		7.1	2	2.3
Not applicable	11	18.3			11	12.5
Total	**60**	**100**	**28**	**100**	**88**	**100**

Like Porta Farm, the majority in Epworth had heard of slashing of crops, however done outside of Epworth. Most of them agreed with slashing if cultivation was done near the roads (perceived risks of increased theft and car accidents (12)) and near streams (6). The second group had never heard of slashing activities but most of them felt that people should listen to authorities, and only cultivate within the designated areas. Others had heard of it but did not air any opinion about the issue. The very few who disagreed with slashing of crops by the City Council felt that it was a waste of time, energy and above all, food.

During fieldwork in 1999 and 2000, the City Council did not seem to undertake any follow up on the recommendations made by several committees earlier in the nineties and eighties. First, the political debacle of the City Council did not provide for an enabling policy making environment. Mid 1999 the Council was dissolved after scandals of corruption and poor performance and replaced by Commissioners whose main responsibility is to ensure a smooth functioning of daily business rather than developing new policies. The running up for the national elections in June 2000 might also have had its impact. Second, during the nineties a NGO, ENDA was very active in putting the issue of Urban Agriculture on the political agenda in conjunction with other environmental NGOs and the University of Zimbabwe. However, ENDA became non-active due to internal problems and the urban agriculture debate lost its main thriving and facilitating engine.

4.2.6   Lack of integrated urban development planning
In Zimbabwe, urban planning seems to be conducted in a rather top down way with hardly any integration of the different planning levels or stakeholders involved and public consultation is non existent. The new government in South Africa has made considerable efforts to establish an integrated planning process with public consultation, but is still struggling with implementation problems.

The main objective of the latest Combination Master Plan for Harare (1992), is to introduce measures to raise standards of living, provide a spatial environment conducive to the creation of more employment throughout the planning area, including rural farming areas in order to curb further intensification of rural-urban in-migration. Proposed activities are the promotion of intensive productive agricultural smallholdings within and at the periphery of urban areas, both larger-scale and smaller-scale such as residential agricultural allotments. The

government, local authorities and the private sector are expected to take the lead in developing and facilitating such activities (Combination Master Plan Harare, 1992). However, nothing seems to have happened so far due to lack of co-ordination and communication between the different departments, and probably serious lack of technical, financial and human resources (pers. comm). Furthermore, the legal status of urban agriculture is still not clarified by the policy makers. It is also striking that none of the advisory committees on urban agriculture had included town planners in their discussions.

Although the implementation of IDPs and the establishment of Planning Zone Fora in South Africa can be perceived as a first attempt to arrive at a more realistic integrated urban development planning approach, the process has revealed a number of problems. First, there is a lack of integration, co-ordination and communication between the different levels of planning among the different departments within the Pretoria City Council and the Metropolitan Council but also between council and metropolitan departments. Very few departments are prepared to take the major lead in the planning whereas others are not involved at all and view the whole process more as a participatory planning exercise without any implications for their financial monitoring system. In addition, the IDPs for the lowest level, PZF do not necessarily feed into the IDP at the subsequent level. This is because under current time scheduling, the different levels are developed simultaneously, which does not allow lower level fora to contribute to the next level of planning (Oudwater and Martin, 1999).

A clear example of lack of co-ordination with other planning bodies and lack of public consultation is a pilot urban farming project implemented in another high density township of Pretoria funded by the Directorate for Economic Development of Greater Pretoria Metropolitan Council. Arrangements were underway to implement similar projects in other areas of the town, such as Mamelodi (August 1999). However, no public consultation was held with the existing local structures such as the PZF, and the official planning departments such as the Department of Town Planning and a local consultancy company in charge of developing IDPs were not informed about these projects either (pers. comm). The major reasons that the Directorate for Economic Development did not involve themselves with the official planning policies were that it was (a) too time consuming and (b) they were under pressure to spend funds before the end of financial year (pers. comm).

Policy, planning and institutional environment was generally unsupportive of urban agriculture in the early to mid 1990s (Rogerson, in Thorgren 1998, Karan and Mohamed 1996). But there has been recent shift in government attitude with the development of provincial and local policies on urban agriculture, and recognition of the need for planning for and supporting urban agriculture.

Box 7: Planning Zone Forums, Pretoria, South Africa

Box 7: Planning Zone Forums

Following the elections of 1994, the new government decided that there was a need to change the former top- down planning policy model towards a more integrated approach in which stakeholders at different levels would be involved. A framework for an Integrated Development Plan (IDP) was designed that sought to link reconstruction with development in a process that would lead to growth in all parts of the economy, including greater equity through redistribution and sustainability. Each local authority is supposed to develop its own IDP. To ensure active public participation in policy development planning processes and to realise local democracy, Pretoria area has been divided into 22 Planning Zones, each represented by a Planning Zones Forum (PZF). Ideally, PZFs should embrace all the different community structures within the planning zones to ensure that all stakeholders can participate in identifying their local development needs, considering the resources available, and on that basis, setting their development priorities. Each planning zone forum should elect a maximum of 12 members for the Interim Steering Committee that is responsible for running the business on behalf of the wider PZFs. Those elected members should represent different interest areas and have some affinity with the four main focus areas of the IDPs: the physical, institutional, social and economic, and environmental environments.

Also in Cape Town, town planners are reluctant to actively support urban agriculture because it does not fit within the planning objectives of the Metropolitan Spatial Development Framework (MSDF) that seeks to consolidate and increase the density of Cape Town's fragmented spatial pattern (Thorgren, 1998, Meadows, 2000). However, others argue that an open space management policy that has already identified urban agriculture as an alternative land use, could provide sufficient scope to include urban agriculture in the planning process (Katzchner, 1995 and Meadows, 2000).[16]

4.2.7 Lack of wider public participation

Wider public participation in policy and planning activities related to urban agriculture is very limited because of the institutional framework but also the fact that urban cultivators have not organised themselves. Another indicator of weak public consultation is that most respondents said that they had no idea about government's attitude towards urban agriculture. Overall, informal local structures and grass roots organisations (other than political groups) are rather weakly developed within the informal settlements of both countries. The main apolitical grass root organisations are church based groups, burial societies and women's clubs with a strong social function. The limited level of local organisation is not surprising considering the transitional, dynamic and heterogeneous nature of the high density townships and its informal settlements. Most groups were initiated either by a strongly committed individual or by an outside organisation such as local NGOs, international donors, churches or a national women federation.

In Pretoria, the introduction of Planning Zone Fora to allow participation of local communities in urban development plans has meant a first step towards wider public participation. However, the rather formalised structure has hampered public consultation with the residents they are representing. Most respondents, if not all, had never heard of the Planning Zone Forums and the Interim Steering Committee. Most of the active members are relatively better off, employed, well educated and residents in the permanent developed areas of Mamelodi. Consequently, the limited resources available are earmarked for the permanent established areas with the argument that the informal settlements are of 'temporary' nature.

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[16] Prior the process of IDP, a Mamelodi Greening Plan was developed in which urban agriculture and vegetable gardens were also identified as possible options for open space management and greening the townships.

There has been some criticism of the policies for adopting top down planning approach, and for dealing only with organised groups such as NGOs or CBOs who have a constitution, despite indications that it is those with low levels of organisational skills who require the greatest assistance in accessing land.

On several occasions, the City Council of Harare has commissioned Committees to develop guidelines and recommendations for an appropriate policy framework for urban agriculture. Only the latest one, the Urban Agricultural Committee (which started at the end of 1997 until mid 1998) saw an attempt to include a wider range of stakeholders. Next to officials from several government departments, police, environmental NGOs, University of Zimbabwe and District Officers, representatives from several Ratepayers and Residents Associations were invited to attend the meetings. Following these examples, people in other areas like Epworth, have started organising themselves in Ratepayers and Residents Associations because of a growing dissatisfaction with City Council's provision of services, despite annual increases in rate charges. Recently, they have started to create linkages to other associations and organised themselves into the Greater Harare Combined Ratepayers and Residents Associations, through which they hope realised their potential for more powerful lobbying. In the future, these associations could be a possible way to engage a wider public participation within specific areas in Harare.

4.2.8 Lack of institutional recognition

Closely linked to the lack of a clear accommodating policy framework for urban agriculture is the limited provision of agricultural extension services in the urban areas. The fact that extension services traditionally focus on the rural areas was criticised by most respondents as they felt that government should provide the same services as in the rural areas such as input supply and extension advice, to promote good farming practices.

However, things are changing slowly as Agritex (the Zimbabwe extension service) has recently allocated one extension officer to the areas of urban cultivation in Harare. Obviously one extension worker is not enough to cover the whole of Harare and therefore the current extension strategy is to target services on organised groups.[17] Although, Agritex recognises the need for expanding their work to cover urban areas, it is hampered in planning its operations by the lack of an official policy towards urban agriculture. In addition, it is already failing to respond adequately to demand for extension services in the rural areas, their principal target group. Considering the fact that Agritex is currently going through a reorganisation in which they have to scale down their activities, it is unlikely that more resources will made available for the benefit of urban cultivators.

The South African Department of Agriculture has recently launched the Food Security Programme that seeks to promote agriculture in urban and peri-urban areas to improve food security at household level[18]. A farming group in Mamelodi has already benefited through the construction of a borehole to allow crop cultivation throughout the year and to reduce health risks as the previous main water sources was a polluted stream. Discussions are being held to explore the ways in which extension officers can contribute to the development of a sustainable agriculture.

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[17] This is also in line with the city council and central government preference for co-operatives and farming groups schemes.

[18] Grants of R3000 are available per household and the envisaged size of land is 720sqm per households, which is a rather unrealistic figure as most garden groups do not even have that size of land at their disposal.

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4.2.9   Lack of wider institutional support

Agricultural research institutes in conjunction with Department of Agriculture could play a major role in facilitating and supporting the development of a sustainable urban agriculture but in neither country was there an established working relationship across the different institutions.   In Zimbabwe, there was no interaction between the City Council, Agritex and staff of the University of Zimbabwe staff with an interest in urban agriculture. The relationship between the City Council and the University is rather sensitive anyway due to the past critical attitude of University staff towards the City Council, for example, warning the public through the media about the health dangers of heavily polluted sewage farms.

Several South African agricultural research institutes that all fall under the umbrella of the Agricultural Research Council, are involved in urban agricultural projects, funded by the Resource Poor Agriculture budget, but instead of a co-ordinated effort it is highly fragmented and location specific. In the case of Pretoria, two research institutes are each operating in their own area without any interaction, consultation or sharing experiences, rather ironic since their highly specialised skills and expertise would complement each other very well.   Reasons for non co-operation seem to be related to severe competition for funding and personal differences between the individual personalities leading these projects. However, staff members have realised the need for adopting an integrated approach and to co-ordinate activities within the Resource Poor Farmers Programme of the ARC. The formation of a small forum should create a platform through which participants can learn from each other by bringing together different disciplines and by sharing experiences and ideas. No information is available on whether this process has already taken off. In addition there are no established linkages between the research institutes working in urban agriculture and the Department of Agriculture.

5. DIFFERENCES BETWEEN SOUTH AFRICA AND ZIMBABWE

From our fieldwork and review of the literature, there are many parallels between the two countries in terms of the context in which urban agriculture is embedded, but has also revealed some striking differences. The first and most important differences are the scale of urban farming activities and people's perception and values attached to agricultural activities. In the Harare study, virtually every household which had some space to spare was involved in maize cultivation and vegetable production although the scale, commitment and importance might varied among the different households. Public spaces along roads and next to bus stops are covered by maize during the rainy season. Farming is very much part of the cultural and social identity and has even increased in importance as a coping strategy in response to the negative impacts of ESAP which saw an increase in food prices and unemployment rates. Consequently, discussions around urban agriculture are very much part of the pubic debate and are recurrent topics in newspapers and radio announcements.

In Pretoria, South Africa, agriculture, especially in the urban areas, has a rather negative connotation and is usually perceived as associated with very low socio-economic status. Farming is often associated with the old traditional life style in the rural areas, whereas migrants are striving for an urban life style instead of being reminded of their "homeland" areas during the Apartheid. Agriculture is often looked down on and considered as hard, dirty and unprofitable labour (Oudwater and Martin, 1999). It is generally seen as an activity for old people, whereas young people favour wage labour and aspire to employment which provides career development opportunities. The attitude towards urban agriculture was more positive in the Cape Flats in Western Cape and lack of space was often the main reason for non involvement in gardening activities (Meadows, 2000).

Policy debates centred around the issue of urban agriculture have a strong environmental focus in the Zimbabwean context whereas in South Africa they are more concerned with the availability and distribution of land. This environmental concern dates back to colonial times and is institutionalised through the Natural Resources Act and several by-laws. Harare is situated in a catchment area on which it depends for its water supply. Most cultivation takes place in vleis and there is a general perception that agriculture causes land degradation that results in silting of the water flows, therefore endangering Harare's water supply.[19] Other environmental concerns are water pollution resulting from use of chemical fertilisers, and soil erosion on sloping land that eventually affects water courses. This discussion was virtually absent in South Africa, where a lot of cultivation outside house stands also takes place in vleis.

Thirdly, international and local NGO involvement in promotion of urban agriculture is far more established in South Africa than in Zimbabwe which is in some ways surprising given the wide interest in and existing uptake of farming activities. Apart from NGOs, some agricultural research institutes play an active role in facilitating local initiatives for taking up gardening through training programmes and extension activities. According to Karaan & Mohamed (1996), the lack of adequate policy, legal and institutional support and other public support services for urban agriculture encouraged the non-governmental sector to take over

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[19] There is some controversy to what extent dambo and streambank cultivation contribute to soil erosion and siltation of water streams. Research seems to suggest that it depend on local soil and hydrological conditions and use of cultivation methods (e.g. soil and water conservation techniques).

some of these responsibilities (Karaan & Mohamed, 1996, Katzchner 1995 and Meadows, 2000). In summary, it seems that urban agriculture in South Africa is much more frequently initiated by external agencies whereas in Zimbabwe it is a self-motivated activity arising from people's livelihood needs and thus offers more potential for sustainable external support. ENDA-Zimbabwe, a local NGO with international donor funding, has taken an advocacy role to put the issue of urban agriculture on the political agenda and has conducted research to inform policy makers about the nature and importance of urban agriculture. However, it has moved away due to institutional changes and no one else has taken over its facilitating role apart from a Ratepayers and Resident Association's chairman, who is quite isolated as an individual.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Issues relevant to urban policy and planning processes

One of main lessons arising from our work is the importance of understanding urban agriculture in the wider context of livelihoods, with its contribution to the quality of life, to food security and survival, to group interaction and community development as well as to income. We have noted the different views of the value of urban agriculture and drawn on the perceptions of people themselves. There are both positive and negative perceptions of urban agriculture, but there is a particular need to understand urban agriculture as a coping and survival strategy, rather than simply an income generating activity. Thus there is an important requirement for policy making and planning to be informed by an awareness of social and economic differences between different groups of urban agriculture practitioners, and by an understanding of the circumstances of the urban poor.

There is a need to develop useful developmental indicators for urban agriculture which are based on criteria relevant to both participants and to planners. This could provide the necessary evidence to assess the relative costs and benefits of urban agriculture compared to alternative uses of land.

Investigation of the asset status of poor urban and peri urban cultivators indicates that in relation to **natural capital**, access to land is a limiting factor.
- access to land is not effectively facilitated at national and local governmental level
- land policies are complex and often poorly understood by intended beneficiaries
- allocation of land/land policies are often linked to political issues, (especially in Zimbabwe), in both urban and rural areas
- insecurity of land tenure
- legitimate access to land for cultivation is hampered because of complex non transparent or non existing procedures for land applications.

Levels of **social capital** in the urban communities studied were relatively low.
- The limited level of local organisation is not surprising considering the transitional, dynamic and heterogeneous nature of high density areas and informal settlements.
- Gardening projects have found a preference among participants for individual plots rather than shared activities

Levels of literacy were quite high, and constitute a good platform for skills development, extension advice, and technical training in urban agriculture if these were to be provided.
Policies to promote urban agriculture should recognise that households have multiple activities which contribute to livelihoods. An emphasis on specialisation in urban agriculture is unlikely to be attractive to the poor unless accompanied by support in the form of credit, inputs and training etc. Enthusiasm created through skills training without the supporting means of practical realisation (for example, through land and input access) is often disappointingly short lived. NGO experience has shown the transition to creating self sustaining agricultural enterprises from dependent groups is highly problematic.

Physical provision of housing, water and sanitation are often priorities for poor urban people, The need for urban agricultural spaces should be factored into plans at neighbourhood level and siting of amenities on individual house plots.

6.2 Institutional issues arising from the review of policy and planning processes

- The existing national legislative framework is highly fragmented and prohibitive with regard to urban agriculture and therefore limits scope to develop specific local regulations for a clearer policy towards urban agriculture
- Lack of institutional recognition for importance of urban agriculture as an important component in the livelihoods of the urban poor.
- Lack of political commitment to work towards an integrated and accommodative policy towards urban agriculture. The bureaucractic structures and financial administration of government departments tends to inhibit co-operation. Forums for interaction are for example, between government, NGOs, the private sector and communities.
- Lack of technical human and financial resources to develop and implement integrated urban development planning including a framework supportive for urban agriculture.

6.3 Recommendations to policy makers and donors

- Improve stakeholder consultation and involvement in planning processes. There is an urgent need for wider public participation and consultation mechanisms that recognise appropriate time-scales and information needs of different stakeholders.
- Access to and security of land could be improved through official recognition of urban agriculture and informal settlements. Local authorities need to develop and communicate clear policies for urban agriculture and make active efforts to simplify procedures and facilitate access to land.
- To address the general ignorance of and lack of clarity in policy it is important to improve information exchange among gardeners, NGOs and policy makers, for example through workshops at local council level.
- Initiatives by institutions to support urban agriculture should respond to the different roles that urban agriculture plays in the livelihoods of the poor. It is important to recognise the different scale and functions of urban agriculture and respond to local needs adequately.
- Develop criteria for assessing the value of urban agriculture which takes into account the economic value (produce, income, value of home consumed produce etc.), the social benefits (co-operation in gardening groups, community assistance and exchange of produce), environmental benefits, food security, and the psychological benefits of well being and pleasure derived from gardening.
- Opportunities for partnerships should be explored between NGOs, public research, extension services, local authorities and the private sector institutions in support of urban agriculture. In South Africa, NGOs can play an important role in facilitating linkages between urban gardeners and the planning processes, and in assisting groups to access land through the Provincial Departments of Agriculture. They can also facilitate training and skills development and linkages with donors. Government departments and NGOs need to focus on developing the conditions for sustainability with local agricultural groups and set realistic time frames for their development.

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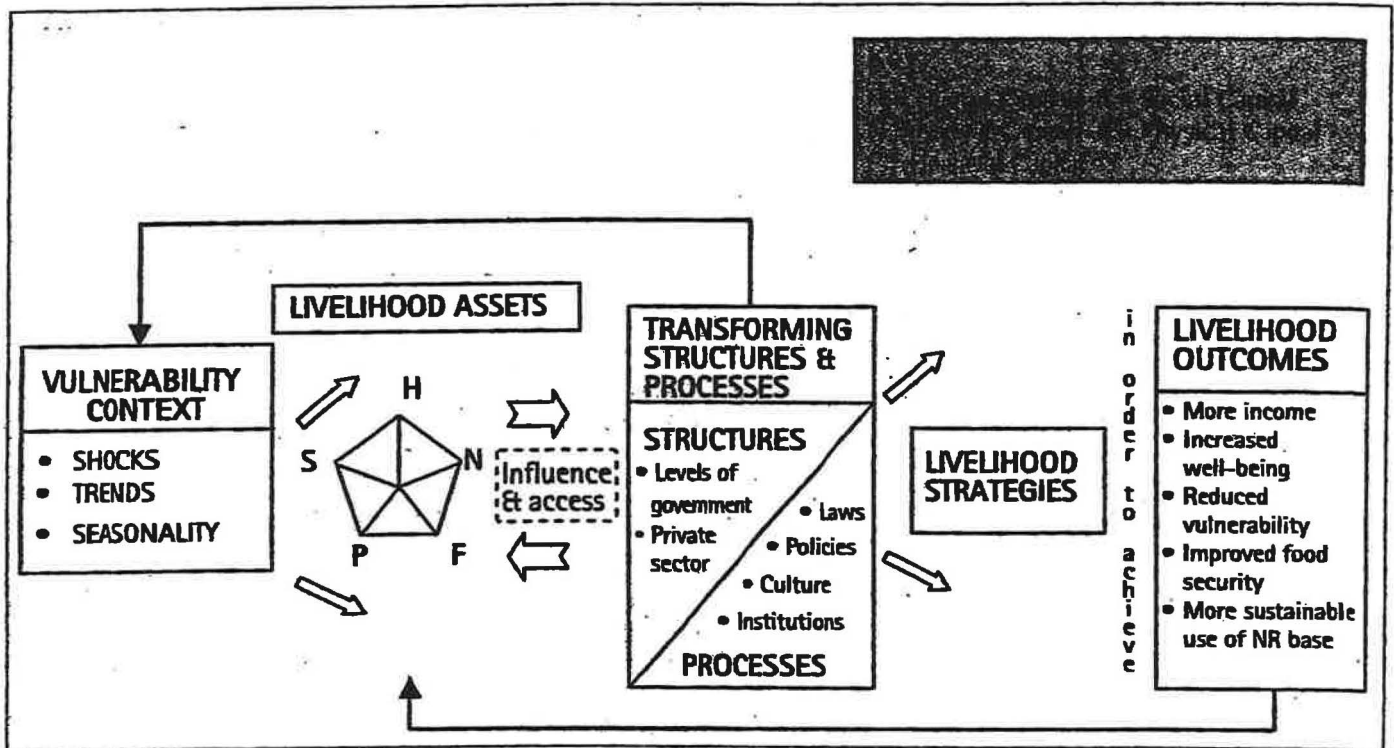
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Appendix 1:   List of Acronyms

AGRITEX	Department of Agriculture Training and Extension, (Zimbabwe)
CMA	Cape Metropolitan Area
DLA	Department of Land Affairs
ESAP	Economic Structural Adjustment Programme.
IDP	Integrated Development Plan
NGO	Non Government Organsation.
ZANU (PF)	Zimbabwe African National Union Patriotic Front.

Appendix 2: Sustainable Livelihoods Framework[1]

Diagram of the Sustainable Livelihoods Framework showing:

VULNERABILITY CONTEXT
- SHOCKS
- TRENDS
- SEASONALITY

LIVELIHOOD ASSETS (pentagon with H, S, N, P, F)

Influence & access

TRANSFORMING STRUCTURES & PROCESSES

STRUCTURES
- Levels of government
- Private sector

- Laws
- Policies
- Culture
- Institutions

PROCESSES

LIVELIHOOD STRATEGIES

in order to achieve

LIVELIHOOD OUTCOMES
- More income
- Increased well-being
- Reduced vulnerability
- Improved food security
- More sustainable use of NR base

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[1] From *Sustainable Livelihoods, lessons from early experience*; Caroline Ashley and Diana Carney, 1999, Department of International Development, UK