

Creating livable cities: the need for urban agriculture

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Abstract

Agricultural activities within city limits have existed since the first urban populations were established thousands years ago. It was generally considered that this practice eventually would disappear as cities industrialised and modernised. Yet, gardens persisted, particularly in cities in developing countries. There is a pressing need to develop land use policies, which can incorporate the social, economic, and environmental benefits that urban gardens give to their practitioners and to the urban ecology. Even though support for urban agriculture is growing among international development agencies, research institutes and some governments, the “ground” work of civil society organisations remains on the margins. This paper examines the contributions of a number of civil society organisations working on urban agriculture in Africa and Latin America. It argues that there is a need to incorporate both urban agriculture and civil society organisations in creating livable cities.

1 Introduction

Agricultural activities within city limits have existed since the first urban populations were established thousands years ago. Governments thought that this practice eventually would disappear as cities industrialised and modernised. Yet, gardens persisted. In the 1960s and 1970s, researchers and local policy makers largely ignored it (Rakodi [14]). With the impact of economic recession, the effects of structural adjustment programmes, and the crises of the 1980s and 1990s, the cultivation of food crops is now both more widespread and economically significant in many urban areas, particularly in Africa (Sanyal [17]; Tricaud [19]; Drakakis-Smith [3]; Drakakis-Smith et al.[4]).

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Agriculture in cities has long been considered to be an oxymoron. Modernisation theory with its functionalist and economist premises mapped out development in terms of industrialisation which would eliminate the dualism that characterised developing countries, between a traditional indigenous underdeveloped sector (predominantly rural and agriculture) on one hand and a modern, westernised urban (Hirschman [6]) on the other. Only rural areas were for agriculture, which over the course of time would become highly industrial freeing up labour for urban industrialisation. Cities were to spearhead economic growth and development.

The reality in many cities across the globe is that the bulk of urban services, employment opportunities and social support are provided outside of the formal sector, state programs, and institutions (Roberts [16]; Mitlin & Satterthwaite [10]). The "informal" rather than the formal sector is absorbing the majority of urban dwellers. Large groups of people in cities have no access to basic services, except what they produce on their own. And it is here where urban agricultural activities are generally classified.

Currently, there is growing interest to plan and coordinate agricultural activities within city limits. A number of international development agencies are recognizing the role that urban agriculture (hereafter UA) can play in food security, poverty alleviation, and environmental protection. With appropriate financial, technical, and institutional support UA can provide important economic, social, and environmental benefits. There are a number of non-governmental organisations (hereafter NGOs) working on the "ground", assisting urban residents to grow food in the cities. Working with little or no institutional and financial support from their own governments, they also receive little support from foreign donor agencies. There is need to look at how their work can be incorporated to promote UA.

This paper looks at the role of NGOs in UA. It is based on research being carried out by the Amsterdam based NGO, Both ENDS. The paper argues that there is a need to incorporate both UA and civil society organisations in creating livable cities. The first part looks at the particularities of growing food in developing countries, as well as the characteristics of urban farmers. The second part examines the work of some NGOs in supporting this activity. The third part gives some suggestions to how their work can be assisted in order to work towards creating livable cities for all.

1.1 Context

The term UA is generally used by NGOs and policy makers to refer to farming activity, within the city boundaries, including the cultivation of food and cash crops, animal husbandry, forestry, and the production of flowers and garden plants. It is estimated that there are 800 million people (Smit et al.[18]) who are urban farmers. There is still very little known of the socio-economic dynamics of urban farming. However, it is possible to make some general statements.

Generally, in northern countries, UA is a recreational activity, offering people the opportunity to reconnect with nature and to supplement their diet with fresh vegetables. By contrast, in developing countries, most tend to be poor, farming to meet their dietary requirements or to earn an income.

Many urban farmers also belong to the “new poor”: the salaried workers from the organised sector of the economy who had come to experience increasing pauperisation due to the declining real value of wages. In Zimbabwe, for example, the dire state of the economy has seen the rise of UA. It is estimated that between 1990 to 1994 the area under cultivation in Harare increased 93% (Mudimu [13]). In this context, UA can be considered one of many activities which households engage to increase their food security.

Another characteristic of UA is that its status is rather ambiguous. In some cities, it is illegal and yet tolerated. Once again in Zimbabwe, even though UA is widespread, it is still not legally recognised and periodic repressive measures are enacted to destroy crops (Mbiba [9]). Because UA is illegal, there are few regulatory bodies controlling it. There are no controls to mitigate health (water contamination, soil contamination can show up in the vegetables posing health risks for consumers) and environmental risks (e.g. practices can precipitate soil erosion, etc.) and this poses a health risk to consumers of urban produce. Moreover, few, if any, extension services are available for urban farmers to use which means that practitioners are not always reaping the full benefits of their time and labour. Crops chosen, for example, are not necessarily ideal for the local environment so that maximum yield relative to local conditions is seldom achieved.

Furthermore, in some parts of Africa, women are the prime agents involved in UA (particularly the productive part). On one hand, UA can contribute to improve women’s nutrition and income levels. On the other hand, it extends the working hours and burdens of women relative to those of men. Finally, UA is not an activity which people do when they immediately arrive into the cities. Studies have shown that some urban farmers having lived in the city for more than ten years. Hence, it is not a transient activity and planners need to recognise this.

There are direct benefits to produce food locally and which can contribute to improve nutritional status, food security, and income. Indirect economic benefits include waste-management (avoided costs of waste disposal), use of under-used resources (rooftops, roadsides, water bodies), economic diversity/stability, changes in economic value of the land, and possible multiplier effects (business attracted by UA, such as input services or restaurants).

UA can also play a role in environmental conservation (see Rees [15]). Energy can be saved by shortening the distance between the points of production and consumption and by reducing savings in storage and transport. UA also contributes directly to improve the urban environment (or city ecology) by improving the micro-climate, CO₂-balance and biodiversity within cities, by preventing erosion and flooding through planting bare lands and steep slopes

(disaster mitigation) and by using urban (organic) wastes (solid waste and waste water) as a productive resource (i.e. fertiliser, biogas production). Because of its proximity to concentrations of human population, UA does, however, require higher technological and organisational precision than rural agriculture. Risks are technically manageable and depend on cities making better use of prevention and mitigating measures.

Irrespective of the benefits that it provides to millions of households worldwide and to the local environment, many governments, particularly in developing countries, are still reluctant to embrace it. As mentioned, the idea of having agriculture in cities is not one that is so readily accepted. In developing countries, it tends to be regarded as a sign of "backwardness" and government officials are reluctant to support it. Cities are supposed to be home to industries and services and not to agriculture.

Institutional and financial factors also play a role as municipal governments are burdened with more responsibilities and yet lack the financial resources to meet them. Beginning in the 1980s, many countries began to adopt plans for the decentralization of important functions and powers from the national to the local level of government. In many cases, local governments now have the power to develop and execute their own developments, draw up their own budgets, collect and spend locally generated revenue according to their own priorities, and even make by-laws that are consistent with the constitution and other existing laws. However, these new responsibilities have come at a time of cutbacks, in staff, resources, and government expenditure. Along with this, a significant rural bias in allocation of resources by central governments continues, as the belief is that cities have more revenue from property taxes at their disposal to address their problems.

Yet, considerable progress is being made to change the opinions of governments. The United Nations Development Programme (UNDP) and the Canadian International Development and Research Centre (IDRC) have been the forerunners in researching, reporting, and supporting UA. In 1992, the UNDP formed The Support Group on Urban Agriculture (SGUA) to examine issues related to food security and UA, especially for developing countries. Later in March 1996 at an international consultation held by SGUA, the Global Facility for Urban Agriculture was created. In October 1999, the Resource Centre on Urban Agriculture and Forestry (RUAF) was created to facilitate the integration of UA in the policies and plans of city authorities. Their focus is also active information dissemination between different levels so as to propel more UA, research into practical and technological interventions in UA and to embed UA in the regular programme of international organisations like FAO and UNDP. Regional networks have been set up to promote policies, technologies, and methods that improve the productivity, accessibility, and sustainability of urban production systems.

The governments of Zambia, Tanzania, the Philippines, Guinea-Bissau, and Indonesia are accommodating UA in an attempt to become more self-reliant in

food. By-laws have been revised to make way for specific production systems in specific zones and state agencies have been authorised to promote appropriate practices in such areas. National departments for UA have also been created in the capital cities of Argentina, Indonesia, and Mexico. In Africa, it has been incorporated into the zoning plans for the new capitals of Cote d'Ivoire, Malawi and Tanzania (Mougeot [11]). National or metropolitan public utilities have leased out land (Brazil), entered in partnership with producers (Senegal) or have become direct producers themselves (Tunisia, South Africa) (Mougeot [12]).

One can, therefore, speak of a growing commitment to get UA recognised and supported as an appropriate activity in urban areas. However, governments need support from many other actors in the city such as local communities, civil society organisations, and international funding organisations. Alliances between a variety of local actors are one way in which the many complex urban problems can be addressed.

2 NGOs and Urban Agriculture

In 2001, Both ENDS, an Amsterdam based non-governmental organisation that supports the activities of southern NGOs working on environmental issues began a study to investigate UA activities being carried out by grassroots organisations in Africa and Latin American. The study (Castillo[2]) was designed to identify what was being done, as well as the barriers and obstacles that organisations are encountering. The results would be used to lobby Dutch donor agencies and to define a more concrete research project on UA for Both ENDS to pursue. The information gathered has provided a preliminary overview of the landscape in which many grassroots organisations are working.

The first comment that can be made relates to how NGOs came to work on UA. Generally, many of the organisations that are currently working on UA were not created for this specific purpose. They embraced it as a result of their work in urban issues such as waste management, soup kitchens, popular education, and/or environmentalism. They stressed that they saw UA as a way of focusing on the needs of society's most vulnerable groups given that they have less security over basic necessities such as food. The indirect manner in which organisations have come to embrace UA means that they have considerable knowledge of how poor households cope with urban life on one hand and how government and private sector provide urban services on the other hand. A second related point is that urban NGOs tend to be multi-purpose. They provide a variety of services, including education, health, organisational support to residents vis-à-vis authorities, etcetera.

A good illustration of this is the Ecuadorian NGO, Acción Ecológica. The organisation began by focusing on environmental degradation in the Amazon but since the mid-1990s have begun to address urban problems in Quito. The decline in living conditions, particularly in poor neighbourhoods in the capital city, provided the stimuli to work on UA. In 1996, the Municipality of Quito provided

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two lots for the organisation to investigate appropriate agricultural techniques for small (between 20 square metres to 200 square metres in size) urban areas. The organisation converted waste sites into productive farming areas. Eventually, these plots became centres of agricultural production where training was provided on animal raising (e.g. pigs, guinea pigs, rabbits, chickens), waste management (e.g., compost, recycle, biological latrines, etc.), and urban forestry to protect streams and riverbanks. The organisation, however, concentrates its efforts on providing capacity building for NGOs that are working on urban issues.

This provides an interesting contrast to a Peruvian organisation that is providing full assistance to urban farmers, from assisting in the formation of grassroots organisations, teaching them how to grow food, and then marketing the produce grown. In 1993, the NGO Imagen-Educativa began to work in UA, promoting hydroponics production. Hydroponic production refers to growing plants "without soil". Growing mediums are used instead. In 1997, they received funding from the Dutch embassy for a project designed to sell the hydroponic vegetables being grown by families. The project has faced many obstacles. Hydroponic gardening is relatively expensive which reduces its accessibility by the poor. Imagen-Educativa has spent a lot of research trying to reduce costs. Also, hydroponic production is rather complex requiring considerable time to learn, such that poor families with limited formal education have difficulties in adopting the production technique and abandon it. The project has been besieged by the desertion of participating families.

In spite of this, the organisation has managed to consolidate a group - 18 families - and to sell hydroponic produce to a supermarket chain. It has difficulties in achieving a regular supply of products of standard quality in sufficient quantity. They also have to compete with private firms engaged in hydroponic production. Hydroponic production is more costly than vegetables imported from the rural and peri-urban areas. This restricts the market to relatively affluent customers, who shop in supermarkets. Supermarkets demand regular production of significant volumes of standard quality. Producers also need to have enough of a financial buffer as supermarkets pay only about four weeks after delivery. All these conditions are difficult to meet for small-scale producers.

In Africa, where the UA has been extensive, the focus of NGOs has been more on research. In Zimbabwe, for example, where the practice of UA has dramatically increased, the role of NGOs has been to educate city officials on the benefits of UA so as to promote dialogue between practitioners and government officials. In the mid 1990s, the NGO ENDA-Zimbabwe spearheaded research on the environmental, nutritional and socio-economic benefits and problems of urban agriculture in order to facilitate more informed dialogue and decision making on the issues. They held workshops that brought practitioners, city officials, civil servants, academics and other NGO personnel together to present findings and forge a way forward (Gabel [5]). Other NGOs such as Pelum and

the Women and Land Lobby Group have emphasised women's access to land and resources to cultivate. They have proposed that the city use land from government acquired farms around the city for urban cultivation, and that an UA act be developed so that a legal framework is in place.

Similarly, in Kenya, the Kenya Green Towns Partnership Association - an association of 31 urban action - has tried to influence city authorities, advocating for the importance of UA in urban waste management. In Kenya, they create kitchen gardens, tree planting, and environmental education. They work closely with local authorities and schools. However, due to a lack of financial resources, the Association has not been able to co-ordinate the activities of household gardeners. Hence, their activities remain dispersed.

In other cases, grassroots organisations have been formed with no assistance from NGOs. In Benin, gardeners in Houyiho recognised the importance of organising and formed a co-operative. The co-operative reached an agreement with the airport authorities to grow crops in an area close to the airport. The gardeners along with street vendors, and other workers of the informal sector formed the *Union Sous-Prefectural des Producteurs de Cotonou* (USPP) which itself is now linked to a national union. The USPP negotiates prices of agro-inputs directly with producers, retailers, and importers. Gardeners in Houyiho sell to two major markets and several smaller markets, and to street vendors.

3 Observations

From this preliminary exercise, several important observations can be made of the challenges that need to be overcome in promoting greater participation by NGOs in UA :

3.1 Institutional

The level of government support for UA varies. In some instances, they have provided public lands or else water. However, this tends to be adhoc and largely based on the skills of the NGO with respect to lobbying and on the whims of certain public figures to meet their demands. There is, therefore, a real need to strengthen or build local institutions and to secure legal standing and political commitment towards UA. Policies should UA holistically, as part of the entire urban food system and taking into account the diversity of livelihood practices that the urban poor simultaneously juggle. In many cases, UA is an activity, which is complemented with others. In most Southern countries, when things are going well, the better off groups do not engage in UA and once alternative employment opportunities appear, even the urban poor do something else. Hence, governments need to plan UA spaces in a manner that takes into account other socio-economic factors.

3.2 Operational

What is difficult often to do is to get farmers to organise, to form their own associations. As some NGO members cited, urban farmers often do not see the benefits of organising. This is often due to the fact that they know that what they do is considered illegal. But there may be additional reasons (e.g. taxes) why farmers are reluctant to form associations or their own grass roots organisations. NGOs can assist in the formation and consolidation of community organisations to strengthen the position of the farmers vis-à-vis other groups. This requires a great investment of time and commitment to foster unity and a common direction within the community.

The creation of grassroots organisations of urban farmers offers several advantages. It makes it easier for cities to do outreach, to provide technical support. It is easier to devise appropriate educational material. Also, promoting the organisation of urban farmers allows for more systematic inventories and analysis of urban management practices. It allows for effective monitoring of environmental effects produced by UA.

3.3 Technology and know-how

Governments, multilateral financial institutions and the private sector must invest in the development of appropriate farming techniques for small urban areas. NGOs in the South find it difficult to access this. NGOs can help identifying the resources available and also what is needed to maximise the benefits of UA. They can also work with research institutions to make sure that new techniques take into the socio-economic factors of urban farmers. Additionally, NGOs with their knowledge of the local can also help identify the entry point for UA: Is it for household consumption to increase nutrition levels or for the market. It cannot be assumed *a priori* that what UA farmers produce will necessarily be consumed. There is a need to take into account urban diet patterns and the gendered nature of labour and crop growing. Additionally, NGOs can help to identify the more subtle effects of UA in relation to gender and cultural norms. If UA is targeted as a woman's issue, it should aim to reduce time, costs, as well as management, marketing and administration costs, apart from aiming to improve production.

3.4 Financial

City authorities need to devise creative ways in which they can finance UA activities. Identifying the linkages between urban and rural farmers, processors, and sellers (both formal and informal sectors) so as to facilitate direct marketing schemes to bring local producers and consumers together. Street food vendors (many of whom are now organised), for example, could be targeted to buy directly from UA producers. Or another niche market would be in the tourist

sector, producing food for hotels.

4 Implications: Promoting Multi-Linkages

This overview has served to illustrate the way in which NGOs can assist in addressing some of the complexities of UA. Designing appropriate UA programs involves understanding patterns of farming, appropriate technologies suitable to be used in urban areas by the poor, and the type and amount of labour available and to link these to the particularities of urban living. Thus, there is a need to draw researchers, municipal authorities, NGOs, and urban farmers together.

As an organisation that has up till now worked predominantly on rural issues, Both ENDS sees this as a challenge. Up till now, our approach has been to build bridges between southern and northern organisations. This approach can be tailored to promote linking and learning alliances, facilitating the exchange of information and allowing for organisations to learn of each other's work. This can lead to the creation of multi-stakeholder platforms in order to build consensus and to achieve commitment from a wide number of actors.

And it is here where those NGOs working on UA can catalyse others. Within a regional or national context, there is a need for a local NGO to take the lead and catalyse other urban organisations to incorporate UA into their agendas. In other words, they can play the role of enrolling other urban NGOs into the benefits of UA. They can also help fill the gap between the expert knowledge and the local knowledge of urban farmers. Currently, considerable information is being generated on UA. Much of it is quite technical and inaccessible to urban farmers. Hence, the need for an NGO to become involved in making information more accessible to local needs.

As for northern funding agencies, their development framework needs to become more holistic, to facilitate the broader coalitions that are taking shape in many cities. Funders in the Netherlands have told us that they receive no requests for UA activities. Yet, these same agencies are funding waste management programs, women's groups, nutrition, and other health programs in cities. There is, therefore, a need for funding agencies to take a more pro-active role, to promote the formation of urban alliances in order to exert more pressure at governments. This requires a change in expectations. Generally, funding agencies do not fund the process of organising. What they want are organisations that function well and can carry out projects. This is a short-term project vision. Capacity building interventions require a longer time frame and greater flexibility. Funding agencies need to facilitate these alliances.

5 Moving Forward

There is a need for a very profound reconceptualisation of what cities are. The transition to a more sustainable urban future requires political vision, long term planning and the involvement of communities and civil society organisations.

Agriculture needs to be considered an integral part of this process, of making cities sustainable.

Governments need to consider the best way to incorporate UA into local development initiatives and planning. There remains tremendous potential for NGOs to contribute to its integration into urban planning. Governments need to recognise the expertise that NGOs have and perceive them allies that can assist in addressing the complex issues that they are facing. Likewise, many NGOs have little experience in negotiation or conflict resolution issues with their own authorities, as their tendency has been to take their demands to international fora.

Needless to say, increased involvement of NGOs in urban issues will place greater demands on NGOs themselves, governments, and funding agencies with respect to issues such as evaluation, accountability, and relations to the grassroots. This, however, should not be an excuse not to promote more constructive relations. Instead, it should be an incentive to devise more flexible funding schemes, which do not compromise the need for effective controls.

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