

3.3 Urban Agriculture and Land Use Planning



Integrating agricultural land use in Beirut City.

(Picture: Henk de Zeeuw)

The integration of Urban Agriculture into urban planning – An analysis of the current status and constraints

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Introduction

“The process of formulating and implementing land policies is not only politically and technically difficult, it can also be costly. However, the costs of not formulating and implementing them are much higher” (Dowall, David & Clark Giles, 1997).

Cities do not develop according to planners' wishes – to the contrary, in the present and past, cities have always shown their own dynamic of development. In many cases this has led to crowded, ill-ventilated, unplanned, unwieldy, unhealthy cities – “ulcers on the very face of our beautiful island” as expressed by Howard (1902) for the situation in Britain (Howard Ebenezer, 1902). Howard's Garden City proposals addressed many aspects of the food system --production, distribution, collective preparation and consumption, and waste recycling-- as integral to the city (Pothukuchi, Kameshwari & Jerome L. Kaufman 2000) an idea that only now is recovering again (Groppo, Paolo (ed.) 1997). In many reports on urban planning in developing countries the rapid urban development and population increase are highlighted which make the recent trend different from what happens in the western world. Harare's infrastructure, for example, has been unable to cope with this influx of people (Dengu, Ebbie & and Alex Mugova 1996). Rapid, largely unchecked, urbanisation like for example in Kumasi, Ghana, has called an end to its claim of being the 'Garden City of West Africa'. As a result, land use patterns have become very complicated and no good concepts are in sight (Pender, Judith 1998). Therefore, urban planning instruments need to be adapted to the relatively new situation instead of using out-dated, old-fashioned, post-colonial planning instruments, which are not even used anymore in the countries of origin (Dowall, David & Clark Giles 1997). Conflicts between customary and modern land tenure systems cannot be avoided. Most of the conflicts have to do with the transition from communal land to freehold land tenure. This leads to fundamental changes in land use. The role of Land Boards and traditional authorities in manipulating and interpreting local land rights is unclear, (Richard, Matthew J. 1991).

Key problems identified are for example:

- Urban poverty and food security
- The urban land market, and
- Issues related to sustainable urban development.

A basic question is: how to increase access to land for the poor or how to integrate the urban poor into the urban land market?

The dilemma is: Recognition of and interest in urban and periurban agricultural (UPA) production is generally low among planners and politicians. Thus, a consistent approach to UPA is rarely found, (FAO 2000). Little international co-operation in the field of land legislation

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is happening and innovative approaches from developing countries are missing. There is a lack of both international comparative studies on land legislation as well as internationally knowledgeable advisers (Österberg, Tommy 1998).

Although public awareness for farming activities in cities is slowly increasing, agriculture is still in many cases “by definition” not practised in cities, and is often seen as “economically unimportant” or “a temporary phenomenon”. The terms “agriculture” and “urban planning” seem to be incompatible. What we find in literature on urban agriculture in western countries refers to allotment garden schemes mostly.

High costs of green open space management tend to modify thinking of planners and authorities: a more “agricultural” approach or an approach to public-private partnerships can help to reduce costs. Agricultural activities tend to be shifted to outskirts of cities, far away from markets and infrastructure without analysing economic, environmental and interrelation with other sectors. Urban agriculture is often informal. This refers to the land occupied, the labour market, and the sales of the produce. No official authority deals with informal activities. For one or another of these reasons, urban planners tend to exclude agriculture from their terms of reference. Nevertheless, leaving the urban farming sector out of planning activities creates many problems in the cities of the South. Urban agriculture is a reality and in many cases a response to crisis and a coping strategy of the urban poor, (Jacobi Petra, Axel Drescher & Jörg Amend 2000). As reported from Mozambique for example, uncertainties about property rights affected land outside the state farm sector, and had an impact on investment, productivity, and social relations throughout the country (University of Wisconsin 2000). In many countries best and highly productive soils are gradually becoming built-up areas, thereby losing the potential for food production forever, (Pujol, D. & M. Beguier 2000). Urban agriculture is often shifted to marginal soils and therefore can never meet the goal of high productivity.

Land remains one of the controversial issues related to Urban Agriculture, (Webb, , N. 1998) but *access* to land is mostly more crucial than the *availability* of land, (Mougeot, Luc 1994). Urban land management (as any other land management) should aim to put urban land resources into efficient and sustainable use (FAO 2000). This requires, first of all, recognition of the prevailing problems and acceptance of urban livelihood strategies including urban farming, but also realization of benefits and opportunities created through productive use of green open spaces in cities.

The challenge for urban planners is to integrate coping strategies of the urban poor -- which are closely related to the informal land market in many countries-- into their planning strategies. This requires the definition of rules and standards but also ways to increase the supply of and access to land by the poor and implementation of land legislation to enable sustainable urban development. Recently, gender aspects have entered into the discussion of planning and agriculture in cities. Women, as major players on all levels of the urban food system, in production, marketing, processing and street food vending have a basic interest in being considered as an important interest group for urban planners, (Tinker, Irene 1997). Children as another important urban dweller group are hardly ever mentioned in the planning process. Urban farms could play an important role in community building and the education process, (Ginsberg, Oliver 2000). In spite of little recognition of urban agriculture in literature on urban planning, urban planners are dealing with other issues closely related to urban agriculture, e.g. squatter settlement development and urban poverty alleviation. We can learn from the experience.

Understanding the importance of urban agriculture in the planning process

“Urban agriculture is a practice widely used in the past, and is still in common use in many urban areas around the globe. Urban agriculture is one of the most exciting concepts of sustainable development since it addresses almost all areas of sustainability. It promotes self-reliance, community, and local economy while reducing many environmentally harmful practices from modern farming practices” (Hsin, Robert 1996).

In view of the sustainability discussion, and recent serious, worldwide problems in agriculture, especially in animal farming, urban and periurban agriculture offer at least partly, a solution. Growing crops and breeding animals near the consumer avoids waste of energy and long transport distances.

Evidence suggests that UA complements rural agriculture and increases the efficiency of the national food supply in that it:

- provides products that rural agriculture cannot supply as well, e.g. perishable products, export crops that require rapid delivery upon harvest;
- can substitute for food imports intended for urban consumption and thus save on foreign exchange;
- can release good rural agricultural land for export-oriented production;
- can reduce pressure to cultivate new rural land, relieving stresses on marginal rural lands;
- can contribute to the generation of income in the rural sector by various and multiple interactions between the areas and their inhabitants, (IDRC 1998).

UPA is a reality and has to be considered as an important activity near and inside cities. Cities obtain their food from a variety of sources, from rural, periurban and urban areas but also from imported food. Therefore urban and periurban food production is, in many cases, a response to various factors:

- inadequate access of the urban poor to rural food supplies;
- inadequate measures to support food production;
- problems of transport and distribution of food in both rural and urban sectors;
- insufficient purchasing power of the urban poor.

Taking the highly complex urban-rural linkages into consideration, it is important to direct future development efforts towards improved urban food security through strengthening the rural - periurban - urban network, (Drescher, A.W. & D. laquinta 1999). This principle is becoming more and more important in the ongoing Agenda 21 discussion.

Basic principles of and tools for urban planning

“Urban planners shape patterns of land use and the built environment in and around cities to solve and prevent challenges of urbanization, including providing shelter, food and other basic necessities of life, protecting and conserving the natural environment, and assuring equitable and efficient distribution of community resources, including land. Planners in less-developed countries

experience the added challenges in practice of sometimes chaotic planning policy, an outdated planning legacy with European origins ill-suited to less-developed country communities” (Quon, Soonya 1999).

The most commonly used planning tools include comprehensive general plans, master plans, strategic plans and structure plans ([Dowall, David & Clark Giles, 1997](#)).

- Master plans
- Structure plans
- Land zoning
- Land subdivision regulations

Experience has shown that **general and master plans** tend to be static or assume slow-growing cities. They also tend to ignore how households and the commercial sector alter their demand for land as prices change. Even when such master plans have taken substantial time and effort to make they could hardly be relevant to real developments on the ground if not at least the most powerful stakeholders are willing to adhere to them. In other words, the authority of a master plan can vary a great deal (Berg, Leo van de, 2000).

A more appropriate and dynamic planning tool for developing countries is **structure planning**. It provides a broad framework for local decision-making and it involves public participation ([Dowall, David & Clark Giles, 1997](#)). The Structure Plan sets out a framework for development of a community. It requires projections of future demands and needs of the community such as housing, infrastructure, employment, transport, local markets etc., but also environmental aspects like waste management. As for master plans the long-term planning approach is a disadvantage in rapidly growing cities of developing countries.

Land zoning

Land zoning dictates to the landowner for what purposes he or she can use the land and what can be built on that land. Zoning regulates the use of land in areas for residential, commercial, industrial, agricultural or other land use ([Dowall, David & Clark Giles, 1997](#)). Zoning is a means to control urban sprawl, population density, traffic, and other urban problems. The strict zoning as practised e.g. in European countries is not applicable to many developing countries. Land in Asian cities is frequently used for other or mixed purposes such as residential and commercial use. Especially with regard to the clustered type of development --whereby working sites and residential areas are planned to be near together-- mixed zoning has to be applied. In many developing countries the spontaneous setting of squatter settlement are mixed zoning models, where housing, small-scale industries **and** agriculture are located near to each other.

Nevertheless, urban agriculture needs guided development through zoning measures with respect to plot sizes.

Land subdivision regulations define standards for plot sizes and layout, street improvement and procedures for assigning private land for public purposes. Subdivisions provide the essential characteristics of land uses, street patterns, and public utilities. Especially in the periurban and peri-rural areas of developing countries subdivision regulations do not work. Uncontrolled housing schemes and unclear roles and responsibilities of local authorities hamper proper planning and law enforcement ([Dowall, David & Clark Giles, 1997](#)).

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In the light of sustainable city development urban agriculture best takes place near the people. In most developing countries, transport is a serious constraint and people tend to be immobile because transport costs are not affordable or no public transport system exists. The affected groups are for example located in squatter compounds with little or no access to infrastructure. Access to food is limited due to the non-availability of supermarkets or shops. Only one case from St. Petersburg is known, where public transport for urban farmers is subsidised by the city council, (Moldakov, Oleg, 2000).

Urban land markets

Urban and periurban land is always under the pressure of change. Fast growing economies, normally going hand in hand with urban growth, place demands for making land available for new purposes with a totally different structure (Österberg, Tommy, 1998). Balancing environmental and economic objectives requires a land management strategy that facilitates the land market and protects sensitive land and cultural resources, (Dowall, David & Clark Giles, 1996).

The availability of land and access to land are crucial for agricultural activities. Even when land is available and production allowed, land tenure arrangements and culturally rooted inequalities may limit the effective acreage available. Thus, productivity can be restricted either by reducing the actual acreage available or reducing the effective acreage available due to land use limitations. Insecurity of tenure also influences crop and animal husbandry selection and soil conservation, discouraging investments and land improvements and leading to erosion and depletion of resources (Drescher, A.W. & D. laquinta, 1999).

Land legislation is one tool to regulate rights of landowners and land users in the urban setting and comprises various sub-packages of legislation, among which the land registration legislation and the land management legislation. Threats to environmentally and socially sound land development are land speculation, high-speed, uncontrolled urbanisation, missing land legislation or centralized, top-down planning approaches. Urban land management legislation is a public tool to avoid uncontrolled and inappropriate land use in cities. Housekeeping with natural resources, protection of open spaces, efficient and appropriate land use, and protection of land for public purposes (parks and recreation) falls under these laws (Österberg, Tommy, 1998). The proper analysis of land markets is a key issue in understanding the problem of how to integrate urban agriculture into urban planning policies. This mainly refers to inefficiencies, distortions, and inequalities caused by the land market and the question of who suffers from it, which ultimately are political questions (Dowall, David & Clark Giles, 1997). This is also a major reason to discuss the role of urban agriculture in the light of the political economy.

Different approaches to urban and periurban agriculture

In this context two different aspects need to be considered: the intra-urban and the periurban land-market. They are different in their actual settings, development perspectives, and regulation needs. While intra-urban land is often scarce due to extensive build up and other uses, in the periurban setting rapid structural changes take place, (Mbiba, Beacon, 2001).

Table 1: Differences between "urban" and "periurban" (Drescher and laquinta, 1999)

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Characteristics of "urban" and "urban agriculture"	Characteristics of "periurban" and "periurban agriculture"
attitudes differ between urban and periurban dwellers	periurban production is economically dependent on the city
different kind of people	lower population density than urban
different activities	more land/space available
concept of "urban" varies a lot cross-nationally	PU area has more natural resources
UA is part time job	PUA is a full time job
UA technology is different from PUA	PUA technology is different from UA
knowledge of urban farmers is different	knowledge of PU farmers is different
UA approach is different	PUA approach is different
UA is less commercial than PUA	PUA is more commercial than UA
urbanised	land under threat of urbanisation
more infrastructure/construction	less infrastructure/construction
more services (banks, schools, medical centres etc.)	fewer services (banks, schools, medical centres, etc.)
different landuse than in periurban areas	different landuse than in urban areas
differences in natural resources availability	differences in natural resources availability
differences in policies/incentives/disincentives	differences in policies/incentives/disincentives
easy access to markets	less access to markets
poor air quality	better air quality
high cost of labour and land	lower cost of labour and land
primarily subsistence production	primarily market oriented production
management strategies different from PUA	management strategies different from UA
small-scale, scattered and low-value crops produced in cities	intensive, market-oriented, high value crops
practised by poor urban dwellers for survival purposes	practised by groups and individuals with ready access to capital markets

The differences between urban and periurban agriculture require different planning approaches, e.g. with regard to size of plots, access to inputs, provision of water, etc. This situation calls for different strategies to land development, legislation, and planning. While in the urban environment, land allocation or land adjudication is required, periurban land needs protection through fore-front appropriate zoning measures and land acquisition. Land allocation is a process where a land owner, the state or council, allocates land for long-term stable use to individuals or organisations, while land adjudication is the process of placing existing records on formal or customary land rights into a formal land registration system.

Land acquisition is a means to protect periurban land from being unguidedly misused for urban functions. Governments buy land to create land banks for guided development, to avoid

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land speculation and, for example, to re-distribute it to the poor. All those measures are important in view of protecting marginalized groups from land grabbing (Österberg, Tommy, 1998).

Conversion of agricultural land to urban uses is a particular concern, as rapid growth and escalating land values threaten farming on prime soils. Existing farmland conversion patterns often discourage farmers from adopting sustainable practices and a long-term perspective on the value of land. At the same time, the close proximity of newly developed residential areas to farms increases public demand for environmentally safe farming practices. Comprehensive new policies to protect prime soils and regulate development are needed. By helping farmers to adopt practices that reduce use of chemicals and conserve scarce resources, sustainable agriculture research and education can play a key role in building public support for agricultural land preservation. Educating land use planners and decision-makers about sustainable agriculture is an important priority (University of California, 2000). The question of how to implement proper land market management is of particular interest for former socialist countries (Bertaud, Alain. 1994).

Leasehold versus land ownership

Land allocation seems a practicable strategy to protect open urban spaces for agriculture provided that this kind of land-use is on the agenda of planning policy. Land allocation requires fore-front land evaluation, zoning and a strategic development plan – otherwise it might end up with undesired results. Experiences in site-and-services schemes and upgraded squatter settlements show that the poor tend to gradually improve their housing, provided they have land security. Similar observations are true for urban agricultural activities, as shown in South African Townships, (Small, Rob 2001). On the other hand, the experience is made that the poor, because of high costs, often tend to sublet or sell the site and move back to the original squatter settlement ([Dowall, David & Clark Giles, 1997](#)). Also, secondary gradual densification of sites can be observed causing lack of agricultural land in such areas. Sometimes in-town or rural-urban chain migration is the cause of this, but often the owner of the plot sublets part of the plot to strangers to make money. With respect to the public interest in conservation of open spaces in cities, this is a strong argument not to give land ownership to urban agricultural land but rather leasehold. Leasehold is a limited right to use land for a specific time and a specific purpose often including protected tenure with the right for prolongation and the right of transfer (Österberg, Tommy, 1998). Contrary to land ownership, leasehold prevents land speculation, thus protecting public interest in open spaces. Proper leasehold is closely related to customary tenure, which, for example in Africa, often includes land use for specific purposes. Another model is the community leasehold whereby land is given to a community or association to use it for specific purposes. The European allotment systems work along this line. Nevertheless this requires the establishment of management associations, garden clubs or similar community based groups (Drescher, A.W. 2001).

Land markets and poverty alleviation

Land tenure and, even more so, security of land is a crucial point in the discussion, rather than the availability of land—as pointed out above. Nevertheless there are big regional differences.

The key question is how to bring the poor into the formal land market (Fernandes, Edésio & Ann Varley (eds) 1998). The past approaches of poverty alleviation did not aim to increase

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the flexibility of the poor but rather led to dependence on government and non-government organisations (Dowall, David & Clark Giles, 1997). Urban planners do tackle this question but rather in connection to housing schemes than to agricultural land use. We learn from this example that sometimes we need to take existing thought and strategies as a valuable starting point and try to incorporate agricultural land use into those. Site-and-services schemes and squatter settlement upgrading are common measures taken by councils to provide or improve housing for the poor.

Site-and-services schemes provide the target group with a plot and basic infrastructure like water, roads, and sanitary facilities. Upgrading of squatter settlements provides an opportunity to build on existing structures, already partly developed, and does not interfere with building communities and social structures.

In Thailand and the Philippines, land sharing has also been implemented with respect to housing schemes. Land sharing is based on an agreement between the landowner (private or state) and the land occupants to develop the land according to their specific interest. Land sharing is a means to increase land tenure security and land value (Dowall, David & Clark Giles, 1997).

As we can see, existing tools can be modified to help incorporate urban agriculture into planning. In many cases it might even be easier to implement agricultural land-use than housing schemes. Land sharing could be a model for public-private partnerships as well. These can be partnerships between electricity companies, waste and health departments or councils and community gardeners.

Power lines are non-housing areas in most countries and are known to be potential illegal waste disposal sites, similar to riverbanks. Community gardens can prevent such areas from pollution as examples from Tanzania prove.

Recycling of organic solid waste is an effective and sustainable way of improving soil fertility and minimising disposal space and costs as well as creating income and as such reducing poverty. Decentralised composting facilities may constitute another form of public private partnerships that would be most desirable (Drescher, A.W., 2001).

Participatory planning

"In order to understand the urban and periurban planning process one needs to know who the stakeholders are and how they manage to have their interests reflected in the plans that are implemented after all. Some stakeholders are always stronger than others and though one tends to think that big real estate development agencies, public or private, tend to be the strongest this is not necessarily the case. Individually weak stakeholders such as small-scale market gardeners have often proved to be able to get organised around a common interest. This enabled them to have plans revoked that ignored their interests and have these adjusted to their needs" (van den Berg, Leo, 2000).

It is proposed that the focus of planning for cities should shift from central government control and the international realm to local personnel and institutions concerned with urban issues who should be given a greater say in decision-making and policy implementation. Towards

this end, a balance between public and private sector initiatives, along with local responsibility and central control should be forged. (United Nations Population Division, 1996).

Participatory urban planning is a new, most complex and difficult process. Many stakeholders have to be involved. Experience from many cities in Europe show the difficulties of this process, now embedded in the Local Agenda 21. Communities often organize themselves when they face a common threat or need. As soon as the threat is over the community organisation falls apart ([Dowall, David & Clark Giles, 1997](#)). Nevertheless community organization, capacity building, and access to finance remain the two key issues in participation. To provide means for land development, communities could be supported through the establishment of savings and credit schemes e.g. "mini banks for the poor" ([Dowall, David & Clark Giles, 1997](#)) or community based saving agreements^{*)}.

Participation requires extensive information and communication, as well as consultation and moderation. There is a need to develop platforms for all stakeholders, which should, at least initially, be of an informal nature. The primary goal should be to define their common problems and seek solutions that would bring about improvement to all (van den Berg, Leo, 2000). Often stakeholders have different priorities from urban planners^{**)}. With regard to urban agriculture, in most countries urban farmers are not at all organised and therefore do not have political power. Women farmers have other interests and approaches than male farmers. Agricultural production by women is often household-based and therefore less market oriented. Agriculture in cities is often scattered over small areas, which makes it even more complicated to get the farmers organised. Major activities should therefore be directed towards the empowerment of urban farmer groups. The international support group for urban agriculture (SGUA) and the national networks on urban agriculture (e.g. the Latin-American Network AGUILA) might play a key role in the formation of national urban farmer associations.

Technical tools for land use planning

In spite of all ongoing research on urban agriculture, little is known, in most of the world's cities, about the actual extent of urban agriculture in terms of inner city areas used for agricultural purposes. Also, little is known about the spatial distribution of urban agriculture in the cities. Many questions arise: Where do urban agricultural activities concentrate and why, who is involved, what kinds of crops are grown and by which groups of city dwellers, which kinds of soils are occupied, how is water availability and quality, what is the distance to markets?

Therefore we face a lack of data and knowledge concerning the extent, the importance, the development and the output of urban agriculture. Geographical Information Systems (GIS) have been widely used for urban planning purposes for decades.

Some limited experience with the application of GIS to urban food production activities is already existent, e.g. from Santiago de los Caballeros (Dominican Republic), Hubli-Dharwad (India), Kumasi (Ghana) and Dar es Salaam (Tanzania), (Del Rosario, P. J. , Y. Cornelio, L.Y. Polanco, A. Russell, H. López & P. Escarramán 1999). GIS are used for urban planning and

^{*)} These are observations made in Dar es Salaam

^{**)} This is an observation from the Dominican Republic: First and most important goal was the improvement of the social capital of the community in order to keep the youth staying within the community. Another important goal was raising awareness of the cultural capital of the community.

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open space mapping but also for monitoring loss of agricultural land within city boundaries or measuring urban greening indicators, (Idbamerica ONLINE 1998). GIS will allow planners to monitor changing urban food production trends more easily as cities continue to undergo rapid changes, (Dongus, S. & A.W. Drescher, 2000).

Nevertheless the institutional problem of planning becomes obvious when using GIS. Efficient planning requires the linkage of different data on space, infrastructure, markets, health, soils, water, waste, socio-economy, agriculture etc. that operate under the responsibilities of different, separate departments. Furthermore, the technical premises are often missing and users of the GIS lack know-how. Another interesting open question in this context is if the use of GIS can increase participation in the planning process, (Nedovic, Zorica . 1999).

Programmes and concepts which could facilitate the integration of urban agriculture into urban land use planning

A fundamental step in order to set the right conditions for city farming is to develop an urban agriculture plan and policy, recognising the interrelated nature of food, agriculture, health and ecology by forming a municipal working group that can deal with food issues from a total system perspective. This could involve, among others: the health department, planning department, engineering, local economic development, water management and waste management. Following this, the urban agriculture plan should be incorporated into the land-use planning system. This implies that urban agricultural activities are recognised as major components of green zoning systems, for which a dedicated policy must be formulated, developed and implemented. (Deelstra, Tjeerd and Herbert Girardet .1999)

Sustainable urban development

The discussion on sustainable development is mainly based on the 1992 UN Rio Conference and includes urban areas. This has resulted in various programmes for sustainable urban development like HABITAT and the Urban Management Programme (UMP).

The international justification for the integration of agriculture into urban planning is laid down in the 1992 Rio Conference and the Local Agenda 21. Especially the land tenure aspects in poverty alleviation and the gender perspectives of sustainable development are developed in some detail.

Agenda 21: Human Settlement (1992)

- Strengthen community-based land-resource protection practices in existing urban and rural settlements;
- Establish appropriate forms of **land tenure which provide security of tenure** for all land-users, especially indigenous people, women, local communities, **the low-income urban dwellers** and the rural poor;
- Accelerate efforts to promote **access to land by the urban and rural poor**, including credit schemes for the purchase of land and for building/acquiring or improving safe and healthy shelter and infrastructure services;

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- Develop and support the implementation of improved land management practices which deal comprehensively with potentially competing **land requirements for agriculture**, industry, transport, **urban development**, green spaces, **preserves and other vital needs**;
- Promote understanding among the policy makers of the adverse **consequences of unplanned settlements** in environmentally vulnerable areas and of the appropriate national and local land use and settlements policies required for this purpose.
- "Support, inter alia, community projects, policies and programmes that aim to **remove all barriers to women's access** to affordable housing, land and property ownership, economic resources, infrastructure and social services, and ensure the full participation of women in all decision-making processes, with particular regard to women in poverty, especially female heads of households and women who are sole providers for their families."
- "Promote awareness campaigns, education and enabling practices regarding, in particular, **legal rights with respect to tenure, land ownership and inheritance for women**, so as to overcome existing barriers."
- Governments also committed themselves to the goal of gender equality in human settlements development, including "**integrating gender perspectives in human settlements related legislation, policies, programmes and projects** through the application of gender sensitive analysis".

Urban agriculture could play a major role in sustainable city development by creating open green spaces, increasing the urban habitat diversity and thereby biodiversity in cities, reducing noise and pollution, closing the energy loops and making cities more habitable. On the other hand, the negative impact of urban food production on the environment is seen as a major constraint to this type of activity. The impacts, negative or positive, are dependent on the type of production, the intensity and the degree of linkages between production types. Urban livestock production, if not integrated into urban horticulture or forestry, can harm the environment through the accumulation of animal wastes. Misuse of fertilisers and pesticides in intensive production systems are likely to pollute consumers, water and soil resources (Drescher, A.W. & D. laquinta,1999).

Table 2: Dimensions of sustainability of Urban Agriculture (van den Berg, 2000)

	Environmental	Economic	Social
Synergy	<ul style="list-style-type: none"> - plant nutrients in urban waste & sewage; - health aspect in context of 'urban greening' 	<ul style="list-style-type: none"> - access to inputs & markets - amenity - employment & poverty alleviation 	<ul style="list-style-type: none"> - meeting human needs for green (recreational) urban space
Conflict	<ul style="list-style-type: none"> - urban pollutants in agricultural produce - agrochemicals in urban environment - urban greening & nature-borne diseases 	<ul style="list-style-type: none"> - competition from urban land use systems - vandalism & theft 	<ul style="list-style-type: none"> - negative perceptions of (peri-) urban farming

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Negative effects of urbanisation on UPA are obvious: Pollution of production sites by solid and liquid waste, air pollution, occupation by buildings, deforestation, soil compaction and ground water depletion are major threats to urban food production. As opposed to other commercial or private activities in cities, urban food production has never been addressed properly by legal regulation and planning. One vision of a sustainable city results in the concept of the "Ecopolis" strategy which can be understood as an extension of the Garden City concept. In the Netherlands for example, the Ministry of Agriculture propagates "green strategies for the urban landscape", including the introduction of urban agriculture, (Trenaor, Paul. 1998). Positive experience has been made by the Latin American Urban Management Programme (UMP-LAC), which recently started municipal consultations on urban agriculture.

“New Urbanism” and the Urban Greening concept

The goal of “New Urbanism” is to reverse the trend of "urban sprawl" by learning from traditional urban development patterns and thereby preserving open spaces for natural habitats, active recreation, and productive agriculture, (Mclaughlin, Richard, 1997). While urban greening is often understood as the re-establishment of trees in cities e.g. to reduce heat island effects and to improve the urban microclimate, a more comprehensive understanding of the concept needs to incorporate urban agriculture. The Japanese government, for example, passed a law in 1991, recognising the advantages of open spaces, on the 're-establishment of green spaces'. Recently, more local government bodies and farmer associations have declared an interest in working together with city dwellers to reinvigorate urban agriculture (Akemine, Tetsuo, 1999).

Planners’ support to urban food production

The little information available on the thinking of urban planners with respect to urban agriculture identifies at least some key issue felt to be important to them (Pothukuchi, Kameshwari & Jerome L. Kaufman 2000), (van den Berg, Leo 2000), (Quon, Soonya, 1999).

- The preservation of agricultural land,
- Changing land use and zoning related to food access,
- The integration of food issues into economic development activities and
- The mitigation of the environmental impacts of the food system.

The World Bank recently tackled the question of urban agriculture within the discussion on urban poverty. Urban agriculture can be supported with respect to planning by Baharoglu (Kessides, Deniz & Christine, 2000):

- Reviewing the land-use planning and zoning decisions and adopting more flexible regulations. Regulations may need to be reviewed to see the extent to which they are relevant to urban poor and the city’s current economic and social context. In cities where urban agriculture is a common subsistence strategy, more flexible regulations could be adopted to help the poor develop urban agriculture rather than prohibiting it.
- Developing and disseminating information on land tenure and land capacity.
- Providing basic infrastructure, and developing and implementing environmental/public health measures against parasites and pests.

Additionally the North can assist the South by:

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- Mobilizing the well organized urban agricultural associations in Europe and North America to take a more active part in Third World development by:
 - Lobbying in their respective national donor agencies to become involved in this field; and
 - Building links with non-governmental organizations in developing countries and offering institutional advice and support (Greenhow, Timothy, 1994).

“Urban agriculturalists are a creative and ingenious group of people, with or without support of planners and other institutions, they will continue to garden, either out of necessity, or out of the sheer joy of it. It would be better to recognize, support, and direct their contributions to sustainable communities than to pretend they are not there, or worse, to deliberately undermine them” (Greenhow, Timothy, 1994).

Some approaches have been made e.g. by the American Community Garden Association which has developed guidelines to implement allotment gardens (American Community Garden Association, 1998). Part of these guidelines might be useful for developing countries as well. The transferability of the European allotment systems is recently propagated at various conferences in developing countries and countries of transition (Drescher, A.W., 2001), (Chatwin, Mary Ellen, 1998).

To achieve better recognition and protection of allotments, local authorities need to keep better information about the demand for, and supply of, allotments. Planning departments and allotments management services need to work more closely together and planners need to prepare more proactive allotment strategies to demonstrate commitment to allotments. They also need to include indicators on allotment provision in state of the environment and other environmental audit reports (Local Government Association, 2001).

“Planning needs pressure”. This is a major outcome of the planning workshop of FAO/ETC Electronic Conference on “Urban and periurban Agriculture on the Policy Agenda” (Drescher, Axel W., Rachel Nugent & Henk de Zeeuw, 2000). Experience shows that a strong interest group should be involved in the protection **and** retrieval of open urban space. Legal regulations are needed to achieve land-security for urban farmers. In many European Countries and North America this was achieved through the formation of urban farmer associations. Nevertheless the conservation of urban open space for cultivation and recreation involves a continuous battle with an expanding city and different interest groups.

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[land use planning](#)

[Dominican Republic](#)

Urban agriculture is a new element in the discussions with city government officials in Latin America. Scaling up of activities requires land-use planning municipal policies, as well as specific technical, financial and legal incentives, laws or regulations related to land tenure, access and land taxation. The municipality of Santiago de los Caballeros, in the Dominican Republic, aims to promote a more coherent and effective inclusion of urban agriculture citywide through municipal

Land Use Planning

management and land-use planning policies, mechanisms and instruments, with the objective to support local environmental management, and strategies for poverty reduction.

Akemine, Tetsuo (1999). Alternative urban development and farming: the role of urban agriculture in Japan. In: Gate: Technology and Development no. 2 (April-June 1999) p. 21-24

[land use planning](#)

[Japan; urban planning; multifunctional land use; urban policies](#)

Urban planning and industrialisation have had a huge impact on Japan's farmland. Nevertheless, a patchwork of urban spaces and farmland remains within many built-up areas. These spaces are not only used for agricultural production but also offer vital open spaces in the case of earthquakes and fires and places of refuge in the case of a major conflagration. The government passed a law in 1991, recognising the advantages of open spaces, on the 're-establishment of green spaces'. Recently, more local government bodies and farmer associations have declared an interest in working together with city dwellers to reinvigorate urban agriculture. (NB)

Bernstein, Janis (1994). Land use considerations in urban environmental management. Urban Management Programme Policy Paper no. 12. Washington, D.C.: The World Bank, 1994. 99 p.

[land use planning](#)

[land use; urban development; environmental management; land tenure; land use policies](#)

Balancing environmental and economic objectives requires a land management strategy that facilitates the land market and protects sensitive land and cultural resources. The paper presents the most promising land management approaches and instruments for protecting sensitive resources, managing hazard-prone areas, conserving open space, discouraging excessive urban sprawl, and managing prime agricultural land. Of particular relevance is an annex that reviews land management instruments to meet environmental objectives, including regulatory and economic instruments, property rights, and land acquisition alternatives. (adapted from original by JN)

Berg, Leo van den (2000) Urban Agriculture as the Combination of two Impossible, though Sustainable Trends.

[land use planning](#)

[Netherlands, sustainability](#)

Despite the increasing attention to urban agriculture world-wide, there is a great deal of scepticism surrounding the concept. This paper gives a review of recent studies in The Netherlands and some African Countries. The two trends refer to urban growth through which rural agriculture becomes urban and urban residents turning to

farming as a niche in urban survival. The question is why these trends, which have been there for a long time, suddenly become fashion.

Blake, B; Adam, M.; Pender, J (1998) Where land is gold: natural resources under pressure around Kumasi, Ghana. 2 p. Department for International Development (DFID), Natural Resources Systems Programme.

land use planning

Ghana; urbanisation; sustainable development; natural resource management; economic marginalisation; urban poor

Rapid, largely unchecked, urbanisation of Kumasi has called an end to its claim of being the 'Garden City of West Africa'. As a result, land use patterns have become very complicated. This paper examines how sustainable management of natural resources together with improvements in agricultural productivity and energy recycling might be achieved. The conclusion is gloomy: a troubled situation that is increasingly unfavourable to poor people who inhabit city limits. (WB)

Blanc, Cyril (1998). Les espaces agricoles et naturels dans les schémas directeurs: gros plan sur 14 agglomérations. Rambouillet, France: Bergerie Nationale, Département Périurbain. Looseleaf collection of 16 booklets.

land use planning

France; metropolitan area; master plans; land use policies; agricultural zones; natural spaces; agricultural preservation

This collection of reports is a unique document. It brings together in one collection an evaluation of how the master plans that govern the metropolitan areas surrounding fourteen selected French cities (not including Paris) take into account non-built land uses. The two main categories considered are agricultural spaces and green open ("natural") spaces. The 14 cities are: Brest, Clermont-Ferrand, Le Havre, Le Mans, Lille, Lyon, Marseille, Nancy, Nantes, Orléans, Rennes, Tarbes, Toulouse, and Tours. Each document (ranging from four to twelve pages) includes a brief historical evaluation of how this consideration has evolved in time across different master plans. The four booklets are complemented by a synthetic booklet of sixteen pages and a booklet containing 25 pages worth of illustrations from the 14 cities. The latter demonstrate vividly, not only the variety of ways in which agriculture (and its conservation) have been regarded in different agglomerations, but also the range of graphic techniques used to represent this consideration in master plans. (JN)

Bourque, Martin (2000). Policy options for urban agriculture. In: Growing cities, growing food: urban agriculture on the policy agenda, p. 119-145. DSE, GTZ, CTA, SIDA

land use planning

urban policies; urban planning; policy tools; planning processes; international development policies

Urban farming is in most cities a relatively new trend providing jobs, food and green spaces. Urban farming is especially growing in the poorest sections of towns as a direct result of increasing disparity between the rich and the poor. The initiative for urban agriculture has come almost entirely from communities where it is found, while in some cases e.g. NGOs aid agencies provided important resources. The paper explores policy options for urban agriculture and useful tools. It examines policy conception and constraints of modern planning processes and strategies overcoming them. Lastly international development policies at the root of the problems urban agriculture addresses are discussed. (NB)

Boyd D., Deelstra, Tjeerd. and Biggelaar, M. van den (2001) Opportunities for Integrating Urban Agriculture into Urban Regions in Developed Countries. In: *Urban Agriculture Magazine*, no 4, Urban Planning, July 2001, RUAFA, Leusden The Netherlands.

land use planning

Netherlands; zoning; multifunctional land use

Politicians and planners are faced with many competing claims for the use of scarce land in and around cities in industrialised countries. Multifunctional land use – combining different functions within one area – offers a solution. The sole function of agriculture in industrialised countries has until recently been seen as food production. On the basis of a case study in the heavily populated west of the Netherlands, the authors demonstrate that urban agriculture can be promoted in industrialised countries by regarding it as one element of a land-use combination that offers other valuable functions to society.

Brook, Robert M.; Dávila, Julio (eds) (2000) The periurban interface: a tale of two cities. 251 + vii p. School of Agricultural and Forest Sciences, University of Wales, Bangor, UK; Development Planning Unit, University College London, UK London: DFID

city ecology land use planning waste recycling

natural resources; periurban agriculture; Geographic Information Systems; Ghana; India

A publication written in the framework of research conducted by the Natural Resource Systems Programme of the UK Department for International Development (DFID) on natural resources in the 'periurban interface'. It describes research conducted in two city-regions: Kumasi, Ghana, and Hubli-Dharwad, India. An exhaustive comparison is made between the national development of India and Ghana and between the two cities, in terms of spatial, human and economic development, but also with regard to the institutional framework under which the periurban interface has developed in recent years and to the decision-making processes that are likely to shape the future of the interface. The resources base of the two cities is examined considering cropping and livestock systems, and soil, water and waste management, and how the urbanisation process has affected these. Also, there is a chapter on comparing livelihood strategies of poor families in

the two cities. Geographical Information Systems (GIS) play an important role in the research conducted by the NRS Programme and receive much attention in this publication. The strength of this tool for planning and analysis in a rapidly changing environment is clearly demonstrated, notably for the case of Kumasi. (WB)

Brouwers, Joost; Harms, Eric; Juffermans, Jan; Koetsenruijter, Willem; Perebooms, Harrie (1998). **De duurzame stad**. 131 p. ISBN 90_75365_11_X. **De Kleine Aarde** city ecology land use planning urban transport; wastewater; waste recycling; sustainable building; renewable energy; green management

In 50 cases from Holland and elsewhere in Europe sustainability in urban development is discussed. Themes included are spatial use, traffic, water, climate policies, waste, sustainable building, use of solar energy and green space management. In the last chapters exemplary municipalities and promising developments are presented. (NB)

Buceo, A (2001) **The Political Ecology of Urban Agriculture in Mexico City: An actor-oriented Approach to Explore the Links with Urban Planning. Paper for the workshop "Appropriate Methodologies for Urban Agriculture", October 2001, Nairobi, Kenya. Proceedings, available On: www.ruaf.org. A shortened version is taken up In: *Urban Agriculture Magazine*, no 5, *Appropriate Methodologies for Urban Agriculture*, December 2001, RUAF, Leusden The Netherlands.**

R&D Methodology land use planning Mexico; actor oriented approach; urban planning

In Mexico, lifestyle and culture rooted in prehispanic traditions have survived through activities such as agriculture. The new urban environment has transformed the spatial and political conditions upon which such agriculture takes place. In this paper a framework is presented to point out the relevance of a political ecology of urban agriculture, in other words to highlight the importance of an actor oriented approach in understanding the link between urban planning and urban agriculture. Secondly this approach is used to refer to Mexico City's farmer's interplay in the context of a local and global politicised environment.

Cabannes, Y and Dubbeling, Marielle. (2001) **Urban Agriculture and Urban Planning: what should be taken into consideration to plan the city of the 21st century? In: H. Hoffmann, K. Mathey (eds.). *Urban Agriculture and Horticulture, the linkage with Urban Planning*. 2000. International Symposium. Berlin July 2000. (on cd-rom).**

land use planning food security and nutrition Latin America; poverty; municipal planning

Land Use Planning

This is a synthesis paper, providing elements for discussion on the topic of urban agriculture and urban planning, what should be taken into consideration to plan the city of the 21st century. The paper will be based on research currently going in 10 Latin American cities, systematising and analysing experiences with municipal urban agriculture policies and its recommendations regarding policies, norms, mechanisms or structures as well as technological options to transfer or adapt these initiatives elsewhere in the Latin American and Caribbean Region. The analysis will be differentiated per ecosystem and city size involved.

Visual (video, slides) documentation supporting the synthesis paper In its programme “Urban Agriculture and Feeding the Latin American and Caribbean Cities” the Urban Management Programme for the LAC Region and IDRC-Cities Feeding People, are systematising 6 successful city experiences with municipal urban agriculture policies (as well as describing the conditions and processes that contributed to the success of these municipal policies and interventions) and implementing 4 baseline studies on the presence, potentials and obstacles to a sustainable UA development in the 4 cities.

Cavric, B.I., Mosha, A.C. (2001) Incorporating Urban Agriculture in Gaborone City Planning and Development: A Case Study of Glen Valley. In: *Urban Agriculture Magazine*, no 4, Urban Planning, July 2001, RUAFA, Leusden The Netherlands.

[land use planning](#)

[planning; Botswana; zoning](#)

Today, the scale of urban agriculture (UA) in Botswana’s urban settlements is very limited comparing to the intensive agricultural practices found in other Southern African cities like Nairobi, Dar Es Salaam, Lusaka, Harare or Johannesburg. Current UA activity can be traced in the form of keeping small livestock, chicken, piggeries or limited arable farming in residential areas or much-larger along river valleys traversing periurban areas of the major towns. However, in the capital of Gaborone, one of the fastest growing cities in Africa, a few agricultural projects have been started and integrated into its urban development. The aim of this article is to give more details on this improvements using a case study of Glen Valley that is a typical example of urban agriculture integration into urban planning.

Chaipa, I. (2001) The Urban Planning Dilemma in Harare, Zimbabwe. In: *Urban Agriculture Magazine*, no 4, Urban Planning, July 2001, RUAFA, Leusden The Netherlands.

[land use planning](#)

[Zimbabwe, planning](#)

The growth and geographical spread of urban agriculture in Zimbabwe is largely attributed to the harsh effects of economic structural adjustment programmes (ESAP). The negative impact of ESAP has been manifest by the erosion of basic wages, escalating prices of basic commodities and the widening of the gap between rich and poor households. Studies by ENDA-Zimbabwe indicated that the total land under cultivation in the City of Harare increased dramatically, by 92.6% between the

years 1991-1994. This period coincides with the early phases of ESAP launched in 1991. The land under cultivation has also increased under the economic hardships of the last years. The paper argues that responsiveness and actions of urban local authorities in addressing the pressing needs of the urban community has become of utmost significance.

Clichevsky, Nora, (2002), Tierra Vacante en Las Ciudades Latinoamericanas. (Vacant Land in Latin American Cities) National Council for Scientific and Technological Research of Argentina, ISBN 1-55844-149-2; Supplier: Lincoln Institute of Land Policy, Information Services, 113 Brattle Street, Cambridge, MA 02138-3400 USA

[land use planning](#)

[vacant lands; cities; urban planning; urban management, Argentina, Brazil, Peru, El Salvador, Ecuador, America \(Southern\), America \(Central\)](#)

This book identifies the many problems related to vacant urban land, as well as the opportunities that it presents. The anthology is the culmination of an Institute-sponsored research project coordinated by the editor between 1997 and 1999. Using a common methodology, researchers analyzed and compared the issues around vacant land in five cities: Buenos Aires, Argentina; Rio de Janeiro, Brazil; Quito, Ecuador; Lima, Peru; and San Salvador, El Salvador.

A great variety of vacant land situations coexist in Latin American cities, but there are common threads throughout the region. The problems derived from vacant lots include increased costs for the provision of infrastructure in low-density areas, as well as long commutes and high transportation costs related to growth further from the urban center. Additionally, as long as significant amounts of urban land remain unoccupied, equally important numbers of poor urban residents will continue to occupy land lacking infrastructure of services, located in areas not appropriate for urban development. This pattern both creates precarious habitats and deepens the processes of socio-spatial segregation.

This anthology is an important contribution to incorporating this topic into the urban policy debate in the region. The essays suggest that, at this moment when urban planning and management are being refined in many Latin American countries, vacant land could play an important role in the dynamics of cities and metropolitan areas. The creative use of vacant land could be beneficial to all social sectors, if its management forms part of the society's broader policies of urban equity. The editor formulates a number of recommendations toward this end.

Darmajanti, Erwina (1994). Integrating informal city farming practices into green space management: a study of the case of Jakarta, Indonesia. York University Canada; Masters thesis, 96 p.

[land use planning](#)

[Indonesia; land use; periurban agriculture; forestry; pollution; informal sector; policy](#)

This study has an overarching aim of integrating urban agriculture into the open

space and ecology systems of the metropolis, and considers its role in the lives of the urban poor, particularly migrants. It defines as policy areas: (i) employment, (ii) nutrition, (iii) food security, (iv) urban greening, (v) prevention of squatting. (JS)

Dengu, Ebbie; Mugova, Alex (1996). Urbanization and land policy in Zimbabwe. In: Appropriate Technology vol. 23 (1996) no. 1 p. 5-8. Intermediate Technology Zimbabwe, PO Box 1744, Harare, Zimbabwe
Supplier: Intermediate Technology Publications

land use planning rural-urban linkages
housing; urban infrastructure; land tenure; tenure rights

In the light of the recent events in Zimbabwe with regard to land tenure rights, this article gives important background information. The land division dating back to the land Apportionment Act of 1930, has led to deterioration of agricultural productivity of the Tribal Trust lands and, hence, to urban migration. The article describes how Harare's infrastructure, especially, has been unable to cope with this influx of people. (WB)

Deswarte, Daniel (1999). Le devenir des espaces agricoles et naturels en zone périurbaine. Paris: Conseil économique et social de la région Ile-de-France. 305 p.

land use planning
France; ; agricultural preservation; land use policies; agricultural zones; natural spaces

This important document is exemplary of how agricultural zones (as well as "natural" open spaces) have entered into a new phase of being seriously taken into account – and in a complex, nuanced way – by public authorities in certain metropolitan areas in Europe. The document hence combines a thorough report prepared on behalf of the Commission for Agriculture, Rural Planning and Environment for the Ile-de-France (France's capital region) with an official decree by this region's Economic and Social Council, based directly on the report. The report itself (305 p. + 8 p. of cartographic annexes) is in three parts. Part 1 assesses the current conditions of periurban agricultural and natural spaces around Paris. Part 2 evaluates the context (demographic, economic, social, the actors, legislation, regulations, national policy, European policy) for these spaces; a typology is developed based on this. Part 3 then develops proposals for how these spaces can best be maintained and used (including a ranges of instruments to that effect). (JN)

Dimanlig, Horacio C (et al.) (1979). Urban agriculture: an approach to landscaping for marginal settlements. 36 p. United Nations Environment Programme (UNEP) , National Housing Authority (NHA)

land use planning city ecology
Philippines; settlement areas; urban planning; urban landscaping; urban vegetation; planting materials

Land Use Planning

A landscaping manual dealing with physical aspects of the housing landscape in the Philippine setting and with applying urban agriculture or, more generally, introducing vegetation into the urban environment, 'the soft landscape'. There is a detailed descriptive list of suitable plant materials for this purpose. (WB)

Dixon, J. and A. Gulliver with D. Gibbon (2001) Farming Systems and Poverty: Improving Farmers' Livelihoods in a Changing World. FAO and World Bank.
land use planning
livelihoods; farmers; poverty; farming systems

The book *Farming Systems and Poverty: improving farmers' livelihoods in a changing world* presents the results of a joint FAO and World Bank study which contributed to the updating of the World Bank Rural Development Strategy. Small farmers produce much of the developing world's food. Yet they are generally much poorer than the rest of the population in these countries, and are less food secure than even the urban poor. Furthermore, although rapid urbanisation is taking place in many developing countries, farming populations in 2030 will not be much smaller than they are today. For the foreseeable future, therefore, dealing with poverty and hunger in much of the world means confronting the problems that small farmers and their families face in their daily struggle for survival. Investment priorities and policies must take into account the immense diversity of opportunities and problems facing small farmers. The resources on which they draw, their choice of activities, indeed the entire structure of their lives, are linked inseparably to the biological, physical, economic and cultural environment in which they find themselves and over which they only have limited control. While every farmer is unique, those who share similar conditions also often share common problems and priorities that transcend administrative or political borders.

Donadieu, Pierre (1998). Campagnes urbaines. École Nationale Supérieure Du Paysage. Arles: France, Actes Sud. 219 p.
land use planning city ecology
France; periurban agriculture; landscape; leisure; neighbours; multifunctionality; urban planning

This book on "urban countryside" addresses the central question: rather than to seek to no avail to control the growth of the city through webs of belts, barriers and green spaces, why not construct the urban fabric *with* agricultural and forested spaces? It therefore proposes that periurban agriculture could be considered by metropolitan planners as a planning tool that is capable of organizing sustainably the territory of cities. Widely illustrated with color photos and examples from across France, the book (by the co-director of the Urban Agriculture Program at the *Ecole Nationale Supérieure du Paysage* in Versailles) is exemplary of contemporary French literature on urban agriculture, particularly appropriate more developed countries. (adapted from original by JN)

Dowall, David; Giles, Clark (1997). Urban Land Policies for the Uninitiated.

Economic and Social commission for Asia and the Pacific (ESCAP). Also at:

http://www.unescap.org/huset/land_policies/

land use planning

land use; policy; urbanisation; planning; poverty alleviation planning

This publication is meant for administrators and decision-makers that are no expert in urban land management. It focuses on concepts and issues in urban land and on possible policy tools to address these issues. A special emphasis is placed on increasing the access of the poor to the formal land and housing markets. It explains concepts and terminologies such as, land markets in the urban economy, political aspects of land development and management, land development and poverty alleviation, land tenure, land speculation and land registration, planning tools, legislative and fiscal tools, slums, squatter settlements, illegal subdivisions, increasing supply of and effective demand for land for the poor, objectives of urban land policies. This paper provides very useful information on the different terms and strategies used in urban planning [from original by AD and comments added]

Dowall, David; Giles, Clark (1991). A framework for reforming urban land policies in developing countries. UNCHS/UMP Nairobi, Kenya 53 p.

land use planning

land use; policy; urbanisation; planning

This report presents a global overview and specific cases of the range of policies and legislation involved in urban land use regulation. It outlines a variety of guiding principles and offers a six-step framework for reforming urban land use policy and management. (JS)

Governments around the world pursue urban land policy objectives, and they rely on a vast range of policy tools and institutions to achieve them. Many cities use master plans, zoning, subdivision regulations, building codes, and other public policies to shape development. These regulations are normally adopted to help protect the urban and natural environment, gear infrastructure investments with development, and maintain and enhance property values. Other objectives are more difficult to achieve; providing the poor with access to land, controlling land speculation, and land inflation. In the minds of many policy makers achieving these goals requires stronger medicine; nationalization of land, public land development, and highly centralized property registration systems to control and monitor land ownership.

The purpose of this paper is to challenge much of the conventional wisdom about the indisputable desirability of government intervention into urban land markets and to argue for a reduction in the scope and direction of public policies and actions. It is written for a wide audience of policy makers concerned with urban development. The paper concentrates on defining the critical land policy issues and offering what can be only considered a preliminary set of guidelines for carrying out urban land policy reforms. Most of the guidelines imply major political decisions and commitments on the part of governments, especially clear support for deregulation and privatization. The steps to reform include: land market assessment, decentralisation of land management authority, deregulation of urban land policies and regulations, curtailing of public land development agencies, improving efficiency of land market operations

and provision of financial, institutional and spatial structure for installing infrastructure networks. [from original by AD]

Drescher, Axel W. (2001) Technical tools for urban land use planning. Paper for the workshop "Appropriate Methodologies for Urban Agriculture", October 2001, Nairobi, Kenya. Proceedings, available On: www.ruaf.org. A shortened version is taken up In: *Urban Agriculture Magazine*, no 5, Appropriate Methodologies for Urban Agriculture, December 2001, RUAF, Leusden The Netherlands.

R&D Methodology land use planning
planning; Geographic Information Systems

In spite of ongoing research on urban agriculture, in most of the world's cities, little is known about the actual extent of urban agriculture in inner city areas. Also, little is known about the spatial distribution of urban agriculture in the cities. Many questions arise: Where do urban agricultural activities concentrate and why, who is involved, what kinds of crops are grown and by which groups of city dwellers, what is the contribution of the product to nutrition and food security, which kinds of soils are occupied, how is water availability and quality, what is the distance to markets?

An important and so far in many countries unsolved problem are appropriate methodologies to integrate agricultural activities in cities into urban planning processes.

Driss, Ben Ali, Di Giulio, Antonio, Lasram, Mustapha & Lavernege, Marc (1996). Urbanisation et agriculture en Méditerranée: Conflits et Complémentarités. Editions L'Hamattan, Paris (Histoire et perspectives Méditerranéennes.
land use planning rural-urban linkages food security and nutrition
land use; policy; urbanisation; planning; Mediterranean ; environment rural-urban linkages environment

This publication is a collection of articles on urbanization and agriculture in the Mediterranean. Most of the articles are in French, some in English. Maps, pictures, and tables enrich the book a lot. In the first part the book deals with problems of urban planning mainly from experience of Magreb countries. The multifunctional character of urban agriculture is pointed out by one article. This paper propose a systematic mode of representing agriculture through a set of indicators, meant as a tool for choosing appropriate planning strategies. In the second part the book deals with specific problems caused by the conflict between urbanization and agriculture, like e.g. water problems and other environmental problems. In the last part the book mainly deals with rural urban linkages [AD].

Dubbeling, Marielle., Loor Bravo, J., Llerena Cepeda, M. (2001) The El Panecillo Pilot Project in Quito. In: *Urban Agriculture Magazine*, no 4, Urban Planning, July 2001, RUAF, Leusden The Netherlands.

[land use planning](#)

[Ecuador; planning](#)

The Municipality of Quito is challenged by demands to eradicate urban poverty, to improve the urban environment and to promote a participatory style of governance. Urban agriculture is a potential source of food, income and employment, and is part of a multifunctional use of land, and therefore has an important and strategic role to play in this development. By way of a participatory city consultation on urban agriculture, the municipality embarked upon a process of institutionalising urban agriculture. This consultation was followed by the formulation of an action plan, later implemented into a specific action programme which presently forms a pilot project. It is envisaged that this will be implemented throughout the entire Metropolitan District of Quito.

Duran L.S., Batac, J.H., Drechsel, P.. (2001) Planning in a Changing Environment: the Case of Marilao in the Philippines. In: *Urban Agriculture Magazine*, no 4, Urban Planning, July 2001, RUAFA, Leusden The Netherlands.

[land use planning](#) [waste recycling](#) [community development](#)
[planning; Philippines; waste; compost](#)

Marilao is a municipality with approximately 15,000 households located on the fringe of Manila in the Philippines. A few years ago, Marilao's authorities faced a typical periurban dilemma. With only 2,625 hectares of land area, just five kilometres from Metro Manila, Marilao's mayor could not find affordable land for a new waste disposal site. There were more than 850 business firms and housing projects that competed for the use of municipal land. Not only the problem of where to bring the waste was a problem, also what to do with recycled waste and changes in policy and urban management needed to be tackled. This paper describes the process set in motion by the Marilao authorities.

Fazal, Shahab (2000). Urban expansion and loss of agricultural land: a GIS-based study of Saharanpur, India. In: *Environment and Urbanization* Vol. 12 No. 2 London and Buenos Aires p. 133-150

[land use planning](#)

[remote sensing; Geographic Information Systems; land use; urbanisation; India](#)

This paper uses GIS data (aerial photos and satellite images) combined with field checks and surveys, to measure the loss of agricultural land to urban expansion in a middle-sized Indian city between 1988 and 1998. It identifies how such techniques allow a detailed mapping of land use changes. It includes details of the loss of productive agricultural land, the nature of the land use change, and also describes which non-agricultural uses were the most consumptive. It concludes with a discussion of the long-term implications for India and other industrializing countries. (JS from authors)

Fernandes, Edésio; Varley, Ann (eds) (1998). *Illegal cities: law and urban change in developing countries*. 256 p. ISBN 1_85469_550_7 (pbk). GBP 14.95. Institute of Commonwealth Studies, University of London, UK
Supplier: Plymbridge Distributors, Estover, Plymouth PL6 7PZ, UK

land use planning

land use rights; land tenure; urban housing

Provides an important overview of the role legislation and legal institutions play in the way open spaces are occupied in cities. Much of the content is about how urban poor gain access to urban land and housing in the margin of the law. Issues addressed are of a wide range: How is illegality perceived? How are property rights and public control of land use defined? How do informal settlements occur and how are they regularised? How does customary law operate? How secure are land tenure rights in reality? Such questions have often met with uncritical treatment in traditional legal studies. Therefore, this is an important book that brings law and urban change to the attention of a wider audience. After an introductory part setting the framework for urban legal research and the research record thus far, the remainder of the book is devoted to twelve case studies from major cities in Asia, Africa and Latin America. (WB)

Fisher, A et al (1998). *Local Food Policy. Community Food Security Coalition*
community development land use planning food security and nutrition
R&D methodology
policy; NGOs; community associations; United States

This manual includes: (i) Tips for Organizing Coalitions and Food Policy Councils, (ii) Inventory of Food-related Policies in Local Government, (iii) Action Ideas for Changing Local Policy, (iv) Tips for Operating Food Policy Councils and (v) Case studies of nine Food Policy Councils and Similar Organizations. It provides useful information for assessing how city and county policies affect food production and distribution, and how they can be changed to promote community food security. It is a valuable resource for activists, academics, policy makers and others working on food and agriculture at the community level. 75 pages, (JS adapted from author)

Fisker, A.M. (2000) *The cutting edge between Agenda 21, food, and design in the new millennium*. In: H. Hoffmann, K. Mathey (eds.). *Urban Agriculture and Horticulture, the linkage with Urban Planning*. 2000. International Symposium. Berlin July 2000.. (on cd-rom).

land use planning food security and nutrition

food; Germany; design

Agenda 21 sets out priorities and strategies to stop and reverse environmental degradation and to stimulate sustainable development. The realisation of sustainable development requires new ways of thinking, but it often leaves the question of how the individual moves from the Agenda towards concrete action. The links between the single citizen/consumer, food/meal and the design of the physical room is the

central topic subject of this project, described here.

Fleury, André; Gonthier, Michel; Hamel, Jean-Maurice (1998). Actes de la rencontre franco-québécoise: points de vue sur l'agriculture périurbaine contemporaine. Quebec: n.p., 1998. 36 p.

land use planning city ecology

France; Quebec; periurban agriculture; farmland preservation; regional planning; landscape

This is a conference report on a meeting in October 1998 between planners, professors and students from France and the Quebec region of Canada, part of an ongoing cooperation between French and Quebecois universities on this topic. Participating students from one country all undertook internships in the other country and report on them here. It focuses on issues that regard the periurban areas surrounding cities, and how these parts of metropolitan areas can be planned for. It includes issues of land management, agrotourism, and multifunctional agriculture. (JN)

Foeken, Dick; Mwangi, Alice Mboganie (1998). Does access to land have a positive impact on the food situation of the urban poor? A case study in Nairobi. In: East African Social Science Research Review vol. 14 no. 1 (1998) p. 1-15. 15 p.

land use planning food security and nutrition rural-urban linkages

Kenya; urban poor; food security; land rights; access to land

Examines the vital issue of whether and how access to farm land influences the household's food and income situation. There is a general introduction into coping strategies of the urban poor as well as an interesting review of existing access rights to urban land in Nairobi. Interestingly, for this aspect hardly receives any attention at all, the authors also investigate the phenomenon of urban households realising part of their livelihood from rural sources, through access to rural land, in particular. Previous surveys had revealed that this was the case for Kenyan middle income groups, in particular. The land is not necessarily farmed by the urban dweller himself / herself: often, it is a member of the family. The authors conclude that having access to a rural plot seems to have a positive effect on income and that, in addition, they seemed to be better off than those with access to an urban plot. Mechanisms involved are not entirely clear, however. A paper with a refreshing view. (WB)

Foeken, Dick; Mwangi, Alice Mboganie (1998). Farming in the city of Nairobi. ASC Working Paper no. 30/1998. 49 p. African Studies Centre, PO Box 9555, 2500 RB Leiden, The Netherlands

city ecology land use planning

food security; nutrition; food policy; land use systems; health; economic impact; land tenure; urban policies; reuse of waste; poverty; Kenya; land use policies; agricultural production; land use policies; urban livestock; wastewater reuse

Land Use Planning

Urban farming can be seen everywhere in Nairobi, especially in informal densely populated residential areas, which do not exist on official maps. Three types of urban farming are distinguished: farming in backyards, farming in open spaces and farming in former rural areas surrounded by city expansion. The second type of farming is usually practised by the urban poor and there is ample open space in the city boundaries. A description is provided on the scale of urban farming, the urban farmers and the farming practises. Next the importance of urban farming and the constraints urban farmers face are presented. Lastly the prospects of urban farming are discussed, which include environmental and policy aspects and development efforts. To further develop urban farming the first step to be taken by the Nairobi authorities is to admit that the slum dwellers are a fact of life in the city, that policies directed at improving the living situation of the poor are needed and that urban agriculture should be part of such policies.

Gertel, Jörg; Samir, Said (2000). Cairo: urban agriculture and visions for a 'modern' city. In: Growing cities, growing food: urban agriculture on the policy agenda, p. 209-234. DSE, GTZ, CTA, SIDA

city ecology urban livestock land use planning
urban livestock; food security; food policy; asset strategy; health; ecology; economic impact; gender; urban policies; reuse of waste; poverty; Egypt

Forms of urban agriculture in Cairo are related to its extremely high population pressure and the government policy, especially with regards to food subsidies. Green open space is scarce. Small-scale animal husbandry, such as chicken raising, is interesting as it provides for expensive proteins and can be practised in confined areas. In certain cases organic waste is used as cheap fodder to feed the animals. Most people engaging in urban agriculture are poor and production is mainly for subsistence purposes. A second element is that animals are important assets. The image of food produced in Cairo is not very positive and there are indications of health risks associated with urban farming. Scientist and authorities consider urban agriculture an oxymoron as they associate urban with modern and agriculture with rural and backward. It is believed that urban farming tarnishes the image of Cairo with negative implications for the modernisation of Cairo. Nevertheless to a section of the urban poor small-scale animal husbandry is of critical importance and is an important strategy to cope with food security in Cairo. (NB

Girardet, Herbert (1999). Growing food in cities: assessing the potential of a long-standing tradition. In: Gate: Technology and Development no. 2 (April-June 1999) p. 4-9

city ecology land use planning
economic aspects; natural resource management; recycling

Looks at some of the origins of urban agriculture and examines its present potential with examples from past and present. Urban agriculture has a long history as an important source of food for the masses. The article asserts the importance of creating a circular urban metabolism. (NB)

Greenhow, Timothy (1994). Urban agriculture: can planners make a difference. Cities Feeding People Series Report no. 12. 19 p. International Development Research Center, PO Box 8500, Ottawa, Ontario, Canada K1G 3H9

land use planning

Lesotho; Botswana; Sweden; urban planning; planners' perspective

Examines the way city planners look at urban agriculture in 3 countries: Lesotho, Botswana and Sweden. The basic question is to what extent planning plays a role in influencing the spread of agriculture in urban areas. Gaborone, the author concludes, has neither the subsistence need nor the planning attitude conducive to widespread urban agriculture. In Maseru, inhabitants farm out of necessity and suitable preconditions exist favouring urban agriculture. In Stockholm, policy environment is such that urban agriculture is seen as a valuable component in a new approach to planning with the environment and the sustainable city in mind. The paper ends with a number of recommendations to urban planners. (WB)

Groening, Gert (1996). Politics of community gardening in Germany. In: Urban Agriculture Notes on: <http://www.cityfarmer.org/german99.html#german>, 16 p. Supplier: City Farmer, Canada's Office of Urban Agriculture

community development horticulture land use planning

community gardens; Germany; municipal policies

Gives quantitative data about community gardening in Germany and highlights difficulties in obtaining urban land for small gardens in Berlin, Germany. The paper examines implications of zoning law in Germany. There is an interesting historic overview of community or allotment gardens and their contribution to community development. (WB)

Groppo, Paolo (ed.) (1995). Land reform: land settlement and cooperatives. FAO, Rome, 129 p.

land use planning

land use; land tenure; cooperatives; sustainable development

This report presents the views of a few specialists carrying out a comparative analysis of different theories regarding the access to land in Africa. It concludes with an elaboration of a preliminary set of proposals to be submitted to different governments. (JS)

Groppo, Paolo (ed.) (1997). (Special issue on urban and periurban agriculture) Land reform: land settlement and cooperatives = Réforme agraire: colonisation et coopératives agricoles = Reforma agraria: colonización y cooperativas vol. 1997 no. 2. 125 p. Food and Agriculture Organization (FAO), Via delle Terme di Caracalla, 00100 Rome, Italy; Land Tenure Center of

Wisconsin University, USA

land use planning services
land use; land tenure; horticulture

Contains articles describing cases on land use and land tenure issues. A number of contributions deal with food supply and distribution systems. This (double) issue of Land Reform reflects the intention of FAO's Land Tenure Service to constitute an interdisciplinary support and study group to mitigate effects of rural exodus at the same time through urbanisation of the countryside. (WB)

Gutman, Pablo; Gutman, Gabriela; Dascal, Guillermo. (1987). El campo en la ciudad: la producción agrícola en el Gran Buenos Aires. Informes de Investigación del CEUR, no. 6. Buenos Aires: Centro de Estudios Urbanos y Regionales, 1987. 155 p.

economic impact land use planning
Argentina; periurban agriculture; land use; history; horticulture; vineyards

This is the report that presents the results of one of the pioneering studies in urban agriculture, conducted within the UN University's Food-Energy Nexus program. It describes the range of agricultural activities that can be found in Greater Buenos Aires. Prepared by prominent urban researchers, it emphasizes changes in land uses. One chapter is devoted to a historical overview of the city's urban expansion and its impact on agriculture. After a chapter describes the state of horticulture in the metropolitan area, one chapter presents a case study of a periurban sector known for its vineyards. The report contains many data tables and maps. (JN)

**Harahi, Gamez Rodriguez (1999). Agriculture in the Metropolitan Park of Havana, Cuba. In: For hunger-proof cities: sustainable urban food systems / Mustafa Koc, Rod MacRae, Luc JA Mougeot and Jennifer Welsh (eds), p. 84-89. ISBN 0_88936_882_1. CAD 35.00. International Development Research Center (IDRC), PO Box 8500, Ottawa, Ontario, Canada K1G 3H9
Supplier: International Development Research Centre (IDRC), Publications Department, PO Box 8500, Ottawa, Ontario, Canada K1G 3H9**

city ecology land use planning
integrated urban development; ecology; deforestation; waste management; Havana; social impacts

This paper outlines the fundamental mission, objectives, goals, and strategic planning of the Metropolitan Park of Havana (PMH, an urban, social, and ecological project being developed around the final 7 km of the Almendares River, the most important river of the Cuban capital. The PMH is committed to integrating development, environmental recovery, education, and participation. The PMH will retain a dense urban network of industries, military entities, and population centres that today occupy the territory. As an ecological park, the PMH will provide a solution to the problems of deforestation in the zone, the uncontrolled social and industrial waste, and the general lack of care for the region that threatens the area's flora and

fauna and the River itself. As a social project, the PMH will provide a space for a population of nearly 9 000 inhabitants, who will be an integral part of the development planning of the park. (NB) (Abstract adapted from original)

Hassell, M. von (2000) The Impact of Community Gardening Initiatives in New York City on Children In: H. Hoffmann, K. Mathey (eds.). Urban Agriculture and Horticulture, the linkage with Urban Planning. 2000. International Symposium. Berlin July 2000. (on cd-rom).

land use planning community development food security and nutrition
United States, children; anthropology; housing; poverty

This paper describes research of the author on the Lower East Side of Manhattan since 1989. Her current work on community gardens has developed out of research about a community-based initiative to renovate abandoned buildings. Community gardens on the Lower East Side emerged in conjunction with these housing initiatives from the early 1970s on. They must be understood in the context of fluctuations in the urban economy and attendant shifts in labor markets, housing availability, and market-driven struggles over space. There are approximately 950 community gardens in New York City, predominantly on city-owned land in neighbourhoods marked by poverty and deteriorated housing conditions. Many are contested and targeted by the current city administration as sites for development. In this paper the role of and impact on children in community gardens and community-based initiatives on behalf of these gardens in New York City are analysed. The focus was on food production, art, and education projects involving children in community gardens on the Lower East Side of Manhattan and on children's participation in marches and other events on behalf of the gardens.

Hietkamp, Fern (1995). Opportunities and constraints for urban agriculture in Bandung, Indonesia. AURN working paper no. 7. 36 p. Asian Urban Research Network (AURN), Centre for Human Settlements, School of Community and Regional Planning, The University of British Columbia, Vancouver, Canada

land use planning city ecology economic impact
Bandung; Indonesia; urban planning; land resources; resource management

Focuses on the competition for space between urban agriculture and other activities in Bandung, Indonesia. When the author states that with the current rate of development, much of the land now used for food production within the urban area will disappear in the next 15-20 years, we must realise that this statement was made before the economic crisis hit Indonesia. The author's suggestion that city administrators should include urban farming more systematically in urban planning remains as valid as before, however. (WB)

Hobbs, K. (2000) The role of community gardening and community development. In: H. Hoffmann, K. Mathey (eds.). Urban Agriculture and Horticulture, the linkage with Urban Planning. 2000. International Symposium. Berlin July 2000.

(on cd-rom).

land use planning community development food security and nutrition
United States, children; anthropology; housing; poverty

The White House Task Force on Liveable Communities coordinates federal agencies with missions and resources that affect the liveability of American communities. The Task Force focuses on policies that promote sustainable growth, preserve open space, reduce congestion, improve schools, and make neighbourhoods safe. In pursuing these policies, the Task Force promotes coordinated Federal financial assistance, technical expertise, and information to assist collaborative efforts by communities at the state, local, and regional levels.

Hoffmann, H. and Mathey, K. (eds.) (2000) Urban Agriculture and Horticulture, the linkage with Urban Planning. 2000. International Symposium. Berlin July 2000.

land use planning food security and nutrition
United States; economic impact

All information of the International Symposium on Urban Agriculture and Horticulture on CD-Rom. The CD contains all the abstracts, posters and papers; programme of the event including the excursion and public relations network information.

Home, R. (2001), Negotiating Security of Tenure for Peri-Urban Settlement: Traveller-Gypsies and the Planning System in The United Kingdom. School of Surveying, University of East London. Paper prepared for the DPU International Conference: Rural-Urban Encounters: Managing the Environment of the Peri-Urban Interface, London 9-10 November 2001

land use planning rural-urban linkages
periurban area; informal sector; housing; tenure rights; security; land use planning;
United Kingdom, Europe (Western)

Occupiers of informal unauthorised housing in peri-urban areas seek to improve their tenure security and living conditions through conflict and negotiation with the agencies of the state. Traveller-gypsies in the United Kingdom, while numerically few, have often occupied such marginal locations, and engaged with the land use planning system in protracted attempts to regularise and upgrade their owner-occupied self-help sites. This article summarises the contested identity and marginalization of this group, and the often inconsistent policy and approaches of central and local government towards it. The issues are explored through five case studies of the planning history of gypsy families and their sites in rural areas of the UK.

Howe, J. and White, I. (2001) Planning for Urban Agriculture in the UK. In: *Urban Agriculture Magazine*, no 4, Urban Planning, July 2001, RUAFA, Leusden The Netherlands.

land use planning R&D methodology
United Kingdom; planning; Botswana; zoning; awareness

This paper presents the findings from a UK Government Economic and Social

Land Use Planning

Research Council (ESRC) funded survey examining the role played by planning in regulating urban agriculture on allotments, community gardens and city farms in metropolitan areas of the UK. Planners' attitudes to, and knowledge of, urban food production are explored; the geography of, and the agencies involved in, urban food production is detailed and an examination of the regulation of urban food production is undertaken. The survey reveals that despite many initiatives awareness of urban food production is relatively low amongst metropolitan planning authorities. Whilst there is an increasing interest in food growing within UK society, the role of planning in this land use issue is relatively small. Indeed, urban agriculture sits uncomfortably within the UK planning framework. Despite encouraging signs of an increasing engagement with urban agriculture, planning's apparent low level of involvement remains perplexing given the significance of food to the metropolitan system.

Hsin, Robert (1996) Guidelines and Principles for Sustainable Community Design. A study of sustainable design and planning strategies in North America from an urban design perspective. Faculty of the School of Architecture at Florida Agricultural and Mechanical University. Thesis.

<http://sustainable.state.fl.us/fdi/edesign/news/9607/thesis/thesis.htm>

land use planning

sustainable design; site planning; environment

The study is an attempt to understand the broad scope of sustainable design. The vehicle used is a research and distillation of existing sustainable design theories, strategies, principles, and guidelines, with a focus on an urban planning scale. This thesis is a compilation of the most prevalent sustainable design themes which run through all the various existing information on this topic. From these common themes, a series of sustainable design guidelines and principles, covering the complete design spectrum of this topic is proposed.

Existing knowledge on this topic is generally limited to the separate professions, without much inter-coordination. A complete holistic perspective of sustainable design is a topic that has not been explored greatly. Thus the reason for this study. A holistic perspective on this topic results in a much clearer understanding of the concept of sustainability, as well as a better grasp of how to steer the design industry towards more sustainable practices.

It is important to note here, that this study is focused on sustainable design as applicable to the west, primarily, the United States. Hence, much of the gathered literature and information comes from a western perspective. This study is not representative of the global field of sustainability, other cultures have different perspectives and approaches to sustainable design [from original abstract AD].

Ignacio, NG (1994). Resettle and survive. In: ILEIA Newsletter vol. 10 no. 4 (December 1994) p. 18. International Institute of Rural Reconstruction (IIRR), Silang, Cavite, Philippines
Supplier: Information Centre for Low-External-Input and Sustainable Agriculture (ILEIA), PO Box 64, 3830 AB Leusden, The Netherlands

Land Use Planning

land use planning horticulture

home gardening; Philippines; small-scale agriculture; urban communities; urban development; urban environment; urban population; vegetables

Urban populations in developing countries are growing fast. It's expected that by 2025, urban centres in the developing world will be home to some four billion people, a figure equal to the world's total population in 1975 (World Resources 1994). Rapid population growth and urbanisation are straining resources. Shelter, sewerage, clean water and even the most basic of amenities, food, are at a premium and malnutrition is endemic. (ILEIA)

Institut d'Aménagement et d'Urbanisme de la Région d'Ile-de France (IAURIF) (1995). Plan vert régional d'Ile-de-France. Paris, France: IAURIF. 262 p.

land use planning

France; Paris; master plan; green spaces

This "Green Plan" for the Ile-de-France region (which surrounds and contains Paris) is a synthetic document of the various studies, laws and other instruments developed til the mid-1990s to guide and regulate the management of all open spaces (including agricultural ones) in the region. It organizes these through a four-part spatial framework: the green structure inside the agglomeration, the green belt, the rural crown, and the valleys and green links. For each of these parts, the report contains: an assessment of the current conditions and potentials; a historical overview of evolutions and actions already taken or attempted; an outline of the objectives and the overall conceivable project; and a sketching of the usable means for action to bring about this project. (JN)

Ishida, Yorifusa (1996). Contemporary urban fringe issues and a framework and measures for the planning of urban fringe areas in Japan. Paper from the International Workshop of the Association of Rural Planning Land Use Systems in Urban Fringe Areas in Asia: Kogakuin University, Tokyo 18 p. Contains a list of relevant Japanese land use planning acts 1951 to 1992

land use planning

Japan; periurban agriculture

This paper includes a good description of the national urban *agricultural district* zoning in force for fifty years in Japan and additional legislation by municipalities. (JS)

Jacobi, Petra et al (2000). Urban agriculture – justification and planning guidelines. GTZ, Eschborn, Germany, 51 p.

R&D methodology land use planning

planning; Africa; policy; poverty; emergency relief; Agenda 21

This is a seminal paper. It presents an excellent theoretical "urban agriculture flow-chart" (research-policy-action, combined with a good deal of relevant hard data and

observation. Urban agriculture is presented as a development intervention that promotes inter alia: (i) sustainable development, (ii) poverty alleviation, (iii) food security, (iv) environment and resource management, (v) community solidarity, (vi) health, and (vii) micro-enterprise. (JS)

Jacobi, Petra. and Kiango, Suzan. (2001) Ways to monitor & evaluate Urban and Periurban Agriculture – Experiences from Dar Es Salaam, Tanzania. Paper for the workshop "Appropriate Methodologies for Urban Agriculture", October 2001, Nairobi, Kenya. Proceedings, available On: www.ruaf.org. A shortened version is taken up In: *Urban Agriculture Magazine*, no 5, Appropriate Methodologies for Urban Agriculture, December 2001, RUAF, Leusden The Netherlands.

R&D Methodology land use planning horticulture
Tanzania; monitoring and evaluation; participatory monitoring; indicators

In Tanzania urban and peri-urban agriculture is a well-known activity and it has reached the level of official acceptance. Systematic monitoring and evaluation as well as channelling generated information and feedback from the field to the relevant levels has supported this acceptance. In the discussion about participatory M&E against conventional M&E it appears that the former should replace the latter. It is argued in this paper that there should be a balance to be struck between "conventional" and "participatory" monitoring. There should be both "hard data" and a system that allows primary stakeholders to monitor and evaluate their activities using different methods and own indicators. Truly appropriate monitoring and evaluation should enhance internal learning and provide evidence to support qualitative statements about the impact of an action.

Jarlöv, L. (2001) Urban Agriculture in South Africa. In: H. Hoffmann, K. Mathey (eds.). *Urban Agriculture and Horticulture, the linkage with Urban Planning*. 2000. International Symposium. Berlin July 2000. (on cd-rom).

land use planning
South Africa; poverty; Paradigms; planning

The paper elaborates on experiences from a short-term assignment in Kimberley and Port Elizabeth in 1998, within a Swedish project, financed by Sida, and two months of volunteer work in Port Elizabeth 1999 trying to constitute a net-work for urban agriculture. The paper discusses the gap between the real problems of hunger and malnutrition among the poor in the cities and the conventional planning view upon the urban fabric as a place where people mainly get their food from buying by means of salaries and wages.

Jarlöv, L (2001) Why We Need New Urban Planning Concepts, insights from South Africa. In: *Urban Agriculture Magazine*, no 4, Urban Planning, July 2001, RUAF, Leusden The Netherlands.

land use planning

South Africa; planning

This article is a synthesis of insights from a short period of participation in a comprehensive urban planning project in Kimberley and Port Elizabeth (South Africa) in 1998 and 1999. All statistics used in this article originate from the First Comprehensive Urban Plan (draft), City of Port Elizabeth (May 1999). It has been observed that the phenomenon of urban agriculture in these two cities challenges the western concepts of urban planning and reinforces the need for new models appropriate to non-industrialised cities of Africa and other developing countries. The western model assumes labour employment for the majority, travel to work and the separation of work, employment, recreation and so on. However, drawing in particular from Port Elizabeth, the South African experience is that a majority of urban inhabitants is unemployed, and the informal sector economy dominates. This means that work, recreation and housing all occur in one place. Urban agriculture is one activity in the informal sector.

Kitilla M. and Mlambo, A. (2001) Integration of Agriculture in City Development in Dar Es Salaam. In: *Urban Agriculture Magazine*, no 4, Urban Planning, July 2001, RUAFA, Leusden The Netherlands.

land use planning

Tanzania; environmental management; zoning; Geographic Information Systems

In the present form, agricultural activities in the city of Dar Es Salaam often conflict with planning of urban land-uses. In some cases, agricultural activities are conducted in fragile environments or hazardous areas of the city, resulting in land degradation and water pollution. In other cases the activities are carried out in areas affected by industrial pollution. The keeping of livestock in the city's residential areas may also be hazardous to the health and safety of city residents. The initiative by the Dar Es Salaam City Council to adopt the Environmental Planning and Management approach in the city planning in 1992, was timely and most welcome. Achievements accrued from the new approach have provided significant change to the common practices. Ongoing efforts will synchronise with other two visions deployed by the government, that is, the Development Vision 2025 for Tanzania and the 2025 vision on Food, agriculture and the Environment.

Kolstrup, Hendrik (1985). Urban agriculture: food production and land-use planning in Maputo: a project proposal. Masters Thesis, School of Architecture, Aarhus, Denmark; 213 p.

Contains excerpt from Mozambique urban planning law.

land use planning

Mozambique; land use; land tenure; planning; community gardens; small-scale agriculture; green belts; nutrition; agricultural cooperatives; training; agricultural extension

This thesis is formulated as a project proposal. In its presentation it provides a very good picture of urban agriculture in Maputo in the post-independence decade. The documentation is appropriate to serve as an input to project design, policy, extension

services and marketing. The work was carried out with the cooperation of the National Planning Institute of Maputo. It is worthwhile to mention that the *Zonas Verdes* program in Maputo is an exemplary civic urban agriculture program. (JS)

Kundu, N., P. Konar and A. Basu (2001), **Peri-Urban Agriculture and Environmental Management: Kolkata Experience**. Institute of Wetland Management and Ecological Design Kolkata, Paper prepared for the DPU International Conference: Rural-Urban Encounters: Managing the Environment of the Peri-Urban Interface, London 9-10 November 2001

land use planning

India; periurban area; urban farming systems; urban agriculture; social development, Asia (South-Central)

Traditionally, 'urban' and 'rural' areas have been considered as two opposite aspects of social development. In consequences, urban planning has been an exclusivist land-use planning oriented towards 'urban' development. Contemporary thinking regards the two sectors as complementary to each other. Under the new paradigm of social development, areas in and around urban centers devoted to agriculture, forestry are considered as integral components of a balanced urban life.

In this context, the present paper will focus on the dynamics of urban agriculture and farming in periurban Kolkata. The Calcutta Metropolitan Area (CMA) has two kinds of 'rural' areas - one adjacent to the core city, another in the fringe of the urban waste management. In the rural periphery, agriculture continues as a fairly permanent system of production. Originally, Kolkata's Basic Development Plan (BDP), 1966 just tolerated farming as a transitional system. Today the view is deferent and supportive of restoration of agriculture and pisciculture as a fairly permanent system of metro-development. The paper intends to analyse the present scenario of 'urban agriculture' in Kolkata's urban space.

Laquinta, D. and Drescher, Axel W.. (2001) **Defining Periurban. Paper for the Conference Rural-Urban Encounters: Managing the Environment of the Periurban interface, London 9-10 November 2001.**

rural-urban linkages land use planning

periurban; natural resources

This paper uses definitions and concepts of the periurban area, and explores the implications for planning and management of natural resources in the rural-urban interface. In exploring this, the authors attempt to define the *social footprint*, with the aim to foster effective interdisciplinary discussion.

Levenston, Michael (1999). **Chickens in the soup. Urban Agriculture Notes**. In: <http://www.cityfarmer.org/chicken84.html>. 3 p. City Farmer, Canada's Office of Urban Agriculture

Supplier: City Farmer, Canada's Office of Urban Agriculture

food security and nutrition land use planning

livestock; chickens; urban policies; North America

This article from the very first issue of the City farmer Newspaper describes the battle of urban farmers, especially chicken raisers, with city by-laws in North America. Interesting from a historical point of view. (NB)

Lorraine, Isabelle (1992). Des zones d'activités agricoles péri-urbaines en Ile-de-France. Paris, France: Institut d'Aménagement et d'Urbanisme de la Région d'Ile-de-France (IAURIF). 95 p.

land use planning

France; Paris; periurban agriculture; policy; agricultural preservation

The key part of this report is a classification of the main types of actions undertaken recently to help maintain agricultural spaces in France's capital region. These actions are grouped into: "agricultural subdivisions," "planned re-parcelled areas" and special planning for some major agricultural spaces. This analysis is then complemented by the development of general principles for agricultural preservation, the identification of key actors, and the proposition of means for action. (JN)

Madaleno, Isabel Maria. (2001) Urban Agriculture Supportive Policies: two distant cities. In: *Urban Agriculture Magazine*, no 4, Urban Planning, July 2001, RUAUF, Leusden The Netherlands.

land use planning

community development

food security and nutrition

Portugal; Brazil

Agriculture is an old urban function. Doomed and cursed as it was after the first Industrial Revolution, it never ceased to exist in developing countries and is now once again welcome in most developed countries as well. Poor Brazilian communities see urban agriculture as an alternative survival strategy, because it produces food and improves household's nutrition, but also generates income and jobs, while additionally providing self-respect and hope for a better future. In Portugal, city gardening is small-scale, aimed at giving opportunities for child and adult education, providing ways to produce and consume healthy food, and to enhance contact with land and living things.

Martin, A. and Oudwater, N. (2000) Urban Agriculture and the livelihoods of the poor in Southern Africa. In: H. Hoffmann, K. Mathey (eds.). *Urban Agriculture and Horticulture, the linkage with Urban Planning*. 2000. International Symposium. Berlin July 2000. (on cd-rom).

land use planning

food security and nutrition

South Africa; poverty; livelihoods

The 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 different social groups; secondly, factors affecting the outcomes of urban agriculture projects, and thirdly, the linkages between households, communities and the planning authorities. The policy implications of

these are discussed. The paper is based on research carried out in informal settlements in South Africa (Cape Town and Pretoria) and Zimbabwe (three sites in Harare, one periurban setting with strong market linkage to the central food market, a resettlement area and a high density township). 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.

Maxwell, Daniel G.; Zziwa, Samuel (1992). Urban farming in Africa: the case of Kampala, Uganda. Nairobi, Kenya: African Centre for Technology Studies.
community development land use planning
Uganda; land tenure; social groups; land use; constraints

This report provides the culmination of Maxwell's research on Kampala in the late 1980s and early 1990s. It paints a general picture of urban agricultural practices in the city, and focuses on the social organization and the access to land by urban farmers. (JN)

Maxwell, Daniel G. (1996). Highest and best use? Access to urban land for semi-subsistence food production. In: Land Use Policy vol.13 (1996) no. 3 p. 181-195
land use planning food security and nutrition
Africa; access to land; land tenure; semi-subsistence farming

Pressures on urban policy-makers in Africa to formalise land tenure and land delivery systems are increasing. Parallel, there is an increased demand for informal access to land in urban areas. From analysing what brings the highest and best use, the land access and land tenure issues in Kampala, Uganda are discussed. Semi-subsistence agriculture is an important component of the urban system, yet it is a technically illegal form of land use. From the situation analysis, possible policy responses to competing demands over urban resources are presented. (NB - abstract adapted from original)

May, Julian; Rogerson, Christian M (1995). Poverty and sustainable cities in South Africa: the role of urban cultivation. In: Habitat International vol. 19 (1995) no.2 p. 165-181. Data Research Africa, Durban; University of the Witwatersrand, Johannesburg, South Africa
R&D methodology land use planning economic impact
household survey; farming systems; access to land; land rights

Urban agriculture is increasingly seen as a major means of supplementing incomes in the cities of South Africa. In light of that nation's transition to a non-racial democracy, the particular task of the paper is to review the potential and policy implications of urban agriculture in the context of national initiatives for post-apartheid reconstruction. To reach these objectives, findings of household surveys

are presented on the nature, methods and problems of production of groups of urban and periurban farmers. Income surveys supplemented by participatory techniques are used to gather further information on the problems faced. These major problems include gaining access to land with secure title for cultivation, finance, machinery, transport, crop security and the need for support services. The policy implications which emerge are then discussed. (Original abstract)

Mbiba, Beacon M. (2001) The Marginalisation of Urban Agriculture in Lusaka's Contemporary Planning and Urban Land Dynamics. In: *Urban Agriculture Magazine*, no 4, Urban Planning, July 2001, RUAFA, Leusden The Netherlands.

land use planning economic impact
planning; Zambia; poverty; land tenure

In 1987, Sanyal suggested that Lusaka, Zambia, was the capital city of urban agriculture (UA) in Africa. This was at the peak of Zambia's economic crisis when residents took up UA as a form of employment and to improve their nutritional status. Travelling in the region today, one will easily agree that Harare, Zimbabwe, has taken over as the capital of urban agriculture and that the activity may not be as widespread in Lusaka as observed by Sanyal. There is no longer abundant maize growing and in addition, there is little integration into planning. In fact, urban and periurban agriculture has been marginalised out of planning; it is not considered a priority by the city authorities and is being gradually squeezed out by residents seeking lodgings to rent, as well as developers. Under these circumstances, a recurring question is 'what factors determine the integration (or otherwise) of urban agriculture into city planning'?

Mbiba, Beacon M (2001) Communal Land Rights in Zimbabwe as State Sanction and Social Control: A Narrative. Rural and Urban Planning, University of Zimbabwe, In: *Africa*, vol. 71, no. 3, pp. 426-448

land use planning
communal land; land rights; Zimbabwe, Africa (Eastern)

This article takes a historical approach to argue that communal lands in Zimbabwe are a construct inherited from colonial days (prior to 1980) which governments in post-colonial Zimbabwe have found convenient to maintain rather than dismantle. The construct is not only a convenient framework for the delivery of collective consumption goods but in turn it enables the government to subtly use communal lands as a framework for social control, especially in terms of urban management. The continued existence of communal land areas and land rights also sustains processes of social control at the household level. However, there are issues that will not receive attention in land debates as long as the larger problem of redistribution of large-scale commercial farms remains unresolved.

Mbiba, Beacon M. and Veenhuizen, R. van (2001) The Integration of Urban and Periurban Agriculture into Planning. c

land use planning
policy; methods

In this editorial to the issue of the Urban Agriculture Magazine on Urban Planning, the authors give an overview of the discussion on how to improve the integration of urban agriculture in urban planning. It is argued that one has to specify the type of agriculture, producers, etc and institutions involved for clarification. An issue under discussion is whether we should search for new policies and new institutions, or whether integration and implementation

McAuslan, Faracque, C (1991). Reforming urban land policies and institutions in developing countries 116 p.

land use planning

land tenure; land use; policy; legislation

This paper defines and assesses the various institutional and mechanical elements that constitute an urban land management system. History has handed us a complex set of generally overly rigid land use regulatory processes. Here a framework is set to make them more efficient. (JS)

MDP (2001) The Political Economy of Urban Agriculture, report of a preparatory workshop, Harare, February 2001.

land use planning economic impact

Africa (Southern); Africa (Eastern); political economy; land use; planning; Uganda; Kenya; Zimbabwe

This report contains one general paper by B. Mbiba (The Political Economy of Urban Agriculture in Eastern and Southern Africa; Overview, Settings and Research Agenda) and five case studies commissioned by the Municipal Development Programme, for a preparatory workshop in Harare, February 2001. The aim of the workshop was to discuss new insights and jointly work on a research proposal on the subject. The five country case studies are on Uganda, Kenya, Tanzania, Zambia and Zimbabwe.

Ministry of Foreign Affairs (1994). Stedelijke armoedebestrijding. Sector- en themabeleidsdocumenten van Ontwikkelingssamenwerking no. 5. 163 p. ISBN 90-5328-063-4. Ministry of Foreign Affairs, Directorate General International Co-operation (DGIS), PO Box 20061, 2500 EB The Hague, The Netherlands

economic impact land use planning

poverty alleviation; urban poor; government policies; development co-operation

This publication elaborates on the general policies of the Netherlands department for development co-operation on urban poverty alleviation. The policy starts with a description of the processes of urbanisation and impoverishment in the urban environment. From there, the themes employment and income, habitat (housing, land, water, sanitation, waste, energy, transport and gender), basic social services, institutional development, policies of international donors and the thematic programme of the Dutch government are discussed. (NB)

Ministry of Planning (1991). Investigation into the potential role of urban agriculture: towards the preparation of policy guidelines. Pretoria: Ministry of Planning, South Africa. 69 p.

land use planning economic impact
South Africa; policy; labour; smallholder farming; land use

This reports investigates the potential role urban farming can play in South African cities. It emphasizes the use of land by small holders, the labor issues they face, and the policies that can be put in place to foster their activities. (JN)

Moldakov, O. (2001) The Problem of UPA Planning. In: *Urban Agriculture Magazine*, no 4, Urban Planning, July 2001, RUAF, Leusden The Netherlands.

land use planning rural-urban linkages
Russia; policy; NGO's

In Russia, agricultural activities of the urban inhabitants are taking place at significant distances from their urban homes. The term "urban agriculture" refers more to agricultural activities of city dwellers than to agricultural activities within the city boundaries only. The agricultural sites, usually with a house, are called dachas and are located between 6 and 60 km from the city. This article call for the necessary inputs by ngo's and farmer rganisations to improve technical know-how and improved use of the facilitating infrastructure to urban agriculture in St. Petersburg.

Morello, J et al (2000). Urbanization and the consumption of fertile land and other ecological changes: the case of Buenos Aires: In: *Environment and Urbanization* Vol. 12, No. 2 p. 199-132. IIED London & Buenos Aires, Argentina

land use planning
land use; periurban agriculture; urbanisation

This paper describes the conflict between agriculture and urban spread in the Pampa Ondulada, the eco-region of metropolitan Buenos Aires, which is one of the richest and most productive agricultural areas. It describes and analyses the ecological changes brought about by urban sprawl into rural agricultural areas between 1869 and 1991 and the form that this has taken. It also includes an analysis of the soil types where the city has spread. The paper ends with a discussion of the lack of control over continued urban expansion including that proliferation of 'gated' or closed settlements now favored by the upper-income groups, and the speculative parceling of land in advance of urban build out. Thousands of hectares have been taken out of production and turned into wastelands awaiting development. This issue should be addressed by regional planning and legislation. (JS adapted from the authors)

Morrée, Dicky (de) (1999). New functions, new partnerships: searching for common ground in land use negotiations: a vision from NGOs on the multifunctional character of land and agriculture. 49 p. Bureau Beleidsvorming Ontwikkelingssamenwerking, Plein 9, 2511 CR The Hague, The Netherlands

land use planning

sustainable development; land use; multifunctional land use; natural resources; natural resource management; stakeholders' involvement

Paper presented at the FAO Conference on the Multifunctional Character of Land and Agriculture, held at Maastricht, Netherlands, September 12-17, 1999. This paper was written to represent views of a working group of Dutch NGOs. Views were developed around three central concepts: (1) the multifunctionality of land and water use; (2) the sustainability of land and water use; (3) stakeholders' platforms for natural resource use negotiation. A summary is given of the recommendations to the Conference. (WB)

Mosha, A.C. and Cavric, B.I. (2000) The Practice of Urban Agriculture in Gaborone City. In: H. Hoffmann, K. Mathey (eds.). Urban Agriculture and Horticulture, the linkage with Urban Planning. 2000. International Symposium. Berlin July 2000. (on cd-rom).

land use planning food security and nutrition

Botswana; strategies; policy

The aim of this paper is to presents on the development and spatial extent of urban agricultural practice in the city of Gaborone, one of the fastest growing urbanities in Africa. From this case study, lessons can be drawn for future urban agriculture practices in semi-arid climatic conditions in Africa and abroad. The main interest in the study was to see to what extent, the people in the city of Gaborone carried out urban agriculture activity. The results from the study show that, urban agriculture in Gaborone is dominantly spontaneous and creative response and to some extent is found to be one of the survival strategies of the urban poor. As this case study has just scratched the surface of this very important urban subject in Botswana capital, there are many more questions, which need further researching into before the city can capture the full potential of this activity.

Mougeot, Luc JA (2000). Urban agriculture: definition, presence, potentials and risks. In: Growing cities, growing food: urban agriculture on the policy agenda, p.1-42. DSE, GTZ, CTA, SIDA

R&D methodology land use planning

food security; access to land; gender issues; land use systems; urban planning; public health; rural-urban linkages; sanitation

The article provides building blocks for defining urban agriculture in an internally coherent and externally functional way based on an extensive overview of developments and literature on urban agriculture. The more important policy challenges for urban agriculture on food security, land access, gender implications, land use dynamics and urban planning, public health and sanitation, environmental

impacts and interaction with rural agriculture are discussed. One of the major issues is that urban agriculture is mainly analysed from an agricultural perspective than an urban planners' perspective, while the latter is even more fundamental for integrating urban agriculture in the urban system. (NB)

Mougeot, L.J.A., (2002), Urban Agriculture Main Concepts. IDRC, Cities Feeding People Programme, Ottawa, Canada. In: Special Edition Urban Agriculture Magazine: World Food Summit, Five Years Later, RUAFA, pp. 6-7, 2002

land use planning food security and nutrition
urban agriculture; concepts of urban agriculture

Key features of current definitions of "urban agriculture" generally have downplayed a critical trait that makes urban agriculture, urban. Urban agriculture (UA) is different from and complementary to, rural agriculture in local food systems.: UA is integrated into the urban economic and ecological system. Unless this dimension is enhanced and made operational, the concept will remain of little use to the scientific, technological and policy fronts.

Mwalukasa, Michael (2000). Institutional aspects of urban agriculture in the city of Dar es Salaam. In: Growing cities, growing food: urban agriculture on the policy agenda. - p. 147-159. DSE, GTZ, CTA, SIDA

land use planning R&D methodology
institutional planning; urban policy development; urban management; stakeholder approaches; urban planning

The paper analyses the mechanisms for institutionalising strategies for urban agriculture in the context of an East African city. The experiences described focus on stakeholder involvement and collectively seeking solutions to priority issues of common concern. Short coming of traditional urban planning are discussed and new initiatives under the sustainable cities programme in Tanzania (SCP-TZ) are presented. (NB)

Nasr, Joe. and Smit, Jac. (2000) Urban Agriculture and Urban Patterns: Implications for Sustainability. In: H. Hoffmann, K. Mathey (eds.). Urban Agriculture and Horticulture, the linkage with Urban Planning. 2000. International Symposium. Berlin July 2000. (on cd-rom)

land use planning city ecology
urban patterns; architecture; history

Urban agriculture has emerged as an activity over the course of the past decade, gaining recognition as a contribution to the sustainability of urban settlements on multiple grounds: health improvement, community-building, environmental enhancement, etc. The presence of this activity is now becoming visible in widely different settings: from devastated inner cities to the periurban fringe, from frigid Russian cities to towns that ring the Equator, from community gardens in the richest countries to cultivation on landfills of the poorest countries. This paper seek to tackle the question: what are the impacts of the variety in such settings on the existence and type of urban agriculture? In other words, how do different urban

patterns influence how and where urban residents farm? Different ways of classifying urban form are assessed for their consequences on potential and actual urban agricultural practices, and a typology of urban patterns is developed and cross-linked to types of urban agriculture.

National Institute of Urban Affairs (2000) The role of urban and periurban agriculture in metropolitan city management in the developing countries: a case study of Delhi

Research Study Series No. 74. Rs. 250; US\$20. New Delhi: NIUA

www.niua.org/publicationlist/index.html#UUP. Rupees 250; US\$ 20.00

city ecology land use planning

environment; management; Delhi; policy; India; pollution; land use policies

This study developed from earlier collaboration under the British DFID project on policy implications of air pollution on urban and periurban areas in developing countries. Its main concern is the contribution of urban agriculture to the national capital area of Delhi in India. After a general discussion of urban agriculture, there is a review of the policy orientation and planning provisions of the Government of India that impinge on urban agricultural practices. The case study of Delhi is described as a 'cursory review.' It gives a considerable amount of information about Delhi from official sources, and the characteristics of the periurban area or rural-urban fringe. The study tries to understand the concept and characteristics of urban agriculture, it reviews the policies that might influence such developments, studies the importance given to urban agriculture in both city development and urban environmental management and estimates its potential role in sustainable urban development. Among the conclusions: urban agriculture is important but there is no clear responsibility for these varied activities in the capital area, and planning does not yet address the issue from the standpoint of the urban poor. (Abstract by Christine Furedy)

Nettleton, J. (2000) Regional Economic and Farmer's Market Development in the New York Region. . In: H. Hoffmann, K. Mathey (eds.). Urban Agriculture and Horticulture, the linkage with Urban Planning. 2000. International Symposium. Berlin July 2000. (on cd-rom)

horticulture land use planning city ecology

markets; community building; organic agriculture; poverty

Consumer demand for fresh produce in New York City continues to grow, mirroring the national trend: demand for organic produce has increased over 20% in each of the last 6 years. With 42 farmers' markets in New York City (up from 35 in 1997) offering locally grown fresh fruits and vegetables and demand for new markets, further market expansion is largely constrained by a lack of participating farmers. Initiated by Cornell Cooperative Extension in NYC in 1994, New Farmers/New Markets Program: 1) develops new farmers' markets in poor urban districts; 2) increases farmer participation in the market system; 3) designs workforce preparation and educational skills training for youth and adults in groups that

produce for market. In 2000, new immigrants with prior agricultural experience are being trained to work in existing markets and seek land to produce for the niche ethnic markets in their own neighbourhoods.

Nunan, Fiona. Bird, K., Bishop, J. with Edmundson, A. and Nidagundi, S.R. (2000)
Valuing Periurban Natural Resources: A guide for Natural Resource Managers. School of Public Policy, University of Birmingham.

rural-urban linkages R&D Methodology land use planning
urbanisation; wastewater; waste recycling; concepts; policy; decision support; India; Ghana; natural resources; cost benefits

This booklet describes a decision framework to facilitate natural resource decision-making and management, particularly in areas where there are competing demands from urban development and "rural" uses of resources. It has been written for Southern Countries and is aimed principally at a range of public sector decision-makers. In part 1 the decision framework is described while part 2 gives experiences with applications in two cities; Hubli-Dharwad in India and Kumasi in Ghana.

Nsiah-Gyabaah, K. and M. Adam (2001), Farming Systems and Farming Inputs in and around Kumasi. Sunyani Polytechnic, Ghana / Natural Resources Institute (NRI), Chatham Maritime, Kent, UK, In: Waste composting for urban and peri-urban agriculture: closing the rural-urban nutrient cycle in sub-Saharan Africa, by P. Drechsel and D. Kunze, pp. 96-111, 2001.

land use planning waste recycling
Ghana; farming systems; urban agriculture; livestock; nutrient balance, Africa (Western)

This chapter examines the farming systems in and around Kumasi and the impact of urbanisation and rapid population growth on natural resources and the environment. The use of inputs in the farming systems is described and it is shown that large quantities of potentially useful organic fertilizer material are wasted. Some general recommendations for future activities to improve the situation are put forward.

Nuwagaba, A. and G. Atukunda (2001), Political Economy of Urban and Peri-Urban Agriculture in Eastern and Southern Africa: The Case of Uganda. Department of Social Work and Social Administration Makerere University / Makerere University of Social Research. Paper presented for the Workshop on "The Political Economy of Urban Agriculture in Eastern and Southern Africa, 28th February-2nd March 2001, Harare, Zimbabwe

land use planning
urban planning; Uganda; urban areas; periurban area; historic overview, Africa (Eastern)

The important thread that runs through this paper focuses on the role of urban agriculture in urban and periurban areas in Uganda. It commences with a historical perspective of urban farming, the changing character of urban farming and the micro and macro-economic rationality of farming activities to the over all wider urban economy. The paper proceeds with the nature of the urban land markets both formal

and informal that are available for urban farming activities. The patterns of land access for farming and the urban regulations that provide for urban farming are discussed. Further, the paper deals with the contradictions in African city formation, the role of urban planning and the growth of farming activities within the context of urban planning and urban standards of a proverbial modern city. Lastly, the identification of the research gaps and proposition of major research issues for urgent investigation are mentioned.

Odame Larbi, W. (2001), Changing Livelihoods in Peri-Urban Accra: Breakdown of Customary Land Ownership? Lands Commission, Accra-Ghana. Paper prepared for the DPU International Conference: Rural-Urban Encounters: Managing the Environment of the Peri-Urban Interface, London 9-10 November 2001

land use planning rural-urban linkages

land ownership; land tenure; Ghana; security; land pressure; periurban area; land use planning, Africa (Eastern)

Pristine customary land ownership and tenurial arrangements provide security of tenure for all members of the particular land-owning community. These guarantee sustainable livelihood forms and stable micro-economies. They also provide social safety nets that guarantee access to land, reduce impact of poverty and provide social equity in the distribution of benefits from commercial land transactions. Pressures for change at the peri-urban areas in recent times have however, undermined the principles underlying established customary land ownership conventions, and has led to serious adverse socio-economic conditions. The paper examines these issues at the peri-urban interface of Accra where pressures for change are necessitated by different demand parameters and have different consequences for the environment and livelihood opportunities.

The paper contends that unless there is specific intervention and a re-organisation of land ownership and tenurial arrangements at the peri-urban areas, deprivation, landlessness, loss of livelihoods and poverty will continue to rise with their attendant social vices. The paper argues that such intervention should include development of capacity within public and private sector land management institutions, a more proactive approach to land use planning and development, development of transparent procedures for customary land management, use of civil society for massive public education on land development and environmental issues, and proper accountability and application of revenue from land transactions.

Oni, S. I. (2001) Urban agricultural Enterprises in West Africa: Case of Metropolitan Lagos, Nigeria. In: H. Hoffmann, K. Mathey (eds.). Urban Agriculture and Horticulture, the linkage with Urban Planning. 2000. International Symposium. Berlin July 2000. (on cd-rom).

land use planning food security and nutrition

Nigeria; poverty

Land Use Planning

This paper discusses the historical antecedent of urban agricultural enterprises in West African countries and particularly shows how urban agriculture is practiced as a means of addressing the consequences of unguided urbanisation such as acute unemployment of low/medium class level, food shortages, poor nutrition and urban poverty. It examines the socio-economic characteristics, factor costs, returns and profitability levels of the enterprise. The research findings show that while commercial vegetable entrepreneurs in metropolitan Lagos are dominated mainly by poorly educated migrant farmers, higher proportion of commercial floriculturists are well-educated, and are engaged in this enterprise on part-time basis. It is also revealed that the revenue derived from a unit of floriculture is higher than from commercial vegetables, while seedlings raised for fruits earn highest. The author advocates for urban agricultural networking involving information, exchange on expertise and projects, and exchange.

Österberg, Tommy (1998). Cadastral Systems in Developing Countries - Legal Options. International Federation of Surveyors. Working Group 7, Cadastral Systems in developing countries.
<http://www.sli.unimelb.edu.au/fig7/Brighton98/Comm7Papers/TS26-Osterberg.html>

[land use planning](#)

[definitions; land legislation; cadastral systems; land allocation](#)

This report reflects and summarises the activities, discussions and conclusions from the activities of Working Group 7.2 of Commission 7 of FIG on Cadastral Systems in Developing Countries during the period 1994-1998. The working group has organised seminars and symposiums and carried out an inventory of ongoing cadastral projects. The conclusions are presented together with ideas on future activities related to the cadastral systems in developing countries.[from original abstract by AD]

Ouma, S. (2000) Urban agriculture in Nakuru. In: H. Hoffmann, K. Mathey (eds.). Urban Agriculture and Horticulture, the linkage with Urban Planning. 2000. International Symposium. Berlin July 2000. (on cd-rom).

[land use planning](#)

[Kenya; Nakuru; surveys](#)

This is a general survey in the whole town and the results can be used as inference for many towns (of the same status) in Eastern and Southern Africa.

Payne, G (1997). Urban land tenure and property rights in developing countries: a review. 73 p. ISBN 1_85339_400_9. GBP 12.95 (pbk)
Supplier: Intermediate Technology Publications (ITP), 103-105 Southampton Row, London WC1B 4HH, UK

[land use planning](#)

communal land; land ownership; land tenure; land use; property rights

An annotated and very thorough literature review on a very important aspect of urban agriculture. Indeed, urban land tenure and property rights play an even more vital role than in rural areas. Often, there are frictions between different systems, particularly in urban areas where land is scarce and expensive. Access to credit very much depends on the definition of property rights. Changes in ownership may have very drastic effects on prices of land and, therefore, continued use of it by the urban poor. Although the scope of the book is on cities, much of what is presented also holds for rural areas in principle, though. Urban areas present the particularity of a clash between old and new laws, in a more acerbated way than in rural areas, as in cities the old laws clearly are no longer sufficient. Clarity of tenure status is all-important: the challenge for the poor city dweller is how to obtain more tenure security, in order to be able to do for more investments, without producing a disproportionate increase in land prices, which would be catastrophic for them. In this publication, the main tenure types are catalogued and explained: customary tenure, private tenure, public ownership, religious concepts, indigenous vs. imported concepts. The author concludes that careful analysis of the existing systems should be carried out before embarking on major reforms. This is all the more so as tenure measures as a policy tools are rather inflexible in comparison with fiscal and money policies. Interestingly, full tenure turns out to be not essential to increasing levels of tenure security. In Botswana and Indonesia, the establishment of a statutory system (i.e. by the state) was firmly grounded on traditional principles. The text has many boxes with case descriptions, thus rendering this difficult and specialised subject reasonable accessible. At the end, we find an elaborate, annotated bibliography and a very welcome glossary of terms. There is also a typology of the main categories of land tenure. All in all, a publication produced with great care and thoroughness.
(WB)

Perez Vazquez, A., Anderson, S. and Rogers, A. (2001) Urban agriculture in England, Perspectives and Potential. In: H. Hoffmann, K. Mathey (eds.). Urban Agriculture and Horticulture, the linkage with Urban Planning. 2000. International Symposium. Berlin, July 2000. (on cd-rom).

land use planning community development

United Kingdom; leisure; PRA

Urban agriculture is one of the most important activities in many countries around the world. Its importance is because of the many benefits that holders obtain for it and the multiple opportunities that it brings to minority population. The most important sort of urban agriculture in England is the allotment. Allotments are small pieces of land in cities, which English people use to grow their own food in a peaceful surrounding. Allotments have been very important during Britain's history. It was vital for producing food during the I and II World War and also in modern times the allotment is viewed as an option for many people to avoid GMO food and chemical food. The aims of this field research was to determine and analyse the main characteristics of allotment agriculture in the Southeast of England (London, Ashford and Wye) through Participatory Rural Appraisal (PRA) tools, such as

Land Use Planning

mapping, time lines, seasonal calendar, ranking and force field analysis. Interviews were carried out with a selection of allotment holders about a variety of subjects using semi-structured interviews. The results suggest that the main purposes for having allotment are because of fresh and safety food, as a hobby, exercise and to get relaxation.

Petts, J.. (2000) Creating edible buildings –growing food on and around buildings. In: H. Hoffmann, K. Mathey (eds.). Urban Agriculture and Horticulture, the linkage with Urban Planning. 2000. International Symposium. Berlin July 2000. (on cd-rom).

land use planning city ecology
United Kingdom; architecture; footprint

The world cannot accommodate an increasingly urbanised society, which continuously draws resources from evermore distant parts and uses the biosphere, oceans, land and atmosphere as a waste sink. We must therefore seek more sustainable ways in which to live and develop solutions to the current economic and ecological crisis. The background to the programme 'edible buildings' is that many parts of the world growing food on and around buildings is an economic necessity. Some city farmers attach long, narrow planters or boxes to their walls and grow cucumber and melon up the walls, supported with sticks or twine. Herbs are grown on rooftops in Santiago, silkworms on balconies in Old Delhi, pigeons in downtown Cairo, rabbits in Mexico City shanties and vegetables in Haiti. In London, at least half of its 2.8 million households have gardens –comprising nearly 20% of the total area of Greater London. 1950s research indicates that 14% of the garden area in London was allocated to fruit and vegetable production but it is likely that the current percentage is lower than this.

Pothukuchi, Kameshwari; Kaufman, Jerome L (1999). Placing the food system on the urban agenda: the role of municipal institutions in food systems planning. In: Agriculture and Human Values No. 16 (1999) p. 213-224.

land use planning food security and nutrition
food system; food policy; urban planning

This article is a perceptive look at the relationship of city planning and the urban food system in America at the turn of the century. The urban food system is less visible than such other urban systems. The reasons for its low visibility include the historic process by which issues and policies came to be defined as urban; the spread of processing, refrigeration and transportation technology; together with cheap, abundant energy; that rendered invisible the loss of farmland around older cities; as well as the continuing institutional separation of urban and rural policy. Despite its low visibility, the urban food system contributes significantly to community health and welfare; to metropolitan economies; connects to other urban systems such as housing, transportation, land use, and economic development and impacts on the urban environment. Existing and potential city institutions that could offer a more comprehensive management of the urban food system are examined. These include

the city department of food, the policy council, and the city-planning department.
(adapted from original by JS)

Pothukuchi, Kameshwari; Kaufman, Jerome L (2000). The food system: a stranger to the planning field. In: APA journal vol. 66 (Spring 2000) no 2. 12 p.

land use planning food security and nutrition
planning; food systems

The article argues that a conceptual gap exists in the planning field. The gap the food system, an area which planners continually impact both directly and indirectly, but which is rarely being considered in the planning process. The article helps to fill the gap by exploring why the food system has a low priority among planners, identifying specific ways the food system affects the economy, environment and health of communities and lastly by suggesting ways to strengthen community and regional food systems and food system planning. (NB)

Pretty, Jules; Altieri Miguel (1999). Best practices in land resources management to achieve sustainable food cycles. CGIAR CSD 8 Dialogue Paper No. 3.

land use planning rural-urban linkages food security and nutrition
sustainable agriculture; environment; policy

This paper, prepared for the UN Commission on Sustainable Development, presents an approach to accelerating the trend to sustainable agriculture. It notes that although there has been increasing informal activity in the field only three countries have given explicit national support (Austria, Cuba and Switzerland). Sustainable agriculture is presented a multi-functional within urban and rural landscapes and economies (food and other goods, clean water, carbon sequestering, flood protection, environment for living, biodiversity). Four options for change are presented to the CSD: (i) better use of renewable resources, (ii) intensification of production, (iii) diversification of the agroecosystem, (iv) better use of non-renewable inputs. Institutions are urged to concentrate on process over product and to aim for win, win, win outcomes. (JS)

Quon, Soonya (1999). Planning for urban agriculture: a review of tools and strategies for urban planners. Cities feeding people series report no. 28 Supplier: International Development Research Centre (IDRC), PO Box 8500, Ottawa ON, Canada K1G 3H9

R&D methodology land use planning
urban planning; land use planning; social participation; policy development

On basis of published and "grey" literature and a survey of 26 urban planning professionals from 18 cities around the world key planning-related constraints facing urban farmers were identified as well as possible responses to these constraints. Land use issues are of particular concern to urban farmers. These issues are compounded by the urban planning policy context through, amongst others, a lack of

formal recognition. Important recommendations cited in literature and from planners are changes to land use planning policy level, participation in new multi-disciplinary institutions responsible for all facets of urban agriculture in a community and establishing records of urban agriculture. It was found that urban planners have greater opportunities to permit rather than to support urban agriculture given their position as regards to decision making at the various levels. Planners could use their influence for change, forge alliances and facilitate opportunities for urban farmers. (NB)

Remenyi, J. (2000) The contribution that urban agriculture makes to the livelihoods of poor people. In: H. Hoffmann, K. Mathey (eds.). Urban Agriculture and Horticulture, the linkage with Urban Planning. 2000. International Symposium. Berlin July 2000. (on cd-rom).

land use planning food security and nutrition

Bangladesh; livelihoods; poverty; micro-finance; participatory techniques

This paper looks into the contribution that urban agriculture makes to the livelihoods of poor people, especially recent in-migrants from rural areas. The research is based on slum dwellers in Dhaka Bangladesh. The paper reports on work in progress, including the use of participatory techniques for assessing the contribution that urban agriculture makes to employment, income generation and cash flow into poor households in the slum areas of Dhaka. The results are relevant for how poverty programs are designed, and for how urban planning needs to coordinate with micro-finance providers to ensure that the potential contribution of urban planning to poverty reduction is realised.

Richard, Matthew J (1991). Opportunity and conflict in the periurban area of Gaborone, Botswana. 19 p. Department of Anthropology, State University of New York, Binghamton, USA

land use planning city ecology

Gaborone; Botswana; land use rights; land tenure; resource use

Examines potential conflicts in access to and use of scarce land resources by the various stakeholders in the periurban area of Gaborone, Botswana, one of the fastest growing urban centres in the world. Most of the conflicts have to do with the transition from communal land to freehold land tenure. This leads to fundamental changes in land use. The role of Land Boards and traditional authorities in manipulating and interpreting local land rights is unclear. (WB)

Sandewall, M., B. Ohlsson and S. Sawathvong (2001), Assessment of Historical Land-use Changes for Purposes of Strategic Planning - A Case Study in Laos. In: *Ambio*, vol. 30, no. 1, pp. 55-61, February 2001. Royal Swedish Academy of Sciences.

land use planning

sustainability; forests; Laos; water management, Asia (South-Eastern)

Land Use Planning

How can governments in developing countries act together with local people to promote sustainable forest land use? Based upon an initial review of man's use of natural resources in Southeast Asia over 100 years, an interdisciplinary approach to strategic planning based on interaction among stakeholders is outlined. A case study in a water catchment area, dominated by shifting cultivation, is used to test and illustrate the approach, which includes interviews with local people about historical events and socioeconomic and environmental conditions. The study also includes field point sampling, remote sensing, official records and a simulation tool (the Area Production Model), for verification, calibration and supplementation of the information provided by villagers. By presenting the consolidated data to the villagers and giving them opportunities to consider their land use and explain discrepancies, and comment on the conclusions, a dialogue on land-use strategies was initiated.

Sawio, Camillus J (1994). Urban agriculture and the sustainable Dar es Salaam Project

Cities Feeding People Series report no. 10. 19 p. International Development Research Center (IDRC), PO Box 8500, Ottawa, Ontario, Canada K1G 3H9

[city ecology](#) [land use planning](#)

[Tanzania; urban planning; environmental aspects; land use planning; development projects](#)

Outlines the scope of urban agriculture and then draws a picture of the situation in Dar es Salaam and a number of other cities in Tanzania, with regard to urban agriculture. The core of this publication is about the Sustainable Dar es Salaam project (SDP) established under the auspices of the Global Sustainable Cities Programme of the United Nations Centre for Human Settlements (UNCHS). Priorities set for this project had to do with management of open spaces, recreational areas, hazard lands, greenbelts and urban agriculture potential, all approached in an integrated manner. The paper presents an (impressive) constitutional framework for this project. A table is provided on the surfaces occupied by the various open spaces in Dar, from which the rise of urban agriculture plots becomes apparent. The increase in surface under residential area, however, is even more impressive. Tanzanian authorities adopt, generally speaking, a fairly positive attitude towards urban farmers (with the possible exception of animal husbandry), as opposed to what has been reported from numerous other countries. (WB)

Saasa, Mubumwanu N (1982). Uses of vacant land in the Kaunda Square - Munali area of Lusaka. In: In the shadow of Lusaka (source unknown) p. 30-36

[land use planning](#)

[Zambia; land use; vacant lands; surveys; home gardening](#)

Describes the characteristics of vacant plots in the eastern part of Lusaka and provides socio-economic features of the people cultivating them. (WB)

Smit, Jac (1996). Urban agriculture, progress and prospect: 1975-2005. Cities Feeding People Series no. 18. 30 p. International Development Research

Center (IDRC), PO Box 8500, Ottawa, Ontario, Canada K1G 3H9; The Urban Agriculture Network (TUAN), Washington, DC, USA

[land use planning](#)

[research planning](#); [historic overview](#); [food policy](#); [food security](#); [networking](#)

The past 25 years were important not only for the global expansion of urban agriculture, but also for achieving academic, professional and political support. By the end of the 1970s, due to the failure of many of the household and community garden projects initiated in that decade, urban agriculture was considered inappropriate on the long run. With the advent of the 1980s came a different picture of urban food production, triggered by the Food Energy Nexus programme of the United Nations University. This was followed by several other global initiatives, including studies on urban waste, the 'Street Food' project supported by the USAID and different city studies. This positive development continued and increased during the 90s, resulting not only in increased awareness about urban agriculture, but also in more publications, degrees and workshops on the subject. Government policies changed during this period, and it became obvious that governmental support is necessary for successful development of urban agriculture. Future trends are indicated in which the author predicts an acceleration of public-private partnerships, and in general, the participation of a wide variety of stakeholders. Also, organisations will regroup on regional levels and will link up with bilateral and global development organisations. Urban agriculture is a complex activity that thrives when diverse partnerships are functioning. A key publication. (WB)

Smit, Jac; Nasr, Joe (1999). Urban agriculture for sustainable cities: using wastes and idle land and water bodies as resources. Originally published in: Environment and Urbanization 4, No. 2 (1992): 141-151. Reprinted in The Earthscan Reader in Sustainable Cities / David Satterthwaite (ed.) p. 221-233. London: Earthscan, 1999.

[waste recycling](#)

[land use planning](#)

[resources](#); [waste management](#); [wastewater](#); [solid wastes](#); [land use](#); [vacant lands](#)

This paper describes how cities can be transformed from being only consumers of food and other agricultural products into important resource-conserving, health-improving, sustainable generators of these products. In particular, agriculture in towns, cities and metropolitan areas can convert urban wastes into resources, put vacant and under-utilized areas into productive use, and conserve natural resources outside cities while improving the environment for urban living. Agriculture within urban and periurban areas defined as a common and beneficial land use. This paper also gives examples of urban agriculture programs that help alleviate poverty while creating these benefits. (JS)

Sommers, Paul; Smit, Jac (1994). Promoting urban agriculture: a strategy framework for planners in North America, Europe and Asia. Cities Feeding People Series no. 9. 12 p
Supplier: International Development Research Centre (IDRC), PO Box 8500,

Ottawa ON, Canada K1G 3H9

land use planning

policy planning; urban planning; development strategies

Paints a picture of the significance of urban agriculture in a variety of settings and presents a planning framework for expanding urban agriculture activities or for establishing an urban agriculture programme. (WB)

Spiaggi, E.P. (2000) Urban Agriculture and Local Sustainable Development in Rosario Argentina. In: H. Hoffmann, K. Mathey (eds.). Urban Agriculture and Horticulture, the linkage with Urban Planning. 2000. International Symposium. Berlin, July 2000. (on cd-rom).

land use planning city ecology waste recycling

Argentina; Rosario; vermiculture; education

Experiences are given of an project, in a poor neighbourhood (Empalme Graneros) of Rosario city, Argentina on urban agriculture, in operation since 1996. 40 families are participating of the project. In 1998 support came from de Organisation of American States (OAS), and the project collaborated with institutions from Chile Centro de Educación y Tecnología (CET), and Canada Environmental Policy Institute (EPI). One of the aims was to compare the state of UA in those countries.

Spies L (1988). Municipal policy review: urban agriculture (South Africa). Pretoria: Technikon Pretoria.

land use planning

South Africa; urban policy; open spaces; urban greening

In February 1994, the South African Department of Environmental Affairs and the Faculty of Environmental Science, Technikon Pretoria, hosted a national conference on the productive utilization of urban open space. In 1996, the International Development Research Centre (IDRC) decided to follow up on the conference with a review of the national and municipal policy environment for urban agriculture in the changing country. The review took the form of an international conference followed by a workshop and was jointly hosted by the Department of Environmental Affairs and Tourism (DEAT) and Technikon Pretoria, at Technikon Pretoria on 3-5 March 1998. The aim of the first conference was to simulate awareness and understanding of the value of urban agriculture and to consider the contribution it can make to community development. The aim of the second was to share information on urban agriculture, to identify policy guidelines, and to identify relevant actors and key areas where action is needed at the institutional, environmental, socioeconomic and practical levels. This paper discusses the impact of the two conferences — both direct and indirect — on institutional capacity building, institutional partnerships, scientific advances, results utilization and stakeholder involvement. It also sets down the delegates' recommendations, lists and briefly comments on the relevant national policy statements, and proposes a model for future policy development. The model indicates the responsibilities of various actors (levels of government, communities,

consultants, nongovernmental organizations, etc.) in urban agriculture-related policymaking, planning and implementation. (HC, IDRC)

Technikon Pretoria (1998). Productive open space management with shared focus on the potential of urban agriculture (urban food production) policy and Agenda 21: proceedings of international conference 3-5 March 1998. Technikon, Pretoria, South Africa

land use planning

open space management; Southern Africa

Contains a collection of papers highlighting various aspects of open space management in cities, notably for urban agriculture, horticulture and urban forestry. Most papers describe cities in southern Africa (South Africa, Zimbabwe, Tanzania). Apart from papers by international and national speakers, there are also abstracts from the poster displayed. (WB)

Trans Rural Initiatives (1996). Agriculture et forêt périurbaines sortent de l'ombre. Special issue, supplement to No. 75 (1996). 24 p.

city ecology urban forestry land use planning

France; periurban agriculture; policy

This supplement to a French periodical contains several syntheses of actions on the preservation of urban (particularly periurban) agriculture in France. These range from agricultural policies of small towns such as Aubagne to the key principles of Paris' "Green Plan". (JN)

Treanor, Paul (1998). An Urban Ethic of Europe. In: Web Architecture Magazine Vol. 3. <http://web.arch-mag.com/3/coll/coll2t.html>

land use planning

city ethic; Europe; political economy

There is an urban ethic in Europe, a set of moral principles which are applied to cities: they explain why some cities exist and others do not. Prominent are: de-urbanisation as the chosen urban trend of modernity; cities as part of national culture in a Europe monopolised by nations; and the liberal idea of an open, interaction-maximising city. In effect, three prohibitions on the existence of classes of possible cities. The urban policy of a state "Europa" should reverse these prohibitions [from original abstract AD].

Tricaud, Pierre-Marie; Blancher, Philippe (1993). Espaces naturels dans une métropole indienne: Ahmedabad. 2 Volumes. Ministère des Affaires Étrangères, Direction du Développement et de la Coopération Scientifique, Technique et Éducative, Paris, France; 13+30 p.

city ecology land use planning

urban greening; forestry; food security; home gardening; community gardens; livestock; India; policy; geography

This is one of a series of studies of the un-built urban metropolitan space in Africa, the Middle East, North America and Europe. It places the Ahmedabad metropolis in history (to 1411), in India and in the urban world. It details specific communities, farming areas, and methods of production. Its policy analysis and view of potentials is particularly useful. (JS)

Tricaud, Pierre-Marie (1999). Urban open space planning: lessons from seven North American cities and the Paris Region. Institute for Policy Studies, the Johns Hopkins University Baltimore, USA. 69 p.

land use planning

urban planning; policy; United States; France

This report reviews the challenge of finding a balance between urban development and open space preservation, considering both periurban and intra-urban spaces. Open space as defined includes urban agriculture. (JS)

Weise K., Boyd, I. (2001) Madhyapur Thimi Municipality, Nepal Urban Agriculture Support Programme Integration of urban agriculture in planning. In: *Urban Agriculture Magazine*, no 4, Urban Planning, July 2001, RUAFA, Leusden The Netherlands.

land use planning rural-urban linkages

zoning; Nepal

This article deals with land and other aspects of integration of urban agriculture into the land-use planning of Madhyapur Thimi municipality located in the centre of Kathmandu Valley in Nepal. Traditionally, municipalities in the country are defined on the basis of (the accumulation of) non-farm activities with agriculture considered a rural activity. This is one constraint confronted by efforts to promote urban agriculture. How this problem was overcome together with issues of land development strategy is narrated in the article.

Wekerle, G.R. (2001) Multicultural Gardens: Changing the Landscape of the City. In: H. Hoffmann, K. Mathey (eds.). Urban Agriculture and Horticulture, the linkage with Urban Planning. 2000. International Symposium. Berlin, July 2000. (on cd-rom).

land use planning community development horticulture

Canada; leisure; PRA; multi-cultural society; immigration

Toronto is one of the world's most multicultural cities, yet, until recent years, the landscape of the city reflected primarily an Anglo-American tradition in landscape design and private gardens. This has changed. The landscapes of private gardens and public spaces, including parks, have begun to reflect the diversity of ethnocultural communities that inhabit and use these spaces. Horticulture forms the

Land Use Planning

basis for communication across cultures; in some instances, it generates conflicts over public plantings and the appropriate use of public space. Immigrants to Toronto bring with them rural traditions formed in far flung parts of the world. Gardeners from Southern Europe, Latin America, the Caribbean, and South Asia bring to the city their agricultural experiences and make new demands on the city to meet their needs for earth to grow foods and plants from their homelands. Drawing from intensive interviews with immigrant gardeners, the paper reports on key themes emerging from the research: the importance of urban agriculture in maintaining cultures and traditional knowledge; the use of urban gardens to transmit culture to the next generation; how horticulture forms the basis for communication across cultures; and the emergence of an underground economy, divorced from the market economy, of seeds and plants to meet the needs of immigrant gardens.

Wekerle, G.R.. (2001) Planning for Urban Agriculture in Suburban Development. In: *Urban Agriculture Magazine*, no 4, Urban Planning, July 2001, RUAF, Leusden The Netherlands.

[land use planning](#)

[Canada; immigrants](#)

An examination of suburban development plans and official plan documents revealed that planning for urban agriculture in suburban development planning is non-existent in North American cities. While proponents of urban agriculture seek land for food production on remnants and left-over spaces in the core, built up areas of cities, they ignore the potential to include spaces for urban food production in the settlements of the future, from the outset. The potential inclusion of agriculture in sub-urban planning is illustrated for Toronto, Canada

Who owns this lot? (1998). In: *Idbamerica* (September-October 1998) p. 13

[land use planning](#)

[South America; land tenure; access to land; digitisation; Geographic Information Systems](#)

With the aid of the Interamerican Development Bank, South American countries are providing both rural and urban dwellers with cadastral certificates land titles. This remapping of city areas is done using a GIS software database linked to digitised versions of aerial maps. (WB)

World Wildlife Fund for Nature - India (1991). The wetlands of Calcutta: sustainable development or real estate takeover? WWFN, India, 24 pages + annexes, maps, tables. bibliography

[land use planning](#)

[wastewater; waste management; environment; land use; periurban agriculture; India](#)

This report presents a good exposition of the issue of urban expansion onto agricultural and natural resource lands. The eastern wetlands of Calcutta are a

Land Use Planning

world-leading example of intensive production of vegetable and fish based on municipal solid waste and wastewater. The SSFR-I presents the story beginning in 1777 and looks sharply to the future. (JS)

You, Nicolas (1981). Alternative strategies in urban development: some Chinese experiments in a quest for agrapolitan space. In: Third World Planning Review vol. 3 no. 1 (Feb 1981) p. 77-93

land use planning community development rural-urban linkages
China; community initiatives; land use planning; rural-urban linkages

Gives a detailed account of land use planning in China since the era of the Han Dynasty up to our days. Rural-urban linkages have always been strong in China, urban dwellers maintaining close links with their ancestral home village. Since the 1950s, the relationship between city and countryside has known different levels of appreciation, but bringing the two closer together was always an overriding aim: 'urbanise the countryside, and ruralise the city'. This article provides interesting background reading and is very revealing about policy considerations of Chinese officials. (WB)

Yoveva, Antoaneta; Gocheva, Boriana; Voykova, Galya; Borissov, Boris; Spassov, Al (2000). Sofia: urban agriculture in an economy in transition. In: Growing cities, growing food: urban agriculture on the policy agenda, p. 501-518. DSE, GTZ, CTA, SIDA

economic impact land use planning
crisis response; food security; food processing; food policy; land use systems;
health; ecology; economic impact; reuse of waste; poverty; land tenure

Historically urban agriculture and processing of produce is common in Sofia in various forms. With the transition to a market oriented system its function and importance changed. There are private farms and household agriculture in different forms in Sofia. Urban agriculture provided mitigated the impacts of the collapse of the economy. People could reduce their food bill and generate some additional income. Production is for self-supply and the market. At the same time it is attractive to change the land allocation from agriculture to residential area to maximise short term profits. Environmental pollution poses serious problems to agriculture as industries during the socialist era could contaminate the area unchecked. Under pressure because of budget cuts are the remaining government institutions, which could facilitate urban agriculture, could exercise the necessary control on product quality and uphold regulations. Unclear land tenure situation is a serious constraint. Environmental awareness and proximity of markets and knowledge infrastructure present good opportunities to enhance urban farming. (NB)

Yoveva, Antoaneta. and Mishev, P. (2001) Urban Agriculture and Urban Planning in Bulgaria. In: Urban Agriculture Magazine, no 4, Urban Planning, July 2001, RUAf, Leusden The Netherlands.

land use planning

Bulgaria; zoning; Geographic Information Systems

In CEE countries and in Bulgaria the agricultural production in urban and periurban areas has been important for food supply as well as family income as a response to the decline in the economy and the introduction of open market principles. Urban agriculture in this regard has functioned as a social safety net for the poorer sections of society. Under the SWAPUA project the characteristics of various types of farming that can be found in and around cities in CEE/NIS countries have been identified, with emphasis to soil and water management issues. The project results are policy recommendations based on the exploratory surveys implemented by SWAPUA as well as the participatory planning processes with a variety of local stakeholders that have been initiated by the project partners. In this paper the case study of one of the Bulgarian cities, Trojan, is presented and the specific rules for urban development related to UA.

Yueng, Yue-man (1988). Agricultural land use in Asian cities. In: Land Use Policy (January 1988) p. 79-82

land use planning

China; Hong Kong; India; Singapore; land use; home gardening; urban livestock

Highlights the contribution of urban agriculture to feeding the populations of the south-east Asian megacities. In many cases (China, including Hong Kong, and Singapore) impressive progress has been achieved but other countries in the region still lag behind. The author argues that, apart from practical aspects, such as the availability of land and water, there are still important psychological barriers with regard to farming in the city which should be overcome. (WB)

Zeeuw, Henk de; Waters-Bayer, Ann; Dubbeling, Marielle (1998). Integrating agriculture into urban planning and action: some options for cities. ETC International, PO Box 64, 3830 AB Leusden, The Netherlands

land use planning

urban planning; food security; urban environment; economic impact; nutrition; health; institutional aspects; urban policies; wastewater reuse

From the notion that agricultural use of urban areas is an integral part of the urban productive system the paper analyses the growing importance of urban agriculture. The potential impacts of urban agriculture on food security, health, nutrition, the environment and community development are revisited. Next the constraints for the development of urban agriculture are outlined ranging from prohibitive policies to limited access to resources and lack of organisation among farmers. Based on the a-fore going, policy options are presented aiming to improve and promote urban agriculture as a viable activity. The options call for integrating urban agriculture in existing urban policies on food-security, health, waste management etc. The article concludes with approaches to come to action emphasising the need for integrated approaches and including an example from the Netherlands. (NB)

Zeeuw, Henk de; Guendel, Sabine; Waibel, Hermann (2000). **The integration of agriculture in urban policies. In: Growing cities, growing food: urban agriculture on the policy agenda, p. 161-180. DSE, GTZ, CTA, SIDA**
land use planning
urban planning; urban policy development; food security; ecology; health policy; land use policies; income generation

The article summarises the discussions and conclusions of the working groups and plenary sessions of the International Workshop on urban agriculture "Growing Cities, growing Food: Urban Agriculture on the policy agenda". A range of policy options (including examples) are described under the following themes: Food security and subsistence production, city ecology, income and employment generation and to community development. Lastly a strategy for creating an enabling environment for the development of urban agriculture is presented. (NB)

Zurayk, R., Talhouk, S., Chatila, J. and Abdul-Samad, L. (2000) **Environmental costs of periurban agriculture in coastal Lebanon. . In: H. Hoffmann, K. Mathey (eds.). Urban Agriculture and Horticulture, the linkage with Urban Planning. 2000. International Symposium. Berlin, July 2000. (on cd-rom).**
land use planning horticulture
Lebanon; environment; cost-benefit; commercial

The notion of urban agriculture carries an intrinsic "small scale" connotation. On Lebanon's heavily urbanised coastal zone, intensive agriculture occupies large areas, and competes for space with human

settlements and natural ecosystems. Urban farming is favoured by a mild climate, the availability of water and a closeness to markets. In this paper, we describe the main periurban agricultural systems, which include open field vegetables, protected cultures and banana orchards. The environmental significance of the high input production, such as heavy fertiliser and pesticide application is also addressed.
Special reference

is made to the implications of the competition between agriculture and natural space on plant biodiversity. Data on plant biodiversity in periurban agriculture and natural space is presented, along with GIS analysis of the dynamics of land use in selected locations on the Lebanese coast.