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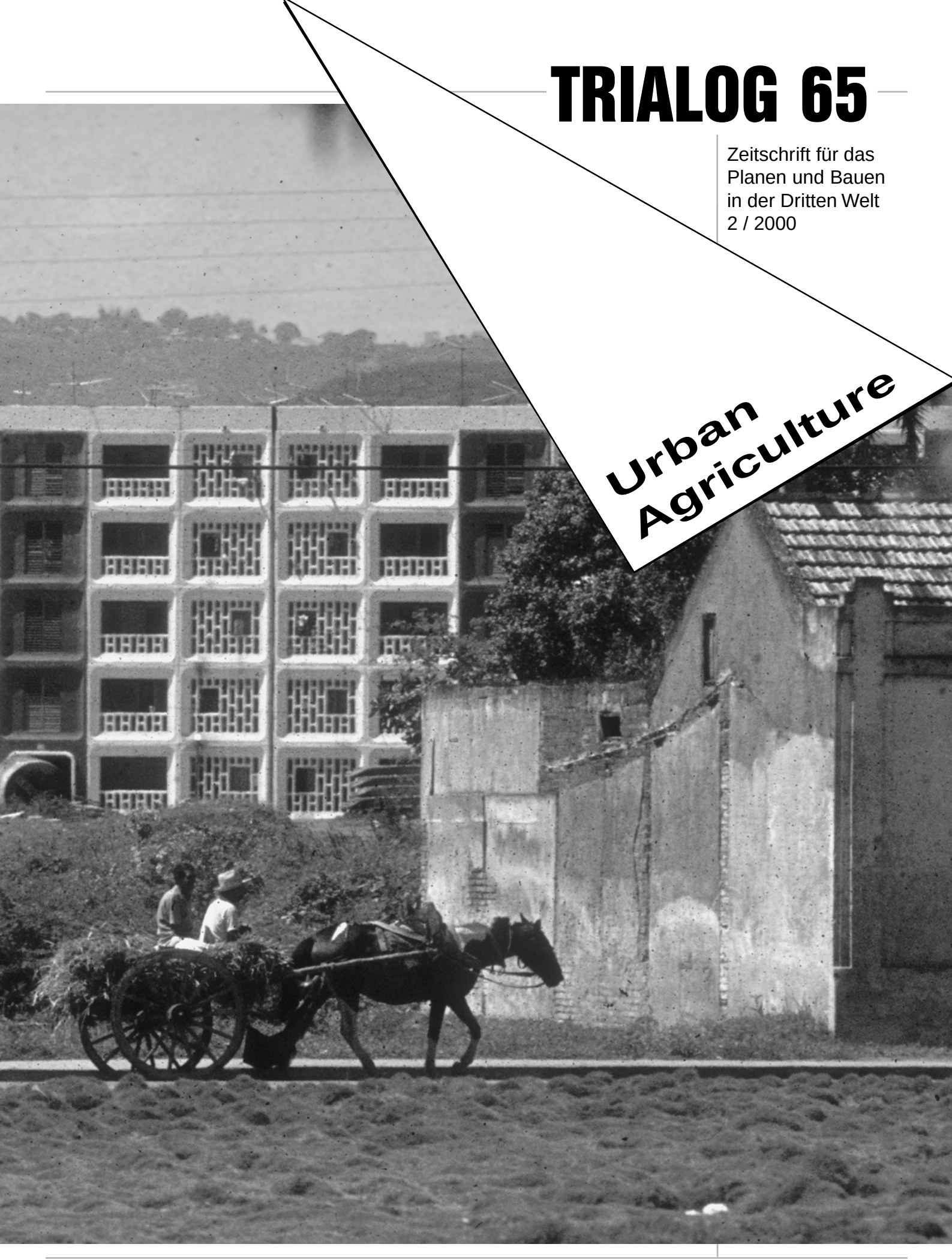
Urban Agriculture



Editorial

The advantages of Urban Agriculture are manifold: healthy nutrition, less loss of food from transport and storage, poverty reduction through income opportunities and possible auto-consumption, education, leisure, and - last not least - a greener city with all its ecological benefits.

Most of highly developed ancient societies benefited from the advantages of urban gardens. Modern societies, though much more urbanized, generally forgot about this valuable culture. Only very recently, faced with increasing poverty and ecological degradation, the potentials of Urban Agriculture and Horticulture are being rediscovered. Hence, international Development Agencies are establishing special units to investigate into the issue, new University careers in the subject have recently been opened in the Americas and elsewhere. A quick search in the Internet will provide hundreds of links under the term 'Urban Agriculture'. However, the practical implementation of the concept still remains an isolated activity hindered by numerous obstacles in most cities. Its smooth and common integration into modern urban life and plannings requires more research, ingenuity and mediation between the stakeholders involved.

Among researchers, decision makers, NGOs and other promoters Urban Agriculture has remained largely the domain of agronomists and development economists, and many of them are thinking of the urban population primarily as consumers rather than producers of agricultural products. However, to bring about a qualitative change in the debate and to establish a direct resource and nutrition cycle within the urban universe, other disciplines must participate, contribute their knowledge and, above all, integrate the concept of Urban Agriculture into their day-to-day professional practice. Urban planners, architects, sanitation engineers, community workers and local councillors are the most obvious new partners in the field.

To explore the possible contribution and impact of town and urban development planning for Urban Agriculture and vice-versa TRIALOG is organizing an international symposium on the topic in Berlin on the 7th, 8th and 9th of July 2000. This initiative has been conceived by TRIALOG as a specific contribution to the URBAN 21 global conference and the parallel meeting of grassroots organizations 'Local Heroes' (also co-organized by TRIALOG), where the future of cities in the new millennium is being discussed. This volume of TRIALOG contains a selection of previously submitted papers to the symposium. It is planned to make the full set of about 30 contributions and the conclusions of the event available on a CD-Rom later on.

The editor of the volume thanks all collaborators for their valuable assistance in putting together this collection under extreme time pressure, especially Marielle Dubbeling, Frank Eckardt, Chris Furedy, Carla Guagliardi, Ute Langendörfer, Michael Peterek und Celeste Vargas.

Kosta Mathey

Title:
Urban farmer in Santiago de Cuba / Photo: Kosta Mathéy

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Urban Agriculture

Volume Editor: Kosta Mathéy

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Conceptual Framework for Urban Agriculture

CARY CRUZ / RED AGUILA[1]

Die Autorin, Mitbegründerin des lateinamerikanischen Netzwerks für urbane Landwirtschaft, unternimmt mit diesem Beitrag eine Standortbestimmung von 'Urban Agriculture'. Insbesondere schlägt sie unterschiedliche Kriterien der Charakterisierung und Klassifizierung des Sektors vor, der in sich sehr heterogen ist und deshalb eine differenziertere Beurteilung und Unterstützung verdient als dies bislang der Fall war. Eine Klassifizierung wäre z.B. denkbar nach Art der Produktion: Gemüse-Anbau, Obstkulturen, Kleintierhaltung, Fischfarmen, Geflügel- und Bienenzucht, urbane Baumkulturen und Oasen, Nahrstoff-Recycling und Humusproduktion, Agroindustrien, etc. Eine andere Unterteilung wäre vorstellbar nach den Vorteilen, die sich aus der Sicht verschiedener Disziplinen anbieten: Gesundheit, Ernährung, Stadtplanung, Umwelt, Vermarktung, soziale Integration, Schaffung von Arbeitsplätzen. Drittens könnte man die sozio-ökonomische Position der Akteure berücksichtigen; Subsistenzwirtschaft kennzeichnet die Ärmsten, Teilverkauf der Ernte eine mittlere Gruppe oberhalb der Armutslinie, und professionelle Produzenten ausschließlich für den Markt können sehr lukrative Unternehmen sein. Eine solche Unterscheidung ist insbesondere hinsichtlich unterschiedlicher Unterstützungsangebote relevant. Der Aufsatz schließt mit einer tabellarischen Übersicht über (aktuelle) Stärken, (künftige) Potentiale, (aktuelle) Schwächen und (zu berücksichtigende) Risiken der städtischen Landwirtschaft.

" A perspective of sustainability of urban agriculture also lies in the companionship among the members of the community, who relate in terms of reciprocity, solidarity and mutual support involving the producers and other members of the community, aiming to minimise costs and searching for alternative solutions for survival. In all development processes, these elements should always be taken into account."

Background

The interest in and presence of urban agriculture in Latin America has increased since the beginning of the 1980's, especially in cities with limited food supplies. To a large extend these experiences are a response to the fast expansion of the cities and their demographic growth, caused by high birth rates and migration from rural habitants to the city attracted by job opportunities, leisure attractions and better services. In this setting, urbanisation pressure has induced a spectrum of alternative strategies to food insecurity, scarcity of employment and social stress. Urban agriculture in its multiple forms is one of the survival strategies for the poorer sections of the population.

Urban agriculture suffers from a common prejudice that can be traced back to the traditional antagony between the rural and the urban, the city and the countryside. Wrongly, the rural has been related to backwardness, inflexibility and poverty while the urban implicates all the opposite: modernity, technology, access to information and mobility. Such a view may have hindered a stonger development of the concept of urban agriculture and the recognition that the agricultural sector can in fact benefit the urban and it's surroundings areas. It is true that urban agriculture is being practised primarily by the poor in developing countries - as a means to improve nutrition and social assistance to the community. As such, authorities should take the role of urban agriculture in poverty reduction programmes into account. However, it would be wrong to reduce urban agriculture to this aspect alone. Examples show that urban agriculture is also a sign of modernity and better quality of urban life.

Definition

The link between urban agriculture and city can be defined by the economic use and circulation of resources and products, implying, for example, small scale production on reduced, empty and abandoned plots, intensive use of the soils and polyculture, productive use of recycled water, application of organic or inorganic fertiliser. Urban agriculture involves both fruit and vegetable production as well as animal husbandry in and around cities. The producers often live in marginal or illegal settlements, in slum and squatter areas and/or other locations in the urban periphery. Local resources such as land, labour, waste water and organic waste are used as inputs for subsistence or commercial production.

The proposed definition of Urban Agriculture already points to some of its inherent limitations and opportunities. Among the former, there may be overproduction of certain crops while others are being neglected; a lack of planning both in terms of land use and economic management; shortage of land and water; insecure land tenure impeding the plantation of perennial crops; contamination of the soil and water sources due to uncontrolled use of agrochemicals; production, sale and consumption of contaminated food due to urban pollution, poor communication and co-ordination between the producers, and difficult access to credits because of the informal character of the activity - mostly the domain of women.

Among the (yet to be exploited) potentials or urban agriculture, we should mention comparative site advantages to be considered in strategic urban planning; crop selection according to

market analysis, improved productivity as a result of producer networking in Clubs, associations etc.; and the setting up of loans-and-savings circles to facilitate access to loans (especially for animal husbandry which requires a bigger investment).

Range of activity

We can identify the following lines of activities within urban agriculture:

- Horticulture: the cultivation of vegetables, legumes, aromatic and medical herbs.
- Fruit production, in its different forms (fruit trees, strawberries etcetera)
- Raising of small animals like birds and rabbits for direct consumption, use of by-products (manure, feathers) and as pets: as well as the raising of larger livestock like cows, goats and sheep.
- Fish cultivation for human consumption as well as for ornamental uses.
- Apiculture, including both bee-keeping and harvesting of their products.
- Urban forestry with its multiple benefits (environmental, social and economic) including the production of flowers, plants, tree and fertilisers for parks and green areas.
- Waste management, productive use of both solid and liquid wastes.
- Transformation/processing of agricultural produce (e.g. into bottled foods, sweets, sausages). Marketing of production in local or regional markets.

Disciplines involved

Seen in a more holistic and integrated perspective, the disciplines related to urban agriculture are numerous. In this article, we focus on those related to health and nutrition of the farmer's families, sanitation in the location of processing and sale, management and marketing, urban planning and urban ecology. Concerning *health,* one could mention the necessity of avoiding the use of chemical and harmful insecticides, the use of non-contaminated water and the protection of edible products from the urban pollution. Also the therapeutical effect of farming for people with physical or psychological problems should be mentioned. Concerning *nutrition*: the planting of highly nutritional and medicinal vegetable and herb gardens, guaranteeing food quality control during production, marketing and consumption. Concerning *management and marketing*: optimising production calendars (to assure year round supply of different products) and competitive marketing strategies. Concerning *land use and urban planning*: creating the right balance between housing, agricultural production, oxidation ponds, forestry and green areas and other land uses. Concerning the *environment*: sustainable management of (natural) resources.

Typology of the actors

Urban agriculture producers may be classified according to their involvement in the previously mentioned types of production; by the kind of space they cultivate in the city (urban or peri-urban); by the type of organisation of the production (self-subsistence or market production) or a number of other criteria that will be mentioned later on. However, in view of assistance needed to urban agriculturists, we proposed to differentiate according to the producers' economic and social position. Three groups can be easily characterised by their level of poverty (diagram 1).

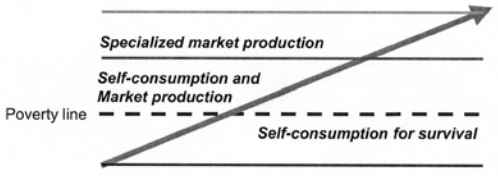

Diagram 1

The first group, living below the poverty line and producing for self-subsistence and survival, should receive specific support to increase food security and combat poverty. The second group has already managed to surpass the poverty line and produces both for self-consumption and for the market. They enjoy a higher quality of life in relative terms, although still remain very vulnerable when losing a job, suffering a disease or experiencing another critical setback. A third group includes the specialised producers which already has accumulated some financial and material reserves and, thanks to their will and innovative energy, have gained a stable position in the market.

1
AGUILA stands for 'Red Agricultura Urbana Investigaciones Latinoamerica'. The network is composed of institutions and organizations legally established, non governmental, public and private, interested in promoting the economically viable, ecologically sustainable and socially equitable use of urban agriculture.
For more information see:
http://www.idrc.ca/cfp/aguila.html

Radical environmentalist's farming in Delft, Netherlands

Strengths of urban agriculture:	Opportunities and challenges of urban agriculture:
1. According to recent surveys, both institutions and individuals are in favour of urban food production, and the percentage of opponents is less than 0.1%.	1. Through sensibilisation of the population and public authorities on the positive effects of urban agriculture, the number of producers and consumers can be increased.
2. The main benefit of urban agriculture for the producing families is higher food security, better health and nutrition; often encouraging the local production of healthy and organic farming methods.	2. Once production exceeds immediate consumption needs then the producing families can also count on a small but steady income in order to satisfy other complementary economic needs (clothing, education).
3. Urban agriculture provides employment opportunities for the less affluent sections of the population, and direct income through the sale of their products.	3. Assistance to SME[2] opens possibilities for involving persons of different age groups and for provision of better quality food, thus responding to current and market demand for ecological and natural products.
4. Urban agriculture may render environmental benefits to the city, by recycling waste, improving the micro-climate and through tree foliage absorption of dust particles.	4. Urban agricultural activities may be better valorised if the environmental benefits are being promoted more vigorously, especially if the use of chemicals is systematically avoided.
5. Urban agriculture offers a healthy and productive occupation for elderly people and a possible therapy for patients.	5. By incorporating urban agriculture in school curricula the urban youth may be better educated and interested get engaged in the matter.
6. Urban agriculture promotes the conservation of resources through recycling of waste(water) and use of non-organic wastes in farming constructions and agricultural tools	6. Urban agriculture, even in it most modest form, can be practised in any school, community or family to produce small amounts of different fruits, forest and ornamental species (including native species in danger of extinction), thus contributing to urban bio-diversity and greening the environment.
7. Urban agriculture may strengthen solidarity and exchange between neighbours, and re-valorises the family as a productive unit.	7. Urban agriculture offers economic opportunities to people with low incomes. Garden products and their processing can be labour-intensive inputs for construction materials, furnishing, arts and medicines.
	8. Urban agriculture can be a vehicle to increase urban well being, by valorising nature, promoting a healthier life, and living in harmony with the environment. It helps to achieve a better balance between production, services provision and consumption, and to save the environment for future generations.

Urban oasis in Gabès, Tunisia

However, for specific reasons other types of classification may prove to be more useful, i.e. for specific research and development interests. Examples include:

- By the quality of the product obtained after production and processing.
- By the complexity of the production system implemented by the producers.
- By the main destination of production: consumption, sale, or as input for food-processing .
- By the type and location of production space: in and around the house, on community, public or private land, along (rail)ways, in parks, in the city core, on roof-tops, along corridors, in new urbanisation areas, the periphery and so on.

Weaknesses of urban agriculture:	*Threats to urban agriculture:*
1. Urban agriculture development is not being recognized as a consequence of consciousness building that requires on-going support for a lengthy period. Instead it is commonly classified as a technical issue that can be explained by a video or a lecture, or maybe a short training seminar, and which is geared to a project-type activity geared to a short-term economic benefit.	1. Better food quality and higher self-esteem, are individual benefits in the moment, but a necessary proof of sustainability. Only a visible economic benefit is likely to stimulate a large number of people to engage themselves in the promotion and practice of urban agriculture.
2. Supporting institutions (governmental and non-governmental) tend to be very enthusiastic and co-operative for a short start-up period, but then their assistance is not being maintained for the necessary period to establish a sustainable urban agriculture tradition.	2. Production-centred technical assistance alone will neither have a long-term effect on urban agriculture practice unless commercialisation and financial aspects are also being taken care of.
3. People who could benefit most from urban agriculture activities, especially in hydroponics o animal husbandry where larger investments are required, just may not have the economic capacity to initiate a financially viable micro-enterprise. Urban agriculture programs hardly allow for non-conventional or even 'in-kind' credits, i.e. by providing the basic materials instead of cash for the setting up of a farming enterprise.	3. Over the last 10 years of experience many productive associations have been formed, but in the end none of them persist; all have split up into individual business. This lesson would suggest that collective enterprises and co-operatives might be useful for the acquisition of raw materials (especially fertilisers, seeds and other inputs) and for the sale of fresh or processed production, but less so for the production itself.
4. Urban agriculture projects are often started without a previous appraisal of the applicants and the location's conditions, like i.e. the will and desire to overcome unavoidable start-up problems, availability of time, space, water and love for plants and animals.	4. Current land use planning, building legislation, the conventional water supply system, credit accessibility (especially for women) are all not adequate for a wide spread introduction of urban agriculture. Along with the necessary reforms also training for non-polluting and healthy techniques must be offered, seed banks started, agricultural supply centres established in order to guarantee a functioning production chain which extends to post-harvest tasks like processing, storage, packing, marketing and transport.
5. The FAO and other organisations rightfully point at the potential risk of contaminated products from urban agriculture, caused i.e. excessive use of chemicals or polluted water and soil. Project appraisal might need to include a profound scientific and social analysis of the local conditions.	5. The geographic urban expansion competes with and incorporates agricultural land, often dependent on the same administrative bodies. There is an urgent need for some sort of 'ad-hoc legislation' capable to efficiently protect agricultural land use and to valorise it's environmental, economical and cultural benefits.
6. Urban agriculture as a relatively young research topic has not yet resulted in a readily available stock of data and scientific information that can be used by the urban farmer, i.e. in respect to organic and small-scale production techniques.	

- By the length and security of plat occupation or any other conjunctural circumstances which may determine the duration of a specific U.A. activity.
- By the amount of income generated.
- By the ecological and health impacts of the activity.
- By the social organisation, such as the family-run farms, communal production, share-cropping or by contract.

Swot analysis of urban agriculture[3]

To facilitate strategic planning and promotion of urban agriculture, a “SWOT-analysis” is a useful exercise and which we present a proposal in the following. It identifies Strengths, Weaknesses, Opportunities, and Threats.

Question: Why is it then that the obvious advantages, both direct (for the families) and indirect (for society and the public administration) have not lead to wide-spread promotion of urban agriculture?

2
Small and medium scale enterprises
3
The original Spanish manuscript refers to FODA: Fortalezas, Oportunidades, Debilidades, Amenazas.

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The original Spanish manuscript was translated and edited by Marielle Dubbeling, Carla Guagliardi and Kosta Mathéy.

Photos: Kosta Mathéy

The hidden Significance of Urban Agriculture[1]

J. A. LUC MOUGEOT

Die verborgene Bedeutung städtischer Landwirtschaft

Landwirtschaft innerhalb städtischer Grenzen ist zu einer existentiellen Lebenspraxis in vielen Ländern geworden. In den letzten zwei Jahrzehnten hat diese Einsicht auch nationale und internationale Förderprogramme erreicht, obwohl nicht von einer allgemeinen Zustimmung gesprochen werden kann, da die Landwirtschaft z.T. im Interessenkonflikt um andere knappe Güter wie Landnutzung oder Wasserversorgung steht. Von Seiten der Forschung besteht zwar noch ein großes Disederat bezüglich der politischen Ökonomie urbaner Landwirtschaft, dennoch lassen sich einige Konfliktlinien insbesondere zwischen Händlern, Landeigentümern und den urbanen Farmern erkennen. Insbesondere der Gender-Aspekt ist von Bedeutung, da vor allem Frauen in diesem Bereich tätig sind. Ökologische und ernährungswissenschaftliche Implikationen einer verstärkt von urbaner Agrikultur abhängigen Stadtökonomie lassen sich nicht als eindeutig positiv oder negativ für die Bevölkerung kennzeichnen. Der Autor plädiert für eine stärkere öffentliche Unterstützung der städtischen Landwirtschaft, zeigt Möglichkeiten der politischen Förderung auf und benennt Beispiele für bereits bestehende Politiken in dieser Richtung.

The UNDP estimates that 800 million people are engaged in urban agriculture (UA) worldwide, a majority in Asian cities; of these 200 million are considered to be market producers, employing 150 million people full-time.[2] As UA practice is still exceptionally reported in official statistics, these estimates draw on various sources using different methodologies. Even if estimates are halved, still the figure of nearly half a billion urban producers in the early 1990s point to an intriguing and growing phenomenon in this new urban age.

While UA is probably as old as our cities themselves, its resurgence has been attracting the attention of scientists since the 1970s, local and national authorities started promoting or supporting it in the 1980s. The 1990s saw UA cast onto the agenda of international colloquia and summits, on local authorities, social development, food security, sustainable and healthy cities. By 1999 several bi- and multilateral development agencies had successfully incorporated UA in their normal sectoral programming. Today, financial institutions and governments in both the North and the South, are supporting multi-actor interventions in UA, in more countries than ever before, for a variety of objectives, often jointly with other sectoral activities.

UA Complements Rural Agriculture in Meeting the Food Needs of the City and the Urban Poor

UA is an industry located within (intra-urban) or on the fringe (peri-urban) of a town, a city or a metropolis, which grows or raises, processes and distributes a diversity of food and non-food products, (re-) using largely human and material resources, products and services found in and around that urban area, and in turn supplying human and material resources, products and services largely to that urban area. UA systems range from forestry to aquiculture and includes horticulture, floriculture, livestock and medicinals. UA's integration into the urban economic and ecological system (or "eco-system") is what fundamentally does and must distinguish UA from rural agriculture. More of the agriculture found in the city will be urban in nature as city size increases. Agriculture becomes more urban through adapting to urban constraints and opportunities, thanks to intensification, specialization, substitution, combination with non-UA, and relocation in the urban area, all processes documented over time in Dar es Salaam, Dakar, Hong Kong, Cagayan de Oro, and at the same time in Mexico City and Shanghai.[3]

UA is an important source of supply in LDC urban food systems and a critical food security option for poor urban households. Additionally, it is one of many tools at hand for using productively urban open spaces, treating and or recovering urban solid and liquid wastes, saving or generating employment, income and added value, managing freshwater resources more effectively, or buffering otherwise incompatible urban land uses. These are functions of UA which have convinced multilateral agencies such as the FAO, UNDP and UNCHS, to incorporate UA in their agricultural and urban development program strategies. UA has been resurging for over three decades now in many regions and a growing number of cities, as a sizeable land use, employer and supplier of foodstuff. Data on several production systems how dramatic growth in numbers of producers, production systems at work, area used, production and yields, in cities such as Kumasi, Lomé, Singapore and Hong Kong, La Habana, Cagayan de Oro, Dar es Salaam, Nairobi, Indian cities, Kampala.

UA is unlikely to turn any city or most households fully self-sufficient in all of the food which they require. High degrees of food self-reliance have been more easily achieved at smaller scales (specific city districts, income groups, households) and for specific food items. UA is

making LDC cities more self-reliant in certain food items and poor households in many cities more food secure at particular periods of time. In many instances, cities' food deficits in nutritious foodstuffs would be worse if they wrote off UA; if they had to abandon UA, poor households would have nothing to turn to, to feed themselves. Cities with more advanced UA sectors have become largely self-sufficient in higher valued, nutritious perishables (10 - 100% of fruits, leaf produce, herbs, milk, eggs, fish, poultry, depending on the city); some cities even export surpluses abroad. Still, such cities continue to depend largely on rural supplies of bulkier, less perishable foodstuff, with longer growth cycles and lower profit margins. UA complements rural supplies and imports by responding to changes in the latter and should continue to do so. In Bissau, officially promoted urban vegetable production has effectively diversified and buffered seasonality of supplies. In West Africa, cities offer better conditions for breeding, sheltering and watering or fattening livestock otherwise kept in rural. Production from rural, peri-urban and urban areas complement each other in supplying food to Dar es Salaam, in Tanzania.

Most urban farmers are low-income men and women who grow mainly food and largely for self-consumption, on small plots which they do not own, with little if any support or protection. Self-producing households represent 10 - 80% of totals; in Central and West African cities, 10 - 50% of households grow vegetables.[4] In this way households secure nutritious food otherwise unaffordable (all animal protein in low income households), replace purchased food staples, or supplement these with more nutritious foodstuff. They save as much as 20% of their income, which they spend on other foodstuff or on other essentials and needs (school fees, transportation). They earn supplemental or principal income which they often reinvest in small home businesses (sewing machine, typewriter, kitchen appliance). Self-production represents between 18% (East Jakarta) and 60% (Kampala) of total food consumption in low-income households. Percentages who feed themselves solely out of self-production reach 50% of sampled households in low-income Nairobi. In high-density wards of Harare, savings are equivalent to several months of earnings. Many factors buttress UA growth, ranging from macro to micro, and on both sides of the food demand-supply equation; their interactions are still little understood. Critical vectors appear to be the growing urban poverty and urban malnutrition in LDCs.

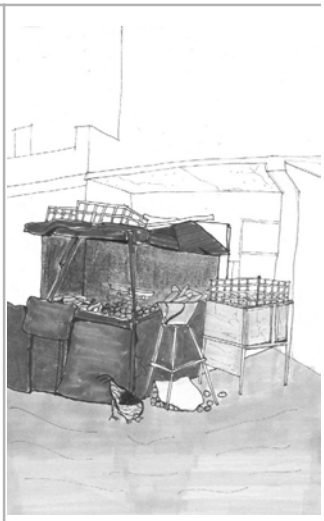
Recent nutritional analyzes of UA use different methodologies in Kampala, Nairobi and Harare. They all find that self-producing households achieve greater food security, as measured by nutritional status (caloric and protein intake, meal quality, consumption of protein-rich food over time, growth rates of children in height and weight, stunting). The Accra study further suggests that this relationship may be mediated by gender.

Actors and Resources: How UA Works and Policy Implications

UA actors are many: suppliers, producers, transporters, processors, retailers and consumers, promoters and managers, including international agencies. These actors pertain to the private and public sectors, the formal and informal economies. Political relationships which these actors thread among and between themselves, with regards to access to control of and benefits from resources, inputs, services and products are diverse.

We know from research that these relationships can be conflictive (real estate developers versus open-space cultivators over access to public land in Harare, or market-vegetable irrigation versus resident consumption needs over tap water in dry season, La Habana). They can exhibit various degrees of violence, from repression of open-space grain crops by municipal agencies (Lusaka), down to opposition between state and municipal policies over the promotion of UA (Kampala). The relationships can be exploitative, as with municipal agents charging illegal tenure or usufruct fees to small producers, retailers and transporters using public areas. But relationships can also be complementary and synergetic, as between municipal food markets, livestock and crop producers over the recycling of organic wastes of vegetal and animal origin (Kano and Mexico City); different producers also share the same site over the year to grow different crops (Lusaka). They can be collaborative, as with market vegetable gardeners using and protecting land investments on public water concessions (Dakar) or power line rights-of-way (Teresina, Brazil), schoolyards (Lima, Santiago); groups of neighbours share one's hard rooftop (Port-au-Prince), or upper-class home builders allow watchmen to grow crops on premisses (Dar, Santiago de los Caballeros). They finally can be inequity-reducing, through subsidised food security and income generation programs, led by partnerships between NGOs, local governmental agencies and public enterprises.

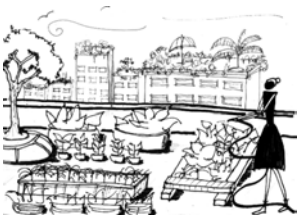
Although all socioeconomic categories are involved in UA research points out the fact that the better-off tend to benefit disproportionately from it. A powerful urban political and economic minority often uses public and institutional estates for personal business, public technical assistance, training and official credit programs, government vehicles and access to markets. Some large producers consistently violate by-



Relationships between various urban agriculture actors can be synergetic, as between food markets and lifestock.

Urban agriculture is an important source of food supply in many LDC cities.

1
A modified version of this article will be published by the International Food Policy Research Institute, Washington, D.C., in a forthcoming FOCUS series on urban food security and nutrition.
2
Smit et al., 1996
3
Losada et al., 1998; Yizzhang, 1999
4
Moustier, 1999



Most cities have plenty of under-utilized areas available, including rooftops, walls, indor space etc.

Women predominate in many surveys of producers and retailers in urban agriculture.

laws, exceed legal quotas, abuse public facilities and infrastructure, and obstruct policies which threaten their privileges and advantages relative to the majority of other actors.

We urgently need much more information on the political economy of UA than is available at this time. As more authorities, agencies and organizations are sensitized to the potential of UA and wish to deliver better policies, it becomes critical to define the proper arena of actors, the interests at stake, the critical issues to be resolved, the actions to be taken, and the implications this has on roles of and relationships between the actors. Understanding the political economy of UA is essential to a reasoned transfer of good practices from place to place. It becomes critical to document and analyze how issues are brought up and by whom, why and how alliances and partnerships are forged or not, and why action taken has been effective or not at curbing or eliminating problems, be these unfair competition, conflict or corruption. The next sections turn to what we know of particular categories of actors: the producers and the managers.

Producers are often classified according to key dimensions of UA in any given city (city zones, site locations, tenure modalities, producers' socioeconomic status, production systems and scales). Everybody does some urban farming, some in bigger and more supported ways than others: UA has always had a vibrant agri-business sub-sector. What is new today are the numbers of low and mid-income households entering the trade, and the visibility of related benefits and problems. Public policy may benefit or affect the future of particular categories of urban producers, depending on how it accounts for dimensions along which particular groups differentiate themselves from others. Will it priorise intra or peri-urban productions? Off or on-plot producers? Plant crops or small livestock? The landless urban poor may need greater public support than households with access to rural land.

That women predominate in many surveys of producers and retailers and not in others has to do with factors still not fully accounted for. No doubt that UA connects well with women's traditional care-taking and general household management. Some UA conveniently enables women to earn income, improve diet and attend to house chores. UA can afford women with greater control over household resources, budget, decision-making and benefits. As women focus on more intensive and integrated production systems (home-based systems, particularly in Muslim societies), they may be more affected by services which disregard such systems and their knowledge of crops, input combinations and cultivation methods. Some authors have warned that policy supporting UA might spur its commercialization, thereby making it more of a man's domain. Public policy should acknowledge women's own constraints and opportunities, and act upon these to enhance women's citizenship, rather than worsening their lot relative to men's own.

Most developing country cities have plenty of undeveloped ground-level land or under-utilized areas (indoors, walls, rooftops) available, often in central areas. But access to prime locations is fiercely disputed. Often, newcomers to UA either take over long-famed plots from relatives, smaller plots at more distant locations or on lesser-quality land, venture into ingenious non-ground or non-crop options, or else hire themselves as labor to mid or upper-class farmers. Producers gain access to urban land from a variety of urban actors, through diverse tenure and usufruct modalities. Everywhere unauthorised occupants seem to be a minority. Given constraints on access and size of land plots, UA systems show great flexibility to make the best use of particular sites and locations. Aridity, unreliable supplies of piped water, violent rainfalls all critically constrain many systems, particularly where water must be paid for. Water quality and quantity and the producer's ability to manage this resource often determine location, size, labor requirements and crop choice.

Within a given city, particular UA systems interact one with another within the same area over time or across areas at any given time. This enables producers to reduce risks and improve access to particular resources and markets. In Bissau small producers grow high-demand, short-cycle indigenous produce, rather than long-cycle and more profitable but less demanded exotic varieties. In Brazzaville or Accra, large producers initially plant short-cycle locals, reinvesting sales revenues into long-cycle foreign produce. Urban farmers use different spaces in a complementary way over a period of time: year-round gardens often are nurseries for rain-fed off-plot fields, as in Lusaka. The same stream-side field may carry dry-season vegetables, then rainy-season grain crops. To work scattered fields ensures stability against hazards. Urban farmers engaged in different productions often cooperate one with another: use each other's plot at different periods, exchange wastes or products. Producers tend to try and recycle animal and vegetable wastes as much as possible. UA management involves deciding which types of products and which scales of operation should be allowed in which parts of the city and for how long. Piggeries may be not tolerated in central districts, where integrated systems of stacked small livestock, along with space-intensive high-value crops, may be encouraged. Even where public open space is a premium, tenure arrangements

strictly for UA can and have been struck between organised groups of producers and private or public owners of estates with idle areas (hospital grounds, golf courses, school yards, ocean port grounds).

Any analysis or program which limits UA's role in urban food security and nutrition to those activities only which are small-scaled, home-located, food-oriented, production-bound, and destined to self-consumption, clearly disregards people's full involvement with UA, misunderstands UA's multiple links with the local urban eco-system, and under-estimates the real contribution (and challenges) of UA to any particular area of urban development (from poverty alleviation to environmental sanitation). Opportunities can be missed in planned UA interventions to curb or resolve problems of concern to particular city administrations. Non-food production may be the way to improve income and the nutritional status of households, given prevailing conditions. In El Alto, Bolivia, severe water scarcity, emphasis on exotic vegetables and local plant demand for beautification, had women abandon the original vegetable gardening system in favor of more profitable tree and ornamental nurseries. Exclusive attention to food production may do little to improve nutritional health, where food preparation and cooking should first be corrected, or the local status of particular crops or livestock accounted for, as in Dar es Salaam.

Urban households need to increase their income in order to improve their food security. Although few producers are employed full-time in UA and few households depend solely on UA income, UA is an important contributor to household employment and income. In Dar it is the second largest employer; in Nairobi it provided the highest self-employment earnings in small enterprises and the third highest in all of urban Kenya. Despite heavy losses and severe constraints non-agribusiness UA generates goods valued annually at tens of millions of dollars in any given major city. The individual urban farmer's annual average profit is estimated at 1.6 annual minimum salary in Dar. In Cairo, small livestock rearing is practiced by 28% of households in informal housing and represents anywhere between 62 and 109% of the household's monthly income. In Lomé the mean monthly income of a market gardener was found to equal 10 minimum salaries or that of a senior public servant. A similar incentive has had many Cuban government bureaucrats leave their offices to engage in UA. Above-normal profits are earned by even the smallest scale backyard dairy producers relying on purchased feed in peri-urban Addis Abeba. High-valued specialty foods requiring little space are attractive cash-earning crops (mushrooms, aromatics, condiments, medicinals). UA is known to have up and downstream efects on the urban economy but these remain largely unquantified.

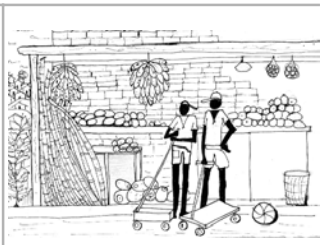
Risks Posed by the Urban Environmental Pollution and Urban Agricultural Mispractices

Public health concerns refer to contamination of producers, handlers, consumers and neighbours in production areas. These concerns are legitimate and must be addressed.

They arise from practices at wrong places or in the wrong way. More attention has been given to health risks triggered by ambient factors where UA is practiced, less so to risks introduced in the living environment by UA mispractices per se.[5] In the former, the roll of available measures is impressive, largely preventive or soft strategies, thus knowledge-based and affordable to LDCs. Still, risks raised by UA itself are a major concern among public health officials. Many such risks stem from misuse or mishandling of agrochemicals, the application of unsuitably or non treated wastes to food crops, as well as crop allocation regardless of site exposure to pollution, plus unsafe disposal of vegetable and animal wastes.

Risks posed by UA products must be compared to those posed by food supplied from elsewhere. Conditions under which food, including perishables, is grown in rural areas tend to be less controllable; shipping and storage are known to be major factors of deterioration. Food mishandling and mis-packaging are a problem regardless of origin. More attention must be paid to human infection and nuisance risks posed by urban livestock. The relationship between UA and the rural-urban transition of zoonoses remains largely under-researched[6]; there is some evidence though, and the risks posed by human brucellosis and echinococcus infection are real, where inappropriate zero-grazing and animal waste disposal are growing, in slaughterhouses and densely peopled areas.

Residents and producers could be better educated on the advantages of different types of compost and of sorting wastes at source; NGOs could help to verify long-range effects of toxic elements applied through continuous use of compost, to determine appropriate scales of composting for cost-effectiveness and to exploit land use combinations that reduce both pollution and transportation costs. Cities are being encouraged by the World Bank and UNDP to seek synergies between wastewater treatment and agricultural applications. Epidemiological and microbiological standards exist for using wastewater in agriculture and aquiculture; these are achievable with simple and inexpensive techniques which, nevertheless, usually need to be tailored locally. Most problems



Urban agriculture is an important contributor to household employment and income.

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Flynn, 1999
6
see 5

Proposed areas of further research into Urban AgricultureSince June 1999, the Urban Management Programme for Latin America and the Caribbean (UMP-LAC/UNCHS-HABITAT/PNUD)*, the Institute for Promotion of Social Economy (IPES-Peru) and the International Development Research (IDRC-Canada) implement the Programme "Urban Agriculture and Feeding the Latin American and Caribbean Cities", that aims to document existing experiences, and facilitate policy development and urban agriculture management in the region. In its first phase, the project has coordinated the implementation of 6 case studies and 4 baseline studies that were presented in the International Seminar "Urban Agriculture in the City of the 21st Century" that took place in Quito, April 2000. In this event the mentioned studies were analysed and potential areas for further research identified. They include:

1. Role of UA within urban food security system. Urban Agriculture needs to provide first of all for the local market (import substitution) or needs to be aimed at (inter)national export. What to support? And what are the real commercial niches: traditional crops (lettuce, small animals) or new products, such as flowers, hydroponics, medicinal plants?

2. What is the key-theme for UA expansion: Access to credit , secure land tenure, social development?

3. What is the final objective for the people to engage in UA?

4. A pro-active physical urban development policy is still lacking: is it just a matter of „filling vacant spaces" or can we anticipate land use planning? Relation with cadaster, role of GIS, zoning policy, urban growth control, territorial function?

5. Relation between UA policy and other sectoral and land use planning policies. Related to this is the question: who within the Municipality will need to support promotion, planning and implementation of Urban Agriculture: a technical/sectoral secretariat or a more transversal body?

6. Relation with water cycle.

arise, partly from making the wrong farming uses of different wastewater qualities, partly from mismanaging the technology itself. When introducing treatment for irrigation, municipalities should devise creative cost recovery, without evicting or being seen as penalizing wastewater-using farmers: bartering agreements tend to be more acceptable than fee charges.

Environmental health issues triggered by UA mis-practices are visual untidiness, soil erosion, de-vegetation, siltation, water body depletion and resource pollution. Agrochemicals are used in some UA but far less so than often believed. Most UA is small-scaled and largely for self-consumption and some trade. This uses sparingly, if any, agrochemicals; even in risky settings, producers tend to grow or raise organically. Agrochemicals are usually unaffordable and subsidy removal is an added disincentive. In market-oriented systems, short-cycle crops hardly require pesticides; manure is widely applied. Crop diversity also concur to lessen dependence on agrochemicals. These however are often used less sparingly at larger peri-urban farms (fewer crops more susceptible to pests, at greater distances from sources of organic fertilisers), with much scope for reduction through IPM[7] and mutually-beneficial contracts with municipal waste disposal services. Non-food UA can be, but still is little, used to rehabilitate contaminated water bodies and soils, generating food and income in the process.

Despite public concerns, there are still few studies on degradation caused by UA mis-practices. Where confirmed, this is usually limited and controllable, as in Dar es Salaam (agrochemical pollution and soil erosion by open-space vegetable production) and Harare (reduced rainwater infiltration and increased surface runoff due to crusting; sediment movements, soil erosion and siltation due to rain-splash and runoff). Technical and policy interventions are needed for open-space cultivation to become more productive, profitable and sustainable.

Should Local Governments Promote UA and How?

Local governments have been promoting UA for a while. Beyond promotion more are now engaged in better managing present and future UA. This is being done through learning from each other's experience and through better local governance. More external support agencies are advising local authorities (FAO is creating a coordinated program which should further assist national governments). IFPRI[8] is a founding member of the Support Group on Urban Agriculture (SGUA); this group, created in Ottawa in 1999, last met in La Habana in October 1999 and is furthering global collaboration in several ways.

NGOs, governments and international agencies have all been supporting UA in LDCs since as early as the 1970s. We will focus on official promoters and managers. As earlier with informal employment and housing, low-income UA is being supported by national and local politicians in response to local residents' initiative, often despite resistance from public health, urban planning and environmental sectors, and with the support of community services, agriculture and employment departments. Leaders' role was critical in Uganda and Mozambique twenty years ago, as much as it is in Cuba and Indonesia today. A view permeating down to government technocracies is the growing acceptance that UA can and should be mainstreamed into robust strategies for food security, poverty alleviation, income and employment generation, productive use of waste and land management. Official interventions in UA on record can be organised as follows, with several types often combined in a same city:

(A) national and local political leaders' public appeals for (food) self-reliance (vg Tanzania, Cuba, Philippines); these have had a far-reaching and lasting legitimising effect which should not be downplayed;

(B) provision of land for UA in city master plans (vg new capital cities in Ivory Coast, Mozambique, Congo); although deemed insufficient for effective incorporation, it has set standards for other cities of the country;

(C) revised urban legislation: ordinances, bylaws, regulations and standards are often excessive, unenforceable or inappropriate to local conditions; representative local governments have been more pro-active in this regard; where texts have not been revised initially, interpretation and application have been sensible to people's survival options (Kenya, Cuba, India). In Kampala for instance, bylaws have been revised to allow for specific production systems in specific zones; state agencies have been authorised to promote appropriate practices in such areas;

(D) new institutional mechanisms: this is increasingly perceived as a key requisite for the effective administration of UA; it is facilitated by municipal decentralization (Philippines, Peru) and a strategy is to set up such mechanisms as multi-stakeholder mechanisms outside the local government apparatus, to ensure and shelter policy continuity against changes of administration in local government (Santiago de los Caballeros, Dominican Republic). Permanent institutional programs and agencies have

made use of flexible zoning modalities (Cuba), purpose-specific leaseholds (Argentina), school and governmental catering programs (Costa Rica), and have legally organized producers (Zimbabwe);

(E) allocation of municipal open space to UA: organized groups are assigned undeveloped public arable land for fixed periods of time; UA is tolerated as interim or permanent land use in public housing schemes (Dar, Harare). The Greater Pretoria Metro Council recently recognised specific UA production systems as valid urban land uses, has incorporated UA into the management of its urban open space system, and set aside land for UA in designated city sectors. In Cuba, some 19 ministerial resolutions now protect urban areas under agricultural production (displacement requires defraying re-establishment elsewhere). In Quito, garden allotments are being set aside in city parks, for women's groups to cultivate and tender the park where their plots are located. Cagayan de Oro has issued an initial ordinance allowing urban farmers to use parts of idle land and open spaces;

(F) officially promoted UA projects: these range, for instance, from green belt projects (Bissau), to peri-urban milk collection (Accra), integration of small production with local food processing (Brasilia), setting up a network of input and extension-supplying outlets (Dar es Salaam, La Habana), and promotion of multiple indoor systems to curb malnutrition (metro Manila);

(G) direct public engagement in UA production: national and metropolitan utilities have leased out land (Brazil), partnered up with producers (Cuba, Senegal) or have become direct producers themselves (Tunisia, South Africa). In the future urban development, public health and agriculture are likely to increase coordinated and complimentary assistance.

Upcoming Challenges

The range of policy interventions on record is only beginning to be systematised. At an international seminar-workshop in Quito in early 2000[9], 20 city delegations requested that the regional stock of experience in urban planning, legal frameworks, alternative credit and financing options, as these relate to UA, be reviewed and disseminated to local governments throughout the region. They agreed to create a permanent working group of cities on UA; they also asked for UA indicators to be devised by UMP in order to monitor progress on UA in LAC[10] since Istanbul 1996. Another international workshop, late last year in La Habana, had concluded that policy design will vary greatly, depending on whether UA is to be used to cope with a food security crisis, or to diversify the local economy through longer-term income and employment generation. Governments can promote, through incentives and disincentives, and partnerships with other actors, a more productive use of abundant idle urban resources, such as unemployed youth, waste lands and polluting wastes. They also can facilitate access to credit, to wholesale suppliers and customers; they have a crucial role in ensuring that quality standards are achieved and credible.

Challenges remain to be addressed from the community up to the national level: more training must be provided to producers in good practices, and more assistance for their setting up representative and effective organisations. We must take stock of a wealth of local experiences and create institutional structures to implement UA policies. Few cities have created city-level food system plans embracing rural and urban sources. Land use and regulatory systems need to be designed and enforced for more equitable access to land, water and markets. Outside Asia there are few national food policies that seek synergies between rural and urban productions or that guide integrated urban agricultural programs. Agriculture departments need to adapt extension to conditions and needs of urban producers and agricultural research stations and urban planning departments must collaborate; little experience is available on model health and land use codes. Regional and global networks are developing but also need to buttress the emergence of national and local networks. Experience shows that prohibition has been ineffective, while permissiveness will defeat its purpose. The tendency is for governments to move beyond accommodation and into issue resolution: multi-stakeholder governance so far seems to be the best approach.

The valorisation of waste use is being fully developed, but there still remains a competition with other sectors for scarce resources:

- Use of wastewater and use of drinking water
- Use of water for domestic or agricultural consumption

7. Subsidies and support: how to canalise use of existing municipal and private funds for Urban Agriculture?

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City master plans need to be revised to inlcude Urban Agriculture as a new and legitimate land use.

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Integrated Pest Management
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International Food Policy Research Institute
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organised by the Urban Management Program (UNCHS) of Latin America and the Caribbean, the Instituto Peruano de Estudios Sociales (IPES), the International Development Research centre (IDRC), also sponsored by FAO
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Illustrations: Celeste Vargas

Edible Buildings
Benefits, Challenges and Limitations

JAMES PETTS

Das Argument, dass es in den Städten keinen Platz für Landwirtschaft gäbe, ist falsch. Ganz im Gegenteil: Auf, an und in den Bauwerken einer Stadt stehen das zwei- bis dreifache der bebauten Grundfläche für gärtnerische Produktion zu Verfügung. Natürlich können nicht alle Kulturen angebaut werden, und auch bei der Tierhaltung ist die Auswahl der infrage kommenden Species beschränkt. Darüber sollten aber nicht die Vorteile von 'essbaren Gebäuden' vergessen werden: Ökologisch und gesundheitlich gesehen ist die erhöhte Sauerstoffproduktion und das verbesserte Mikroklima zu erwähnen; auch ist die Kontamination der Ernte geringer als am Boden. Ein direkter Wasser- und Nährstof-Kreislauf lässt sich zumindest teilweise einrichten. Im sozialen Bereich fällt das hohe Image von grünen Wohnhäusern ins Gewicht, außerdem ist die Gefahr von Erntediebstahl geringer. Trotz höherer Baukosten zu Anfang zahlen sich 'essbare Gebäude' wirtschaftlich aus: Transportverluste der Lebensmittel entfallen, flexible Arbeitsplätze werden in oder am Heim geschaffen, und Heiz- bzw. Kühlungs-Kosten lassen sich darüberhinaus auch noch einsparen. Um zu einer umfassenden Praxis 'eßssbarer Gebäude' zu kommen, brauchen wir in erster Linie eine gezielte Aufklärung der Öffentlichkeit, vielleicht gewisse Änderungen in den Bauordnungen und einige wenige technische Vorkehrungen wie Verankerungen als Schutz vor Sturmschäden bei Dachgärten.

Edible buildings: not a new concept

In many parts of the world growing food on and around buildings is an economic necessity. Often people produce food where they live and work - in window boxes and courtyards and on rooftops and balconies. Commercial 'edible building' enterprises do exist but most of the food produced is likely to be for home consumption or barter between neighbours. This provides participants with a fungible income - substituting market bought produce with home grown food. 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.[1] Some city farmers attach containers to their walls and grow melon and cucumber up them, whilst others keep goats and cows on rooftops.

Sustainable *strategies* of particular relevance and significance to 'edible' architecture (agritecture) include the maximum use of: vertical height, micro-climates and reflected light, and water; conservation, de-contamination, and recycling, and the production of high yielding, high turnover and high value crops.[2] Commercial enterprises are likely to concentrate on a small number of crops whilst amateur gardeners on a greater diversity. Garden design strategies may follow permaculture and ecological principles to maximise yields whilst benefiting people and the environment.

Sustainable *techniques* of importance in an urban context include organic; cultivation, composting and biological pest control, spatial and temporal annidation[3], intercropping, companion planting, and 'guilds'.

Appropriate food crops will depend on a large number of factors ranging from the macro- and microclimates to the time and income of participants. Potentially suitable species for using in conjunction with walls and other structures in temperate climates include; cherries, kiwi, apples, pears, peaches, hops, courgettes and squash, peas and beans, blackberry, loganberry, red, black, and white currant, gooseberries and figs. Obviously, consideration has to be given to preserving the structural integrity of buildings and maximum loads for roofs (See Technical).

Unfortunately, the urban environment is not fully utilised in an efficient and sustainable way. No reliable estimates are available as yet, but the area of flat roof space in towns and cities in developed countries must run into tens of thousands of acres. Taken with the sides of buildings, this represents an enormous, under-utilised resource. Urban areas could produce significantly more food because of the amount of surface that is available and the (biological) intensity of production.[4] The potential is further increased when we consider how much can be grown indoors or with protection.

There are numerous benefits of 'edible buildings' but also many barriers and limitations to their installation and operation, some of which we examine next.

Benefits of, challenges and limitations to, 'edible buildings'

Environmental

The environmental benefits of 'edible buildings' include: the production of locally grown food (reduction in 'food miles'), the benefits to biodiversity (see *Use*), the protection of surfaces from the elements, increased thermal insulation of buildings, macro and micro temperature regulation, and mitigation and adaptation of climate change.[5] They may also include improved sound insulation and control of soil and growing mediums, and of possible pollutants such as fertilisers and pesticides. If composting of plant and/or animal wastes takes place, nutrients will be recycled locally and waste assimilated to provide soils and medi-

ums for, and organic fertilisation of, crops. Roof and vertical gardens can also assist storm water management and improvement of air quality through filtration of particles by plants.

Unfortunately, contamination of food via the air, water and soil can be a serious obstacle to food growing in urban areas because of both real and perceived threats. Produce grown in front gardens is thought to be particularly vulnerable to contamination by vehicle emissions although a study by Birmingham University[6] found that this is largely superficial - easily resolved by thorough washing and the removal of outer layers of foods. Research by Cornell University in New York and the Russian State Committee on Standards suggests that food grown on rooftops and terraces is significantly less contaminated than that grown in sub-urban plots or bought at local markets.[7] Certain strategies and techniques such as the choice of crops, use of raised beds and green pollution barriers, and increases in soil alkalinity, are thought to assist contamination abatement and remediation.[8]

Social

'Edible buildings' can help improve the aesthetics of urban areas and increase participation of the community. Residents living in Apple Tree Court in Salford, England, started to green their estate in 1988 and now have a productive garden with allotments, polytunnels and composting. This has brought about a positive change in the community and they have gained confidence to develop other initiatives.

Everyone lives in buildings and a majority in the North work in them. Those without a front or back garden, or in close proximity to allotments or community garden, still have the opportunity to garden and grow food where they live and work. Generally, less affluent households are likely to have less surplus space in which to grow food. These inequalities reflect those found in society in general. Deprived communities and households may partly overcome this problem by utilising all available areas and surfaces in homes and on estates.

Tenure in and around buildings is generally more stable and secure compared with other urban food growing locations.[9] Participants can therefore plan further into the future and develop larger capital improvement projects.

Food that is harvested from household gardens is also likely to be fresher when consumed, as it travels direct from the garden to kitchen and/or to be processed. This increases the likelihood of higher amounts of vitamins and beneficial enzymes being present when it is consumed by householders and may help to improve diet and nutritional intake.

Greenhouses as expanded living room in Perlach, Munich.

Security is a major concern of people, especially in deprived inner city neighbourhoods. Front and communal gardens tend to be more prone to theft and vandalism compared with private, back and roof gardens.[10] However, they are all likely to be less prone than distant areas given that similar conditions apply.

Economic

There are many economic benefits of 'edible buildings' with a number related to aspects already discussed (see *Environmental*). Non-commercial participants will benefit from a fungible income through a reduction in purchases of food from markets. Cost savings may occur through the increased insulation of buildings (reducing energy bills), protection of surfaces (extending the life of walls and roofs, thereby reducing maintenance and replacement costs), and reduced need for storm water infrastructure and management.[11]

Additionally, the proximity to home and work saves time and effort[12] and reduces participants' incidental costs incurred by travelling to and from sites further afield (shoe leather costs). Employment and training opportunities can be increased in the food economy and in auxiliary industries such as plant nurseries, roofing manufacturers and landscape architecture businesses. Improvements in air quality may lead to improvements in the health of residents and productivity of workers resulting in cost savings accrued to individuals, Government health departments and companies.

However, 'edible buildings' and especially roof gardens can have high initial costs especially if the building's structure needs to be modified. Costs of consultants, insurance, maintenance and materials can be a barrier to their initiation and development.[13] Insurance costs can be high due to a lack of historic information about terrace, roof and balcony installations. Further more, most of the cost savings will accrue over a number of years and are therefore likely to be heavily discounted.

Glossary

Agritecture - 'the practice and study of food production using buildings and other structures'

Annidation - 'layering and timing of plants to utilise all available space and time'

Apiculture -'beekeeping for honey and other products'

Aquaculture - 'use of water resources for agricultural production'

Companion Planting - 'planting crops together which have a symbiotic relationship'

Discounting - 'reduction in the present value of income and costs because accrual is in the future'

Food Miles - 'the number of miles which food travels down the food chain, from primary production to retail and consumption'

Fungible income - 'income saved by substitution of purchased goods and services'

Guilds - 'associations or groups of animals and plants which have a symbiotic and synergistic relationship'

Intercropping - 'production of more than one crop in the same space

Microlivestock - 'small livestock including guinea pigs, rabbits and poultry'

Organic agriculture - 'agriculture that does not use artificial chemicals or monocultural practices'. Its philosophy is to feed the soil to feed the plants to feed the animals'

Permaculture - 'ecological design for landscapes, buildings, gardens, economies and communities'

Shoe Leather Costs - 'incidental costs incurred by travelling'

Newly erected greenhouses on the roof of apartment block at Documenta Urbana in Kassel, Germany.

Technical

Technical challenges to growing food in conjunction with buildings include the suitability of the existing surfaces for plants, the possible impact of root penetration especially from trees if membranes are damaged during installation, and the limitation of types of crop available for use due to the soil systems employed.

Sites such as balconies, terraces and roof gardens need particular consideration of their maximum loads. Maximum loads are calculated by summing the 'live' load including people, snow, wind, etc, and the 'dead' load including the roof itself, roof membranes and growing mediums when saturated. Professional help is advisable in such instances although this is likely to increase the cost of installation.

Small to medium sized trees can be grown in large containers. However, they need to be weighted or securely attached to the building if they are vulnerable to strong winds. Both containerised trees and windbreaks may add to the 'dead' or 'live' load of the building respectively - advice should be sought if considered necessary.

Informational

The creation of 'edible buildings' can be hampered by a lack of awareness and information by participants, policy makers, academics, professionals and other stakeholders. It can also be hampered by misconceptions by the public at large. The view that climbing plants will damage surfaces, or that the roots of plants will damage the foundations of can be correct in certain instances although major problems are rare and can be largely mitigated by following appropriate designs and strategies. Education and awareness raising of these aspects are necessary to overcome misconceptions and shortages of information.

Damage to walls may be accelerated by climbing plants if they have already started to decay. Foundations may be damaged by trees with vigorous roots, it is advisable to plant trees with small rootstocks and/or with a root barrier in between. It is recommended that climbers be planted at least 40cm away from any wall so that their roots do not affect the foundations.[14]

Regulatory

Building standards vary across borders and can be used to encourage the greening of buildings and improve their ease of use for growing food. Regulations in some parts of Germany have required new developments to install green design aspects and technologies. Costs are likely to be minimised if the appropriate structures and systems are in place from the beginning.

Planning regulations can benefit or be barriers to 'edible buildings'. If poorly designed developments are given planning permission this can lead to difficulties in starting and developing food growing. Alternatively, developments that are ecologically designed, including the maximisation of areas for planting and creation of sheltered microclimates, will aid sustainable food production. Planning permission is sometimes required for structural work and for greenhouses and conservatories if they are over a certain size - this can lead to delays and increases in cost.

Health and safety regulations including those for fire are there to protect life and minimise injuries. It is best for participants to seek advice on health and safety from statutory bodies. In the UK, appropriate fire exits and a minimum 1.5 metre high fence or wall, around the edge of roofs are required if the public have access. If modifications are required, adherence to regulations will obviously increase the cost of installation.

Operational

The cost of plants and materials can be a barrier to the installation and development of 'edible buildings' as well as any structural adjustments (See Economic). Installation and maintenance can be made more difficult if heavy loads need to be transported to higher locations. If labour is limited for such tasks, hoists, lifts and winches can be employed.

Access to the outsides of buildings is occasionally required for repairs and painting. Plants can be damaged in these processes by scaffolding, paint and people. Inappropriate maintenance, as well as burrowing animals, may cause damage to the bases of sites. (Remark by the editor: on the other side, deterioration of facades may be reduced by plant cover, i.e. climbing wine).

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The urban environment, including homes and workplaces, makes water more available for harvesting and irrigation.[15] As well as piped water supplies, rain drainage systems can direct water to storage tanks to be used for plant irrigation. Household wastewater can be remediated with the use of reedbeds and similarly used in the garden.

On balconies and rooftop gardens wind speeds are greater than those on the ground. Crops which tolerate such conditions are appropriate whilst others will require greater protection from the negative effects of strong and desiccating winds.[16] Food plants also need protection from the sun and heat particularly if grown in a greenhouse during summer months. Plants generally require more frequent watering and fertilisation if grown in arid conditions, containers or shallow beds.

The garden design and choice of plantings will depend on many factors including the aspect and orientation, final size, personal taste, climates, disease resistance, etc. Gardening techniques will be the same as general areas although certain aspects will have a greater emphasis. A good proportion of food grown in urban areas will be grown in containers. Crops are also likely to have similar allies and foes to others in more conventional gardening locations although differences will occur due to the location and environment. For example, carrots grown on balconies or rooftops may suffer less from carrot root fly whilst brassicas may be more prone to damage by pigeons.

Animal keeping is also practised on and around buildings although less so in the North. Poultry and livestock are kept for their fresh meat, milk, and eggs, providing the householders with some of their essentials. Animals require at least twice daily feeding and watering as well as weekly, monthly and yearly tasks, which limits their potential especially where participants have neither the time nor the inclination. Microlivestock are perhaps more suitable especially if space and time are limited. Apiculture is considered to have fewer limitations. Bees produce greater quantities of honey in urban areas[17], require a space of only 2 m^2 per hive, and have minimal maintenance and low cost of equipment. Aquaculture systems also have potential for 'edible buildings' although there is limited information on this aspect.

The greatest potential regarding roofs and terraces obviously lies in accessible, intensive roofs and terraces which can tolerate deeper soils and mediums. Lower weight systems such as hybrid hydroponics and hydroponics can be employed if loads are restricted. Even inaccessible, extensive roofs can be used for food production in an indirect way. Green roofs with bee forage and other insect attracting plants would increase honey yields and assist a balanced garden ecology.

Roof garden on a squatted house in London.

Rooftop gardening in Havana.

Use

Much of the urban surface in courtyards, around buildings and estates is unutilised or under-utilised. Competition for space with other economic or recreational activities can occur although most sites are likely to be unused or have mixed usage. Spaces can be used for activities such as commercial operations, energy generation (including photovoltaics), household activities such as drying washing, and children's play. However, gardening is very popular and plants and gardens are generally seen as desirable not least in homes and at work.

The use of artificial pesticides and other biocides in the garden will have negative effect upon the organisms that live there and upon the wider environment, and could have potential health risks to humans. Food growing activities, when they include ecological principles and organic practices, increase the biodiversity of wildlife and plant varieties. Ponds, animals, plants and soils will enhance the diversity and variation of both species and habitats and may form parts of 'green corridors' or distinct islands within the city.

Notes

Sustain: The alliance for better food and farming (formerly the National Food Alliance and the SAFE Alliance) advocates food and agriculture policies and practices that enhance the health and welfare of people and animals, improve the working and living environment, promote equity, and enrich society and culture. Sustain represents over 100 national public interest organisations working at international, national, regional and local level.

This paper is based on the author's own experience and a review of research and projects concerning urban food production in association with the built environment. It is not to be cited or referenced. It does not necessarily represent the views of Sustain or any of Sustain's members. Although it contains some useful insights into the subject, for more technical aspects, it is for the reader to ensure that any necessary professional help is sought before any practical work is conducted. Sustain will be conducting a more in depth study and disseminating the results during the course of its *Edible Buildings'* project.

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Balancing Diverse Needs
Risks and Pleasures of Urban Agriculture in Silesia, Poland

ANNE C. BELLOWS

Im Spannungsfeld unterschiedlicher Bedürfnisse. Risiken und Chancen der städtischen Landwirtschaft in Schlesien, Polen

Im Jahr 1997 feierte man in Polen das 100jährige Jubiläum der städtischen Landwirtschaft. Ein besonderer Schwerpunkt des städtischen Gartenanbaus liegt seit jeher in Südpolen in Schlesien, im Bereich zwischen Wroclaw im Nordwesten und Gliwice und Bytom im Südosten. Dies ist eine Region, die durch eine hohe Bevölkerungsdichte und Verstädterungsrate, durch eine umfassende großindustrielle Basis (heute allerdings in einer tiefgreifenden Strukturkrise befindlich) sowie durch enorme Umweltprobleme gekennzeichnet ist. Dennoch werden hier (noch) 50% der Gesamtfläche für Landwirtschaft und Gartenanbau genutzt und dabei 40% des lokalen Obst- und Gemüseverbrauchs vor Ort angebaut (1996), trotz der damit verbundenen erheblichen gesundheitlichen Risiken. Vor dem Hintergrund eines umfassenden historischen Rückblicks und auf der Grundlage von detaillierten aktuellen Forschungsergebnissen beschreibt die Autorin die konstante gesellschaftliche und ökonomische Bedeutung des städtischen Gartenanbaus für weite Teile der Bevölkerung. Trotz mehrfacher grundlegender politischer, sozialer und ökonomischer Umwälzungen im Laufe der letzten einhundert Jahre hat sich daran we-

In 1997, Poland celebrated 100 years of urban allotment agriculture. In light of the recent international spotlight on urban food production (e.g. UNDP 1996), Poland's experience might be considered a model. I argue it does provide a vehicle to establish some of the contradictions of co-existing risks and pleasures in this important and much lauded land use. The paper focuses on Silesia, in southwest Poland, known for its extensive industrial base, urban agglomerations, high population density, and severe through spatially uneven toxic contamination as part of a central European region known as the Sulphur Triangle. The paper offers historical evidence and contemporary survey research findings to establish the complexities inherent in why urban gardeners cultivate land in environmentally challenged regions. The purpose is to show that the co-existence of benefits and challenges inherent in urban agriculture is not new, but rather a template against which to consider findings from the contemporary research on allotment gardens in Silesia. Gardeners balance the risks and pleasures of gardening against multiple environmental risks, broadly understood. In the case of Poland generally and Silesia specifically, these include war, regime change and political instability, development threats to the integrity of and right of access to public allotment space, inefficient market distribution systems and food shortages, periodic underemployment, public health risks associated with industrial and transportation-based pollution and its relationship to the ingestion of contaminated foods, and market supply that carries no guarantee of greater safety. Against these risks, gardening creates biodiverse landscapes around cities[1] and provides traditional pleasures and a relief from hard urban landscapes and the monotony of much industrial paid work.

Research Location: Silesia, Poland

The research location lies in southwest Poland along a northwest-southeast axis ranging from Wroclaw in Lower Silesia (northwest) to Gliwice and Bytom in Upper Silesia (southeast). All cities have established industrial and mining concerns. Wroclaw on the Odra is a vast industrial, transportation, and communication center. Opole on the Odra operates coal-based energy production and the remains of the 19th century international capital for research and development of cement production. Southeast of Opole, Kedzierzyn Kozle became a center for chemical industries, and in particular, for nitrate production under the socialist state and has controlled the Chlodnicka Canal to Upper Silesia since the 19th century. Gliwice and Bytom are part of an urban megalopolis known as the Upper Silesian Industrial Area. Gliwice, lying along the Chlodnicka River, houses a large metallurgic and industrial center, boasting the first coke oven in Europe which was built in the 1790s. Bytom, founded on the mining of coal and other ores, lies due east of Gliwice along the Bytomka River.

Southwest Poland, with Upper Silesia at its helm, historically houses the greatest concentration of industry in Poland, leading to uneven but catastrophic desecration of the human and natural environments. Upper Silesia, defined here in terms of the pre-1989 boundaries of the Katowice voivodship, and housing Gliwice and Bytom in the study, has the worst indicators by far. The research area, however, is linked by waterways and congestive transportation corridors which provide pollutant mobility from the higher pollution to the relatively lesser polluted areas downstream. For the most part the problems faced vary only by degree across the study area. The former borders of the Katowice Voivodship bounded 2% of Polish land, and yet included the highest population density in the country (ca. 900 persons/km^2) representing 10% of the Polish population and 18% of the country's total industrial production. It harbors 30% of the national dust emissions, 40% of national non-dust air pollution, and 60% of the total national waste disposal. Of Upper Silesia's

3000 factories, 300 are considered environmental hazards. Upper Silesia has the highest concentration of heavy industry in Poland, yet up to 50% of the land is used for agriculture and urban garden allotments and 40% of all locally consumed fruits and vegetables are grown in these soils despite health risks.[2]

The most severe threat to health from soil pollution in the Upper Silesian region is from food contaminated with lead, cadmium, and excessive concentrations of nitrogen compounds. Literature from the World Health Organization and Polish research demonstrate that 60-80% of all heavy metal toxins enter the human body through ingestion, and that intake by breathing polluted air is of relatively lesser importance.[3] Other health concerns include residuals of nitroamines, polycyclic hydrocarbons and pesticides.[4]

100 years of Polish Gardens

The origins of the urban allotment gardening in Poland are tied to broad urban reform movements unfolding in North America and Europe. In Europe, the gardening movement is closely connected with Dr. Daniel Gottlieb Schreber (1806-1861) of Leipzig, Germany. This social movement served both to improve the impoverished conditions of industrial workers and to stem labor protests that were leading to early union and other left movements. Early industrialists of partitioned Poland were also the regional land barons. With the abolition of serfdom and the growth of the industrial era, the owners of rural serfs became the employers of the same population. Specifically describing Silesia under the Prussian/German partition, Rose writes, that desperate to increase and stabilize labor given competition, industrialists were forced to address abysmal working conditions.[5] Rudimentary private welfare programs developed housing projects, that sometimes included garden plots that could be maintained by women. These allotments spatially "rooted" employees near their workplaces[6] and satisfied the dislocated peasants' „land hunger": the deep-rooted desire for work in soil that complements the need for food and a healthy, pleasurable, and restful respite from industrial toil.[7]

During the inter-war period of the Polish Republic, urban allotment agriculture developed institutionally by formally registering as an organization and participating in the early gardening movement in Europe.[8] The Association of Allotment Gardens and Gardeners' Estates forged sophisticated relationships with the industrial sector and the state, at the local and national scale, turning to local Polish municipalities to lease public land for allotments. With the 1930s depression, the Ministry of Social Care established a Workers' Fund to support the development of allotment gardens.

Reeling from the devastation of the economic infrastructure and supply caused by World War II, the new communist government aggressively addressed urban agriculture as a food production strategy as well as a public right. Legislation nationalized workers' garden allotments (1944), designated them specifically for public use (1946), and defined allotment use as a worker's right (1949).[9] The garden tracts (*ogrodki*) served as public green spaces and everyone had the right to walk through them along paths for rest and recreation, but not in the privately designated allotments (*dzialki*). The new State continued and intensified the pattern of building housing and garden settlements near expanding and heavily polluted industrial and energy development centers. By the late 1970s and early 1980s, the economic situation in Poland caused ongoing and even increased reliance on domestic food production. In 1980s, the government legalized some private sales of surplus allotment produce[10] and in 1981, created an NGO-like organization, the *Polski Zwiazek Dzialkowcow* (PZD, Polish Gardening Association), and charged it and not the state, to manage workers' gardens.

Shortly after the 1989 Round Table talks, the transition toward privatization and decentralization began to threaten the integrity of workers' gardens. Local self-government law overlooked the fate of public gardens and ignored the 1949 and 1981 laws that established them.[11] Garden land "ownership" was presumed by many local governments and the possibility of land sales and taxation appeared a boon to cash starved municipalities.[12] The PZD organized in response and was instrumental in the formulation of the 23 June 1995 law, no. 486, reconfirming the 1981 enactment guaranteeing workers' perpetual use of public gardens. The 1995 law was almost immediately challenged in Poland's Constitutional Court by the Union of Polish Cities and was declared unconstitutional in 1996.[13] However, the Polish parliament overruled the court decision on 25 April 1997.[14] To build its case and as an additional "modernizing" strategy, the PZD has consciously downplayed the role of gardens in stabilizing household and community economies under the post-1989 transition, and foregrounded urban green spaces, environmental consciousness, and pleasurable healthy environments as its development priorities in an effort to win approval in Poland and support from gardening organizations in western Europe.[15]

Thus, for over one hundred-plus years of allotment agriculture in Poland, urban gardeners engaged in cultivation, even in environmentally challenged regions. The hodgepodge development of early industrial work places located housing and gardens adjacent to polluting factories, mines, and transportation corridors. Access to green and quiet recreational spaces in

nig geändert. Freizeitaspekte stehen dabei gleichwertig neben wirtschaftlichen Vorteilen (eigene Lebensmittelversorgung angesichts unsicherer Einkommensaussichten) sowie den mit dem Gartenanbau verbundenen Möglichkeiten gemeinschaftlichen Lebens und sozialer Kommunikation. Den Umwelt- und gesundheitlichen Risiken der Nahrungsmittelproduktion in dieser kontaminierten Region begegnet man eher gelassen bzw. nimmt sie zwangsläufig in Kauf. Noch stehen die Flächen für die städtische Landwirtschaft zur Verfügung – wenn auch Kommunen und andere Institutionen zum Teil schon begehrliche Blick darauf geworfen haben. Von daher sind aufrichtige Bemühungen und der politische Wille, diese zu schützen, dringend vonnöten, in der Hoffnung, dass bald die notwendigen Mittel und Technologien zur Verfügung stehen werden, die Böden zu angemessenen Kosten zu sanieren.

1
Moszkowski 1995
2
Potrykowska 1993; Ragland et al. 1994; Kacprzak et al. 1996; Peterson 1993: 15; Bellows 1996: 256-257
3
Kacprzak et al. 1996
4
Kacprzak et al. 1996; Bellows 1999b
5
Rose 1935: 44
6
Rose 1935: 155, 251; *Biuletyn-PZD* 1988: 30; Scholz 1964: 33; Pounds 1958: 149-151; cf. Gassner 1994
7
Rose 1935: 251
8
Lenkiewicz 1996: 37
9
Lenkiewicz 1971:51
10
Lenkiewicz 1980
11
Biuletyn-PZD 1993: 3
12
Dzialkowiec 1997 (1): 14-15; Biuletyn-PZD 1994: 16; cf. Lake et al. 1990
13
Dzialkowiec 1997 (1): 14-15

which to practice rural peasant traditions, therefore, has been balanced against the health threat not only of a compromised harvest, but by the often unsightly and environmentally unsafe occupational settings of older industrial agglomerations. Further, the provision of allotment land to provide household sustenance has been balanced by conscious efforts of private and public sector employers to pacify real or potentially unruly labor. This strategy was originally enabled by presuming that unpaid, mostly female labor would garden and male, mostly paid labor, would be employed in the early industrial era.[16] These labor arrangements of pacification and presumed and unpaid reproductive work underpin the tenuous nature of any workers' right to allotment gardens.

Contemporary Gardening in Silesia

The following section reviews 1996 data from 356 gardeners in five cities in Upper and Lower Silesia. It provides basic demographic data as well as multivariate analyses that profile why Silesians engage in their cultivation practices. Questionnaires were administered at urban garden sites, through local PZD (Polish Association of Gardeners) organizational units, and at selected places of employment where gardener contacts had colleagues who gardened in the same allotment tract with them. The questionnaire was long, with 67 questions or question sets, querying basic demographic data, garden characteristics, social aspects of food, gardening and health, and perceptions of contamination and health risks in Silesia.

Demographic Overview

Women (n=194; 54.4% of sample) and men (n=162; 45.5%) spend roughly equal amounts of time in the garden, although male respondents report coming more often for short periods of time and female respondents visit gardens slightly more on weekends and holidays. Both female and male respondents overwhelmingly identified women as conducting the vast majority of off-garden food work, including food preservation, storage, and general household shopping. Over 98% of respondents find gardening pleasurable and good exercise and believe the need for the gardens will continue (54.8% agree; 35.4% neutral), but report mixed enthusiasm by their family members. The average garden size was 376 square meters. Most typically two people regularly work a garden (58%), although in one-third of the cases (33%) only one person regularly cared for the dzialka.

The youngest respondent was 24, the oldest, 82. There were few in younger age groups (18-35), but a relatively wide representation in older groups. 42.7% of respondents work full time (40% female, 46% male); 7% report themselves underemployed (a combination of unemployed and part-time; 9% women; 6% men). A surprising 52% of respondents (same percent, women and men) identified themseves as retired, which, given meager fixed pension incomes, suggests a very low income group. Of the "retirees", only 18% were over the age of 66 (34%, 56-65; 49%, 36-55; 1%, 18-35).[17] 16% of all women and 15% of men identified an elementary/basic level of education. More than twice as many males (27%) enter training in vocational trades as do women (12%). Almost twice as many women (47%) finish the high school/lyceum as do men (29%). Men represent 29% of those continuing to higher education; women, 25%.

Modeled on Greenberg's methodology (1998), respondents reported on their "extracurricular" or civic life, including parent school committees, sporting clubs, adult education, regular religious services, activities in political parties or local government, any volunteer or activist work, and other. Almost 58% of the respondent pool did not identify any activity. Volunteer/activist received the most responses (n=48); regular religious services received the least (n=14). Because of low response, the variables were added together into a new variable "Activity" for incorporation into the discriminant analysis described below.

Changes Across Recent Political and Economic Transition

This section focuses on social and economic aspects of gardening. Questions addressing social aspects of gardening ask respondents about the role of gardens as a function of enjoyment (pleasure in gardening and healthy exercise), fungible and real income, family tradition, as well as the viability of gardening for future generations. To understand the economic situation of respondents, I draw on two sets of questions: first, respondents' perceptions of the adequacy and security of their household income; and second, the way they do or do not integrate gardening work into community use and informal economies as gauged in terms of the non- or informally-monied circulation of locally grown food resources. The seven economic condition questions were developed as sets to be answered both in terms of the gardener respondents' memory of the period "immediately preceding 1989" (i.e., more or less 1988) and "in the last year" (i.e., in 1995). The questions attempted to compare Communist-era memories of the 1980s crisis of food shortages with a 1995 snapshot ("last year") six years into the historic political and economic transformation.

Factor analysis was used to assess simultaneously the variables in Table 1. The strongest two factors in the 1988-groups and the 1995-

14
On 20 November 1996, the Constitutional Tribunal ruled that the 1995 law was, in fact, illegal. They were most concerned with the PZD as the monopoly (red, communist-era centralized) representative of the gardeners and allotment land. With a post-communist coalition in power, the Sejm overruled the Tribunal on 25 April 1997. The 1995 law stands... precariously.
15
Biuletyn-PZD 1995: 43-44; Biuletyn-PZD 1993: 3-9
16
cf. Smith et al. 1984
17
Multiple explanations are relevant to this unusual finding. The "retiree category" can include those on the typically very modest pensions who have stopped working because of age ("emerytura") or disability ("renta"). It may also hide some degree of unemployment and part-time work, being chosen as a more honorable title than unemployment or a less transparent one for possible tax-dodging. Note that although the total percentage of sampled retired women and retired men is the same, the female respondents retire earlier than do the male. This renders women as a group economically more insecure than men over a longer period of their lives and at the peak (as opposed to early stages) of their earning power.
18
Bellows et al. 1994
19
see 18
20
Hynes 1996

grouped studies are closely comparable, demonstrating a durable profile of garden use over political and economic restructuring. The strongest (of five factors in both time groups) represents gardeners who identify with economic insecurity and is characterized by the critical position of gardening to household food security; the powerful tradition of gardening in the family such that it is accepted whether everyone in gardening families likes it or not; and, the growing stress over time on low income families who spend increasingly higher percentages of their income on food and whose need to garden is greater than that of more economically secure households. The second strongest represents gardeners who identify with economic security. In stark contrast with the first factor, the second factor describes relatively secure gardeners who have had the political or community connections and/or sufficient income to ensure household security. Notably it is also these respondents who have had no trouble finding either basic or luxury food goods in the stores both before and after 1989. After 1989, the ability to purchase food in shops has required a secure job that resists downsizing and keeps salaries and inflation apace. For the period before 1989, these respondents' unusual situation of unproblematic food access during the crisis of food shortages implies good political networks as well as politically valued jobs (e.g. mining). Enjoyment, a statistically combined variable of pleasure and exercise, did not appear strongly in any factor except in a more minor factor as negatively associated with selling produce in the informal economy. In other words, pleasure and exercise are evenly, positively, and statistically "uneventfully" distributed across the factor profiles of the respondents.

Why Garden?
Balancing Risks and Pleasures

In this section, I highlight select findings from two sets of risk perception questions, environmental hazards generally and garden pollution risks specifically, and then present a discriminant analysis that integrates social, economic, and physical pollution variables. Perceptions of general environmental hazards are posed in a set of fifteen questions.

The most important finding in multivariate analyses on these variables (table 2) is that respondents place greater weight on the threat of social rather than physical environmental risk conditions. For example, the correlation matrix for environmental hazard questions produces coefficients that stress drugs (.570) and drinking alcohol and cigarette smoking (.550). Outdoor air quality and chemical pollution (.468) are the first and highest physical environment variables to show relatively significant coefficients. Motor vehicle contamination is more linked to social (drugs and drinking) than to physical environmental hazards. Garden contamination is linked primarily to air quality (.417). Important to highlight are also the relatively strong coefficients for storms and floods and climate change (.359) and for garden contamination and storms and floods (.351). Allotment gardens in Poland often lie on the floodplains extending up to the banks of rivers and channels.

Table 1: Questions Measuring Respondents' Economic Security
(Anne C. Bellows, Rutgers, The State University of New Jersey, 1999a)

1. Was your joint household income adequate to feed your family?
2. Gardening was critical to provide food for my family.
3. We give away some of our vegetables and fruit with every harvest.
4. Household members sell food or [and/or] ornamentals from my garden.
5. Other gardeners share their harvest with my family.
6. Local stores carry the basic foods for a healthy Polish diet.[1]
7. Local stores carry luxury foods like out-of-season or foreign items.

1) A "healthy Polish diet" is loosely defined according to basic soup stock ingredients, i.e., carrots, beets, parsely root, celery root, onion, and potatoes.

Nine garden risk questions were posed that inquired into respondents' perceptions of local health risks associated with domestic food production (table 3). The questions expand findings from a 1994 study on perceptions of health risks related to local food production undertaken in Wroclaw in Silesia.[18]

In a factor analysis on garden risk variables, the environmental hazard variables were combined and included as a new variable „RISK." Adding RISK to the Garden Risk factor analysis sharpened the ability to see how gardeners perceived garden contamination within the context of other Silesian-based public health hazards (table 4).

The strongest factor simultaneously demonstrates tremendous confidence as well as the perception of having few alternatives. It expresses the parochial and patriotic belief that respondents' produce is as safe as any in the world (.788) or in Poland (.817). This compares with field studies that show allotment gardeners trust that which they carefully tend day in and day out more than what they buy in the market.[19] Less powerful, but statistically significant in this factor, are the associated variables showing that respondents resign themselves to contamination risks because they fear possible future changes in the price (.617) or availability (.569) of food in the market.

A discriminant analysis, using the stepwise method, was run on all but 1988-specific variables to test further how respondents balance risks from environmental contamination against problems with the cost of food in the market. The dependent variable here originates from

Table 2: Environmental Hazard Variables
(Anne C. Bellows, Rutgers, The State University of New Jersey, 1999a)

Bacteria in food	Drinking alcohol	Nuclear power plants
Chemical pollution	Garden contamination	Pesticides
Cigarette smoking	Motor vehicle accidents	Storms and floods
Climate change	Outdoor air quality	Street drugs
Coal/oil plants	Crime	Stress

the garden risk question "Growing my own food is worth possible contamination risks given the steady increase of food market prices".

Two discriminant functions together correctly predict 68.5% of the cases. The first function, „Distrust Market", contrasts those who strongly agree and those who disagree with the dependent variable question. It represents respondents who fear the market has and will fail them in multiple ways: by not providing adequate food supplies to local markets, suggesting that the pre-1989 supply problems of the centralized economy are either not forgotten or not universally overcome in southwest Poland; by not showing signs of improvement such that their economic insecurity of the preceding year, 1995, influences their gardening decisions in the 1996 survey year; and by not believing that the market could possibly provide safer or better guaranteed quality of produce - either from Polish or import sources - than can be extracted under their own cultivation methods and scrutiny.

The second function represents those who agree with the dependent variable question. It portrays „Contented Activists" who find gardening pleasurable and good exercise. They are volunteers/activists who tend not to believe that coal and oil plants pose environmental health risks generally; and who also believe that their harvest is as safe as any domestic or international produce on the market.

The discriminant analysis demonstrates a tension between gardeners who weigh the multitude of economic and health risks in the environment and those who are more focused on the contented pleasures of gardening. The connection between „contented" gardeners and „activist/volunteers" was a surprise. And yet, the activist manages tension by analyzing social problems and developing strategies to address them. It appears reasonable that a practice of acting on problems is associated with a psychology that copes with stress.

Table 3: Garden Risk Variables
(Anne C. Bellows, Rutgers, The State University of New Jersey, 1999a)

1. The effects of pollution on my garden concern me greatly.
2. My garden produce is as safe as any other grown in Poland.
3. My garden produce is as safe as any from international food markets.
4. Growing my own food is worth possible contamination risks give the steady increase of food market prices.
5. Growing my own food is worth possible contamination risks given that local markets don't always carry what I need.
6. Health risks caused by local pollution have not increased since 1989.
7. Facts on health risks from local pollution are easier to obtain now than before 1989.
8. Warnings about garden contamination from friends and neighbors would convince me to not consume or share produce from my garden.
9. Warnings about garden contamination from government officials would convince me not to consume or share produce from my garden.

Discussion

Both those who are economically secure and insecure develop safety nets through barter and use economies to counter the vagaries of the macro-scale political economy around them. In other words, the historical experience of instability and inefficiencies in successive political economies and the concurrent trust in local familiar networks of friends and family spans income groups. Gardening is like money in the bank for rich and poor alike, an investment in and of social capital in the community use economy. Evidence suggests, that in more urbane and the more parochial cities alike, the pursuit of allotment land appears ongoing and fresh, indicating a vibrant utility and circulation of food production space in the community. Respondents are overwhelmed by inseparable environmental risks that are characterized by social, economic, and physical pollution problems. Human behavioral vulnerabilities like stress, drinking, smoking, and drugs pose relatively greater concern than physical pollution. Respondents cannot separate the economics of food security and pollution as a health risk into distinct categories and separate choices. Need propels respondents to garden despite suspicions of contamination. The pleasure and relaxation found in gardening weave a logic through the impossible choices.

Discriminate analysis reveals two respondent profiles that are differentiated in how they exude more and less confidence in the environment and in respondents' personal capabilities to cope with risk. A lack of personal confidence and public trust is representative of the first profile. This stronger of the two profiles is grounded by, although definitely not limited to, the experience of economic insecurity and need. Respondents with less confidence also have little trust in the political economies that rule market supply, market price, the cost of living overall, and job security. An anxiety over the social and economic health of their daily lives and household security exceeds, while it does not erase, their concerns with environmental or gardening health.

Greater confidence in the ability of economic, social, political, and human environments to improve with time as well as in the respondent's own abilities to create safer alternatives marks the second profile. These respondents

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trust the reliability and integrity of their own food growing efforts and in their community networks that share food, information, and other non-purchasable goods more than they fear contaminated environments. Why, they ask, should they believe that market produce from other parts of the world or other parts of Poland might not be more contaminated than their own harvests which they nurture on a daily basis? There is a confidence that environmental pollution and related public information and public health can improve and is improving. The profile reflects not complacency, but rather engagements of public volunteerism and activism as well as long and frequent restful retreats to the privacy of allotments. Pleasure, as opposed to anxiety, drives garden labor and surely contributes to a psychology of greater optimism.

Summary

Over more than one hundred years of urban allotment food production in Poland, gardeners have balanced risks and pleasures as they have turned soil and survived successive political and economic transitions. The historical and contemporary conditions of labor, industrial practice, agricultural tradition, and environmental pollution in Silesia continue to impose complex and conflicting choices for gardeners. The very land that defines some degree of household autonomy is threatened by toxicity and development interests. However, land converted to non-food producing purposes is almost impossible to reclaim. Research, activism, and policy are needed to protect allotment space until that time when technology is available at an affordable cost to clean the land. Education is necessary to teach gardeners how to meet their diverse needs in gardening and also to minimize the risks from food contamination through, e.g., crop selection.

Gardening as pleasure is defined best as a retreat from household, social, and economic stresses that lie outside the shared labors of cultivation. These broadly defined social and economic problems of the lived environment are perceived to be more grave than are physical pollution hazards. To face the possibility that one's „patch of eden"[20] might harbor yet another threat to one's physical and mental security induces tension. Tension manifests itself in multiple and often co-existing forms of anxiety, the by-product of balancing the potential of environmental health risks against the need to garden given insecurities in the market. Even as the vast majority of garden respondents, irrespective of sex or age, indicate pleasure in gardening, this tension diminishes their reported level of relaxation and enjoyment. What statistically correlates with great pleasure and restful outdoor exercise is the tendency to be involved in activist or voluntarist community participations. Perhaps pleasure rewards those who actively seek to change the stress of the world around them. It visits those who leave the anxieties of everyday life and put their energies into growing edibles and ornamentals, and then circulating them through the community. It associates itself with those who engage themselves institutionally, working with local schools, sports and religious centers, politics, education, and other volunteer and activist endeavors.

Table 4: Strongest Factor, Garden Risk Variables. N=356
(Anne C. Bellows, Rutgers, The State University of New Jersey, 1999a)

"Risk Takers and Patriotic Gardeners" Explanatory power, 18.5% Factor Variables:	Factor Loading
My food is as safe as any in Poland.	.817
My food is as safe as any from abroad.	.788
Increase in food prices makes gardening worth the contamination risk.	.617
Insecure market food supply makes gardening worth the contamination risk.	.569

Public allotment gardens serve as a spatial and economic pivot between households, the formal political economy, and communities of neighbours, friends, and families. Yet the data presented here only partially reveal the diversity of household and community food labors in the development of social capital and use economies. For example, greater and lesser confidence in an environment safe from hazards and garden contamination is notably not distinguished by sex, age, employment status, or participation in giving and receiving garden produce in the community. At the same time, the largest group of economically insecure respondents are women based on their over-representation in low income retiree categories. As a group, women undeniably spend more time than do men on total household food labors, of which gardening is only one part. I argue that balancing the risks and pleasures of urban gardening within the formal-informal and public-private nexus of allotment spaces evolves from an intricate set of socio-cultural relationships (including sex, age, employment status, etc.) that further research should continue to pursue.

The reasons Polish gardeners tend urban allotments are as diverse today as they have been over the course of their one hundred years of institutionalized existence. The multitude of reasons can help build their defense in an age of privatization and „development". Balancing risks and pleasures requires first the land; it serves first and foremost local communities. Whether driven by economic insecurity or optimism and pleasure, access to land predicates, and vibrant interactive communities ground, the future for urban allotment agriculture.

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Urban Agriculture in Brazil
A Tale of two Cities

ISABEL MARIA MADALENO

Brasilien ist eines der wenigen Länder, in denen in einer größeren Zahl von Kommunen die städtische Landwirtschaft explizit gefördert wird. Da es sich um relative junge und isolierte Maßnahmen handelt, fehlen noch statistische Daten, die für eine optimale Förderung und zur Erfolgskontrolle wünschenswert wären. Ein Forschungsprojekt, in das die Autorin maßgeblich involviert war, zielte auf die Erkenntnis von empirischen Daten zur städtischen Landwirtschaft in zwei brasilianischen Städten ab: in Belem an der Amazonasmündung und in Presidente Prudente im Großraum Sao Paulo. Über 800 Familien wurden in den Jahren 1998/99 in beiden Städten interviewt.

Die gewonnenen Daten sind besonders reich hinsichtlich der angebauten Pflanzkulturen, wobei selbstverständlich die großen klimatischen und geologischen Unterschiede zwischen den beiden Orten einen erkennbaren Einfluss haben. Darüberhinaus werden aber auch die ernährungswissenschaftlichen und gärtnerischen Vor- und Nachteile der verschiedenen Kulturen untersucht.

An empirical research in Belem and Presidente Prudente

In Brazil, eight in ten people already live in cities and towns, and the urbanized extensive areas are running short of resources. More than half of the population lives under the poverty line. The possibility that residents are capable to produce food and improve family nutrition is quite impressive and hopeful. We have noticed that in many cities local governments are promoting the intensive growth of vegetables, fruit trees and the raising of micro livestock or poultry on open spaces that are vacant or unsuited for urban development, hence helping to ameliorate the economic and nutritional security of the urbanites, and enhancing the beautification of the urban spaces.

The relatively high natural growth rate, the expanding migration rate, increasingly originated in the rural interior areas, where living standards are quite unattractive as compared to the urban mythic potential, tend to push people to the cities. Meanwhile, there's a growing demand for urban land, small plots where to build shacks and tiny little houses, that perpetuate the pattern and traditional modes of living from the rural realm, transforming peripheral neighbourhoods in Brazil in function compatible spaces, dominated by the juxtaposition of built up areas and agriculture plots, farmed by low-income families.

So urban growth and agriculture are conveniently intertwined, even though there has not been much scientific work on the subject. That's why we felt it useful to embark on a research project focussing in intra-urban farmed spaces, so far depreciated by statistics and censuses, while relying on these to characterize the green belt. Urban agriculture in Brazil is labour intensive and occurs in small plots that start right next to the city heart (the CBD) and tend to widen toward the periphery. Moreover, the more peripheral is the neighbourhood, the more scattered is residential development usually. In Belém, as in Presidente Prudente, we noticed that idle land tended to be more abundant in the newly developed settlements, ideal spaces to grow food crops as *Manihot esculenta* (cassava), *Zea mais* (corn), *Ipomoea batatas* (sweet potato) and a wide variety of beans, which constitute an important part of daily diet in the country in analysis.

We found three distinctive types of urban cultivation: 1. Household gardens; 2. Urban shifting farms; 3. Peri-urban market farms. This typology is quite similar to the one described by other authors in Africa[1], difference residing in the proportion of urban agriculture practitioners who crop those areas from country to country and from community to community.

In the case of the first group of spaces, we accounted for more than 87% urban residents (of all income groups) growing crops and raising animals in their own front- or backyards, usually family owned and attached to their home. The family member who more often tends the garden is mainly a female[2] - the mother, a grandmother, a grown up daughter or then a housemaid - even though all family cooperates dividing the tasks and consuming the production. Urban shifting farms are normally cared by lower or low-middle-income class individuals, retired, underemployed or unemployed (the last being 11.4% of the urban growers in Belém), more commonly male, that farm idle land existent inside the city or around peripheral neighbourhoods, which have still not been taken over by urban development.

Sometimes the land is illegally occupied, for corrupt local government officials often ignore ownership rights or then effective settlement is stimulated in badly registered or hardly controlled areas, like the ones dominant in Northern and Western states. 20% of total families surveyed in the Amazonian city of Belém (total interviewed was 555 households) were squat-

ters, and only 2.5% in Presidente Prudente (we remember the universe of families inquired was 280), as public control of land ownership is tighter in São Paulo South-Eastern state. About 13.2% of the families we surveyed in the middle-sized town had rented the plots they farmed, and 17.5% of the households had borrowed the land from a friend or a relative (only 6% in Belém). Nevertheless we believe actual figures of squatters that practise urban agriculture to be much higher in many other cities, for the tendency to farm all possible urban open spaces, even vacant land under heavy power lines, plots existent along routes and railways is increasing as welfare decreases.

As to peri-urban market gardens they could either be taken by middle-class and high-middle class landowners that grow food for hobby or profit, in the last example through contract workers, usually male. But there are also lower-middle class individuals again, with a rural past and know-how, who specialize on commercial horticulture crops, highly labour-intensive, irrigated, sometimes even chemically fertilized, developed on land they own, rent or "invade", and explored for demand on the close-by markets as an income-generating activity. To this group of resourceful and persistent males belong the full-time growers we interviewed, about 2.5% in Presidente Prudente and 1.1% in Belém.

Therefore, agriculture is far from being merely a temporary business in Brazil. More than half the cultivated area was in hands of people who had been living and caring household gardens or inner city vacant plots for more than 10 years. About 41.4% of the surveyed families in Belém were farming for more than 20 years and 35.7% in Presidente Prudente. Even those who had borrowed plots to cultivate, usually for profit as we remarked, were very active, vigilant and persistent cultivators, with an enviable love to the land one usually only experiences in rural realms, while displaying environmentally friendly farming techniques.

Farmers in vacant intra-urban lots and peri-urban land plan cropping depending on market demand, and produce vegetables several times a year in order to increase the income. The household gardeners, on the contrary, select a mix of fruits, vegetables, spices and animals season by season, based on the nutritional needs of the family. Being the last far more numerous in Brazil, it explains front- and backyard diversity of species, transforming the well managed urban plots on genetic reserves, giving sustainability to cities through waste recycling, and food security to their residents.

In fact, the abundant lower economic circuit or informal modes of life reflect rising unemployment and low wages. Consequently, in urban areas fruit plants like *Euterpe oleracea* (açaí palm), the most abundant species found in Belém (39.8% of the cultivated spaces visited), constitute a nutritional household reserve, for their fruits are highly appreciated sources of vitamins, juices being more nutritious than milk, hence being taken on a daily basis as diet supplements.[3]

Not endemic, but yet tropical and quite nutritious too, are the *Persea Americana* (avocado), dominant in Manaus, (capital of Amazonas state), because it requires high humidity, and the Asian *Mangifera indica* (mango), surprisingly more important in Presidente Prudente than in Belém, supposedly the 'mango city in Brazil'. This is a species with low water requirements but high temperature preferences.[4] Many other fruits are abundant in both surveyed cities, like *Psidium guajava* (guava), *Eugenia malaccensis* (Rose-apple), *Carica papaya* (papaya), *Musa paradisiaca* (banana), *Passiflora edulis* (passion fruit), *Punica granatum* (pomegranate), *Cocus nucifera* (coconut) limes, lemons, tangerines and several types of oranges (see table 1).

It's quite interesting to notice that most of these fruits come from selected tropical plants with small space requirements. That's the case of banana (3 x 2 m), papaya (4 x 2.5 m), guava (6 x 5 m), lime (7 x 7 m) and pomegranate (2 x 2 m). Pomegranates (*Punica granatum* L.) are particularly popular bushes or small trees in

1
van den Berg at al. 1998
2
Considering we always tried to interview the family member dedicated to urban cultivation, women constituted 66.4% of the UA practitioners in Presidente Prudente and 69.7% in the city of Belém.
3
Madaleno 2000
4
Wade 1986

Table 1 / Food Crops in Brazil / Source: Surveys from Belém (1998) and Presidente Prudente (1999)

COMMON NAME *(Botanic name)*	**UA spaces in Belém**	**UA spaces in Presid.Prudente**
Açaí (*Euterpe oleracea* Mart.)	39.8%	0%
Guava (*Psidium guajava* L.)	34.9%	18.2%
Rose-apple (*Eugenia malaccensis* L.)	29.6%	0%
Papaya (*Carica papaya* L.)	26.1%	28.6%
Avocado (*Persea americana* Mill.)	25.8%	7.5%
Banana (*Musa paradisiaca* L.)	25.4%	19.6%
Mango (*Mangifera indica* L.)	24.3%	32.1%
Lime and Lemon (*Citrus aurantifolia* (Christm.) Swingle and *medica* L.)	23.2%	23.6%
Coconut (*Cocos nucifera* L.)	21.8%	4.3%
Indian Pepper (*Piper nigrum* L.)	21.0%	3.6%
Acerola cherry (*Malpighia punicifolia* L.)	19.1%	21.4%
Chicory (*Eryngium foetidum* L.)	17.3%	8.9%
Cashew (*Anacardium occidentale* L.)	16.9%	3.2%
Oranges (*Citrus sinensis* (L.) Osbeck and *vulgaris* Risso)	16.8%	22.5%
Basil (*Ocimum basilicum* L.)	12.1%	5.7%
Bunching onions (*Alium fistulosum* L.)	1.3%	34.3%
Cassava (*Manihot esculenta* Crantz)	3.6%	22.5%

Home garden for just above subsidence production / Photo: Kosta Mathéy

Presidente Prudente's middle and high-middle-class household gardens (8.6% of UA spaces), because the fruit is edible as food and the leaves are boiled into a brew for it's anti-inflammatory powers, with proven action for tonsils.

In matter of fact, about 1/3 of household plots were less than 50 m^2 sized in Presidente Prudente and 23% of them in Belém, while 2/3 of the cultivated spaces had between 51 and 500 m^2 in the big Amazonian city, 53% being characterized in the same category in the smaller São Paulo state town.

As to the fruits elected by the urban farmers we interviewed, we would like to emphasise that one single avocado contains about 980 calories, corresponding to nearly half our daily nutritional need, while 2 medium coconut supplies 1900 calories. As to mangoes, they are the richest tropical fruits in vitamin A; the papayas are one of the best digestives in nature; guavas are excellent sources of vitamin C, as well as lemons, oranges, mangoes, papayas and passion fruits, being Acerola cherry (*Malpighia punicifolia*) the most recommended of them all.[5] This last plant species was found in 19.1% of the spaces we visited in Belém and 21.4% in Presidente Prudente.

5
see 4
6
UNDP 1996
7
Mougeot 1994, p.18

Table 2 / Urban food and health production in Brazil / Source: Surveys from Belém (1998) and Presidente Prudente (1999)

PRIMARY ACTIVITIES	FAMILY PLOTS IN BELÉM	FAMILY PLOTS IN PRES. RUDENTE
Fruit culture	529	243
Medicinal Plants	372	156
Vegetable Production	120	130
Spices Production	205	88
Animal Husbandry	189	48
Cereals and Tubers	29	94
Total Households Visited	555	280

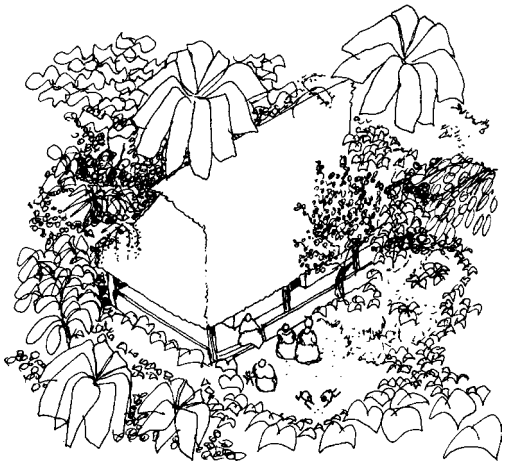
Small, even tiny, vegetable gardens are also quite common, irrigated on a daily basis, sometimes with milk and water mixtures, or waste water from vegetable and meat washing procedures, and fertilized with organic compounds, especially with açaí seeds in the case of Belém, particularly corn wastes, tree leaves and family meals garbage, chicken or ox manure, in São Paulo state. Quite commonly gardeners burn rather than compost the solid waste they use. The species we found were namely *Allium fistulosum* (bunching onions), *Petroselinum sativum* (parsley), *Eryngium foetidum* (chicory), *Piper nigrum* (pepper), *Capsicum frutescens* (hot pepper), *Ocimum basilicum* (basil), *Lactuca sativa* (head lettuce), *Chicorium intybus*, *Coriandrum sativum* (cilantro), *Talinum triangulare* (talinum).

Climatic factors such as humidity, rain and high temperature obviously influence plant growth. In Belém the climate is quite hot and rainy, for the city is located in the Equatorial region. As to Presidente Prudente, the town is South of the Equator, and has a tropical humid environment. Having sufficient water in both cases, it's quite beneficial for trees and fruit development, as well as for horticulture.

Consequently, green and productive tracts of land mark city landscape in the two surveyed urban spaces. Fruits being the most abundant natural features, either in inner and peripheral agricultural areas (86.8% of the cultivated plots visited in Presidente Prudente and 95% in Belém), they are followed by medicinal plants and vegetables (see table 2), competition being very stiff between shacks, houses and gardens in the more densely populated neighbourhoods.

We should notice that market gardening is an important item on Brazilian political agenda. All over the country there are examples of urban authorities that consider agricultural land important and useful within city boundaries. UA literature has emphasised the positive role local governments in cities like Fortaleza (NE) or Curitiba (S) had on this issue.[6] That's also the case in Belém, where either the municipality and the Pará state government sponsor and strongly support a green belt development area, on public land located in the Northern islands of Outeiro and Mosqueiro, where vegetables, fruits and the raising of chickens and ducks are widely stimulated.

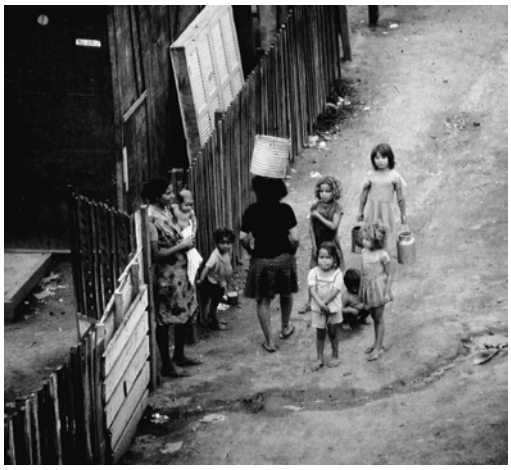
Simultaneously, poultry has increased enormously inside the biggest Amazonian city where we interviewed 34% of families involved in this activity, as well as it has grown in the nearby island of Cotijuba as a result of this good governance. Being ducks one of the most appreciated delicacies in the Northern States



(duck with *tucupi* sauce), the raising of the birds is often seen as a quite lucrative business even in the poorest neighbourhoods, often victimized by floods in the municipality-archipelago, formed by tracts of land separated by buffers of water and "liquid roads", because aquatic birds can swim...

In Presidente Prudente municipality, where a project called "Feed Prudente" stimulates non-built plots occupation with vegetable gardens by low-income families, especially because local authorities lack funds to clean and maintain those public areas, there is concern about this issue too. Hence, extension services provide contracts with private landowners, so that urban growers can develop more land in the most peripheral neighbourhoods; they also lend or give away inputs like ploughing machines, seeds and water pumps.

Cassava, beans, onions, corn, sweet potato and lettuce are the main productions, very few of them rain-fed, most intensively irrigated (85.4% of spaces visited), sold for profit on the streets or to a few selected high middle-income families, interested on "health food". Onions (34.3% of spaces) grow best in this medium sized town, for bulb crops are sensitive to day length and heat, requiring moderate temperatures.



Nutritional properties of cassava leaves, particularly calcium, iron and vitamin C make it an obvious choice in the Northern states. In Belém a highly appreciated delicacy called *maniçoba* is consumed by urban growers, the cassava leafy parts being provided, in this case, by peri-urban farms. But in São Paulo state there's no such good habit in meeting food needs with the aerial plant part, so only the caloric roots are eligible. Cassava was planted by 22.5% of families surveyed in Presidente Prudente.

Medicinal species like *Lippia alba* N.E. Br. (Brazilian Melissa), *Cymbopogon citratus* (DC.) Stapf (Citronelle), *Mentha piperita* L. (peppermint) and *Peumus boldus* (Mol) Lyons (the herb of Chile), are commonly used for their sedative and sudorific powers all over Brazil, to cure respectively depression, stomach aches, the flu, and liver disturbances. Even the well known cotton leaves (*Gossypium herbaceum* L.) are used to cure asthma, as well as the mango tree leaves and bark, while guava tree leaves cure diarrhoea, cilantro seeds (*Coriandrum sativum* L.) heal pneumonia, and *Eryngium foetidum* L. (chicory) is used against tuberculosis. The importance of alternative medicines in Brazil is remarkable, because the national health system, supposedly universal is, in fact, quite inefficient.

Concluding remark

Food security is basically defined as "access by all people at all times to the food required for a healthy life".[7] Consequently, it shouldn't be a surprise that local authorities start displaying a very positive attitude towards city farming, in a country were urban poverty is rampant. Basic luxury for the urban poor, food cultivation inside city boundaries is, according to the sample results, a privilege to about one in three Brazilian households. Considering that low-income families of cultivators surveyed spend two thirds of their budget on food, being their budget less then 250 US$ a month, and lower-middle income families (that earn up to 600 US$ a month) usually spend about 50%, urban agriculture is a desirable strategy to overcome food insecurity, to ameliorate food self-reliance, and to improve the nutritional health of urban residents.

Methodological Remark

This paper is based on field research undertook in the biggest Amazonian city, Belém (population: 1,241,824 inhabitants, in the 1991 Census), the capital of Northern Pará state, in March and between June and September 1998, together with another survey from Presidente Prudente, a medium sized town (population: 165,484), located in the interior of São Paulo state, dating from November and December 1999. Observations, meetings and semi-structured interviews were the basis for questionnaires used for interviewing 555 families (representing 2800 residents) of urban agriculture practitioners, randomly dispersed through the urban tissue in Belém. A similar procedure was met in Presidente Prudente, a much smaller urban centre, where 280 families (representing 1050 individuals) were interviewed. Participation of respondents was always voluntary and their identity was not recorded.

Amazonas 'house' - symbiosis between house and garden in Northern Brazil / drawing: Johan van Lengen

'Brazilian poor' - producers living below the poverty line deserve greater assistance in urben farming / Photo: Kosta Mathéy

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Urban Community Forestry - an Innovative Model in India[1]

The "Ahmedabad Green Partnership" Project[2]

LILIANA MARULANDA S.

Die indische Industriestadt Ahmedabad versucht der eklatanten Verschlechterung ihrer Umweltbedingungen, namentlich der Luftverschmutzung, durch eine konzertierte Aktion unter Beteiligung der Privatwirtschaft und einiger Nicht-Regierungs-Organisationen zu begegnen. Unter dem Namen 'The Greening of Ahmedabad Programme' wurde ein Projektbündel ins Leben gerufen, das Patenschaften für öffentliche Grünflächen an Geber aus der Zivilgesellschaft vermittelt. So werden z.B. eine Reihe von Parks durch die Wirtschaft aufgemöbelt und instand gehalten; im Gegenzug erhalten die Finanzgeber gratis Werbeflächen am Eingang der betreffenden Anlagen und an anderen städtischen Standorten.
Eines der Unterprogramme ist das 'Ahmedabad Green Partnership Project', das in diesem Beitrag detaillierter beschrieben wird. Hier wurden 17 Grundstücke, die nach dem gültigen Flächennutzungsplan für künftige Bauvorhaben der öffentlichen Hand reserviert sind aber noch nicht gebraucht werden, für städtische Aufforstungsprojekte durch interessierte Organisationen auf Zeit zu Verfügung gestellt. Bewässerung und Umzäunung wurden in der Regel von der Kommune finanziert, während die Betreiber insbesondere für die Personalkosten aufkommen. Allerdings wurden nur fünf dieser Grundstücke auf längere Dauer (mehr als ein Jahr) tatsächlich bewirtschaftet. Gründe für diesen verhaltenen Erfolg waren ungenügende Garantien für eine Mindestlaufzeit der Nutzungs-

The Greening of Ahmedabad Programme

Ahmedabad is a very dynamic industrial city in India with a long standing history in the textile sector. Its growths as the 'Indian Manchester' of India has not been without problems, but the effects of the textile crisis of the 1970-1980 seem partly overcome, and today Ahmedabad is again known to be a city bustling with industrial and commercial activities.

The cities ongoing growth has been marked by substantial influx of population, by growth of slums and unauthorized colonies and environmental decline. The deterioration of the environment has not been only in the settlements where the poor live, but in the city as a whole, and this has fostered a process of awakening and awareness about the urgency to introduce corrective measures. The Ahmedabad Municipal Corporation (AMC) has ventured in various measures to improve the city's management of its revenues, assets, and own operations to convert the city from a liability into a wealth creating resource.

Responding to the decline in the city's environment, the AMC has launched various infrastructure improvement schemes, has invested in slum improvement projects, and initiated the Greening of Ahmedabad Program. This programme includes actions towards increasing the green cover of roadsides, traffic islands, open lots where natural regeneration can occur, vacant lots where wasteland restoration can be undertaken and open land at AMC installations. As part of this greening drive, amongst others, the AMC launched the Ahmedabad Green Partnership project (AGP). This project aims at increasing the green cover and improve the environmental quality of the city using AMC owned vacant plots in partnership with NGOs and community organizations.

This greening drive has been initiated as an innovative scheme using the concept of 'partnerships' and 'participation' as its main ingredients. The city has managed to launch this program as an initiative that provides responsibilities and space for innovation to its citizens, to civic organizations and to private sector enterprises.

In 1995, the Centre of Environmental Planning and Technology (CEPT), with support from USAID, carried out an Environmental Risk Assessment for the City of Ahmedabad. A major finding of the study determined that the city's ambient air quality was a major health risk to its residents. In response to these findings the Ahmedabad Municipal Corporation gradually evolved a comprehensive approach, "the Greening of Ahmedabad Program" which includes efforts in various fronts to tackle the city's air pollution problems.

The *Greening of Ahmedabad* is a concerted effort between the AMC and the Private Sector towards increasing the green cover and improving the environmental quality of Ahmedabad. For implementing this city wide effort the AMC has entered into partnership agreements with interested business and industrial houses, local entrepreneurs, institutes, service oriented organizations and NGOs. Through such partnerships, in a cost-effective manner, the public partners are contributing to increase, develop and maintain the green spaces of the city. This effort is managed by the Director Parks & Gardens of the Department of Special Estates, Parks & Gardens of the AMC and its main components are:

A Road Side Plantations & Traffic Islands: In an effort to increase road side tree plantation, private and public sector institutions were offered to chose plantation units along the main roads of the city.[3] Private and public sector institutions provided the funding for the saplings and the tree guards while maintenance is done by AMC. In exchange, they are allowed to advertise their logos on the tree guards.

Through this effort, between 1996 and 1997, a total of 16.292 trees have been planted along main rods with a very high (90%) survival rate.[4] With a similar approach, strategically located traffic islands have been 'adopted' by industrial houses or local business for a period of five years. They have to plant and maintain the area and the AMC provides the water connection. In this way traffic islands look beautiful and remain well maintained.

B Parks and Gardens: Large parks and empty plots have been given in adoption to local industries, entrepreneurs and corporations. The corporate partners are responsible for the planting and maintenance of the parks or gardens in exchange for the right to advertise at specific sites in the city. This initiative turned out to be very successful: most of the parks are well maintained and the municipality saved the initial investment cost and subsequent expenses for maintenance (table 1).

C New Parks & Gardens: In order to increase the green area and to provide more recreational facilities, the AMC was developing new parks and gardens in different parts of the city: altogether 23.8 acres of land have been converted into new parks and gardens.

D City Forest Development: Large open plots, which were vacant in the past, are being developed as city forest by the AMC. In Lal Bahadur Stadium alone 31.800 trees have been planted. Through this component alone, a total of 57.690 trees have been planted and maintained by AMC in 1996/97.

E Preservation of the City's Watershed: Preservation of the watershed and protection of existing water bodies are a main concern for the AMC. For this objective, the city's development plan attempts to prevent undesired developments that could have a negative impact on the ground water table.

F The "Ahmedabad Green Partnership" Project (AGP): This is an initiative to utilize empty plots, owned by the AMC, for urban forestry related activities through a private-public partnership approach. Details of this project will be given in the following chapters of this paper.

The "Ahmedabad Green Partnership" Project (AGP)

The Green Partnership is an initiative by the Ahmedabad Municipal Corporation (AMC) to utilize empty plots, owned by the municipality, for urban forestry related activities in partnership with NGOs working with poor communities and other citizens groups. The idea was supported by RHUDO/USAID, was co-ordinated jointly by a consultant and staff of the AMC Parks & Gardens Department for a period of one year. According to the Program Guidelines[5] a total of 17 plots were allocated and agreements were signed with 12 NGOs for undertaking forestry and other greening related activities in these plots. Today only four of them continue in operation and continue to receive the support from the AMC.

AMC owned plots were handed over to NGOs and other organizations a period of 5 years, with a possible extension of other 5 years provided that there are no immediate plans to develop these plots. The State Department of the Municipal Corporation provided a list of available plots, while the Director Parks and Gardens dealt with the applications from interested organizations, revised the proposals and prepared the agreements to be signed by the Municipal Commissioner and the implementing organization. Eventually the Director Parks and Gardens prepared the disbursement order which could be cashed by the implementing organizations after approval of the Accounts Department.[6]

The Ahmedabad Green Partnership is managed by the Director Parks and Gardens under the Department of Special Estates, Parks & Gardens of the AMC. The General Manager of this department reports directly to the Municipal Commissioner. It was initially agreed to contract an independent institution to administer the day-to-day business of the program and to act as intermediary between the AMC and the implementing organizations. It was also planned for this institution to assess and coordinate training and technical assistance re-

lizenz (was ja insbesondere bei Baumpflanzungen Voraussetzung sein sollte), mangelnde Einbeziehung der Bevölkerung in den Planungsprozess und unzureichende Vorabinformationen sowohl über die Eignung des Grundstücks wie auch über die geplante Bewirtschaftung bzw. die Bonität der Betreiber.

Objectives of the AGP project:

- To contribute to the greening of Ahmedabad through the development of urban forest and other greening related activities on vacant plots plots owned by the municipality.
- To facilitate and encourage participation of low income residents, specially women, through the formalization of public-private partnerships. The poor are being explicitly invited to become productive partners in development initiatives.
- To open new income generation possibilities for low income residents through the planting and management of trees and other species with an economic potential.

Photo / Bhikhabhai Park adopted by Anil Bakery. Detail of the entrance.

1
For the purpose of this project the term forestry includes not only trees but shrubs, plants, flowers, vegetables and fodder.
2
This paper is based on the Documentation Report of the Ahmedabad Green Partnership Project prepared by the author for USAID, New Delhi, India, 1997. It will be also presented in the International Symposium on Urban Agriculture in Berlin July 7 – 9, 2000.

Table 1 / Gardens adopted by companies

Table 2 / Details of parks and gardens

	Name of Garden	Name of Company	Size	Investment in Rs	Maintenance per Month in Rs	Remarks
1	Sardar Baug	Arvind Mills Ltd.	8 Acres			Work in progress
2	Law Garden	Ashima Syntex Ltd.	10 Acres	70 lakhs	35.000	Near completion
3	Parimal Garden	Torrent Lab.	10 Acres	2 lakhs	19.000	Work in progress
4	Bhikhabhai Park	Anil Bakery	5 Acres	65 lakhs	25.000	- do -
5	Holliday Inn	Indulal Yagnik	3 Acres	2 lakhs	15.000	- do -

	Size	No. of Gardens	No. of Traffic Islands	Maint. by AMC	Maint. by Private S.
1	Up to 2 Acres	38	45	30	15
2	From 2 to 5 Acres	19	-	17	2
3	Above 5 Acres	15	-	12	3
	Totals	72	45	59	20

COMPONENT		ACHIEVEMENT		
	Trees/Year	1996-97	1997-98	TOTAL
1	**Road Side Plantation & Tree Guards**			
a	With the help of donors	3.224	150	3370
b	Councilor's budget	5328	3150	8478
c	General budget	1740	2700	4440
	Sub-Total	**10292**	**6000**	**16288**
2	**Block Plantation (City Forest)**			
a	Open plots	32690	25000	57690
b	AMC Installations, Schools, Hospitals, Dispensaries and Water Pumps		6500	6500
c	**Green Partnership Project**		5000	5000
	Sub-Total	**32690**	**36500**	**69190**
3	**Van Mahotsav (Seedlings Distribution)****	13900	150000	289000
		181982	192500	235482

**. Van Mahotsav, distribution points were open in main gardens for distribution of plants free of charge. Plants were also distributed door-to-door to encourage planting.

Table 3 / Summary of the greening of Ahmedabad / source: Department Parks & Gardens

quired on project to project basis and conduct monitoring of the various projects and evaluation of the program.

Financial resources are granted by AMC to the implementing organizations for fencing, saplings, tools, fertilizers, a portable shed and other expenditures for the first year.[7] This provision includes grants for the implementing organizations as well as for project administration, training and technical assistance costs. Additionally, the AMC provides one water connection, while the organizations are responsible for wages, maintenance, security and other planned amenities. In the second year funding will only be available for watering, weeding and fertilizers. Thereafter, 10% of the amount provided for the second year will be granted. It is expected that after a period of five years the projects will achieve financial sustainability. Disbursements were made according to the progress observed after periodic evaluations of the projects.

Table 4 / Sequence of the process and actors involved

Activity	Who	Remarks
Development of criteria for selection of plots	Land use from Master Plan	Other factors need to be considered.
Selection of Plots	Estate Department	
Revision of proposals from NGOs Assessment of capacity of NGOs	General Manager and Director Parks & Gardens	process takes approx. 1 month
Approval of proposals from NGOs	- do -	process takes approx. 10 days
Preparation of Agreements Allotment of plots to NGOs	Director Parks & Gardens together with NGO	process takes approx. 2 weeks
Preparation of disbursement order	Parks & Gardens Department	process takes approx. 2 days
Sanctioning of disbursement	Accounts Department	process takes at least 2 months
Plot demarcation	Estate Department	7 days
Provision of water connection	Engineering Department	10 days
Construction of fence	NGOs	Funds provided by AMC
Monitoring of projects	General Manager and Director Parks & Gardens	To attend to problems by NGOs
Projects evaluation	- do-	
Calling regular meetings with participating organizations	- do-	Monthly
Follow-up of decisions taken in meetings	Director Parks & Gardens	-
Assessment of technical assistance needs of NGOs	General Manager and Director Parks & Gardens	
Organise procurement of assistance needed	- do -	-
Assessment of training needs	- do -	-

In 1997, a total of 17 plots were allotted to 12 NGOs. Presently only four NGOs are working on 5 plots. The organizations and their respective project activities are as follows:

Centre for Environmental Education (CEE): The Centre for Environmental Education was set up and supported by the Ministry of Environment and Forest of the Government of India. The Centre has a high reputation for developing environmental curricula for schools and supporting youth clubs with interest in environmental issues. In this project the CEE is orienting a group of associated students to develop a 8.543 m^2 plot into an urban forest for research and academic purposes. According to the municipal Development this plot has been earmarked to be used for a future school. The stated objectives of the initiative include:

- To create awareness and develop an understanding about the importance of green areas in cities among the local communities;
- To encourage learning through experiencing nature;
- To develop and disseminate information on the diverse species that can form an urban forest.

Initially a total of 545 plants of different types were planted. The soil quality is good and the water is supplied for 2 hours per day. The fence and a buried water tank have been built by AMC as agreed. One gardener is being employed to take care for the plants and maintain the Site. One of the project managers visits the plot daily to monitor development.

Akhil Bharatiya Vanaaushadhi Abhyas Mandal: This organization specialized on propagating ethnobotany and conservation of the environment. They organize educational camps in different forests or such areas around India and teach the identification of different medical trees, plants, shrubs, tubers etc. to the participants. They also organize exhibitions on local medical trees at schools and try to foster appreciation for trees which are beneficial to people while promoting a better environment at the same time. In this programme they are developing a 14.000 m^2 plot into a garden of medical trees and plants. Their stated objectives include:

- To contribute to the greening of Ahmedabad city through the urban forestry;
- To plant medicinal trees and provide information about them;
- To promote planting medical plants in kitchen gardens and backyards;
- To start a nursery for medical plants.

A total of 1.200 plants of medicinal value were initially planted. Three persons are responsible for the supervision of this project and they visit the plot twice a week. Two gardeners and one watchman have been hired to take care of the plantation and guard the plot.

State Bank of India SBI Officers' Association: The State Bank of India Officers Association is the trade union of bank officers. It is developing this project through its Social Service Wing which implements small projects for the benefit of communities and the city in general, while providing a good corporate image to the Bank. In line with this policy the Association applied for a 5.776 m^2 plot to be developed into an urban forest. In the city's master plan this plot is earmarked for residential purposes. A total of 1.500 trees were planted, with very good survival rate. The fence was provided by the Association, the water connection by the AMC, and the water supply runs two hours per day. Two persons visit the plot three times a week for supervision. The Association has employed 2 gardeners, 1 sweeper and 1 watchman to look after the plot and after the trees.

Self Employed Women Association (SEWA): Under the Green Partnership, Sewa - an internationally well known NGO and a winner of the HABITAT II award for its housing programmes- was given two plots which are being managed by two community based unions. The objective is to generate employment for the members of the unions and to contribute to the greening of the city. Both plots are located in residential areas, Plot A has a size of 4.123 m^2 and Plot B 4.030 m^2; both are reserved for future markets in the city's master plan.

- **Plot A:** Fencing, underground water tank and shed for tools and fertilizers, and water connection was provided by AMC. Work started in August 1997 and all of the planned 350 trees have been planted. Water provision is enough and the soil quality is good. One gardener, one sweeper and one watchman take care of the plot and it's trees. Monthly maintenance cost is reported to amount to Rs. 5.000 (cir. U$ 150).
- **Plot B:** The fence and a temporary shed have been built. A total of 329 trees have been planted. Soil quality is very good but water supply is very scarce in this plot. One gardener, and one watchman take care of the plantation. Maintenance cost is as for Plot A.

Lessons from public-private partnerships

Based on this particular experience certain considerations seem to be crucial to guarantee an efficient execution of such a project and contribute toward a high level of satisfaction for the parties involved. They include, among others:

Planning and Programming

a In the initial stages there should be a high degree of flexibility to identify potential problems and to develop any necessary corrective measures or adjustments.

b Plot selection should be based upon a set of technically realistic criteria, taking into account such issues as the topographic condition of the plot, access to water mains, soil quality etc. These factors need to be identified well in advance so that any necessary extra inputs required for its development are well known to all parties involved.

c A list of minimum information and data to be included in the proposals should be made available. This is needed to assess its feasibility and its compliance with the land uses allowed under the agreement, and to assess financial viability. It helps to avoid lost investment at a later stage.

d The early and full involvement of residents living in the neighbourhood of any envisaged site is vital for the success of these projects. At the project planning local residents can provide valuable information and should participate in project design to create a sense of ownership for the project. Obviously such a process requires time but must be seen as a good investment as it can prevent confrontations at a later stage which may disrupt project implementation.

Financial Issues

a. Projects should be financially sound to ensure sustainability after termination of the subsidized project period.

Management Issues

a Each organization and each project has different characteristics, objectives and approaches. It could prove very difficult for a government office on it's own to monitor day-

3
500 m with trees planted at 5 m spacing

4
Data presented in this paper dates from February 1997 when the documentation was made, unless otherwise stated.

5
The Programme Guidelines were agreed upon by potential participants during a workshop organized with the assistance of USAID.

6
Plot demarcation and water connections were provided by the AMC. Fencing, construction of sheds and preparation of the land was carried out by NGOs. Plantation work started when weather conditions were appropriate (in this case plantation work could only start during the monsoon season).

7
The grant has been calculated according to rates established by the AMC and sum up to an average of Rs. 10 per m^2. For the fiscal year 1997/1998 the AMC budgeted Rs. 15 million (cir. U$ 441.000) for the greening of the city. Yearly provisions of Rs 10 million (cir. U$ 294.000) have been made for implementation of the AGP in the next four years.

today needs and to provide the assistance required for the various projects. Project management requires a number of skills and resources that may not always be available within the responsible government office. This is where the mediation of an appropriate institute/organization is useful to smoothen communication between the municipality and the implementing agencies.

b Regular project evaluations involving all concerned parties are the best way to identify any problems and to discuss possible corrective measures.

Assistance to participating organizations

For most of the grassroots organizations, a partnership arrangement is a completely new experience, as it is for the local authorities. Their motivation draws on the perspective of deriving some secondary benefits from their urban forestry activities while contributing to improve the green cover of the city. Efficiency in project management pays off in terms of beneficial returns to the association and the participant's motivation. Third party assistance can greatly improve performance and helps to maximize outputs of these projects. The following kinds of assistance appear to be mostly needed in the examined context:

- Technical assistance to improve the quality of the plantations through efficient and appropriate maintenance and management.
- In view of the above mentioned participatory approaches, advice is needed in the selection of adequate planning tools, motivation building and community development.

Relevance of the AGP for urban development policies elsewere

The AGP includes a number of innovative features, some of which might be successfully adopted in similar cases elsewhere. From the presented experience three aspects are worth to be studied further in this sense:

Urban Agriculture as an Strategy

Urban agriculture, urban forestry and other greening related activities are feasible strategies towards improving environmental, economic and social indicators of the city's development. In this particular case not only the parties involved, but the city's environment are benefiting from urban agriculture initiatives. For the parties involved, specially residents living in industrial worker's housing and for local businesses the socially responsible approach counts as an important argument while they can rely on sharing benefits and responsibilities with the municipal administration. For the municipality this strategy, through ist integrated approach, offers an answer not only to environmental problems, but also to economic and social stress among certain sections of the population. Environmentally, urban forestry increases the green coverage of the city, reducing air pollution and the incidence of respiratory diseases. Depending on the scale of the involvement, a substantive number of jobs can be created.

The Partnership Approach

The partnership approach chosen for this programme made it possible to supply an urban service to the community more efficiently and at a lower costs to the state budget. It seems important is that the joint effort is understood as an opportunity that provides benefits for all parties involved (win-win benefits), but at the same time also entails responsibilities, which have to be fulfilled by the partners. The development of transparent tools is this essential, in this case a very simple and clear contract, and the overcoming of bureaucratic delays in plot allocation facilitated the participation of the private sector partners.

With today's financial constraints of local governments, well conceived partnerships with private sector partners could decrease the need for government expenditure in services provision and maintenance. At the same time, the parties involved are drawing a series of benefits that most certainly, if they were acting independently, would not be possible to achieve. However, the success of such approach fully depends on the reliability and commitment of the parties to fulfill their obligations. There must be certainty that the partners have the means and capacity necessary to fulfill them, and technical assistance can help to achieve this. Last but not least, success depends not only on willingness and good intentions, but also on realistic planning and programming.

Planning for UA

Land use planning is an important development tool and affects strategic decisions. However, establishing urban agriculture and urban forestry zones in such a plan is not enough. The city needs more for the plan to happen. Planners and city managers need to recognize that trees and crops are long term products and such investment need a minimum length of time to yield benefits. Therefore even in temporary land use licences a certain minimum occupancy period must be guaranteed: the private partners need have the certainty that their investment, when adopting and building new parks or other greening related activities, will be given a chance to produce returns. In other words: Public land use policies must offer a high degree of continuity to ensure and encourage private sector participation.

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The Urban Farmers, Gardeners and Kitchen Gardeners of St. Petersburg

OLEG MOLDAKOV

Der Beitrag liefert eine Systematik des städtischen Gartenbaus in St. Petersburg, aber auch allgemein im heutigen Rußland. Die Wurzeln dieser lokal sehr verbreiteten Kultur, insbesondere in Form der 'Datschas', werden historisch hergeleitet bevor sich der Autor den gesetzlichen und administrativen Rahmenbedingungen der Bewegung zuwendet. Bemerkenswert ist insbesondere die bewußte Förderung der städtischen Landwirtschaft durch speziell hierfür eingerichtete Behörden, aber auch durch Wettbewerbe und andere Events. Doch es ist nicht alles Gold, was glänzt: Konflikte bestehen zwischen den Kern- und Umlandgemeinden bezüglich der Finanzierung von Infrastruktur, neuerdings gibt es auch Probleme durch Kriminaltät in den Gartensiedlungen. Ein Teil der Gärtner wird zudem auch zu hohe Pachtkosten zur Aufgabe ihrer Gärten gezwungen, da nur wenige Farmer ihre Gärten wirtschaftlich profitabel bewirtschaften können.

Introduction

This paper provides an overview of urban farming activities in Russia, with case study from St. Petersburg. The origins of cultivation in plots at summer residences are briefly mentioned. The main types of today's urban and peri-urban farmers are explained. Federal and municipal laws on gardening and kitchen gardening are summarized and discussed, together with the activities of various state and public organizations that influence urban farming. Projects and competitions for St. Petersburg that promote urban farming are described. The problems faced by the farmers are discussed, in particular the taxes that are forcing people to give up their cultivation activities. Finally, the paper notes the factors enhancing the opportunity for urban agriculture in Russia.

Historical background of farming at summer residences

The history of urban gardening movement in the Russian Empire goes back to 1862. Thousands of village noblemen moved into cities. They made their careers in town service, but they remained villagers at heart. While living in towns they began to rent rural houses. Thus yesterday's landowners became the first summer home residents.

The first urban farming season in USSR opened in the spring of 1930 when the Economic Commission passed a decision called "On working-agricultural cooperation". Then, former peasants joined urban intellectuals as summer residents. Summer residences, however, gradually became the privilege for narrow circle of the Communist Party Officials, the military and those called "creative". The Soviet authorities began to use access to comfortable rest houses up country as a reward or an encouragement to loyalty. Thus, *dacha* referred to a well-built, one storey family house in the country near a lake or other beautiful landscape. There were several thousand in the Soviet period, looked on with envy by the masses.

In 1961, the "state" summer residences were placed in a separate category of buildings by government order. They were divided by decree into "state" (for the elites) and those of cooperative societies, which are numerous clusters of little houses with 0.15 ha plots. The summer residence became a symbol of well being in Soviet society. Many people, hoping to have the opportunity for rest and to cultivate something in a village or peri-urban area, aspired to get their own peri-urban plot in some way. Every family was allowed to access land plots of about 0.06 ha as well as a summer house (30 m^2). But it was impossible for a normal Soviet family to access a plot. Even the cooperative societies were allocated insufficient plots to meet their demand.

Nowadays, the Soviet-style summer house in a desirable area not far from St. Petersburg is still for the elites. Nevertheless, it constitutes only one example of the three or four urban farming types. For the less privileged, a house of 5-6 m^2, on 20-30 m^2 of poor soil, 50-90 km from the city is the norm. Both types are called *dachas* and are in private ownership. Even simple houses in undesirable forest or wetland areas came to be called *dachas*. S*adovodstvo* are plots in areas with 200-400 plots, controlled by gardening unions.

By spring 1991 the number of new summer residents in USSR has reached 13 million.[1] Thousands of residents spend almost every weekend in these areas from mid-April till the end of October. The agricultural activities of the urban population have a positive impact on self-sufficiency, poverty and unemployment problems.

In addition to the cultivation activities at summer residences, there are numerous activities in urban and peri-urban areas by individuals,

cooperatives, gardening communities, partnerships and companies.

Urban agriculture (UA) activities in Russia[2]

In Russia as a whole there are approximately 70 million persons engaged in urban agriculture for several reasons: to secure for themselves a supply of fresh green food, to earn income; to have a leisure-time activity (for 30% of cases), and to obtain "healthy" food also. The cultivators are mainly middle aged and elderly, that is, aged 35-45 and older. Younger people are not interested and find little time for cultivation.

The indicators defining the boundaries of peri-urban areas are:
- Small-scale areas, located at the city boundaries (commercial or subsistence-oriented).
- All land plot areas under the direct influence of a city and urban markets influencing agricultural production.
- Areas located 10-100 km from urban settlement where the cost of production is still influenced by urban agricultural markets. (Some peri-urban farming areas near to one city may, in administrative terms, belong to another municipality.)

In addition to such plots, cultivation is carried out in backyards, basements, rooftops, balconies, windowsills, public lands, and vacant spaces near houses.

Types and zones of urban agriculture

- *Dachas* is a dacha-building cooperative union (DSK). The DSK is a block of gardening plots (0.08-0.15 ha) with buildings for permanent use. Originally, houses were built using cooperative fees on the invitation of a special building company. The houses were part of the financial balance of dacha-building cooperative union. Dachas are usually located in peri-urban area of cities. Dachas are in private ownership now.

- *Sadovodstvo* is a gardening community. It is a block of gardening plots (usually 0.06 ha) with buildings for permanent use. Houses were built by and for the gardeners' at their own cost. The houses never were registered with a cooperative union / community. Every year or half year the gardener must pay a fee only for inner infrastructure maintenance (roads, wells, etc.) *Sadovodstvo* are usually located in the peri-urban areas of new and/or industrial cities and towns. Now *sadovodstvo* are in private ownership.

- *Ogorod* is a gardening plot (0.02-0.3 ha) without any buildings or with only a shed-like structure for temporary land use. Ogorod areas often have no infrastructure. Sometimes ogorods are formally registered but very often they are informal, even illegal, types of UA, temporarily tolerated by the local administration. They usually are located in the peri-urban areas of small towns. Sometimes they are found in peri-urban areas of cities, but only for the use of pensioners and veterans. Now ogorods are in municipal or private ownership and are potentially subject to Western-style expropriation.

- Dwellings with land plots are usually located on the periphery of Old Russian towns, in private or municipal ownership.

Background on cultivation in St. Petersburg

In St Petersburg today there are 2,500,000 people who engage in agriculture on 600,000 plots around the city. This is more than half of population of city. The total urban cultivated area is 560,000 ha. On these plots in 1998 the urban farmers produced: 15,800 tons of potatoes, 47,400 tons of apples, pears and plums, 38,500 tons of vegetables, 7,900 tons of strawberries and 23 million flowers.

Laws, regulations official policies, and official organizations[3]

1. Federal level

There is no special unit within the federal Ministry of Agriculture for the development and promotion of urban agriculture. Russia has not elaborated any special federal program for UA. However, there are a number of laws and regulations pertaining to gardening, kitchen garden-

ing and associations of citizens for cultivation. The now-cancelled law of 1988 ”On cooperation in USSR” had a number of clauses related to gardening companies and country cooperative societies.

Now garden plots (they are often just called ”dacha”) are considered the area with the right of construction of an inhabited structure (but without the right of registration of residing in it). A kitchen gardening plot is a plot with the right or without the right of construction of habitation (under the decision of local authorities). A country-site or cottage with a piece of land is considered the land area ”acquired by the citizen for the purpose of leisure” with the right of construction of habitation and even registration for residence.

There are three forms of non-commercial associations of the owners of plots: companies, cooperative societies and partnerships. For a *company* the property of the company is the collateral property of members, but the company has no responsibility or obligations towards the members and vice versa. In the case of a *cooperative society*, all members cover losses by common property as a legal entity. Finally, in the case of a *partnership*, common property is property as a legal entity property, but there is no mutual responsibility or obligations.

It is not necessary to become member of a non-commercial association in order to be owner of land, located in its territory. It is possible to farm individually, with a contract only for the right to use infrastructure (for example, water pipe and electric systems) and other property of, say, companies. According to the law, such an ”individual, private person” does not have to pay more for this use than members of company.

The form of financing of such associations is classed as ”non-commercial”. They can do economic projects at the expense of member payments only. Thus there is an interesting nuance: one is authorized to create funds for mutual credit, funds for hire and other funds. The purpose of their creation is obvious: it is rendering mutual aid in construction of habitation on sites, their accomplishment, granting of engineering and stock.[4]

The Law of Russian Federation “On the right of the citizens of Russian Federation to reception in a private property and on sale of the land plots” allows privatisation of land within city boundaries. It permits transfer of the land for agricultural activity, gardening and economy, and individual housing construction. This law also permits the return of land under individual apartment houses and construction in a private property in cities.

2. Municipal (St. Petersburg)

City authorities consider urban and peri-urban farming a major social factor and a means of supplementing the family budget for two million citizens in St. Petersburg.[5]

The Information Center to serve gardeners has been created under the regulation ”Management on development of a gardening and owners of kitchen gardens”. The city authorities help with the organization. This center plans and coordinates cadastre plans. It is allowed to have information on the free land areas and it can speed up and simplify the purchase and sale of plots. This center aims to solve production problems, to enhance processing of products, and to optimize organization of sales. Financial support to the Lease Center of St. Petersburg for rendering aterial help to farmers, country and personal part-time farms, gardeners and kitchen gardeners reaches the sum 500,000 rubles (about U$ 20,000) per year.

3. Regional administration

The Federal law mentioned above also includes clauses about the forms of assistance to gardening associations to be provided by state bodies and by bodies of local self-management. For example, one clause mentions that the authorities *are obliged* to help the associations on such important issues as: construction and repair of roads and transmission lines, water drain, water supply. Local authorities are also supposed to provide suburban transport and to organize privileges such as travel passes for gardeners and summer residents.[6]

A source of basic conflict is the unwillingness of the city administration to compensate peri-urban administrations for their expenses in providing services to almost two millions summer residents from St Petersburg who stay in the summer in peri-urban and countryside locations. One garden area - ”Trubnikov the Boron” in the Tosno area - has 50,000 summer residents: matching the number of local inhabitants in the municipality; in a gardening area nearby (”Danube”), there are 100,000 gardeners. Today Leningrad regional authorities spend regional money for health services to urban gardeners, cleaning of garbage from gardening, repair of roads, on maintenance of standard conditions for the rest of the inhabitants. Nevertheless, local authorities help to create mobile brigades of regional first aid in large gardening, the first-aid posts in big gardening communities. At the request of the gardeners, the Leningrad oblast Governor has financed 16 millions rubles (U$ 700,000) for the construction of a road from the Moscow highway to one of the biggest a gardening community (“Radofinnikovo”) in this year.

1
Land and Freedom
2
Urban population in Russia: 108,100,000 (74%)
Engaged in UA activities: 70,000,000
number of sadovodstvo and dacha: 22,500,000
3
federal and with special reference to St. Petersburg
4
Three people is the minimum number. The owners of plots have the right to enter a company or partnership from 18 years on, and into a cooperative society from 16 years. Foreign citizens are authorized to become the members of an association of any form, in the case when they rent or temporarily use a plot.
(Chance “- week” November 1999)
5
Suburban train travel is free for the pensioners (an important group of farmers), costing the sum of 70 millions rubles (some $ 2.500.000) per year in the Petersburg budget. Twenty-five specialized medical ambulances serve gardening and country facilities.
6
Petersburg *Vedomosti* No 87 (1761), May 13, 1998

Land	1990		1993		1995		1998	
	ha	%	ha	%	ha	%	ha	%
Lands in general, including:	139936	100	139936	100	139936	100	139936	100
Territory under buildings	36305	25.9	35784	25.6	36560	26.1	36582	26.1
Individual cottages		-	2785	2.0	3135	2.2	3227	2.3
Streets, squares	5257	3.8	9450	6.8	9191	6.6	9209	6.6
Parks, community gardens, boulevards	-	-	10675	7.6	13993	10.0	14004	10.0
Agricultural lands within town boundaries	24726	17.7	22167	15.8	21127	15.1	20925	14.9
Gardeners' lands	930	0.7	1630	1.2	1661	1.2	1906	1.4
Kitchen gardeners' lands	2153	1.5	1598	1.2	2835	2.0	2623	1.9
Backyards lands	736	0.5	300	0.2	63	-	63	-
Forests within city boundary	37694	26.9	30114	21.5	27540	19.7	27383	19.6
Trees and bushes	13740	9.8	10446	7.5	9681	6.9	9673	6.5
Wet lands	5499	3.9	5339	3.8	4579	3.3	4563	3.3
Rivers, lakes and channels	6846	4.9	6860	4.9	6853	4.9	6841	4.9
Uncultivated lands	101	0.1	317	0.2	298	0.2	298	0.2
Former peat-moss-producing areas	101	0.1	317	0.2	298	0.2	298	0.2
Other lands	5949	4.3	5236	3.7	5555	4.0	5866	4.2

St. Petersburg: Structure of urban territory and share of lands of agricultural use

Everywhere the organization of transport and supplies is a big problem. The tradesmen from St Petersburg come irregularly and the people are forced to bring not only food products but also often tools, boards and nails by themselves. All heads of Administration have now been assigned the concrete task: to organize trade in gardening with the help of the local businessmen (who pay taxes to the regional budget). The aim is to increase the income to the Leningrad oblast treasury.

It is important to note that gardening activities necessitate action from the authorities not only in the spring and summer months but also in the winter. The statistics for 10 months in 1999 show that crimes in gardening files increased 23% in comparison to 1998. Now the local police is developing a program to improve the safety of country settlements in winter. Some of the local policemen and even policeman from St Petersburg will be mobilized to patrol in the gardening complexes.

4. Related official organizations in St Petersburg

A number of organizations and activities have been started by the municipality in support of urban farmers:

Office for the Development of Horticulture and Gardening in Saint Petersburg and the Leningrad Region : The committee handles matters such as: coordinating the activities of state agencies and local government agencies, enterprises, institutions and organizations of St. Petersburg with respect to issues of organizing, equipping and servicing gardening collectives, gardening communities and cottage construction cooperatives. Other functions of the St. Petersburg administration are related to the development of horticulture and gardening in accordance with the legislation.

Committee on City Property Management : The committee handles matters such as: management of St. Petersburg municipal property, management of organizations created with the participation of the city of St. Petersburg and control over use of property; legal actions connected with limitations on state property; defense of St. Petersburg's property rights; other functions of the St. Petersburg administration connected with administering and managing St. Petersburg city property in accordance with current laws.

Committee on St. Petersburg Land Resources and Land Use : The committee handles matters such as: state inventory of real estate of all forms of ownership and the state land cadastre; inventory and monitoring of St. Petersburg lands; protection of the property rights of individual citizens and corporate bodies in St. Petersburg within the scope of its jurisdiction; other functions of the St. Petersburg administration connected with land resources in accordance with acting legislation.

Environmental Protection Office : This office looks after: coordinating environmental protection efforts of companies, institutions and organizations in the city; organizing complex environmental protection works; issuing licenses for the right to use natural resources, to emit hazardous materials, place, process and store hazardous wastes; preparing proposals concerning the procedures for use of non-budgetary funds for environmental protection, ensuring complete and accessible information concerning the state of the environment; other functions of the St. Petersburg administration connected with environmental protection in accordance with acting legislation.

Public organizations : The most influential of these is The Petersburg Union of the Gardeners, a public organization that advises on land tenure.

"Who is best of the year" competition : There are two main vehicles for encouraging urban agriculture in and around St. Petersburg: gardening competitions and projects. Since 1996, the "Management on development of a gardening and kitchen gardening of St. Petersburg and Leningrad area" and the interregional public organization "Union of gardeners" have organized a "Gardener of the year" competition. It is sponsored by the Military-Insurance Company and "The Russian Villages" Center of Gardeners.[7] This important competition has three categories:

- "The best garden plot of the year": The gardeners present to a competent jury new varieties and grades of vegetable, berries and fruits, telling how they applied new technologies for cultivation. They take a part in a competition on the layout and rational use of the land site.

- ”Head of gardeners’ community businesses” or ”The best gardening community of the year”: the infrastructure of the garden, its ecological condition and protection, presence of places of rest and children’s platforms, and also the quantity of the gardeners participating in competition on the best garden site are assessed.
- Journalists’ competition: journalists present works about life of the gardeners.

Traditional competition for the gardeners called ”Most - most” : The competition is organized by The Petersburg Union of Gardeners and the club Green Gift. The competition is held at the Russian Farmer Fair.[8] The gardeners can take part in four categories of competition:
- ”Balm for the soul”: all the most beautiful, most exotic, plants grown on raised beds, can be submitted for this nomination. If a gardener keeps any unusual animals, which can be related to ”to balm for soul”, the gardener can take part in competition too.
- ”The green doctor”: for gardeners seriously cultivating medicinal herbs or plants.
- ”Most surprising”: Huge squash, carrot and potatoes of unusual form and shape, gooseberry with the taste of black currant, and all other unusual plants from gardens can be presented in this category.
- ”The foreman-gold hands”: inventors of unique home-made devices for facilities and equipment, works of improvised materials take part in this competition.

The competition is traditional.[9] The competition is for gardeners and farm owners on whose plots “something outstanding” has been grown that could surprise both members of jury and public, such as exotic plants, vegetables of the extraordinary sizes and configurations, rare grades of various cultures.[10]

Projects

A most impressive project in St Petersburg is called “Kitchen gardens on apartment building rooftops in St Petersburg.” Martin Price, an agricultural adviser and lecturer from ECHO (Educational Concerns for Hunger Organizations), an American evangelical organization, visited the city in 1991 and engaged several gardening enthusiasts with this idea. It was supported by the Center of Citizen Initiatives USA-Russia. ECHO offered several non-standard agro-technical methods and the Down Town Gardening Club adopted and developed them. One method is vermicomposting, whereby kitchen wastes are fed to California red worms in special containers and the compost produced is used to fertilize the rooftop garden. There are many advantages to rooftop gardening in the city:
- Ecology can be improved: a 150 m^2 plot creates enough oxygen for 100 people to breathe for one year;
- People in the city feel closer to nature;
- People can engage in their gardening right where they live and do not need to travel far from the city, large amounts of extra food can be raised and wastes can be utilized;
- Women with young children can engage in such gardening as a business generating income while they stay close enough to home to look after the children;
- Gardeners get better yields from such rooftop gardens;
- Crops are safer. The Club tested the vegetables and the amount of heavy metal contamination was much lower than the critical level.

The Club is multiplying and extending their members’ experience to the inner yards of prisons (this program has been in operation since 1996), penal establishments for juvenile offenders, and rehabilitation centers for disabled people. The Club’s goal is to publicize and popularize the idea of urban gardening and ideas of ecology connected with it. This program is now called ECODOM.

Main problems facing urban agriculture

Without going into detail, the problems can be summarized as:
- Absence of a powerful governmental strategy for the development of urban agriculture;
- Shortage of written information (books, articles) about projects and activities for UA gardeners;
- Lack of co-ordination for marketing produce;
- Inefficient information system for social-economic issues of urban gardening;
- Economic barriers to wider participation: At the moment UA activities are not economically attractive to everyone. If you are not a pensioner, the costs of self-production and transportation expenditures may be higher than the price of the same products in the town markets. Due to strong competition among producers, some people cannot afford to farm at great distances from their city residences. Not seeing the chance to profit financially, people invest their time in searching for other jobs. That is why UA has spread mainly among retired persons. For them, there are economic incentives as pensions are very low, but people’s expenditures for food are very high, consuming over 60 % total income. Pensioners get free transportation.

Farming within city boundaries: family help or financial servitude?

The federal land tax for the Leningrad area is no more than 18 rubles per year for 0.06 ha of land. This figure has not changed for two years. But urban gardeners with plots in garden communities within the urban administrative

7
The preliminary results of the Garden of the Year competition are given at a fair. Usually more than 2000 people participate.
8
Russian Farmers Fair : The organizers competition is held at ”The Russian Farmer Fair”. All gardeners who wish so can take part in the competition. They just have to submit the application with the instruction of a surname, name and patronymic, name of a gardening and area, urban address and telephone for communications. Also included is a brief description of the basic directions of facilities: horticulture (what cultures), gardening (grade), flowers/herbs (kinds of decorative plants).
(Petersburg *Vedomosti* No 128 (2043), July 13, 1999)
9
The competition is held in August at the World fair, ”the Russian Farmer” fair, under the auspices of the St Petersburg Vedomosti. The jury are five of the winners of last year’s competitions.
10
Petersburg *Vedomosti* No 161 (1586), August 22, 1997

boundaries are not so lucky. The Ownership Committee of St Petersburg treats them as tenants and, accordingly, expects a payment for land based on an authorized rate that is rising at present.

The troubles of urban gardener communities began in 1995, when the decree of the mayor of St. Petersburg's Ownership Committee, recommended under duress to conclude the government's contract on rent of plots. The rent rates then were already much higher than provided by the federal law. After numerous court challenges, this decree was found to be in contradiction to the federal legislation. However up to the present, the gardeners have been forced to pay up according to the mayoral decree. For example, Gardening Community in Pavlovsk was established 15 years ago. More than 1000 people work in it. The people took over waste dumping land and constructed small houses, in which store simple stock. They made a nice place from a former urban dump. Earlier they paid for the use of the territory regularly and completely. Now however, each month, the gardeners (the majority of them invalids and needy pensioners) leave, as rent payments increase continually. The contract of rent used to be with a company for three years, now it is for one year only. Each autumn the government has to collect a large amount of information and to administer this regulation. In the meantime, many urban gardeners have refused the plots, as agricultural activities do not pay off. One can see the same thing happening in other urban gardener communities. The owners of land plots should on the average pay for three quarters of 1999 U$ 20 for every 0.01 ha. Most inhabitants cannot pay.

"If the situation continues, we will kill the urban gardener movement," says the head of the Department on Development of Gardening and Kitchen Gardening of St. Petersburg and Leningrad area, Vasily Zaharjashev. If the Ownership Committee insists treating gardeners as tenants, the people will refuse lands and plots altogether. But for many people, such cultivation is their sole opportunity to support their families. Recently some of a little collective non-commercial communities of Pushkin area decided to refuse to pay land rent, paying only land tax. If their request is not be accepted by the Committee, the plots can simply be bulldozed. Similar attempts were undertaken already.[11]

Conclusion: Opportunities for Urban Agriculture in Russia

Many people are active in the field of sustainable and organic agriculture. Plots for cultivation are available. Gardening is part of the mentality and townspeople are still inclined to work with plants, animals, soil and water (traditional "life-producing" habits). There is good research at universities relevant to agriculture. Urban gardeners are optimistic, well informed, self-trained and skilled. Most individuals are well educated and very curious. The Russian urban agriculturist has never been keen to use chemicals, always likes manure and compost and never has enough cash for chemicals in any case. He reads the old handbook about agricultural technology, which existed before 1840, and Justus Liebig experiments. That is why he knows so much about organic and biodiversity farming technology but often knows nothing about Steiner, Pfeiffer and Rachel Carson's "Silent Spring."

Low salaries, limited purchasing power for some agricultural products in the city markets forced people into UA. There was also skepticism about agricultural products from abroad, related to fear of chemical contamination. The gardening activities require low investments and can bring real income in a short time. After the August 1998 crisis, domestic food production and processing companies saw a chance to increase their market share, since some foreign competitors seemed ready to give up operations in Russia. Some real farmers (not week-end ones) continued to earn a small but stable income by running bakeries, growing flowers and early vegetables, inside towns and in peri-urban areas. Many farms near urban areas now offer customers the opportunity to harvest vegetables (especially potatoes, carrots, cabbage).

Governments are interested in assisting self-employment and in development for social and political stability. They see gardening as a socially useful activity. Municipal representative have shown their readiness to provide some indirect support (low tariffs on transportation, some municipal services free of charge, ambulance service for dachas/sadovodstvo, etc.) All these factors point to the potential for even more UA in Russia, although the policy, administrative and economic issues explained in this paper remain to be resolved.

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Urban Farming in Shanghai

HERBERT GIRARDET

Shanghai is China's single most important industrial, commercial, and financial centre. A metropolis of over 16 million people today, in comparison with less than 12 million in 1982[1], it currently produces 5% of the country's industrial output. Shanghai ranks first in the production of pig iron, steel, chemical fibres and consumer products like televisions, refrigerators, washing machines and bicycles. Major industries also include automobiles, textiles, telecommunications and machine tools. From 1992 to 1998, Shanghai's economy has grown at an average rate of 13.4%, with its service sector and its port growing the fastest. Some U$60 billion worth of goods pass the port every year.[2]

A special aspect of Shanghai's economy is that the city, in addition to its commercial enterprises, also administers large areas of farmland to assure sustained food supply from local sources. This policy has been pursued systematically since 1949 and continues unchanged today, even facing the rapid growth of Shanghai's commercial economy. In the last 50 years, the total land area administered by the city authorities expanded tenfold from 63,618 ha[3] in 1949 to 634,050 ha today.[4] More than half of this land is occupied by the city itself, whilst the rest, the land on its periphery, is largely devoted to highly intensive agriculture. Some 800,000 people cultivate this land, mainly by hand, producing vegetables, rice and fruit as well as chicken, pork and carp meat. The traditional practice of using night soil as fertiliser continues on some farms to this very day.

It is curious that urban farming is so much taken for granted in Shanghai that people find it almost peculiar if one asks questions about it. Actually there is very little published on this subject in English and new information is difficult to come by. Few foreigners seem to take interest in it. However, on a recent visit to Shanghai, working on a TV programme, I saw the vast scale of urban farming in and particularly around Shanghai for myself. Curiously, according to Shanghai officials, no foreign TV crew had ever wanted to film urban farming before.

Collecting night soil

This method of maintaining soil fertility has a long established track record as explained in 'Farmers of Forty Centuries', a seminal book on Asian agricultural practices written in 1911.[5] 'One of the most remarkable agricultural practices adopted by any civilised people is the centuries-long and well nigh universal conservation and utilisation of all human waste in China, Korea and Japan, turning it to marvellous account in the maintenance of soil fertility and in the production of food. … With this fact must be associated the very long unbroken life of these nations and the vast numbers their farmers have been compelled to feed.' F. H. King, the author of the book, goes on to talk about events at the turn of the century: 'In 1908 the International Concessions of the city of Shanghai sold to one Chinese contractor for U$31,000, gold, the privilege of collecting 78,000 tons of human waste, under stipulated regulations, and of removing it to the country for sale to farmers.'

I saw the use of night soil as fertiliser being continued, even on farms within the city itself. Growers there still keep large earthenware jars in which they store the night soil, which is diluted with water and then ladled onto the crops when required. The reality of rapid urban growth however, has also meant that flush toilets are becoming common place in the city, making it much harder to collect night soil and to return it to the land as fertiliser. In fact, river pollution from China's new sewage systems is now becoming a major problem, particularly in the coastal regions of the country.

Intra-urban farming

Small farms used to permeate cities such as Shanghai and even today one can find them

In China wird Städtische Land- und Gartenwirtschaft betrieben seitdem es Städte gibt, und ein Forschungsinteresse von Ausländern zu dem Thema erscheint den meisten Einheimischen unverständlich, wo es sich doch um eine ganz banale und tägliche Praxis handelt. Zur Sicherstellung der lokalen Nahrungsversorgung besitzen die Gemeinden selbst große Landgüter innerhalb der Stadtgrenzen. Die Nähe der Felder zu den Wohnungen erleichtert den direkten Kreislauf von Nährstoffen: Der übliche Rücktransport von Fäkalienkübeln auf die Felder zum Zweck der Düngung (night soil) wird auch in der Literatur zu China ausgiebig gewürdigt. Selbst in manchen modernen, halbautomatisierten Gärtnereien vertrauen die Betreiber auf die Qualität von *Night Soil* und ziehen diesen dem Kunstdünger vor.

1
Victor Sit, editor, Chinese Cities, The Growth of the Metropolis since 1949, Oxford University Press, Hong Kong, New York and Oxford, 1988
2
www.usembassy-china.org.cn/consulates/shanghai/epcss.htm
3
see 1
4
Evan Liu, Shanghai Foreign Affairs Division, personal communication, 2000
5
F.H, King, Farmers of Forty Centuries, Rodale Press, Emmaus, Pennsylvania; first published in 1911

scattered among new high rise blocks and along urban motorways on bits of land not as yet swallowed up by development. Large quantities of vegetables are still grown there by hand on raised beds, using night soil diluted with water. Tsu Hsiao Dang, a farmer still growing vegetables in the city, is confident that the loss of intra-urban farmland will not greatly affect the yields of vegetables grown for the people of Shanghai. He said:
'These problems were thought out long ago. When this area in the city was taken over for housing construction, lots of vegetable greenhouses and specialised areas were set up at Nanhui, on the edge of Shanghai, instead. They're all modernised and automated. Some growers don't even use soil and they can still grow things. Here, we use manure - night soil - not fertiliser. We believe that if you use fertiliser, the food doesn't cook properly. You have to use manure for it to taste better. At the markets, people only like vegetables grown with manure.'

Peri-urban cultivation

The bulk of urban agriculture in Shanghai is now on the periphery of the city. Adjoining the city, as indicated above, there are some 300,000 ha of very intensive vegetable cultivation. Traditional raised-bed cultivation systems are still widely practised. Polythene tunnels are now very much in evidence and hydroponic cultivation is becoming widespread. Pig sties, duck and chicken sheds, as well as carp ponds, can be found in many places.

Throughout China, urban authorities are charged by central government to assure substantial food supplies from the peri-urban areas administered by them. There is much evidence that this policy for sustainable food supplies for an increasingly urban population is here to stay, but more information is now urgently needed. After all, it greatly matters to the rest of the world how the world's most populous country, with an ever shrinking land base due to urban, industrial and road development, manages to feed itself.

There is little information available about the identity of the urban farmers of Shanghai, but apart from older local people who continue a lifelong practice, I am told that younger farmers are often migrants from rural areas who are now doing jobs that the people of Shanghai, increasingly engaged in high-earning activities, no longer want to do. One farm worker I spoke to told me that he sleeps on other people's floors because as a migrant worker he can't get a work permit and a permanent dwelling of his own.

Conclusion

It is impressive that China as a country, and Shanghai as a vast metropolis, continues the practice of growing crops for local consumption as a matter of policy. The concern, expressed in recent years by the likes of Lester Brown in his book 'Who Will Feed China'[6] is certainly realistic. There is no doubt that growing affluence and its associated demand for more meat will affect China's capacity to feed itself. There is evidence of increasing imports of soybeans from places such as Mato Grosso in Brazil, where the cerrado, the savannah and forest region on the southern edge of the Amazon, is being turned into vast fields for the production and export of soybeans. No doubt some of these end up on farms on the periphery of cities such as Shanghai, in the stomachs of chicken and pigs. Which in turn will end up in the Shanghai citizens' stomachs.

China's capacity to feed itself from farms in peri-urban areas will certainly be affected as ever larger stretches of land are being paved over or developed into factories and housing estates. Nevertheless, the insistence of the country's authorities to encourage urban agriculture as part of its economic strategy is of great significance to China itself and, indeed, to the rest of the world.

6
Lester Brown, Who Will Feed China, Norton, New York, 1996

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Rural Agriculture is still the Most convenient Way to Produce Food

Urban Agriculture and Urban Planning in South Africa[1]

LENA JARLÖV

An hypothesis

”Urban sprawl” is a horror often expressed in relation to American cities, with enormous areas of detached houses, where people are totally depending on private cars. The warning for ”urban sprawl” is repeated in many places in the developing world, including in the comprehensive urban plan for Port Elizabeth[2], but is not discussed in connection to the problem with lack of garden possibilities around the dwellings. Could ”urban sprawl” be a positive phenomenon for urban agriculture in South Africa? The risk for increasing the number of private cars is anyhow very low in low-income neighbourhoods in Africa.

I will call in question the relevance of applying the same basis for town planning in the case of South Africa as in towns in parts of the world with high employment rate. The instruments of physical planning are developed from the conditions in the industrialized western society, based on the fundamental principle of function's separation between work and leisure or in other words between production and reproduction.

The situation in the growing cities in the third world is totally different from that in the first world, mainly due to the unemployment rate. The living conditions in the townships of Port Elizabeth for example cannot be separated into work and leisure, production and reproduction. A vast majority of the people there is unemployed and very poor. Many are balancing on the edge of survival. They spend their day at home or walking around the city looking for job, making some little earning now and then. Their home is a schack in a densly built area. The small ground outside the very tiny house is used for storing stuff and for outdooor activities and is necessary to give place for the childrens play and meeting the relatives and friends. There is very little space for production of food or other things. In spite of the minimal space some people have a cow or some goats, pigs or chickens, which are very disturbing to the neighbours because of smell, flies and noise.

Thus the basis for physical planning in these towns should not be the employment and consumption way of life but the unemployment way. It ought to give a different plan where the housing area means something else than only a place for reproduction, rest and consumption. It is in fact the most important place for survival for these inhabitants. The goal for the planning should on the contrary be to create the best possibilities to earn a living without employment; a living based on self-production and informal economy. That means space for other activities than just cooking, eating and sleeping. Food-gardens and animal raising should be among the most important life supporting activities there.

For example, the explicit over-all goal for the comprehensive urban plan for Port Elizabeth in South Africa is the maximum economic growth. To achieve this growth the aim is to create an environment that is attractive to (foreign) investors. Of course it is a favour with lots of unemployed people within short distance, with no competing means of provision. Minimal costs for salaries are of vital interest for the entrepreneurs.

I hesitate, though, that economic growth really is the primary interest for the large number of unemployed people if the consequence is very densly built housing areas with small plots and no place for food-gardens or other small enterprises. How urgent is a transport system for people with no reason, no job, no money to transport themselves compared to a piece of land for subsistence food production? What if high economic growth does not occur? If no increased transfers will be possible despite an increasing population? Then the possibilities for life-supporting production in the home environment will be of crucial importance to the poor.

Zersiedelung und Suburbanisierung werden von vielen Stadtplanern als Schreckensbild an die Wand gemalt, und eine Verdichtung als Mittel zum Erreichen ‘urbaner’ Qualitäten empfohlen. Für berufspendelnde Nordamerikaner oder Europäer mögen diese Argumente mitunter berechtigt sein, doch für den Süden im Allgemeinen und Afrika im Besonderen ist Verdichtung der falsche Ansatz. Vor dem Hintergrund chronischer Unterbeschäftigung und weiter zunehmender Armut bieten weniger dichte Siedlungsformen wesentliche Vorteile sowohl zur Sicherung einer minimalen Grundernährung und zur Wahrnehmung informeller Verdienstmöglichkeiten, wie auch in Hinblick auf die sozialen Erfordernisse von nachbarschaftlichen Familienverbänden oder Großfamilien. Wir dürfen nicht vergessen, dass die meisten Migranten nicht freiwillig in die Stadt kommen, sondern aus der Not ländlicher Armut. Solange es uns nicht gelingt, attraktive Angebote auch in den Dörfern zu schaffen, sind dorfähnliche Lebensbedingungen in der Stadt die nächstbeste Lösung.

1
The author co-operated as a short term expert in the preparation of comprehensive urban development plans for Kimberley and Port Elisabeth in 1999. Her specific contribution was the integration of the Urban Agriculture concept into urban planning, which resulted in the formation of an ‘Urban Agricultural Task Force’ for Port Elisabeth. The ideas expressed in this article reflect the Task Force’s proposals

for the urban development plan. Some, but not all, of the proposals were eventually incorporated in the official planning document. This paper is a shortened version of a much more comprehensive presentation to be delivered at the Berlin Urban Agriculture Symposium in July, 2000.

2
The First Comprehensive Urban Plan, Draft, City of Port Elizabeth, May 1999

3
Jarlöv Lena, Urban Agriculture in Port Elizabeth, Final Report, Urban Planning and Environmental Projects Kimberley and Port Elizabeth Hifab International AB, April 1998

4
Winblad Uno: The Productive Homestead. Report from a study tour, Sida, Stockholm, February1992

5
Migge Leberecht: Jedermann Selbstversorger: Eine Lösung der Siedlungsfrage durch neuen Gartenbau. Eugen Diedrichs Verlag, Jena 1918

6
Jarlöv Lena: Nutrient Circulation with Innovative Toilets in Multi-Family Dwellings in Environmental Research Forum Vols. 5-6 (1996) pp 45-54

7
Winblad Uno: Ecological Sanitation, Sida, Stockholm, 1998 and Günther Folke: Report on Innovative Technology, Urban Planning and Environmental Projects Kimberley and Port Elizabeth Hifab International AB, 1998

8
Winblad Uno: The Productive Homestead. Report from a study tour, Sida, Stockholm, February 1992

9
Towards an Urban World. Urbanization and Development Assistance. Sida (Swedish International Development Cooperation Agency), 1995, p. 18

Very dense urban areas are badly vulnerable systems. As the survival of the inhabitants is totally based upon import of food, lack of money is a much bigger problem there than in most rural areas, where it probably is possible to get at least some sort of food. Every decreace in employment rate and every increase in food prices makes it more profitable for the individual to grow some food or keep some animals. In a very dense urban area you have very small possibilities to cope with this situation.

There are allways different interests behind an urban layout plan. Sometimes they coincide. Apparently this has been the case during most of the last century in industrialized welfare states like Sweden. During this time the model of living for the majority of the people has been constituted from the base of employment, salary and consumption. It is still the case in the industrialized western world. The daily life for most men is divided into payed work time at a work place and unpayed free time at home. For the women the time mostly is divided into payed work time at a work place and unpayed work time at home. Some women spend all their daily life at home at least during some periods of their lifetime. This has led to the housing areas being planned for ”reproduction”, i.e. rest, sleep, child care and house work as cooking, washing, sewing etc. They are planned for consumption, not for production.

Though, in the quoted example of Port Elizabeth, the different interests are apparently conflicting. Apart from these conflicting interests, an explanation to the planning philosophy that has resulted in the plan, could be that instruments, developed in the first world, are used unreflectingly, specially when foreign planners are involved or the native planners have been educated abroad. It is similar to the use of first world techniques, which are often not appropriate to the conditions in the third world countries.

An alternative planning philosophy

As a sensible alternative to mainstream practice I would propose another way of planning.[3] It adopts the basic concept of ’urbs’ suggesting that space for urban agriculture being included in the dwelling unit, ”urbas”. With the presumption that full self-sufficiency of food would require 300 square meters per person, the result would be 6.5 dwelling units per ha (du/ha). That is the prevailing density of the well-to-do areas in South Africa, for example Summerstrand in Port Elizabeth. 50% self-sufficiency would result in 10.7 du/ha and 20% in 22.1 du/ha. In the prevailing official plans a density of at least 40 du/ha is being proposed!

There are many different suggestions of the area needed to feed a person. The span is between 100 and 800 m^2. Of course the requisite area differs with the climate, the soil, the access to water and fertilizer and the diet of the family – vegetarians need less area. The suggested areas, however, are based on labour-intensive integrated agricultural methods, using organic fertilizers to keep and improve the fertility of the soil. 250 m^2 are suggested by Dr Gus Nilsson in Botswana[4] and 300 square meters by Leberecht Migge, a former garden designer in Germany (1881-1935).[5]

I would consider the idea to offer bigger plots to the inhabitants with building permissions for two or three houses. This would create a flexibility and give the choice to the plot owners whether they will build one house and use the rest of the area for agriculture or build a workshop or another dwelling-house for grandmother or to let or sell. If this successively would lead to a densification of the suburb, so what! It would be the single family who could make a profit and not an exploiter. This might also be a way to handle the fact that the family sizes in reality differ between 1 and 15 persons, which is a serious problem where the plots are too small to the minimal dwelling-houses to be enlarged. A presumtion for bigger plots is to minimize the costs for pipes for sewage. That is one of the reasons why it is urgent to implement modern recycling technology instead of transporting the sewage by fresh water to the sea.

Allotment gardens versus home gardens

Allotment gardens in the residential neighbourhood are proposed as one possibility for food production. In Port Elizabeth there are some examples situated on common area and on ground outside churches, schools and hospitals. Most of the gardeners are struggling with lack of resources like water pipes, fences and tools. In some cases they have to walk a very long distance. If allotment gardens shall be a real possibility for food production to the majority of the poor people in the townships, there need to be many of them close to the housing areas. Initially people also may need some financial support.

A house garden is definitley preferable to an allotment garden, specially for women, for many reasons. With a couple of children it is hardly possible to walk away from home very often to maintain and harvest the food-garden. Also, the garden in the back- or frontyard is safer both against thefts and against straying animals. It is noticable that many households in South Africa consist of only women and children; sometimes also some elderly people. That fact ought to be an important starting-point for town planning. An additional advantage of the home garden is that it is easy to use sewage water and organic

waste from the household in the garden near the house. This, however, requires education.

There is an urgent need for trees and shadow in the housing areas for the poor. Many trees have been planted within different projects but lots of them have been affected by animals, playing children, vandalists, lack of water etc. If the people have bigger plots they can plant trees themselves and take care of them. Trees can also give fruit to the households.

A garden near the house can be a wonderful complementary room. Poor people need quality of life as well as the rich. Many families are big and most houses in the townships are very small. The space outside the house is useful for many other things than just food production.

Environmental issues

Lack of water is one of the main restraints for agriculture in places with a climate like in Port Elizabeth. Optimally every drop of water should be kept and used for food production instead of being used as a means for transport of excrements to the sea. The urine and excrements should be used as fertilizers. The water toilet is an evident example of engineering, that is unsuitable for South Africa. It is developed in countries with different economic and natural conditions, which can afford such wasteful systems, at least for a period. Sweden has lots of water and has not yet had enough economical reasons to fully develop ecological sanitation for our own use, even if there are such systems on the way. There are in fact a lot of examples in Sweden where composting and urine separation toilets have been installed, even in blocks of flats in the cities.[6]

In townships where water and sanitation are istalled the water toilet often does not function because of lack of money to buy toilet paper. By use of cardboard and other available products instead of toilet paper the toilet soon stops to work.

It ought to be a task for the so called developed countries to assist in refining and implementing modern ecological sanitation everywhere in the world. There is a lot of knowledge and experience available to develop sustainable systems to reuse water and nutrients in urban agriculture.[7] Equally there exist many interesting ideas for intensive gardening. One of the most inspiring ideas is ”The Productive Homestead” by Dr. Gus Nilsson in Gaborone in Botswana. He claims that a 1000 m^2 plot including a house can feed a family and pay for the building of the home over a 20-year period.[8] He has also developed ideas for using Nigerian Elephant grass for purifying waste water. As this grass is exceptionally productive, it should be a splendid opportunity as forage for cows kept in community kraals. This could be integrated systems, solving the waste water problems as well as the problems with animals, straying around in the cities. Such so called zero-grassing methods will be necessary when starting to implement the new By-laws in Kimberley and Port Elizabeth.

In Port Elizabeth a model-project was under development in 1999 in cooperation between the inhabitants in a former squatter area and the Brittish voluntary agronomist James Ogborn. The 1500 families living in the settlement have formed an association and bought the area in order to develop a legal settlement, named Joe Slovo Settlement. The area is situated at the fringe of the city with few possibilities for a conventional water borne sewage system. This was possible by using housing subsidies in a very unconventional way, supported by the former Minister of Agriculture and Land Affairs, Mr. Honecamp. Mr. Ogborn proposed a system using a combination of shallow short term pitlatrines and double-dug vegetable beds. This is a hygienic water saving system, used by him in an Eritrean refugee camp in North-Eastern Sudan. The rain-fall in the location is low, approximately 400 mm. The effective adoption of this system, however, depends on the level of education attained by the people. However, the hygienic risks of using the system should be evaluated very thoroughly in the local environment before being replicated at larger scale.

Conclusion

It is my opinion that the prevailing view of the influx of people to the cities as an inevitable and even desirable process has to be reviewed. It is often said that ”people go to the city because they want to”. Of course this is true for many of them, but I also met many people, both in Kimberley and Port Elizabeth, who missed the rural way of life and dreamt about a smallholding, which is unattainable for them. As long as people have no choice - no land, no schools, no hospitals, no transport systems in the countryside, they will continue to move into the cities. The choice is not free in this case. Besides, the buyers of manpower will go on regarding this as a favourable situation because it will permanent the possibilities to get very cheap labour.

Strategies that encourage and facilitate small-scale farming and provide services in small towns and in the countryside have not been tested enough.[9] I think this should be the first effort to decrease the great influx to the big cities. Anyhow, urban agriculture in big cities is not a desirable situation but a necessary means for unemployed people to survive. Rural agriculture is still the most convenient way to produce food.

New settlement for low-income people, Missionvale, Port Elizabeth.

Preparation for vegetable land, Walmer township, Port Elizabeth.

Minimal vegetable garden at home, New Brighton, Port Elizabeth.

Consultation with agronomist James Ogborn in former squatter area, Joe Slovo Settlement, Port Elizabeth.

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Neue Bücher / Book Reviews

Urban Farming

Lieberecht Migge. Der soziale Garten. 210 S. ISBN 3-7861-2291-1. 1999, DM 148,-. Berlin (10888): Gebrüder Mann Verlag.

Hinter diesem Titel verbirgt sich eine Neuauflage der programmatischen Schrift 'Deutsche Binnenkolonisation - Sachgrundlagen des Siedlungswesens, die Migge 1926 veröffentlicht hat. Schon die damalige Veröffentlichung enthielt das 1918 verfaßte 'grüne Manifest'. Im Zentrum der von Migge propagierten Siedlungsform steht der 'Soziale Garten', eine umfassende Antwort auf Nahrungsnot, Wohnungsnot und Arbeitslosigkeit. Soviel zum Anlaß der Schrift. Inhaltlich setzt sich der Autor in der Hauptsache mit dem praktischen und naturwissenschaftlichen Grundwissen für einen nutzbringenden städtischen Gartenbau auseinander. Die Siedlungsform selbst wird ausgiebig diskutiert und anderen zeitgleichen Konzepten, z.B. den Wolkenkratzer-Städten Le Corbusiers entgegengesetzt. In der Literatur über städtische Landwirtschaft, wenn wir von einigen verkleideten Agronomie-Büchern absehen (die das Label 'städtisch' aus Marketing-Gründen hinzufügen), ist Mügges Buch das Referenzwerk *per se.* Schade nur, daß dieser Faksimile Nachdruck nur als Liebhaber-Ausgabe erschienen ist: knapp DM 150 werden die wenigsten Interessenten für eine Neuauflage, für die weder Satzkosten noch Autorenhonorare anfallen, hinzublättern bereit sein.

Kosta Mathéy

David Grossman, Leo van den Berg, Hyacinth I. Ajaegbu (eds.). Urban and Periurban Agriculture in Africa. 335 S. ISBN 1 84014 910 8. 1999. Aldershot: Ashgate Publishing.

Die *'Proceedings'* einer 1996 in Netanya (Israel) abgehaltenen Tagung zur städtischen Landwirtschaft. Der Band gliedert sich in vier Teile: Erstens: Fallstudien aus Süd- und Ostafrika (Tanzania, Kenia, Simbabwe; zweitens: fünf Beiträge zu Jos in Nigeria; drittens: übergreifende technische Überlegungen; viertens: strategische Gesichtspunkte. Besonders der letzte Teil des Buches enthält einige anregende Überlegungen, die neu erscheinen, wie z.B. ein Konzept-Gerüst zu Evaluierung von Produktions- und Vermarktungserfolgen.

Wie so häufig in der jüngst aufblühenden Publikationsfreude über *Urban Farming* scheint der Aspekt 'Urban' mitunter sehr weit ausgelegt worden zu sein: Wenn Bauern irgendwo auf der Welt nicht nur für sich, sondern für den (notwendigerweise urbanen) Markt produzieren, ist dies noch lange keine *'Urban Agriculture'.* Solche Misverständnisse kommen bei Tagungen und Seminaren häufiger vor: bei selbst angemeldeten Vorträgen bestimmen die Teilnehmer die Auslegung des Themas, und die Relevanz eines einzelnen Beitrags läßt sich erst im Nachhinein bewerten. Sammelbände, wie der vorliegende mit 20 Beiträgen, haben anderersets den Vorteil, daß in der Regel zumindest einige Aufsätze dabei sind, die so interessant sind, daß man ohne Groll über die weniger spannenden Texte hinwegsehen kann.

Kosta Mathey

FAO. Urban and Peri-Urban Forestry. Case Studies in Developing Countries. 194 S. D/X3994E/1/12.99/2000. 1999. Rome: Food and Agriculture Organization of the United Nations (FAX: +39 0657053152).

Bäume in den Städten haben offensichtliche und weniger offensichtliche Vorteile. Neben der Verbesserung von Luftqualität und Microklima versprechen sie auch eine ökonomische und ernährungsrelevante Versorgung mit Fetten und anderen Nahrungsmitteln und mit Brennholz. Wenn wir von *städtischer* Aufforstung sprechen, sind nicht nur Parks und Alleen gemeint (die übrigens auch mit Obstbäumen bestückt werden können: *'edible parks'),* sondern auch Gärten und Höfe. Gerade in den Tropen kann schon ein einzelner Baum zentnerweise Lebensmittel produzieren (Datteln, Kokosnüsse, Avocados, Mangos etc.). Darüberhinaus sind die Früchte der Bäume gegenüber bodennahen Kulturen resistenter gegen Verunreinigungen sind und die Gefahr von Krankheitsübertragung tendiert gegen Null. Im städtischen Wasserhaushalt spielen Bäume ebenfalls eine entschidende Rolle.

Die FAO beschäftigt sich schon seit Jahren mit der städtischen Nahrungmittelproduktion, und betreibt ein spezieles Unterprogramm zu *'Urban Forestry'.* Die hier vorliegende jüngste Ausgabe einer ganzen Reihe von Publikationen der Organisation widmet sich ausschließlich dem Thema. Dort sind Fallstudien aus Afrika, Asien, Lateinamerika und Nahost zusammengetragen - im Einzelnen verschieden gründlich ausgearbeitet aber dennoch nützlich (so zum Beispiel eine Übersicht besonders empfehlenswerter Stadtbäume für den öffentlichen Raum in der Studie zu Senegal).

Kosta Mathey

Kwaku Obosu-Mensah. Food Production in Urban Areas. A Study of Urban Agriculture in Accra, Ghana. 231 Seiten, ISBN 0-7546-1029-2, 1999. Ashgate Publishing, Aldershot GB-GU11 3HR.

Das Verdienst dieser Dissertation ist es, in einer ersten wissenschaftlichen Arbeit Grunddaten zum Thema der Urbanen Landwirtschaft in einem Westafrikanischen Land gesammelt und in Buchform publiziert zu haben. Auf Grund dieser Daten lassen sich z.B. Vergleiche zu Ost- oder Südafrika herstellen. Doch wie so oft bei 'Erst'-Forschungen verwässert die Fülle des empirischen Materials die methodologische Stringenz: Welches ist die zentrale Fragestellung der Arbeit, und welches sind die wirklich erforderlichen Informationen, um eine befriedigende Antwort daraus zu destillieren? In dieser Veröffentlichung ist es nicht immer leicht, die Grenze zu ziehen zwischen Landeskunde, Primär- und Sekundärinformationen, Beschreibung des persönlichen Vorgehens bei der Forschung und allgemeinen Empfehlungen an die Politik. Angesichts der Tatsache, daß es weltweit kaum ein Dutzend Buchveröffentlichungen zu 'Urban Agriculture in Westafrika' gibt, verdient diese Neuerscheinung besondere Beachtung.

Kosta Mathéy

Nico Bakker et al.: Growing Cities, Growing Food. Urban Agriculture on the Policy Agenda. A Reader on Urban Agriculture. 350 S, 2000. DOK-Nr. 1904a. Feldafing: DSE (zel@dse.de / www.dse.de).

Schon seit gut einem Jahrzehnt gärt an der Basis der Entwicklungshilfe-Organisationen ein reges Interesse an dem Thema *'Urban Agricluture'*- auch wenn viele Entscheidungsträger in den höheren Etagen (Ministerien, DFG-Gutachter u.ä.) davon nichts hren wollen und die Thematik als nebensächliche Angelegenheit abtun. Die hier vorliegende Publikation, an deren Zustandekommen acht renommierte Entwicklungsorganisationen beteiligt waren, demonstriert ein internationales Einverständnis vorausschauender Wissen-

schaftller über die positive Rolle, die *Urban Agriculture* bei der Bwältigung aktueller und künftiger Probleme der großen Städte spielen kann. Es ist gleichzeitig die umfassendste Dokumentation zu dem Thema, die bislang veröffentlicht wurde.

Die Akten eines internationales Seminars der DSE, das im Oktober 1999 in Havanna stattfand, bilden den Grundstock der Publikation. Doch die Aufgabe der DSE ist bekanntlich politisch, weswegen sich das besagte Seminar in erster Linie an Entscheidungsträger richtete, die einen Einfluß auf lokale und nationale Politik haben - und weniger an Experten mit Interesse an den jüngsten wissenschaftlichen Erkenntnisses in einem bestimmten Wissensgebiet. Vor diesem Hintergrund ist es den Herausgebern der Dokumentation in lobenswerter Weise gelungen, die obligatorische Seminardokumentation (Programm, Teilnehmer, Gruppenfoto etc.) mit aktuellen und kompetente Texten von außen anzureichern und einen ebenso interessanten wie nützlichen Reader zusammenzustellen. Etwa ein Drittel der Beiträge besteht aus global übergreifenden Analysen und der Rest aus Länderstudien, und zwar zu Ghana, Ägypten, Senegal, Tanzania, Zimbabwe, Sambia, Kenie, Cuba, Peru, Mexico, Bolivien, den Philippinen, Indien, Indonesien, China, England und Polen.

Kosta Mathey

Stadtentwicklung

Jordi Borja, Manuel Castells. Local and Global. Management of Cities in the Information Age. 227 S. ISBN 1-85383-441-6, 1997, £ 20,-. London: Earthscan.

Eher bescheiden in der Aufmachung, bietet diese Publikation anspruchsvolle Kopfnahrung. Etwas anderes ist bei den beiden Autoren, Jordi Borja, dem globalen Guru für strategische Planung und dem Stadttheorie-Vordenker Manuel Castells auch nicht zu erwarten. Die Grundthese, die hier vorgetragen wird, lautet, daß wir künftig zwar zwangsweise in einer urbanisierten Welt leben werden, aber das Konzept der Stadt gleichzeitig in der Auflösung begriffen ist, und zwar sowohl räumlich wie auch politisch. Räumlich ist eine Entwicklung hin zu großen Konurbationen vorstellbar, in die beachtliche ländliche Fragmente eingeflochten bleiben. Geopolitisch sind heute weder die Metropole, noch der Nationalstaat einflußreich genug, um wirklichen Einfluß auf das globale Mächtespiel zu nehmen. Was an metropoler Herrschaft übrig bleibt, sind über den Globus verteilte und miteinander vernetzte Zentren einer Elite, die wenig Berührungspunkte mit dem Rest der Bevölkerung aufweisen. Das Volk an sich, um zu überleben und möglicherweise als Juniorpartner des globalen Kapitals eine bescheidene Rolle spielen zu können, muß sich lokal und regional organisieren, um ein interessantes Investitionsklima anbieten zu können. Gelingt dies nicht, steht ihm immer noch der Rückzug in burghaft abgekapselte Enklaven möglich, ein Nischendasein, mit teilweiser Subsistenz- und Barter-Ökonomie. Wodurch die Organisation auf lokaler Ebene in beiden Fällen bestimmt wird, erklären die einzelnen Kapitel des Buches: Gender, Multikulturalität, City-Management und -Planung.

Kosta Mathéy

Michael Peterek. Wohnung. Siedlung. Stadt. Paradigmen der Moderne 1910-1950. 446 Seiten, ISBN 3-7861-2327-6. 2000. Berlin: Gebr. Mann Verlag.

Diese Arbeit geht weit über Norm einer Dissertation, als welche sie ursprünglich entstanden ist, hinaus. Sie dokumentiert und reflektiert vier unterschiedliche Städtebauliche Paradigmen der Periode 1910 bis 1950, die sich, avantgardistisch zu Ihrer Zeit, im Spannungsfeld zwischen Stadt und Natur, bzw. zwischen individualität und Massenwohnungsbau bewegen. Die Paradignem manifestieren sich an konkreten Beispielen, die das materielle Rückrat der Arbeit darstellen: die erste deutsche Gartenstadt in Karlsruhe-Rüppur; die Zeilenbausiedlung Karlsruhe Dammerstock; die *Ville Radieuse* von Le Corbusier, und der Brinkmann-Baublock in Rotterdam stehen stellvertretend für die analysierten Urbanismus-Konzepte, die jeweils ganze Generationen von Planungen und Wohnquartieren beeinflußt haben. Gerade diese Streuwirkungen wie auch ihre philosophischen Grundlagen werden in dem Werk in vorbildlicher Weise nachvollzogen und aufgezeigt, und an Hand unzähliger Abbildungen illustriert. Interessant im Zusammenhang dieses TRIALOG-Heftes ist das gemeinsame Moment des hausbezogenen Freiraums, kollektiv oder individuell. Deshalb ist der Titel der Arbeit eigentlich unvollständig und müßte heißen: Garten-Wohnung-Siedlung-Stadt. Der Band sollte in keiner Städtebau Bibliothek fehlen!

Kosta Mathéy

Skizze von Le Corbusier zur Parklandschaft in der Strahlenden Stadt [1930]

MICHAEL PETEREK / WOHNUNG. SIEDLUNG. STADT

Hugh Barton (ed.). Sustainable Communities. The Potential for Eco-Neighbourhoods. 305 Seiten. ISBN 1 85383 513 7. 2000. £ 17.50. London: Earthscan (earthinfo@earthscan.co.uk).

Unter den vielen neuen Publikationen, die Siedlungswesen in den Zusammenhang von Nachhaltigkeit setzen, zeichnet sich die vorliegende durch ihren 'Betroffenenansatz von unten' aus. Motiv für Veränderung ist für den Herausgeber in erster Linie eine bessere Lebensqualität der Bewohner, auch wenn sich die Empfehlungen in den einzelnen Kapiteln des Buches nicht wesentlich von anderen, Traktaten mit abstrakt-wissenschaftlichen Anspruch unterscheiden: umfassendes Ressourcen-Recycling, Urban Farming, Reduzierung des Auto-Verkehrs, dezentrale Verdichtung etc. zählen zu den konkret genannten Notwendigkeiten. Hier wird auch auf lokale Selbstverwaltung, Kriminalitätsprävention, usw eingegangen. Hinzu kommt noch der soziale und Nachbarschaftsgedanke, der am Beispiel verschiedener bestehender 'Eco-village' Projekten *en detail* vertieft wird (bemerkenswert ist übrigens die kommentierte Liste aller Referenzprojekte einschließlich Namen von Kontaktpersonen und deren Telefonnummern im Anhang). Also ein Buch weniger für reine Theoretiker und Träumer, sondern für Interessierte, die ernsthaft an Veränderung interessiert sind.

Kosta Mathey

Bernd Hamm, Pandurang Muttagi. Sustainable Development and the Future of Cities. 291 S. ISBN 1-85339-452-1, 1998. £ 15,-. London: Intermediate Technology Publications (orders@itpubs.org.uk).

Das Zentrum für Europäische Studien an der Universität Trier hat sich in den vergangenen zehn Jahren zu einem spannenden Marktplatz stadtökologischer Konzepte und Theorien entwickelt. Bei den periodisch organisierten Symposien treffen sich zukunftsorientierte Wissenschaftler, und die hier vorliegende Veröffentlichung enthält die 'Schlüsselbeiträge' der Tagungen 1991 bis 1994. Leitgedanke ist, daß die Menschheit, solange sie sich nach der darwinistischer Theorie des 'Recht des Stärkeren' organisiert, bereits mittelfristig keine ökologischen Überlebenschancen hat. Ein wie auch immer geartetes Prinzip globaler Solidarität stellt den einzigen Ausweg dar. Da die urbanen Zentren mit Abstand die größten Umweltzerstörer sind, muß die Erneuerung hier beginnen.

Da ein solcher Ansatz alle wissenschaftlichen und gesellschaftlichen Bereiche einschließen muß, verwundert auch nicht die multi-disziplinäre Auswahl der vertretenen Autoren, wie z.B. William Rees (Biologe), P.K. Muttagi (Soziologe), On-Kwok Lai (Politologe), Peter Marcuse (Jurist), Salah El-Shaks (Stadtplaner), Charles Middleton (Archtekt), Lorenz Hilti (Informatiker) etc. Ein kluges Buch, das trotzdem lesbar und sogar spannend bleibt.

Kosta Mathéy

Kathie Williams; Elizabeth Burton; Mike Jenks (eds.). Achieving Sustainable Urban Form. 388 S. ISBN 0 419 24450 6, 2000. £ 35,-. London: E.&FN.Spon.

Mit großer Gründlichkeit hat das Oxford Centre for Sustainable Development ein weites Spektrum an Texten zum Thema ökologischer Stadtform zusammengetragen und in dem vorliegenden Band mit 46 Autoren veröffentlicht. Erstaunlicherweise sind so gut wie keine aus der einschlägigen Literatur bekannte Namen dabei: ein Zeichen, daß das Konzept der ökologischen Stadtentwicklung auch in benachbarten Disziplinen und bei jüngeren Kolleg/inn/en auf fruchtbaren Boden fällt und frische Ideen beigetragen werden.

Im Überschwang der Begeisterung auch unter den zahlreich vertretenen Architekten und (klassischen) Städtebauern ist hier vielleicht der Einfluß der Form etwas überbewertet worden *(function follows form?),* was das soll in dieser Berufssparte häufiger vorkommen. Bei der Fülle des Materials, das in der

Veröffentlichung demokratisch gleichwertig nebeneinander gestellt ist, fällt es nicht immer leicht, das Wesentliche von den Zugaben zu trennen, aber auch das ist nicht alleine ein Problem dieser Publikation, sondern ein Merkmal unserer Informationsgesellschaft. Zum Thema der nachhaltigen Stadtentwicklung finden wir hier also nicht das zentrale Werk, das in der Nachwelt tausendfach zitiert werden wird, aber ein nützliches Kompendium, das eine ganze Reihe aufschlußreicher Aufsätze speziell aus englischer Sicht enthält.

Kosta Mathéy

Sassen, S.: Cities in a World Economy (second edition), Sociology for a new Century. 182 S., 2000. Thousand Oaks: Sage (Bezug: Fine Forge Press/Sage, 2455 Teeler Road, Thousand Oaks, California 91320, USA).

Dieses Buch ist ein internationaler Bestseller, der uns die Herausforderung der Globalisierung der Ökonomie vor Augen führt, und deren Auswirkungen für die Städte und speziell für die am besten positionierten "strategischen" Städte und Metropolen. Die Auswirkung der Globalisierung ist jedoch die zunehmende Ungleichheit der Städte innerhalb des sich artikulierenden transnationalen Städtesystems. Die Herausforderungen des globalen städtischen Prozesses sind in der Perfilierung der Städte in Hinblick auf einen bestimmten, favorisierten Service zu sehen, der die besondere Spezialisierung jeder Stadt ausmacht. Unter den in dem Buch behandelten Fallstudien finden wir die Städte New York, Miami, Toronto, Sydney, verschiedene internationale Finanzzentren (allesamt in Europa, Nordamerika oder Japan und Australien). Das Buch schließt mit einer Charakterisierung der neuen Arbeitsteilung, die bestimmte Auswirkungen auf die Lebens- und Arbeitsqualität der Städte hat. Das Buch hat sicherlich mit Grund Furore gemacht wegen seiner schonungslosen Analyse der ökonomischen Wirklichkeit, welche die heutigen Weltstädte formt. Aber es ist eine ausgesprochen Nordamerika-orientierte Arbeit, die das existierende Weltsystem der Städte und Ökonomien Asiens, Afrikas und Lateinamerikas ausgeblendet hat. Geradezu ein Widerspruch, wenn so viel von der "Weltökonomie" gesprochen wird...

Florian Steinberg

Ansari, J.H., Einsiedel, N. von (Hg.): Urban Land Management – Improving Policies and Practices in Developing Countries of Asia. 291 S., 1998. New Delhi: Urban Management Programme, (Bezug: Oxford & IBH Publishing, 66 Janpath, New Dehi 110001, India).

Dieses Buch ist ein weiterer Band aus der Produktion des Urban Management Programme (UMP-Asia/Pacific). Die vom UMP in Auftrag gegebenen Länderstudien aus Bangladesh, Indien, Indonesien, Korea, Malaysia, Philippines, Sri Lanka und Thailand vereinen Arbeiten von (weltweit bekannten) asiatischen Wissenschaftlern, die versucht haben, nicht nur die bestehenden Rahmenbedingungen zu erklären, sondern die wenigen positiven Beispiele guten Bodenmanagements, und speziell diejenige Beispiele, die eine Relevanz für die Situation der städtischen Armen haben, herauszuarbeiten. Wie die Herausgeber im Vorwort mitteilen, gelten als Erfolgsbeispiele die Land Consolidation Programme und das ASPEK Gruppen-Selbsthilfe Wohnungsprogramm in Indonesien, die Zusammenarbeit mit dem privaten Sektor in Bangladesh, das von der GTZ unterstütze Urban Development through Local Efforts (UDLE) Programme in Nepal, das Community Mortgage Programme in den Philipinnen, die NGO Aktivitäten in Sri Lanka, das Programm der Legalisierung illegaler Siedlungen in Madya Pradesh/Indien, das Land Sharing Programme in Thailand. Die Herausgeber schlussfolgern, dass zu akribische, unflexible Regelwerke das Bodenmanagement behindern, Verantwortungen zu zentralisiert, aber auf Implementierungsebene zu zersplittert sind, effektive Boden-Informationssysteme fehlen, und generell die relevanten Agenturen des öffentlichen Sektors zu wenig miteinander kommunizieren. Was angestrebt werden solle, ist mehr Transparenz, Verantwortlichkeit und Partizipation beim Bodenmanagement.

Florian Steinberg

Bundesanstalt für Bauwesen und Raumordnung: Urban Future. Preparatory expertises (Overviews) for the World Report on Urban Future for the Global Conference on Urban Future for the Global Conference in the Urban Future URBAN 21; Forschungen, Heft 92. 1999; 152 Seiten, ISBN 3-87994-895-X; DM 28.-. Bonn: Bundesamt für Bauwesen und Raumordnung (BBR, Am Michaelshof 8-10, 53177 Bonn).

Der Band stellt in englischer Sprache auf je 20 Seiten mit deutschen Zusammenfassungen neun Studien vor, die als Grundlage des „Berichts zur Zukunft der Stadt" für die Konferenz URBAN 21 Anfang Juli in Berlin, einer Begleitveranstaltung der EXPO 2000, dienen. Bereits in den einzelnen Titeln tritt „Stadt" oder „städtisch" in zweierlei Bedeutung auf, nämlich als politische Handlungseinheit und kleinräumlich-kollektive Umweltgestaltung oder im Gegensatzpaar „urban" und „rural". Die erste Bedeutung steht hinter dem Kapitel Entwicklung städtischer Lebensformen und Lebensstile', in welchem Peter Hall drei (teilweise) endogen herausgebildete Idealtypen von Stadtkulturen beschreibt (anglo-amerikanisch, europäisch-kontinental und chinesisch-ostasiatisch). Auch die Kapitel Leben und Arbeiten im informellen Sektor' sowie Entwicklung der technischen Infrastrukturen in den Städten und Siedlungsgebieten der Welt' und Umweltschutz als integraler Bestandteil einer nachhaltigen Stadtentwicklung' unterstellen eine gewisse lokale Handlungsautonomie. Weil sie jedoch zwischen den beiden Bedeutungen von „Stadt" nicht klar unterscheiden, bleiben die Aussagen mehr oder weniger diffus und für mögliche Handlungskonzepte unscharf. Daß es dann aber nicht mit aufzählenden Beschreibungen und aggregierten Quantifizierungen getan ist, wird in den Kapiteln Auswirkungen der Veränderung von Alters- und Haushaltsstrukturen auf die Städte der Welt' und Sozialer Wandel in den Städten' deutlich. Hier werden Länder- und Regionsstatistiken auf methodisch unzulässige Weise so desaggregiert und Status- und Trendquantifizierungen so vermischt, daß letztlich das gesamte Thema schlicht verfehlt wird. In den Kapiteln Nachhaltige Entwicklung und Verkehr' und Städte als Immobilienmärkte' wird darüber hinaus der institutionell-kulturelle Bezugsrahmen sehr eng europäisch bzw. angloamerikanisch (s. Peter Halls Typen) beschrieben und als selbstverständlich vorausgesetzt. Das letzte Kapitel, Steuerungsaspekte der Entwicklung von Metropolen (Metropolitan Governance)', faßt Studien über die Städte Hongkong, Manila, Singapore, Johannesburg, Nairobi, Abidjan und Moskau verwaltungstheoretisch völlig unbeleckt und auf eine geradezu demotivierende Weise zusammen. Soll etwa doch lieber alles gleich dem Markt überlassen werden?Soweit zu sehen ist, haben die meisten Autoren nicht oder äußerst selektiv auf die Untersuchungen für und nach Istanbul (Habitat-Konferenz II) zurückgegriffen. Zusammen mit den angedeuteten methodischen Schwächen, von denen noch manche andere herausgestellt zu werden verdienten, dürfte der „Weltbericht zur Zukunft der Stadt", wenn er denn auf solchen Fundamenten errichtet werden sollte, ein gefährlich wackliges Gebäude werden.

Jürgen Oestereich

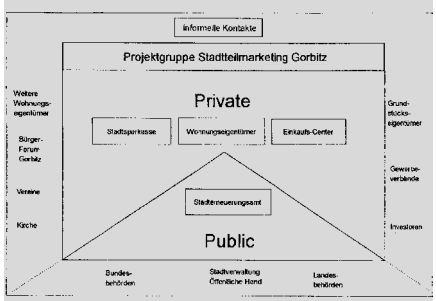


Abbildung 5: Skizze zur Struktur der Stadtteilmarketing-Arbeitsgruppe

JAHRBUCH STADTERNEUERUNG

Ronald Kunze et al. Jahrbuch Stadterneuerung 1999. 378 S. ISBN 3-7983-1810-7. 1999. Berlin: TU. (Bezug: Universitätsbibliothek, Abt. Publikationen, FAX 030 314 24741, E-mail: Publikationen@ub.tu-berlin.de)

Das Jahrbuch Stadterneuerung 1999 steht unter dem Vorzeichen des Bonner Regierungswechsels und der Frage, ob sich zumindest in der Baupolitik eine soziale Wende gegenüber schwarz-gelb abzeichnet. Doch bereits die Themenwahl der Beiträge liefert die Antwort: echte 'neue' Konzepte und Ideen fallen nicht ins Auge. Stattdessen beginnt bereits das 'Leit-Kapitel' von Klaus Selle mit einem Rückblick auf die Lehren, die aus 10 Jahren IBA Emscherpark gezogen werden können. Die übrigen der auf Deutschland bezogenen Beiträge reflektiert die erste Dekade der neuen Bundesländer, und der nachfolgende Auslandsteil (Frankreich, England, Australien, Neuseeland) gibt selbstverständlich auch keine Antwort auf die Ausgangsfrage - die vielleicht ohnehin verkehrt gestellt war. Ein gemeinsames Motto könnte vielleicht stattdessen 'Planung auf Sparflamme' heißen: Kleine Schritte der Gemeinden, denen überall die Finanzen versanden und die verzweifelt nach 'partnerschaftlichen' Mäzenen suchen. In

diesem Sinne ist das Jahrbuch ein aussagekräftiges Zeitdokument.

Kosta Mathéy

Tim Hall. Urban Geography. 180 S. ISBN 0-415-14085-4. 1998, £ 13,-. Routhledge, London.

Dieses Schulbuch uunternimmt eine aktuelle Standortbestimmung der Stadt-Geographie innerhalb einer ganzen Serie anderer Bindestrich-Wissenschaften: Humangeographie, Ländliche Geographie, Politische Geographie, Geschichtsgeographie, Kulturgeographie, Entwicklungsgeographie, Tourismus-Geographie, Transport und Kommunikations-Geographie. Als ich vor einigen Jahren den Weltkongreß der Soziologie bewohnte, fand ich dort fast alle entsprechenden Disziplinen vertreten, nur mit dem Wort 'Soziologie' hinter dem Bindestrich. Wie beschränkt erscheinen dagegen die Planer und Architekten, denen außer Innen-, Landschafts- oder Regional- so wenige weitere Vorsilben eingefallen sind! Doch zum Thema: wie wird in dem vorliegenden Buch die Stadt-Geographie interpretiert? Behandelt werden insbesondere aktuelle räumliche und demographische Veränderungen der Stadt, doch in Bezug gesetzt zu den zugrundeliegenden ökonomischen Problemen. Bekannte Strategien werden aufgezählt, die die Probleme bezwingen sollen (und am Ende vielleicht verstärken, das wird aber nicht erwähnt). Zu den Strategien zählen auch der Städtebau wie das Stadtmarketing oder die Stadtökologie. Auch wenn man das Abschlußsskapitel mit den fünf urbanen Zukunftsszenarios als innovativen Beitrag würdigt, entsteht leicht der Eindruck, Stadt-Geographen hätten das Erbe des historischen Stadtschreiber-Berufs angetreten: Chronisten, die möglichst objektiv zu dokumentieren versuchen, wie die Geschichte voraneilt, aber selbst keinen Einfluß nehmen wollen oder können.

Kosta Mathéy

Edmundo Werna, André Dzikus; Lynette Ochola, Mano Kumanasuriyar. Implementing the Habitat Agenda. Towards Child-Centered Human Settlement Development in Developing Countries. 138 Seiten, ISBN 1 84014-841-1. £ 32,50. 1999. Aldershot: Ashgate (ashgate@cityscope.co.uk).

Das Buch ist eine Zusammenfassung von ursprünglich drei einzelnen Reports, die als Hintergrundmaterial für die 16. Sitzung der *United Nations Commission for Human Settlements* in Nairobi 1997 zusammengestellt wurden. Ausgangspunkt ist die Erkenntnis, daß unter den Millionen Obdachlosen und Slumbewohnern über 50% der Betroffenen Kinder sind, diese aber keine Lobby und keine Stimme in den wohnungspolitischen Gremien haben. Zwar wurde 1990 von den Vereinten Nationen die *Convention on the Rights of the Child* angenommen, und die Schlußresolution von Habitat II enthält auch eine Klausel, die auf die Wohnsituation von Kindern hinweist. Detaillierte Ausführungen zu diesen Äußerungen, oder gar konkrete Handlungsempfehlungen, wurden dort aber nicht beigefügt. Diesem Manko sucht diese Arbeit abzuhelfen. Der erste Teil des Buches hält die faktischen Grundlagen zur Problematik fest und legt dar, warum die Thematik besondere Aufmerksamkeit verdient. Teil II diskutiert verschiedene Strategien, die geeignet sein könnten, um das beschriebene Problem abzumildern, und gibt in Form von Empfehlungen konkrete Handlungsanweisungen. In Teil III schließlich finden wir neben einer allgemeinen Zusammenfassung der Schlüsselaussagen des Buches auch Hilfestellungen zu Monitoring und Evaluierung zu ergreifender Maßnahmen. Daten und Strategieempfehlungen in Tabellenform wurden im Anhang des Buches untergebracht, und machen etwa ein Drittel des Gesamtumfangs aus.

Kosta Mathey

Wohnungsversorgung

Datta, K., Jones, G.A. (Hrsg.): Housing and Finance in Developing Countries, 1998, 270 S., £ 50,-. London: Routledge (Bezug: ITPS, Cheriton House, North Way, Andover, Hampshire, SP10 5BE, UK).

Die Hälfte der Weltbevölkerung lebt in Städten, betroffen von Armut, und etwa 800 Millionen leben in inadequaten Substandard-Wohnungen. Diese Wohnungskrise hat angehalten trotz diverser Aktivitäten der Entwicklungsspezialisten und Forscher. Im Zusammenhang mit HABITAT II wurde von einer größeren Rolle der innovativen Finanzierungsmethoden gesprochen, und es wird von der Annahme ausgegangen, daß mit flexiblen sowie den jeweiligen Bedingungen angepaßten finanziellen Instrumenten wirkliche Verbesserungen in Qualität und Quantität zu erreichen seien. Das Buch beschreibt die Erfahrungen von formellen und "informellen" Finanzierungsmechanismen, letztere basierend auf Mikro-Kreditprinzipien, die schon in vielen Zusammenhängen von NGOs ausprobiert wurden. Wie das Buch anhand von Beispielen aus Mumbay, Sri Lanka, Kamerun, Zambia, Botswana, El Salvador und Südafrika belegt, gibt es weltweit viele positive Ansätze erfolgreicher Mikro-Kreditprojekte, an denen Frauen und NGOs maßgeblich beteiligt waren. Aber auch im formellen Finanzierungssektor haben Jamaica, Mexico, Singapur, India, Kolumbien und Russland interessante, innovative Finanzierungsmechanismen ausprobiert. Im Übersichtsartikel beziehen die Herausgeber die Position, daß es nun heute um den Wandel von "Selbsthilfe" zu "Selbstfinanzierung" gehe. Empfehlenswert für alle, die erkannt haben, daß die Suche nach Alternativen dringend ist.

Florian Steinberg

Habraken, N.J.: Supports: a alternative to mass housing, new edition, 1999, 124 S., $ 16. New Castle upon Tyne, Urban International Press (Mansion House Chambers, The Close, Newcastle upon Tyne NE1 3RE, UK).

Dieser Klassiker stand am Anfang einer „Bewegung" und Denkrichtung niederländischer und internationaler Architekten, die bekannt wurde als SAR (Stichting Architecten Research) Methode, und vor allem in den 70er Jahren weltweiten Einfluss erhielt. Habrakens Konzept war, dass Benutzer von Gebautem im Mittelpunkt des Baugeschehens stehen sollten, und deswegen sei die Architektur dem anzupassen, und nicht anders

herum. Die Funktion der Architektur sei es deshalb, eine offene Rahmenstruktur zu erstellen, welche es dem Nutzer ermöglicht, sich sein Haus oder Apartment den jeweiligen und sich ändernden Bedingungen anzupassen. Dies hat vielerlei Auswirkungen auf die Bautechnik, speziell den Ausbau, die Finanzierung und die Interaktion mit den Nachbarn, die an diesem Prozess teilhaben. Gemäß des Zeitgeistes war Habraken auch von der Rolle der standardisierten Vorfertigung von Grundelementen des Ausbaus überzeugt, und versprach sich davon eine Reduzierung der Baukosten. Im Nachblick kann man sagen, daß dieses Buch, neben Turners „Housing by People“ und Alexanders „A Pattern Language“ eines der wichtigsten Dokumente eines Programmes gegen geistlosen Massenwohnungsbau ist. Manches ist in der Tat von der Bauindustrie aufgegriffen worden, und auch im Bereich des Niedrigkostenwohnungsbaus (der Sites and Services, aided self-help programme) haben sich Elemente der Habraken'schen Konzeption weltweit verbreitet. Ein Klassiker für jede komplette Bibliothek.

Florian Steinberg

Dörte Fuchs, Jutta Orth. Bauen in der Gruppe. Kostengünstig, innovativ, ökologisch. 128 Seiten, ISBN 3 7667 1389 2, 2000. München: Callwey Verlag.

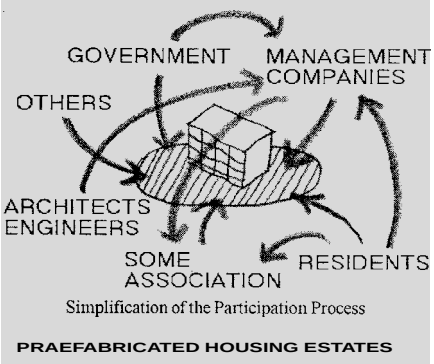
Es ist beruhigend zu sehen, daß die progressiven Konzepte der siebziger Jahre gut genug waren, um unbeschadet zweieinhalb Jahrzehnte zu überdauern und danach immer noch als 'innovativ' verkauft werden zu können. Mehr noch: inzwischen handelt es sich nicht mehr um vereinzelte Pilotprojekte, teils illegal durchgesetzt oder zumindest vom 'Volk' skeptisch beäugt, sondern wir finden eine Vielzahl im bürgerlichen Umfeld realisierter und akzeptierter Projekte. Die Architektur hat sich vom Hausbesetzer- und IKEA Image gelöst, und erfreut das ökologisch bewußte Gemüt durch Zugabe von Sonnenkollektoren und Grasdach. Zielgruppe der Publikation sind die Nutzer selbst, deshalb erhält der Textteil Checklisten, ganz banale Empfehlungen zur Organisation von Interessengruppen (bunt hinterlegt wie im Schulbuch), und Hinweise zur relevanten Rechtslage in Deutschland. Die abgebildeten Beispiele geben genaue Auskunft über Baukosten, Heizwärmebedarf, Grundstücksausnutzung usw. Gemessen an dem beabsichtigten Zweck, nämlich potentielle Nutzer zu interessieren und anzuleiten, ist die Publikation als gelungen zu bewerten.

Kosta Mathéy

Prefabricated Housing Estates. Open House International, vol.25, no 1/2000 (special issue). 104 S. ISSN 0168-2601. US$ 20,-. Orders: Urban International Press, Mansion House Chambers, Newcastle NE1 3RE, UK.

Dieses Themenheft, zusammengestellt von Seji Sawada (Tokio), widmet sich der Auswertung einer im Mai 1999 in Dessau abgehaltenen Konferenz. Thema waren die unzeitgemäßen Großsiedlungen in Fertigbauweise, von denen in Osteuropa und Rußland rund 70 Millionen Wohnungen existieren. Die Konferenz, die von der EXPO 2000 mitgetragen wurde, untersuchte insbesondere die Möglichkeit, solche Baublöcke durch offene Baustrukturen nach der Habraken-Methode zu verändern. Die Veröffentlichung ist zweispachig deutsch-englisch verfaßt und enthält sieben technische Artikel und eine von den Teilnehmern verfaßte 'Dessauer Resolution'.

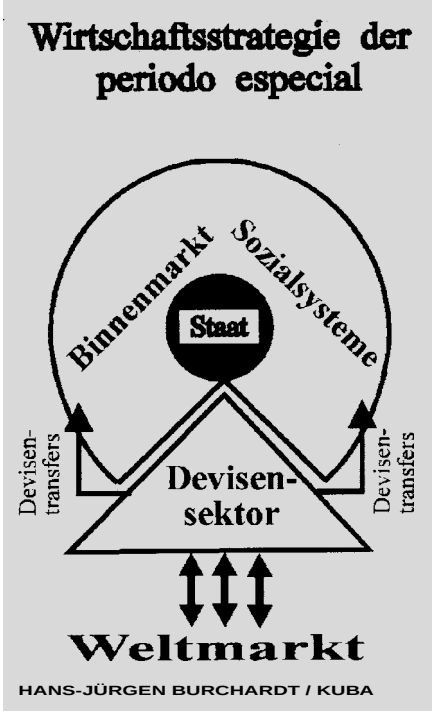
Florian Steinberg



Gesellschaft und Politik

Hans-Jürgen Burchardt. Kuba: Im Herbst des Patriarchen. 229 Seiten, ISBN 3-89657-602-X. DM 30,-. Stuttgart: Schmetterling Verlag (FAX 0711-626992).

Der Autor, der bereits 1966 ein interessantes Buch über Kuba unter dem Motto 'Der lange Abschied von einem Mythos' verfaßt hat, liefert hier den Fortsetzungsband über die sich so rasant ändernden Bedingungen dieses Landes. Die drei Hauptkapitel seiner Arbeit sind Wirtschaft, Soziales und Politik. Die Analyse wird in der Verlagsankündigung als 'kritisch-solidarisch' bezeichnet. Dem wäre hinzuzufügen, dass in sehr deutscher Besserwisser-Manier das nörgelnde Element vielleicht etwas zu sehr in den Vordergrund gerutscht ist. Auch die Spekulationen über ein Kuba nach Castro entsprechen notgedrungen



nicht ganz der Präzision, mit der der Autor andere Fakten über die Insel zusammengetragen hat. Unbestritten ist jedoch, dass diese Publikation eine Vielzahl von aktuellen Daten und Hintergrund-Informationen zu Cuba zugänglich macht, die an anderer Stelle und in deutscher Sprache nicht in diesem Umfang zugänglich sind. Es empfiehlt sich, das Buch bald zu lesen, bevor es wieder veraltet ist.

Kosta Mathéy

Van Rooy, A. (Hg.): Civil Society and the Aid Industry, Earthscan, London 1998, 237 S., LE 15.95.

Dieses Buch ist ein Produkt des kanadischen North-South Institute, das seit mehr als 20 Jahren unter anderem die Entwicklungspolitik begleitet und deren Interesse an der Zivilgesellschaft kennt. Die Entwicklungshilfe-Organisationen des Nordens sind zunehmend an diesem neuen Phänomen, der „Zivilgesellschaft“ interessiert. Mitunter wird ihr eine alles regelnde Rolle zugedichtet, and viele Organisationen scheinen davon überzeugt, daß die Zivilgesellschaft den entscheidenden Anstoß zur Lösung der massiven Armutsprobleme geben kann. Die Autoren unternehmen hier ein kritische Wertung dieser Auffassungen, welche zum Teil im Elfenbeinturm entstanden sind. Anhand von Fallstudien n Peru, Kenya, Sri Lanka und Ungarn werden die konkreten Profile und Leistungskapazitäten der Organisationen der Zivilgesellschaft durchleuchtet. Daraus ergibt sich, daß die Organisationen der Zivilgesellschaft erheblich weniger in den Bereiche aktiv sind, die den Geberorganisation des Nordens wesentlich erscheinen, es wird viel weniger an der Demokratisierung der Gesellschaft, der Förderung der Menschenrechte oder Armutsbeseitigung gearbeitet als angenommen wurde. Außerdem fließt nur ein recht kleiner Teil der Entwicklungshilfe zu den Zivilgesellschafts-Organisationen. Darum wird von der Herausgeberin vorgeschlagen, daß die Gebergemeinschaft mehr strategisch und zielgerichtet gehandelt werden sollte, damit dieses neue Paradigma sich in der Praxis beweisen kann.

Florian Steinberg

Hope, A., Timmel, S.: Training for Transformation - A Handbook for Commnity Workers, Handbook IV, 1999, 294 S., LE 12.95. Intermediate Publishing, 103/105 Southamption Row, GB-London WC1 4HH.

Dieses Buch ist die Neuauflage eines alten, weitgehend in Afrika seit 1984 benutzten Handbuches, das 1994 inhaltlich überarbeitet und nun neu aufgelegt wurde. Teile dieses Buches hatte man vorher schon ins Spanische und Französische übersetzt. Das Buch ist ein sehr praktischer und didaktisch gut aufgearbeiteter Leitfaden für Sozial- und Gemeindearbeiter. Es geht von der Prämisse aus, dass Veränderung in den Lebensumständen der Armen nur da entstehen kann, wo wirkliche Beteiligung der Betroffenen praktisiert wurde. Allein die Diskusion des Begriffes Entwicklung bedeutet für viele Gemeinschaften, dass etablierte Vorstellungen in Frage gestellt werden und sich heute die umweltbedingte Überlebensfrage stellt. Das Buch hat fünf Hauptthemen: die Umwelt, geschlechtsbedingte

Entwicklungsaspekte, Rassismus, multi-kulturelles Verständnis, Schaffung von partizipativer Regierbarkeit auf lokaler Ebene. Diese Themen wurden im Zusammenhang einer jahrelangen Arbeit mit afrikanischen und US-amerikanischen Nachbarschafts- und Stadtteil- wie Dorfgruppen entwickelt, und sehr konkret und didaktisch detailiert. Jedes Kapitel besteht aus einer Reihe von Übungen, die für den Gruppenleiter erklärt sind, dann werden Handouts für die Teilnehmer präsentiert, und es gibt viele inter-aktive Formen der Vermittlung und des partizipativen Lernens in diesem Handbuch. Viele der Themen werden mit provokativen Stellungnahmen eingeführt, darauf basierend die Übungen und Diskussionsrunden aufgebaut. Die Übungen können in allen möglichen Sequenzen angewandt werden, je nach Zielgruppe: Erwachsenenausbilder, Sozialarbeiter, Community Development Workers, kirchliche Akteure, Gewerkschaftler und alle anderen Organisationen, deren Interesse der gesellschaftliche Wandel ist.

Florian Steinberg

Payne, G. (ed.): Making Common Ground Public-private partnerships in land for housing, 1999, 241 S., LE 15.95. Intermediate Publishing, 103/105 Southampton Row, GB-London WC1 4HH.

Geoffrey Payne ist vielen schon durch verschiedene Veröffentlichungen zum Thema der Bodenversorgung in der Stadtentwicklung bekannt. Dieses neue Buch basiert auf einer Reihe von Forschungsarbeiten, die im Auftrag der britischen DFID in Indien, Pakistan Südafrika und Ägypten durchgeführt wurden. Das Buch wird weiter angereichert durch Erfahrungen aus der südasiatischen, südostasiatischen und afrikanischen Region, Mexiko, Bulgarien und Russland und Großbritanien. Das Buch beansprucht, einen umfassenden Überblick zu geben von den gegenwärtigen Erfahrungen mit effizienter und armuts-orientierter Bodenversorgung durch Partnerschaften bei der Bodenversorgung für städtische Siedlungen. Einige dieser Projekte waren formale Partnerschaften, andere informeller Art. Die vorgeführten Beispiele zeigen eine interessante Bandbreite von organisatorischen Modellen, die allesamt das Fehlschlagen der Mehrzahl der klassischen Initiativen des Staates belegen. Die Erfahrungen der partizipativen Modelle der Grund- und Bodenentwicklung oder Stadtteilentwicklungsprojekten, des Transfers von Bebauungsrechten, sowie der privaten Beteiligung von Immobilienfirmen an der Slumsanierung (land sharing), das gesteuerte Squatting, die Konzepte von wachsenden Häusern sind sicherlich relevante Fallbeispiele, die weltweite Relevanz haben (können). Ebenso die enge Partnerschaft des informellen Bausektors mit den Behörden, wie es massive Praxis ist im Falle Ägyptens, oder das Land-Pooling/Readjustment System, bei dem sich private Eigentümer zusammenschließen, um bessere Grundstücksnutzung und eine Finanzierung ihrer Infrastrukturversorgung zu erzielen. Abschließend stellt der Herausgeber fest, daß die Partnerschaften sicherlich die Verfügbarkeit von städtischem Bauland vergrößert haben, durch erhöhte Versorgung und Marktangebote eine größere Effizienz des Bodenmarktes bewirkt haben, wenn dies sich auch nicht in allen Fällen in Bodenversorgung für die Armen und Ärmsten niedergeschlagen hat. Aber in jedem will das Buch darauf bestehen, daß die Partnerschaften in der Regel eine Win-Win Situation geschaffen haben, und das allein rechtfertigt eine weitere Propagierung dieser Konzeption. Man darf davon ausgehen, daß es in den kommenden Jahren noch zahlreiche (wenn nicht gar eine richtige Flut von derartigen) Arbeiten zu diesem Thema geben wird, und sicherlich auch mit vielen neuen Beispielen aus Regionen, die hier ausgespart bleiben...

Florian Steinberg

Pope, J. (Hrsg.): National Integrity Systems – The IT Source Book, Third Edition, Berlin 1999, 114 S., DM 75,- (Bezug: Transparency International, Otto-Suhr-Allee 97-99, 10585 Berlin)

Die weltweit berühmt gewordene Anti-Korruptions Gesellschaft Transparency International hat mit diesem erweiterten Handbuch ein wichtiges Nachschlagewerk zum Thema der Korruptionsbekämpfung herausgebracht. Im ersten Teil des Buches geht es um die analytischen Instrumente der Korruption, Methoden der Identifizierung von korrupten Praktiken und deren Eliminierung, sowie die Schlüsselemente eines Nationalen Integritätssystems. Im zweiten Teil des Buches werden die wesentlichen Elemente dieses Nationalen Integritätssystems vorgestellt: der demokratische Prozess, die Zivilgesellschaft, administrative Reformen, der Ombudsmann, das Rechtssystem, die Finanzkontrolle, öffentliche Ausschreibungen, die Rolle der Privatwirtschaft, Informationskampagnen und Öffentlichkeitsarbeit, unabhängige Anti-Korruptionsvereine/-gesellschaften, internationale Akteure und Mechanismen, gutes finanzielles Management. Der dritte Teil bietet eine Liste "guter Praxis" in der Korruptionsbekämpfung. Die Publikation ist sicherlich ein wichtiger Beitrag, da hier die wesentlichen Makro-Maßnahmen zur Korruptionsbekämpfung dargestellt werden, sozusagen eine Darstellung der "state of the art" zum Thema. Vieles ist sicherlich noch weit entfernt von der Realität vieler Länder, speziell des Südens, aber der Kampf gegen die Korruption hat seit einigen Jahren begonnen, wichtige Formen anzunehmen, und Transparency International hat nicht nur wesentliche Instrumente zur Korruptionsbekämpfung ausgearbeitet (wie zum Beispiel eine Modellsatzung eines "Integrity Pact" zwischen Regierungen und Privatwirtschaft), sondern kann heute schon ein weltweites Netz von Filialen aufweisen. In Zukunft wird man sicherlich noch mehr von Transparency International in Sachen Erfolge der Korruptionsbekämpfung hören können, denn Öffentlichkeitsarbeit ist eine der wesentlichen Aktionslinien von Transparency International.

Florian Steinberg

Ökologie

Atkinson, A., Dávila, J.D., Fernandes, E. Mattingly, M. (Hg.): The Challenge of Environmental Management in Urban Areas, Ashgate Studies in Enviornmental Policy and Practice, Ashgate Publishing,

Aldershot 1999, 298 S., LE 42.50 (Bezug: Ashgate, GB Hampshire GU11 3HR).

Dieses Buch ist ein weiterer Band mit Konferenzbeiträgen eines internationalen Treffens des Jahres 1997. Das Buch legt seinen Schwerpunkt auf die in den letzten Jahren formulierten Ansätze, Strategien und neuen Techniken des städtischen Umweltmanagement, vorrangig die Lokale Agenda 21. Während die Länder des Nordens vielen als führend und nachahmenswert gelten, sind die Länder des Südens um die Findung ihres eigenen Weges bemüht.

Das Buch ist unterteilt in Beiträge zu Politik, Management, Organisation und sektorielle Ansätze. Es geht im Themenblock der politischen Orientierung um mehr als nur den oft zitierten „politischen Willen", sondern um die organisatorische Managementkapazität. Bei den Managementaspekten werden wieder mal die Leitthemen der Partizipation, Partnerschaften, intersektorale Ansätze, Transparenz und Verantwortung zitiert.

Ansonsten gibt es sektorale Beiträge zum Wassermanagement in Madras, Umweltmanagement am Kap in Südafrika, dem Programm der städtischen Parks in Chile, Abfallmanagement in Afrika, Kopenhagen und Colombo, Luftverschmutzung in Sao Paolo, Armutsaspekte in Rio de Janeiro, Überschwemmungen in Buenos Aires, das Accra Sustainable Programm, ein nationales Umweltprogramm in Thailand, die Lokalen Agenda 21 Erfahrungen in Lateinamerika, Frischwasserreservoirs in der Türkei, die Rolle der Universität als Erneuerer des Umweltmanagement am Beispiel von Manizales, und anderes mehr... Eine gute Sammlung von anregenden Artikeln, und die Herausgeber haben sich hier etwas zurückgehalten mit allzu ambitiösen Versuchen der Theorieformulierung, was ihnen zugute gehalten werden sollte.

Florian Steinberg

Fernandes, E. (Hg.): Environmental Strategies for Sustainable development in Urban Areas - Lessons from Africa and Latin America, Studies in Green Research, Ashgate Publishing, Aldershot 1998, 212 S. (Bezug: Ashgate, Gower House, Croft Rad, Aldershot, Hampshire GU11 3HR).

Dieses Buch enthält die Konferenzbeiträge eines internationalen Treffens des Jahres 1996. Die Hauptthese des Herausgebers ist, daß der Süden in den letzten Jahren substantielle Fortschritte in der Thematik des städtischen Umweltmanagement gemacht hat, und daß sogar der Norden davon lernen könne. Nichts destotrotz ist die Forschungsagenda über viele Jahre von den Ländern und Interessen des Nordens dominiert worden. Die diversen Entwicklungsagenturen, die in Afrika und Lateinamerika aktiv sind, haben zwar zunehmend die Bedeutung der Umweltdimension erkannt, aber es hat noch lange nicht zu institutionellen Veränderungen in diesen Ländern geführt. Deshalb ist die Rolle der NGOs und CBOs als Vorreiter der Formulierung von Umweltstrategien so bedeutsam.

Das Buch präsentiert die Umweltstrategien und Stadtforen in Sao Paolo und Kumasi, das neue Programm zur Reinigung der Luft Mexicos, die modellhaften Projektbeispiele der Mega-Cities Projektes, die Erfahrungen von regionalem Umweltmanagement in Bio-Bio, Chile, sowie arabische Erfahrungen mit dem bekannten Zabbaleenprojekt in Kairo und der Altstadterneuerung in Tunis. Dazu gibt es noch kurze programmatische Selbstdarstellungen der UNDP und des UNCHS mit seinem Sustainable Cities Programme. Eigentlich nicht viel Neues, doch interessant in historischer Hinsicht, als Kompilation einiger Ansätze und Initiativen, ohne daß Vollständigkeit reklamiert werden kann.

Florian Steinberg

Loefstedt, R. , Frewer, L. (Hrsg.): The Earthcan Reader in Risk & Modern Society, London 1998, 278 S., LE 16.95 (Bezug: Earthscan, Kogan Page, 120 Pentonville Road, London NI 9BR).

In verschiedenen Feldern der modernen Gesellschaft ist das Management von Risiken in den letzten Jahren zu einer wichtigen Aktivität geworden, sowohl für den öffentlichen Sektor wie auch für die Privatwirtschaft. Dieses Buch bietet einen Überblick der Sozialwissenschaften, die sich mit Fragen der Risiken in der Gesellschaft, der kulturellen Dimension von Risikobegriffen, sowie der Arbeit der Medien in der Risikoforschung befasst haben. Dies schließt Forschungen über mentale Modelle der Risikoperzepcion ein (z.B. im Falle von Drogenkonsum). Im letzten Abschnitt ein kurzer Beitrag über die Arbeit von Sozialwissenschaftlern in einem Abfalldepotprojekt, dass gewisse Umweltrisiken einschloss.

Leider finden wir in diesem Buch wenig von den Umweltrisiken, die weite Teile der Welt heute immer häufiger heimsuchen. Das wäre wohl interessanter gewesen. Oder auch eine finanzielle Risikoanalyse eines interessanten Investitionsprogrammes des privaten Sektors...

Florian Steinberg

Infrastruktur

Sader, F.: Attracting Foreign Direct Investment into Infrastructure – Why is it so Difficult?, Foreign Investment Advisory Service, Occasional Paper 12, International Finance Corporation and World Bank, Washington 2000, 171 S., $ 25 (World Bank Publications, P.O. Box 960, Hemdon, VA 20172-0960, USA).

Die International Finance Corporation und die World Bank haben mit diesem Buch ein wichtiges Dokument veröffentlicht. Es zeigt auf, dass die privaten direkten Infrastrukturinvestitionen in Entwicklungsländern heute einen erheblichen Anteil an der Gesamtsumme der weltweiten, in die Entwicklungsländer fließenden Investitionen ausmachen. Und bei 80% der privaten Investitionen waren ausländische Investoren beteiligt. Das am meisten davon begünstigte Land ist Brasilien, das alleine 33% der privaten Infrastruktur-investitionen erhält. Darüber hinaus ist Lateinamerika der führende Kontinent wegen seiner die privaten Investitionen fördernden Rahmenbedingungen und einer offenen Privatisierungs- bzw. BOT (build-operate-transfer) Politik. An zweiter Stelle stehen Süd-Ost-Asien. Trotz der massiven Expansion der privaten Investitionen gibt es etliche Hindernisse, die u.a. ihren Ursprung haben bei den staatlichen Serviceunternehmen, den Konflikten unter den diversen Regierungsinstanzen, einer immer noch existierenden Bevorzugung der öffentlichen Institutionen durch die Regierungen, politische und soziale Proteste gegen private Projekte, unklare Lizenzvergabe-praktiken, Korruption, Mangel an Seriosität gegenüber vertraglichen Verpflichtungen vorausgegangener Regierungen, inadequate Gesetzgebung, Mangel an sektorialer Liberalisierung.

Der Autor fordert für die BOT Projekte der Zukunft eine Art spezialisierter Institution zur Regulierung und Förderung der privaten Investitionen. Deren Aufgaben sollten einschließen, die Identifizierung potentieller Investitionsprojekte, die Ausarbeitung und Evaluierung detaillierter technischer, legaler und finanzieller Durchführbarkeitsstudien, die Erarbeitung von Ausschreibungsdokumenten und der Steuerung des Vergabeprozesses, die Evaluierung von Vorschlägen, und die Verhandlung mit den ausgewählten Investoren. Dies bedeutet, daß ein von den Regierungen etabliertes Regel- und Kontrollwerk unabdinglich ist, um die Interessen der Allgemeinheit, der Investoren wie der Konsumenten zu schützen.

Florian Steinberg

Dinar, A. (ed.)\: The Political Economy of Water Pricing Reforms, New York 2000, Oxford Unversity Press $ 50, 405 S. (Bezug\: World Bank Publications, P.O. Box 960, Hemdon, VA 20172-0960, USA).

Das Thema der Wasserpreisreformen hat die Weltbank seit langem beschäftigt. Dieses Buch bietet theoretische wie praktische Konzeptionen für die Analyse und Gestaltung von Wasserpreisereformen, die sowohl auf den städtischen wie landwirtschaftlichen Wasserkonsum orientiert sind. Es gibt viele politische Faktoren, welche den auf adequate, kostendeckende Preisgestaltung ausgerichteten Refomen entgegenstehen. Die politische Konjunktur vor oder nach den Wahlen spielen ebenfalls eine Rolle, wie auch der Einfluss internationaler Zusammenarbeit. Viele Beiträge dieses Buches belegen, dass ein Reformprogramm vor allem dann erfolgreich sein wird, wenn die oekonomische Rationalität den Entwurf, die politische Sensitivität bei der Durchführung und eine permanente Beachtung des politisch-ökonomischen Zusammenspiels und der sozio-kulturellen Faktoren das Programm angeleitet hat. Doch wie in diversen Studien sichtbar ist, selbst sorgfältig(st) geplante Reformen koennen schiefgehen – es gibt keine allgemeinen Erfolgsrezepte. Dennoch wird empfohlen, dass wirtschaftliche Gewinne unter den verschiedenen beteiligten Sektoren zu teilen seien, dass ein sinnvolles institutionelles Regelsystem eingerichtet wird – und keine Standardlösungen. Das Buch besteht aus 13 Kapiteln zur Wirtschaftstheorie und emipirischen Evaluierung der Reformmaßnahmen; fünf Länderbeispiele (Australien, Brasilien, Mexico, Pakistan und Yemen) repräsentieren eine weite Bandbreite.

Florian Steinberg

Aktuelles / News

Kurze Hinweise auf aktuelle Ereignisse, Nachrichten, Konferenzen, Wettbewerbe, Ausbildungsgänge etc. werden gerne entgegengenommen. Zuschriften bitte an: Michael Peterek, Adlerstr. 27A, 76133 Karlsruhe.
Die Redaktion behält sich das Recht der Auswahl und Kürzung vor.

European Urban Studies Program. Postgradualer Studiengang Europäische Urbanistik. Bauhaus-Universität Weimar

The European Urban Studies Program wants to contribute to a new and sustainable culture of planning based on an up-to-date post-fordist planning philosophy. Urban developments in Germany, Europe, and elsewhere bring about challenges to the design, the formation, planning and reflection of urban studies that are so severe that the education profile has to be changed. These changes especially concern the overlap of cultural programs and conceptual qualifications. Topological sciences, related to space and its qualities, and the semiotic knowledge about a de-urbanized space will become as important as the management of big events, the moderation of informal planning processes, and the mediation of competitive spatial demands. Other specific disciplines have to contribute the fundamental knowledge about the correlation between different urban regulation regimes and the sociology of suburban and extra-urban areas.
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A diploma in urbanism or a master of science certifies the successful graduation. The program serves for the academic preparation and support of a doctorate (Dr.-Ing. or Dr.phil.) Efforts are being undertaken to extend the European Urban Studies Program to a PhD level. Scholars from non-European countries are seen as an enrichment of the program and warmly welcomed to apply.

Further information and application: Bauhaus-Universität Weimar, Studienberatung, D-99421 Weimar, Germany, Tel. +49-(0)3643-582358, http://www.uni-weimar.de/urbanistik/fs-kontakt.html

Frank Eckardt

Periphere Welten. Neue Formen der Urbanität in der Dritten Welt und Europa. TRIALOG-Jahrestagung 2000 an der Bauhaus-Unversität Weimar. Haus der Europäischen Urbanistik, Weimar, Samstag, 28. Oktober 2000, 10.00-18.00 Uhr

Die Beschreibung von urbanen Lebensformen orientiert sich an dem traditionellen Muster dichotomer Stadtstrukturen. Demgegenüber spielt sich bereits ein Großteil des Lebens der meisten Menschen jenseits von zentralen Räumen ab. Neue Raumidentitäten haben sich stadtplanerisch und architektonisch in den Zwischenräumen der metropolitanen Kerne konstituiert. Es ist anzunehmen, dass dies auch auf die soziale Konfiguration gesellschaftlicher Räume von erheblicher Auswirkung sein wird. Die Tagung wird sich der Frage stellen, ob wir es mit neuen peripheren Welten zu tun haben und wie sich diese planen, bauen und soziologisch verstehen lassen.
Peripherie ist gleichfalls eine Metapher für die Analyse der Verhältnisse von Dritter Welt und den hoch industrialisierten Ländern der nördlichen Hemisphäre. Doch auch diese deutliche Distinktion ist durch den global flow von Menschen, Informationen und Waren in Frage gestellt worden. Peripherie ist in diesem Sinne auch im Zentrum zu finden. Zu fragen ist daher, wie sich die ehemals monolithischen Kapitale in ihrer geographischen und sozialen Raumproduktion restrukturieren. Für die weltpolitische Peripherie stellt sich die existentielle Frage nach der weiteren Marginalisierung der "lokalen Armen" (Bauman) in einer glokalisierten Weltgesellschaft. Im Rahmen der Tagung werden konkrete Fallbeispiele "peripherer Welten" aus den Ländern des Südens und des Nordens einander gegenübergestellt.
Information und Anmeldung:

Frank Eckardt, Bauhaus-Universität Weimar, Haus der Europäischen Urbanistik, Leibnizallee 20, D-99425 Weimar,
Tel. +49-(0)3643-904031
e-mail: Frank.Eckardt@archit.uni-weimar.de.

Im Anschluß an die Fachtagung findet am Sonntag, den 29.10.2000, die Mitgliederversammlung der Vereinigung zur wissenschaftlichen Erforschung des Planen und Bauens in Entwicklungsländern e.V. (Herausgeberverein der Zeitschrift TRIALOG) statt. Interessierte sind dazu herzlich willkommen.

Frank Eckardt

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Veranstaltungen / Forthcoming Events

July 3 - 6, 2000 in Berlin, Germany
"Cities for All - Local Heroes 21".
European Meeting of Urban Grassroot Organisations. In preparation for the World Assembly of Urban Inhabitants (October 2-6, 2000 in Mexico City). Organised by Bildungswerk Berlin, Forum für Umwelt und Entwicklung, Habitat Forum Berlin and TRIALOG. Supported by HIC and various NGOs from Germany and Europe. Venue: ufa-Fabrik, Viktoriastr.10-18, Berlin-Tempelhof. Contact: Klaus Teschner, Habitat Forum Berlin, Baerwaldstr. 51, D-10961 Berlin, Germany, ✆ (*49 30) 694 67 09, Fax: 693 31 09
e-mail: teschner@habitat-forum-berlin.de

July 4 - 6, 2000 in Berlin, Germany
URBAN 21 - World Conference on the Future of Cities. An event of the world exposition EXPO 2000/ Hanover. Organised by the Federal Ministry of Transport, Construction and Housing. Contact: Federal Office for Building and Regional Planning, URBAN 21, Am Michaelshof 8, D-53117 Bonn, Germany, Fax: (*49 228) 826 315, e-mail: info@urban21.de, website: www.urban21.de

July 7 - 9, 2000 in Berlin, Germany
"Urban Agriculture and Horticulture: The Linkage with Urban Planning". An event in the frame of Urban 21. Organised by TRIALOG, HABITAT CUBA, Havana and the Humboldt-University Berlin, Faculty of Agriculture. General correspondence: urban.agriculture@usa.net
Local coordination: Dr. Heide Hofmann, Humboldt-Universität, Invalidenstrasse 42, D-10099 Berlin, Germany, % (*49 30) 2093 8720, Fax: 2093 8723
e-mail: heide.hofmann@agrar.hu-berlin.de
website: www.urban21.de
International coordination: Dr. Kosta Mathéy, Fax: (*49 30) 3603 135 196
e-mail: kmathey@usa.net

July 10 - 14, 2000 in Johannesburg, South Africa
Urban Futures 2000. International Conference on Issues Confronting the City at the Turn of the Millenium. Organised by the University of the Witwatersrand, Johannesburg and the Greater Johannesburg Metropolitan Council. Contact: Ms Lesley Stephenson, Urban Futures 2000, PO Box 327, WITS 2050, South Africa, ✆ (*27 11) 716 5091
Fax: (*27 11) 339 7835
e-mail: Stephenson@egoli.min.wits.ac.za
website: http://sunsite.wits.ac.za/urbanfutures/contact.htm

July 15 - Oct. 15, 2000 in Hanover, Germany
International Women's University. Interdisciplinary postgraduate study and research programme in English. Subjects: body, city and gender, information, migration, water, work. Application forms: German Academic Exchange Service (DAAD)
e-mail: ifu@daad.de
website: www.int-frauenuni.de

August 9 - 13, 2000 in Taegu, South Korea
2nd International Critical Geography Conference - "For Alternative 21st Century Geographies". Organised by the International Critical Geography Group. Call for papers. Contact: Neil Smith, ICG Conference, CCACC, 8 Bishop Place, Rutgers University, New Brunswick, NJ 08903, USA
e-mail: nsmith@rci.rutgers.edu
website: http://econgeog.hit-u.ac.jp/icgg/

August 15 - 17, 2000 in Hanover, Germany
Global Dialogue on Urban-Rural Relationships. Organised by UNCHS (Habitat) and Centre for Development Research, Univ. of Bonn. Contact: Mathias Hundsalz, UNCHS (Habitat), ✆ (*254 2) 623 103
e-mail: mathias.hundslz@unchs.org

August 31 - Sept. 2, 2000 in Berlin, Germany
European Cities: Networks and crossroads, Fifth International Conference on Urban History - Cities & Catastrophs. Organised by the European Association of Urban Historians, Contact: schott@pg.tu-darmstadt.de, hplatt@orion.it.luc.edu, massard.guilbaud@wanadoo.fr

September 5 - 9, 2000 in Perth, Australia
Habitus 2000 - 'A Sense of Place'. Organised by Curtin University of Technology. Contact: Promaco Conventions Pty Ltd, PO Box 890, Canning Bridge, Western Australia 6153, ✆ (*618) 9332 2900, Fax: (*618) 9332 2911
e-mail: promaco@promaco.com.au
website: www.promaco.com.au/conference/2000/habitus

September 7 - 11, 2000 in Chetumal, Mexico
36th International ISoCaRP Planning Congress: People's Empowerment in Planning - citizens as actors in managing their habitat. Organised by the International Society of City and Regional Planners (ISoCaRP). Contact: ISoCaRP Secretariat, Mauritskade 23, 2514 HD - The Hague, The Netherlands
IFHP 2000 Congress 'Urban Networks'. Organised by the Intern. Federation for Housing and Planning (IFHP). Contact: Rotterdam Development Corporation, PO Box 6575, 3002 AN Rotterdam, The Netherlands, ✆ (*31 10) 489 6999, Fax: 489 7136
e-mail: g.ploeg@abr.rotterdam.nl

Sept. 11 - 15, 2000 in Delft, Netherlands
UDMS 2000: 22nd Urban and Rural Data Management Symposium: UDMS - Common Problems - Common Solutions Land Markets and Land Consolidation in Central Europe. Contact: Elfriede M. Fendel, Delft University of Technology
e-mail: e.m.fendel@geo.tudelft.nl
website: www.udms.net/

October 2 - 6, 2000 in Mexico City, Mexico
World Assembly of Urban Inhabitants - Rethinking the City from the Grassroots. Organised by Habitat International Coalition (HIC). Contact: Coalición Habitat México – HIC Mexico, Cordobanes 24, San José Insurgentes, 03900 México, D.F., ✆ (*52) 5 651 6807, Fax: (*52) 5593 5149
e-mail: chm@laneta.apc.org

October 9 - 12, 2000 in Haifa, Israel
"Medit.-Waste 2000". Mediterranean Workshop on the Treatment and Utilization of Municipal Solid Waste. Organised by: Technion, Israel Institute of Technology. Contact: Ofira Ayalon, Technion, Israel Institute of Technology, Faculty of Agricultural Engineering, Haifa. 32000, Israel, ✆ (*972 4) 829 2480, Fax: (*972 4) 822 1529, e-mail: medit2k@tx.technion.ac.il
website: www.technion.ac.il/technion/agr/medit2k.html

Oktober 13 - 14, 2000 in Berlin, Germany
Intern. Konferenz 'Wohnungsgenossenschaften 2000. Demokratische Strukturen und Selbsthilfeansätze'. Humboldt Universität. Registration: DM 110,-. Info: www.agrar.hu-berlin.de/genossenschaftswesen; andreas.eisen@rz.hu-berlin.de

October 17 - 20, 2000 in Accra, Ghana
West Africa Waste Conference. Organised by the Healthy Cities Foundation. Call for papers. Contact: Samson J. Nibi, Healthy Cities Foundation, Braspenningdreef 3, 5431 AM Cuijk, The Netherlands, ✆/Fax (*31 0485) 31 60 24, e-mail: samlia@universal.nl

November 6 - 9, 2000 in Marseille, France
7th International Conference Cities & Ports. Organised by IACP (Association Internationale Villes et Ports)
e-mail: listefr.conference@aivp.net
website: www.aivp.com/7conf/formgb.asp