

## **Urban Agriculture and Poverty: The Latin America Case**

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### Introduction:

“Cities function by drawing on the skills and labour of their populations; in turn, people are drawn into the city in search of work and opportunities to improve their lives. Many fail to find the employment necessary to give them and their families an adequate income and suffer deprivation and poverty.” (Drakakis-Smith, 1996, p.663)

The human endeavour has become an urban one. We are no longer peasants of the countryside; we are citizens of the global city. Driven by the economic forces of industrialisation and demographic growth, the urbanisation of Latin America began in the 1940's (Schteingart, 1986, p.56; Morello et al, 2000, p.122; Ward, 1998, p.43). “Recent in-migration from the countryside combined with high birth rates has resulted in thousands of persons who cannot be readily absorbed in the urban economies” (Griffin & Ford, 1980, p.404). Ward states that “during the early decades of the [Mexico] City's growth, when the demand from industry was high, migration flows accounted for around 60 per cent of the population expansion, with the remainder the result of natural increase (1998, p.48)”. “People did not move out of the countryside simply because they had little potential livelihood as peasants- this had been the case for many of the younger people for many years. Rather they moved because the demand for labour in the factories promoted and required their movement (Ward, 1998, p.43)”. Therefore, Urban-Rural migration and the urbanization of areas previously dedicated to agriculture transformed the urban structure of Latin America.

In the future, Ecumenopolis –a global system of settlements in which the urban and rural components are entirely integrated – is expected (Potter and Unwin, 1995, p.68).

“Virtually all the population growth expected during 2000-2030 will be concentrated in the urban areas of the world. During that period the urban population is expected to increase by 2 billion persons, the same number that will be added to the whole population of the world. In terms of population size, there are 2.9 billion inhabitants in urban areas today and 4.9 billion are expected in 2030, whereas the world has 6.1 billion inhabitants and is expected to have 8.1 billion by 2030.” (United Nations, 2001).

Presently, Latin America has 51 cities with more than one million inhabitants. Approximately 75% of the total population lives in cities: this proportion is expected to increase to the levels of the more developed world, where 84% of the total population will live in urban areas by the year 2030 (UNCHS, 2001a; United Nations, 2001).

The conversion of the most productive Latin American farmland to urban cores, and the high level of rural-urban migration, compromises our ability to feed the continent’s inhabitants. Urban Agriculture provides a means of coping with the food-supply problem and addresses some of the social and economical inequities of developing cities. I claim that urbanization is inevitable, however governmental urban planning policies in Latin America should acknowledge Urban Agriculture as the best alternative to feed an increasing urban population and to bring economic opportunities to the urban poor.

#### Latin America urbanization and urban poverty: A Background.

“The agricultural landscape, which surrounds most of our cities and towns, is being converted to development at a still accelerating rate. Farmland is lost as subdivisions and malls with large parking lots are built. Asphalt replaces topsoil” (Senville, 2000, ¶ 1).

Feeding the future human population is a major concern in the urban-rural relationship. Pimentel et al. state that “maintaining fertile and ample land is critical if large populations are to be fed (1998, p.125). Moreover, Del Mar et al. state that “in countries where there has been a shift from an agrarian to an industrial economy, abandoned agricultural lands are often converted to urban uses (2001, p.49).” Presently, many countries rely on imports to feed their population (Netherlands, Japan, South Korea, etc). If the productive lands of agrarian countries disappear, the ability to sustain import-reliant populations is threatened (Del Mar et al., 2001, p.49; Pimentel et al., 1998, p.126-127). Hence, in the dawn of the urban millennium, food security cannot rely on vast rural areas. Fertile land must be sought inside urban cores and in the peri-urban areas of urban centres. Moreover, economic and social policies in developing countries have played a central role in the food security of developing cities.

The macroeconomic policies in Latin America changed the urban centres in an unprecedented way: rural lands were lost to an expanding urban economy and peasants found their future in industrial jobs. During the 1960's, encouraged by the World Bank, several Latin American governments, including those of Brazil and Colombia, began to reduce levels of domestic protection and give incentives to export producers. Between 1951 and 1964 the demographic growth of Colombian cities was 5% to 6%. In Bogota the population exploded from 638, 562 habitants in 1951 to 1, 661, 935 in 1964. Rural-urban migration was the principal cause of urban expansion. The rural-urban migration of peasants is, therefore, encouraged by the industrialization of the economy and, in some Latin American countries (ex. Colombia), by widespread war in rural areas. Rural-urban migration and the loss of farmland to urbanization is, as such, strongly influenced by economic policies promoting industrialization.

In Latin America, the “industrialization” of the economy produced jobs and housing for many, but the pace of “development” did not reach that of the urban growth. The disparity between urban and rural conditions encouraged many people to leave the countryside and migrate to the “industrial” cities, creating wide areas of squatter settlements. “In 1964, more that three-quarters of the

population of Bogota aged over 15 years were migrants” (Gilbert, 1990). The arrival of young migrants changed the structure of the cities, and new migrants produced large numbers of city-born children. It has been established that around 40% of Colombian cities have been originated by “illegal” settlements (Valderrama, 1999) and in a typical Latin American city between 30 and 60% of the population lives in a barrio ‘pirata’ (Gilbert, 1990).

When the poor migrate to urban areas, many have to buy food instead of growing their own (Hubbart & Onumah, 2001). For most of the urban poor, shelter appears to be of less importance than food, with the greatest expenditure going toward the latter. Indeed, most measurements of overall poverty are couched in terms of the ability of the household to meet a basic food intake (Drakakis-Smith, 1997). Food not only has crucial links to health, poverty and vulnerability, but food also has important ties with employment, the urban environment and shelter. In this respect, Urban Agriculture becomes a potential survival strategy for developing countries (Drakakis-Smith, 1997). Urban and peri-urban agriculture is estimated to involve 800 million urban residents worldwide in income-earning and/or food-producing activities. The findings of national censuses, household surveys and research projects suggest that up to two-thirds of urban and peri-urban households are involved in agriculture.

While gardeners are by no means self-sufficient in their food needs, nor can they supply all food needs of each city, they are able to provide vitamins, minerals and carbohydrates that are crucial to people’s diets (Altieri et al., 1999). Poor urban dwellers often lack the purchasing capacity to acquire adequate amounts of food. In this sense, Urban Agriculture (UA) appears to reduce food insecurity by providing direct access to home-produced food to households and the informal market. Moreover, UA also enhances food security during times of crisis and severe scarcity, whether caused by national crises (civil war, widespread drought, currency devaluations, inability to import, etc.) or household crises (illness, health, sudden unemployment, etc.) (FAO, 2002).

#### Urban Farming: The answer to a crisis

The production of food inside cities is the response of the poor to the inadequate access to food and to the lack of employment opportunities. Cuba is an outstanding example in this respect. In 1989 the collapse of the socialist bloc market was the beginning of a severe economic slump in Cuba and had devastating effects on its food security. Food imports, which previously accounted for up to 57% of the caloric intake of Cuban population, dropped off as a result of the shrinking import quota. However, with the onset of the crisis, urban gardeners began to emerge all over Cuba, particularly in Havana, as a massive response by citizens themselves to the food shortages (Altieri et al., 1999). As a result, Cuban agricultural officials perceive UA as a key component of the overall national food system.

The success of UA is based on an integration of a variety of strategies that combine social, economic, and environmental concerns with issues of food security. UA increases the freshness of perishable foods that reach urban consumers, alleviates transportation burdens and increases the variety and the nutritional value of food available for the poor. UA transforms unsanitary and unsightly areas such as garbage dumps and vacant lots into healthy, productive environments. In addition, it assists in developing the environmental awareness of urban populations and utilizes the agricultural expertise of rural migrants. In addition, UA offers employment opportunities to disadvantaged groups such as women, seniors and children. It also uses available resources by recycling animal and industrial residues from local sources. However, the development of UA is slowed because planners see urban areas as alien to animals, with the result that livestock programs are removed from cities. (Altieri et al., 1999, Hubbart & Onumah, 2001, Losada et al., 2000).

The use of urban space for farming has received little attention from urban policy makers, who often see it in a rather negative light. They argue that it creates more waste to be disposed of and takes up land which should be used for housing. Moreover, UA competes for resources (water, land, labour and energy) and creates incompatible urban uses (smells, noises, pollution) (Hubbart

& Onumah, 2001). Nevertheless, there are examples of innovative uses of urban farming waste. In Mexico City, milk production from stables in eastern and southern urban zones uses locally available food, such as fruit and vegetable wastes from supply-centres, to feed the animals. Furthermore, the manure generated by urban milk production is stored with feed refuse to be sold as fertilizer for the production of nopal-vegetable (*Opuntia ficus indica*). Moreover, milk, calves and meat create a stable source of income for urban herders (Losada et al., 2000). This intensive horticultural and livestock production thrives in peri-urban areas, employs workers and produces reasonable incomes and returns. (FAO, 2002)

Urban producers achieve real efficiencies by making productive use of underutilized resources, such as vacant lands, treated wastewater, recycled wastes, and unemployed labour. In this sense, productivity can be as much as 15 times the output per acre of rural agriculture. Furthermore, the commercial peri-urban production of livestock is an extremely fast-growing sector, representing 34% of total meat production and nearly 70% of egg production worldwide. In addition, UA is often carried out on a part-time basis by women, who can combine food production activity with child care and other household responsibilities, thereby improving family economies. Finally, urban farming links food production with small-scale enterprises, such as street food stands, fresh milk outlets, and maize roasters. (FAO, 2002).

It is not only the supply of certain food products that makes UA important, but also who produces and consumes them. Increased market supply will tend to hold down consumer prices and improve food access, thereby benefiting the urban poor. In this respect, UA improves the intake of fruits and vegetables that in many developing cities only reach 20% of the daily recommendation of the World Health Organization. (FAO, 2002). Moreover, demand for cooked food has grown quickly in most cities as a result of changes in urban life-styles and the widespread urban poverty that fragments households. Food supply from street vendors depends upon local conditions. For example, it accounts for as much as 20-25% of household food expenditure in Bogota and

Caracas (Hubbart & Onumah, 2001). Nonetheless, urban authorities give low priority to UA issues and lack any food policy.

Optimal management of urban and peri-urban resources requires land use planning which views agriculture as an integral component of the urban resource system, balances the competitive and synergistic interactions among users of natural resources (water, land, air, wastes), and influences land rights, uses and values. In many areas non-farming households' inability to access land in the city is the major reason given for not farming. Moreover, poor migrants face constant evictions and difficulties in obtaining governmental credits for housing and farming. In this respect, allocating urban and peri-urban lands to agriculture, parks, housing or other uses is a fundamental policy decision based upon priorities and political interests.

Decline in space for urban agriculture is attributable not only to increased urban population density but also to changes in planning regulations (FAO, 2002). The implications of land shortages for the urban poor are two fold. First, food security is undermined by the inability of rural migrants to find legal areas to pasture their cattle or grow vegetables due to zoning laws and other urban planning provisions. Second, since most of housing of the urban poor is developed by 'pirata' invasions they face constant threats of eviction. In this respect, "Clearing desirable lands from the poor not only makes way for luxury developments and infrastructure projects but frees the wealthy from daily contact with the urban underclass" (Everett, 2001, p.454). Moreover, local governments, landowners, and developers often claim environmental "protection" and "sustainable development" to justify evictions from slums without any consideration for the right to housing (United Nations, 1948) or the devastating social impacts of involuntary displacements. Therefore, UA and housing rights present a case for urban land reform in Latin America.

Access to land and water is central to the development of UA. Urban Planning can integrate UA in cities by eliminating legal restrictions, such as exclusive zoning by-laws, and by allowing the use of unused public lands for pasture and horticulture. Furthermore, through the promotion of UA, urban

planners can incorporate recreation, production, and conservation into multifunctional land-use zoning. In addition, water access for UA can be improved through the use of recycled wastewater from domestic sources, but taking in consideration appropriate water treatment for agricultural use (FAO, 2002). Last, but not least, housing solutions for the urban poor should include areas for individual and communitarian gardening. (Aguila, 2002).

## Conclusion

Contrary to what might be hoped for, Latin American city development proposals have been based on a “western model” of development. Consequently, Latin American urban form has been dominated by concrete, automobiles, urban inequalities and the concept of “green spaces” (which see parks and gardens as controlled imitations of nature). At the same time, agriculture has been considered counter to the ideal of modern, urban life, giving rise to a curious “corruption” whereby animals exist only as pets – as “exhibition pieces” (e.g. zoos) or for sports – and agriculture is seen as an agent of pollution and a symbol of underdevelopment (Losada et al, 1998).

Governmental urban planning policies in Latin America need to incorporate UA as a tool for decreasing poverty, increasing food security and creating environmental awareness of urban citizens. The capacity of urban farmers to produce food inside cities demonstrates the imagination of vulnerable social groups (poor, women, elders) to generate alternative income and food solutions in the face of the ecological “catastrophe” resulting from the chaotic growth of developing cities. In this context, the opportunity arises for governmental policies to promote UA as a response to the economic and environmental challenges of modern industrialization. Moreover, UA can integrate sources of income with housing provisions in order to improve the squatter settlement consolidation process and the social and environmental sustainability of these areas.



## Definitions

While there is not yet a universally agreed-upon definition, Urban and Peri-urban Agriculture is perceived as agriculture practices within and around cities which compete for resources (land, water, energy, labour) that could also serve other purposes to satisfy the requirements of the urban population. Important sectors of UPA include horticulture, livestock, fodder, milk production, aquaculture, and forestry. Therefore, for expository purposes, the term UPA should be understood to be inclusive unless otherwise specified. (FAO, 2002)

“Urban” agriculture, as used here, refers to small areas (e.g. vacant plots, gardens, verges, balconies, containers) within the city for growing crops and raising small livestock or milk cows for own-consumption, or sale in neighbourhood markets. “Peri-urban” agriculture, refers to farm units close to town which operate intensive semi- or fully commercial farms to grow vegetables and other horticulture, raise chickens and other livestock, and produce milk and eggs. (FAO, 2002)

## References

Aguila (2002). La Integracion de la Agricultura en las Politicas Urbanas. Revista Agricultura Urbana. . Retrieved 1 May 2002 from AGUILA Web Site: <http://www.ipes.org/aguila/publicaciones/revista%20contenido1.htm>

Aguila (2002a). Agricultura Urbana, Una respuesta a la crisis?. Revista Agricultura Urbana. . Retrieved 1 May 2002 from AGUILA Web Site: <http://www.ipes.org/aguila/publicaciones/revista%20contenido1.htm>

Aguila (2002b). Viviendo con Animales en la Ciudad. Revista Agricultura Urbana. . Retrieved 1 May 2002 from AGUILA Web Site: <http://www.ipes.org/aguila/publicaciones/revista%20contenido1.htm>

Aguilar, Adrian G. (1999). Mexico City Growth and Regional Dispersal: the Expansion of Largest Cities and New Spatial Forms. Habitat International, Vol. 23, No. 3, pp 391-412.

Altieri, Miguel A. et Al. (1999). The greening of the “barrios”: Urban agriculture for food security in Cuba. Agriculture and Human Values. Vol.16: pp.131–140.

Bohrt, J P (1994) Agricultura Urbana en America Latina: Evaluacion in situ para iniciativa regional. Cities Feeding People, Report 13. . Retrieved 1 May 2002 from IDRC Web Site: [http://www.idrc.ca/cfp/abs13\\_e.html](http://www.idrc.ca/cfp/abs13_e.html)

Brand, Peter (1995). Ecologism and Urban Space: Nature, Urbanization and the City in Medellin, Colombia. Planning Practice & Research. Vol 10, Issue 1, pp.55-72.

Del Mar et al. (2001). Urban Expansion and the Loss of Prime Agricultural Land in Puerto Rico. Ambio. Vol.30, No 1, pp.49-54.

Drakakis-Smith, David (1997). Third World Cities: Sustainable Urban Development III- Basic Needs and Human Rights. Urban Studies, Vol. 34, Nos 5-6, pp.797-823.

Everett, Margaret. (2001). Evictions and Human Rights : Land Disputes in Bogota, Colombia. Habitat International. Vol.25, pp. 453-471.

FAO (2002). Urban and Peri-Urban Agriculture. Retrieved 1 May 2002 from FAO Web Site:

<http://www.fao.org/unfao/bodies/COAG/COAG15/X0076e.htm>

FAO (2002a). Issues in urban agriculture. Retrieved 1 May 2002 from FAO Web Site: <http://www.fao.org/ag/magazine/9901sp2.htm>

Gilbert, A.G. (1990). Latin America. Routledge, London.

Gilbert, A.G. (1994). The Latin America City. Latin American Bureau, London

Griffin, E. & Ford, L. (1980). A Model of Latin America City Structure. Geographical Review. Issue 70, pp. 397-422.

Gough, K.V. & Kellet, P. (2001). Housing Consolidation and Home-Based Income Generation: Evidence from Self-Help Settlements in Two Colombian Cities. Cities. Vol.18, No.4, pp-235-247.

Hubbard, M. and Onumah, G. (2001). Improving urban food supply and distribution in developing countries: the role of city authorities. Habitat International. Vol. 25. Pp. 431 –446.

IDRC (2002). Urban Agriculture Research in Latin America: Record, Capacities and Opportunities. . Retrieved 1 May 2002 from FAO Web Site: [http://www.idrc.ca/cfp/rep07\\_e.html#1.0%20%20INTRODUCTION](http://www.idrc.ca/cfp/rep07_e.html#1.0%20%20INTRODUCTION)

Losada et al. (2000). Urban Agriculture in Mexico City: Functions Provided by the Use of Space for Dairy Based Livelihoods. Cities. Vol.17, pp.419-431.

Losada et al. (1998). Urban Agriculture in the Metropolitan Zone of Mexico: Changes over time in urban, suburban and peri-urban areas. Environment and Urbanization. Vol.10. pp.37-54.

Madaleno, Isabel (2000). Research Note: Urban agriculture in Belem, Brazil. Cities, Vol. 17, No. 1, pp. 73–77.

Morello, J. et al. (2000). Urbanization and The Consumption of Fertile Land and Other Ecological Changes: The Case of Buenos Aires. Environment and Urbanization. Vol.12 No 2, pp-119-131.

Moskow, Angela (1999). Havana's Self-Provision gardens. Environment and Urbanization. Vol.11. No.2. October, pp. 127-133.

Murphy, D & Anana, T. (1994). Evictions and Fear of Evictions in the Philippines. Environment and Urbanization. Vol. 6(1). pp. 40-69.

Naranjo, Gloria. (1992). Medellín en Zonas: Monografías. Medellín, Colombia : Corporación Región.

Nates, Beatriz (2000). Movimientos Poblacionales y Conflictos Sociales en Colombia... De la Historia Incorporada a la Piel Social. Séminaire Prisma-3. Toulouse, 23 mars.

Pick, J.B. & Butler, E.W. (1997). Mexico Megacity. Westview Press. Boulder. United States.

Pimentel, D. et al. (1998). An Optimum Population for North and Latin America. Population and Environment. Vol 20, November 1998, pp. 125-148.

Potter, R. and Unwin, T. (1995). Urban Rural Interaction: Physical Form and Political Process in the Third World. Cities. Vol 12 No 1, pp.67-73.

Schteingart, M. (1986). Social Conflicts and Environmental Deterioration. Development: Seeds of Change. 1986(4), pp.56-60.

Tjallingii, S.P. (2000). Ecology on the Edge: Landscape and Ecology Between Town and Country. Landscape and Urban Planning. Vol.48 (2000), pp.103-119.

United Nations (2001). World Urbanization Prospects: The 1999 Revision. Retrieved 5 December 2001 from United Nations Web Site: <http://www.un.org/esa/population/publications/wup1999/urbanization.pdf>

UNCHS. (2001a). A World of Cities: Latin America and the Caribbean. Retrieved 5 December 2001 from United Nations Centre for Human Settlements Web Site: <http://www.unchs.org/istanbul+5/16.pdf>

UNCHS. (2001b). A World of Cities: Urban-rural Linkages. Retrieved 5 December 2001 from United Nations Centre for Human Settlements Web Site: <http://www.unchs.org/istanbul+5/86.pdf>

Valderrama, J. C. (1999). Colombia Urbana: Una Aproximación cultural.  
Santafé de Bogota: Universidad Nacional Abierta y a Distancia, Facultad de  
Ciencias Administrativas,

Vojnovic, I. (1999). The Environmental Cost of Modernism. Cities. Vol. 16,  
No. 5, pp. 301-313, Great Britain 1999.

Ward, P. (1998). Mexico City. Jonh Wiley & Sons, NewYork.

Yu-Ping, N. & Heligman, L. (1994). Growth of the World's Megalopolises.  
Mega-City Growth and the Future. The United Nations University, Hong Kong.