

Urban **Farming** and **Land-Use Planning** in the Dominican Republic

The municipality of Santiago de los Caballeros, in the Dominican Republic, aims to promote a more coherent and effective inclusion of urban agriculture citywide through municipal management and planning policies, mechanisms and instruments, with the objective to support local environmental management, and strategies for poverty reduction.



Jacquelyne Acevedo

The mayor of Santiago de los Caballeros, Dr Hector Grullón Moronta, alongside urban agriculture technicians and workers, carries out the first harvest of the horticultural garden developed on the grounds of the Municipal Palace.

In 1991, during a participatory analysis and planning exercise with urban actors (municipal staff, civic organisations and neighbourhood groups), the municipality of Santiago de los Caballeros identified the following principal problems, which are

The challenge now lies in the institutionalisation

similar to those of many other municipalities in Latin America:

- ❖ a significant percentage of urban population live in conditions of poverty and food insecurity (57%);
- ❖ a large volume of solid organic waste negatively affects the urban environment, and a lack of resources to collect and dispose of them adequately;
- ❖ a large amount of urban and peri-urban plots (both of municipal and private property);
- ❖ lack of environmental awareness;
- ❖ lack of inter-institutional cooperation and integration to solve the above-mentioned problems; and
- ❖ a weak application of existing laws and regulations, and the lack of a land-use plan and operation-

al regulation for poverty alleviation and environmental management.

One of the strategies to counteract these problems was the development of a (municipal) urban agriculture programme, which was set up in that same year. This programme would focus on more efficient use of local resources (like organic wastes) based on the existing agricultural culture, and an adequate institutional setting was developed.

The municipality has a specific role to play in this programme: “The municipality will develop urban agriculture as the coordinator, planner and facilitator of actions. It will also implement direct projects in its different zones, with support of the various departments (Public Works, Urban planning, Community Affairs, Cooperation and Development, Environmental Management, Public Relations and Legal Advice), neighbourhoods, the community and in cooperation with other entities (universities, private enterprises, NGOs). It will also guarantee the

legal framework that is required for UA development.” (Municipal presentation in Havana, Cuba, May 2001).

ACTUAL LAND USE

The city of Santiago de los Caballeros, with its 500,000 inhabitants, is the second city in the Dominican Republic. Land use is rapidly changing from agriculture towards urban construction.

To visualise the extent and type of urban agriculture activities in Santiago, the city was divided into: the *inner city urban* area (34.6 km²), the *peri-urban* area (29.5 km²) and the *suburban* area (130 km²). In the *urban area*, 33% of the vacant or partially constructed areas contain UA activities¹ and another 22% of this land has been classified as suitable for agricultural land use. The total agricultural land-use area counts up to 315 hectares or 9 % of the total inner urban area, including patios, backyard gardens, river- and roadsides and other open spaces.

Due to pressure on the land for housing and the high population

Jacquelyne Acevedo
Abinader, General
Coordinator, Municipal Urban
agriculture Programme,
Santiago de los Caballeros

density, the presence of agriculture in the poorer neighbourhoods is generally lower than in middle or high-class neighbourhoods. The presence of agricultural land use is relatively high in industrial and institutional areas (especially by schools), and in middle-class neighbourhoods that are generally expanding and include open spaces that are temporarily used for agriculture.

The further away from the functional centre of the city, the higher the presence of urban agriculture. Agriculture is shifting from the centre to other areas, and is characterised by a cycle of location-substitution-relocation. Only in patios and along roads and riversides is agricultural land use of a more permanent character. The main presence of agriculture is on vacant plots and is of a temporary nature.

Most of the *peri-urban* area is subject to a process of urbanisation. Agricultural land use occupies 29 % of the area (ca. 840 hectares) of which 10 % is dedicated to crop cultivation and differs from the inner urban area in that an important part is dedicated to pasture, cattle and pig raising (14 %) and tobacco growing (4 %).

Agriculture thus occupies about 16 % of the total urban (inner and peri-urban) area of Santiago and is the third most important soil use after residential and vacant land use. In this perspective, Santiago is a real agricultural city or modern “agropolis”, in which agriculture lives in “conflictual co-existence” with urban construction. Agricultural land use is “on the move” (relocates), but does not disappear with urban growth (del Rosario et al. 1999).

The municipality recognises that agriculture has an important and permanent urban function - food production and income generation - and is embarking on a more systematic inclusion of urban agriculture into urban and land use planning. This function directly responds to the fundamental problem of urban food security.

LAND USE PLANNING: A PROCESS

With the support of a Cuban expert in September 2000, the municipality started to update the classification and identification of non- or partially constructed plots or areas within the urban area, with use of maps, aerial photographs and sat-

REFERENCES

- Del Rosario Pedro Juan et al. 1999. *Manejo de residuos sólidos y agricultura urbana en la ciudad de Santiago de los Caballeros*. Presented at Centro Internacional de Investigaciones para el desarrollo (CIID), Santiago de los Caballeros, October.

ellite images. Areas are classified according to their location, land tenure (municipal, institutional or private), characteristics (agronomic, physical and environmental) and potential agricultural land use (agriculture, animal husbandry; temporary versus permanent; monoculture versus mixed land use).

On the basis of this classification, and starting at the end of 2000, agricultural use of land is being stimulated through the dissemination of the objectives of the Municipal Urban Agriculture Programme, by radio, television, journal articles, and through a number of workshops, seminars and meetings. Various demonstration projects (demonstrative gardens, waste recycling and composting, seed and plant nurseries) are also being implemented with the support of different actors.

THE CHALLENGE

The challenge for the municipality now lies in the “institutionalisation” of agricultural land use by either including permanent agricultural land use into zoning plans (see the Box on Havana) and/or stimulating multifunctional and temporary productive use of non-built-up and vacant lands by means of financial or legal incentives (for example tax exemption). This implementation is high on the agenda in 2001. The creation of a municipal department for food security, under which urban agriculture is one component and field of work, also supports a more permanent programme, whose survival does not depend on the interest of only one favourable political administration.

NOTE

(1) Ornamental gardens and non-soil-bound production (hydroponics) were excluded from the survey.

Agricultural Zoning in Havana, Cuba

One way to include urban agriculture into land-use planning is to include it in zoning policies. For the first time, in the “General urban and land-use plan for the city of Havana” (December 2000), urban agriculture is explicitly mentioned and zoned as an “agricultural corridor” around the urbanised area of Havana:

- ❖ **Goal**
 - Create the urban and land-use conditions that contribute to reach the goals set for agricultural production and commercialisation.
- ❖ **Objectives**
 - Develop 101 hectares of agricultural land responding to the demand of international tourism.
 - Optimise use of land for animal production in the corridor around the city.
- ❖ **Actions**
 - Elaborate a partial land-use plan for the southern part of the city where agricultural soils are located.
 - Localise 63 hectares for intensive crop cultivation that will be added to the 38 hectares already in use.
 - Define the perspective of the agro-industrial complex in the city, related to the type of production and the use of industrial installations.
 - Identify the area where the buffalo will be introduced without affecting the aesthetic and environmental values of the south-eastern part of the province.
 - Solve the water supply to animal production systems through alternative solutions that avoid using groundwater of the city.

Source: General urban and land-use plan for the city of Havana
Council for provincial administration, Department of Physical Planning, City of Havana, December 2000