

URBAN AGRICULTURE IN THE GLOBAL NORTH & SOUTH: A PERSPECTIVE FROM FAO

Makiko Taguchi,
Agricultural Officer,
Food and Agriculture Organization

Guido Santini,
Officer and Technical Adviser,
Food and Agriculture Organization



Paddy production in peri-urban areas of Colombo (Sri Lanka)
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Makiko Taguchi is an Agricultural Officer working for the Food and Agriculture Organization (FAO)'s Plant Production and Protection Division, Rural and Urban Crop and Mechanization Systems team. She has been supporting FAO's corporate work on Food for the Cities since 2012 from the perspective of food production. Guido Santini is Officer and Technical Coordinator of the FAO Food for the Cities Programme that supports national and local governments on issues related to planning sustainable and resilient city region food systems with strong rural-urban linkages.

The high-level conferences in agriculture of the late 1990s have provided the political impetus to mandate FAO to support urban agriculture across the world. The agency provides technical expertise and advice to national and local governments on food-related matters through key programs, initiatives and reports, while working closely with the private sector. FAO's holistic and systemic approach focuses on strengthening the complex linkages between urban, peri-urban and rural agriculture which characterize contemporary food systems, with the goal of enhancing the city region's food security and resilience. FAO also acknowledges the limitations and opportunities provided by contextual variables and the necessity to adapt programs according to the local populations' needs and aspirations. If food has not always been authorities' main priority in policy-making, current changes in the perception of food systems, pushed by societal demands to act against food waste and climate change, have fostered an increased attention to FAO's activities.

Since when and why has urban agriculture come to the forefront of the agenda of international organizations such as FAO?

Makiko Taguchi: FAO's engagement in urban agriculture can be traced back four decades ago and be characterized by a few milestone moments. The first was the second United Nations (UN) Conference on Housing and Sustainable Urban Development (i.e. Habitat II), which occurred in Istanbul in 1996. Habitat II brought together all UN agencies, high-level representatives of national and local governments, as well as private sector, NGOs, research and training institutions, around the objective of ensuring adequate and safe human settlements and shelters, as well as healthier and more livable cities. In this context, the United Nations Development Programme (UNDP) published *Urban Agriculture: Food, Jobs and Sustainable Cities*¹. The report highlighted the compatibility of urban agriculture with an ever-increasing urbanization, demystified key points raised against urban farming, and identified solutions to the challenges faced by urban agriculture.

The context in the late 1990s provided the political impetus of integrating urban agriculture in FAO's work. The FAO Department of Agriculture has been governed by the Committee of Agriculture (COAG) since 1971. Constituted of over 100 Member States, COAG meets every two years in order to provide policy and regulatory guidance on issues relating to agriculture, livestock, food safety, nutrition, rural development and natural resource management. The 1999 COAG officially mandated FAO to work on urban agriculture.

With this recognized status and responsibility, FAO became more proactive in working on urban agriculture. In 2001, FAO launched a multidisciplinary initiative "Food for the Cities" which aims at addressing the challenges



Paddy production in peri-urban areas of Antananarivo, Madagascar
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that urbanization brings to the environment and to urban and rural populations by building more sustainable and resilient food systems based on stronger rural-urban linkages. It was first established as an internal network to share information amongst people working in projects in urban areas and to have a more coherent approach towards urban-related activities. Then in 2009, we established the Dgroups Global Network "Food for Cities", which we have been managing since. It is a global network with over 3,400 members across 131 countries, which allows experts, activists, students, from development practitioners to academia, to connect research and practice on sustainable food systems and urbanization through an online platform.

¹ Smit, J., Ratta, A., & Nasr, J. *Urban agriculture: food, jobs and sustainable cities*. 1996.

GROWING GREENER CITIES IN AFRICA: THE CASE OF THE DEMOCRATIC REPUBLIC OF THE CONGO

FAO supported the development of urban and peri-urban agriculture sector in five cities of the Democratic Republic of the Congo. It advised on measures that regularized title to 1,600ha of garden areas operated by 20,000 full-time growers. The project improved vegetable varieties and installed or upgraded 40 irrigation structures, which extended production throughout the year. Some 450 growers' associations were trained in good agricultural practices, while micro-credit helped beneficiaries start profitable small-scale enterprises. Market gardens in Kinshasa now produce an estimated 75,000 to 85,000 tons of vegetables a year, or 65% of the city's supply.

In Lubumbashi, the second largest city of the Democratic Republic of the Congo where population has expanded by more than 50% since 2000, a FAO project has created a flourishing urban and peri-urban horticulture sector. The area under horticulture has risen from less than 100ha to 725ha. Market gardens ringing the city produce more than 60,000 tons of vegetables a year.



Women producers in Quito, Ecuador, technically supported by municipal government initiative AGRUPAR, producing vegetables (and poultry) in their backyard garden - ©Makiko Taguchi

More recently, the importance of food systems and the interlinkage between rural and urban areas have been increasingly recognized by urban planners and decision-makers. The issue was included in the Goal 11 of the Sustainable Development Goals, dedicated to making cities resilient and sustainable (Target 11.a.: “support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning”).

In 2016, Habitat III aimed at further exploring the implementation of this goal. It adopted the New Urban Agenda (NUA), which clarifies the importance of rural-urban linkages and the role of food security, nutrition and food systems for sustainable urban development.

Urban agriculture could be defined in many ways and is sometimes extended beyond the city’s territory. What does the term “urban agriculture” encompass, in FAO’s perspective?

M.T.: The most straightforward definition of urban agriculture is “growing plants or livestock within and around cities”. But in terms of characteristics, urban agriculture usually operates at a small scale, for domestic

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purposes and self-consumption, being harvested by a household or community for food security purposes. This contrasts with peri-urban agriculture, which is usually bigger in size and commercially oriented. These are the global and general tendencies of these two types of agriculture.

Guido Santini: The way urban or peri-urban is defined strictly depends on the context. Each country has its own definition and criteria to determine what draws the line between urban and peri-urban agriculture. It is often based on jurisdictional criteria, but it can also rely on food flow patterns and the supply chain of main commodities in circulation

in the city and around it. It varies very much according to local characteristics, so there is no standard definition of what is urban and peri-urban. At FAO, we promote a territorial approach to look at urban and peri-urban agriculture, advocating that the food system cannot stay in the limit of the city: we need to go beyond urban and adopt peri-urban and rural agriculture. It is important to highlight that urban agriculture alone cannot provide sufficient food to guarantee food security for a city. It needs to be perceived as a complement to other sources of food supply, and more broadly, we need to think beyond urban food models by incorporating the broader region in connection with the city in urban food security strategies.

GROWING GREENER CITIES IN LATIN AMERICA: THE CASE OF HONDURAS

Tegucigalpa, the capital of one of the poorest countries of the world, embodies key urban development challenges in the developing world: informal settlements, an exponentially increasing population, insecurity, malnutrition, lack of basic services such as drinking water, sewerage, schooling, *inter alia*.

FAO and the district mayor's office launched the "Pilot Project for Strengthening Urban and Peri-urban Agriculture and Food Security" in the Central District in 2009. The US\$480,000 project consisted of establishing and maintaining household gardens in four settlements in the East of the city, with the immediate goal of increasing the consumption of fruits and vegetables, and the ultimate goal of contributing to food security of people living in extreme poverty. Its guiding approach was to teach low-cost and locally-adapted gardening techniques and technologies that were easy to implement and maintain.

Since 70% of participants did not have any agricultural experience prior to the project, they participated in demonstration training centers to receive a two-months weekly training on home gardening (e.g. vermicomposting, seedling production, micro-gardening, hydroponics, pest control). In a second phase, the participants applied what they had learned by establishing their own home gardens, with technical experts following progress and providing guidance. The last phase of the project consisted of developing a system of credit for the future purchase of inputs of seeds and a barrel or tank for storing water.

The project, which ended in 2011, trained 1,200 people and affected 6,000 people overall. Beyond gardening skills, participants were also taught on food security, nutrition, and vegetables preparation. In the immediate, the vegetable intake of participants more than doubled and reduced family's food expenditure by US\$20 to US\$60. Follow-up studies found that almost 90% of the people trained had established gardens and were growing up to 30 different species of plants.

Tegucigalpa became a signatory to the Milan Urban Food Policy Pact and is committed to strengthen its food system.

FAO has been leading different programs over the years on food and cities which notably seek to strengthen rural-urban linkages. How does urban agriculture fit into these programs?

M.T.: FAO is a UN technical agency and its main role is to implement projects with national and/or local governments by providing policy and technical expertise and advice, and to support them in the formulation and implementation of their own food and agricultural projects and policies. Historically speaking, the requests that we deal with regarding urban agriculture revolve around two main elements: (1) the technical elements – help authorities understand what kinds of technology and techniques should or could be used in their circumstances and (2) the enabling environment – support authorities identify which policies support each particular kind of work and objective, such as local, municipal, or even national legislation that governs land use and water access.

G.S.: FAO's goal is to provide a broader, systemic perspective to local governments which extends beyond urban agriculture alone. In order to support and understand urban agriculture, we need to link it to other dimensions of governance, such as nutrition, resource management and food waste. We advise local institutions to adopt such a system-wide approach. We also work in close partnership with the private sector, with which we have different forms and ways of engagement. We work on public-private partnerships through public procurements to feed schools, hospitals, etc., and we try to bring the private sector on our issues and areas of work if we need to create a shared vision on the food system in a city, as they play a key role in food systems. FAO builds partnerships with companies and is currently working to strengthen them.

M.T.: Regarding the place of urban agriculture among our organization, FAO has been working on several different projects related to urban agriculture since it has been mandated to do so. Due to the size of the organization, numerous departments and divisions deal with different aspects of urban food systems. Guido and I work at the Plant and Production and Protection Division, focusing on the production side. Apart from the Food for Cities Programme, the FAO Programme for Urban and Peri-urban Horticulture has specifically worked on urban agriculture over these last years. The program has assisted developing countries in removing barriers and provide incentives, inputs and training to low-income urban farmers, with the ultimate objective of optimizing urban farming production systems – that is, "growing greener cities". To assist policymakers in evaluating the potential of urban agriculture, FAO conducts surveys and exposes its findings on urban horticultures in specific regions in the Growing Greener Cities report (cf. boxes).

In the projects supported by FAO, do you promote any particular models or technologies or is FAO neutral regarding these issues?

M.T.: Each context and location has different needs and consequently they require different technologies and agricultural models. In very densely inhabited and built-up cities, there may be no other option than gardening on rooftops, such as in Cairo and Dhaka. Other cities' limitation may be climate or the population's restricted access to technological inputs. In cities where livestock still run free, it could be an issue of delimitating pastoral areas. In the developed world, some cities are promoting vertical farms, stacking layers of gardening and farming activities in a building, and underground farms, which allow to grow vegetables in tunnels and other infrastructures. There are numerous types of vertical farming that have developed according to this varying context. The case of Singapore is a high-tech, almost fully-automated kind of vertical farming, but in

FAO works with authorities for them to understand needs and opportunities within their cities so that they can create an enabling environment for sustainable food systems and urban farming activities to flourish

Colombia, internally displaced refugees have developed a technique of vertical farming based on a simple container or bag gardening along a wall. Hence, there are many ways to grow food in cities, and FAO does not promote one particular model or technology over the others. The only thing we do advocate for in these terms is that

the techniques need to be chosen *and* adapted to best suit local characteristics and needs.

GS: We can identify broad trends depending on the region of the world we are looking at. In the developing world, we tend to promote affordable solutions which require simple and cheap inputs, instead of expensive materials or spare parts. We need to acknowledge local

limitations such as access to energy,

electricity, water, space, financial resources, technology, etc. The goal is to formulate an urban agriculture strategy which is sustainable and appropriate for a precise context. It is not only about technology, but also about understanding different needs and market possibilities, so we can attend the former and maximize the latter.

GROWING GREENER CITIES IN LATIN AMERICA: THE CASE OF COLOMBIA

FAO has implemented three projects in Colombia which provided training and other technical assistance for urban and peri-urban horticulture in Bogota, Medellin and Cartagena, and in urban areas of Antioquia and Tolima departments. Assistance from FAO and other organizations has helped introduce various types of urban gardening - including backyard plots and micro-gardens on terraces and rooftops - to 50,000 urban residents. In 90 municipalities in Antioquia, more than 7,500 families are participating in urban and peri-urban horticulture programs.

Bogota and Medellin have joined the Milan Urban Food Policy Pact, and through the technical assistance from FAO to Medellin and its department of Antioquia, they have established a multi-level governmental platform called *Alianza por el Buen Vivir* (Alliance for Well-Being) to foster coordination and collaboration to improve the city region food system.

What kind of difficulties and challenges have you and the FAO team encountered while setting up urban agriculture projects, and how can they be overcome?

M.T.: In the general context, urban agriculture is in constant competition with other development works, such as buildings, parking lots, etc., which are often more profitable for cities. For instance, FAO was involved in the 1990s in the master plan of the development of the city of Kigali in Rwanda, in order to incorporate urban agriculture in its design. In the meantime, Kigali became one of the fastest growing cities in the world, facing great pressures from population growth, so green spaces that were designated for agricultural usage were reallocated for residential development. We have observed similar issues in other cities.

From a technical perspective, two main challenges arise. First, food safety is a recurring question because it has not been categorically and scientifically proven that urban agriculture is safe in terms of health. It implies that food is grown in urban areas which are potentially polluted, soils contaminated, amidst busy roads and unclean water. This is still an area that needs a lot more work and research. Second, urban agriculture often does not fall under the responsibility of the ministry of agriculture in most developing countries. Usually, agricultural services are exclusively provided to rural farmers, while urban farming activities are left unattended. As a result, there is no help in the provision of inputs like seeds, fertilizers, chemicals, and

technical advice – resources that every farmer needs but are hard to find in urban contexts. Remedying this situation, as well as ensuring access to clean water, land, and capacity building, is crucial in supporting urban agriculture.

G.S.: From my perspective, the main challenges arise from (1) the political buy-in, that is, the fact that we need to bring to the table actors from different institutions, fields, interest groups, and levels to propose effective solutions. This is a governance issue, rather than a sectoral one specific to food-related topics. It is important to try to put in place a mechanism of governance that goes beyond the city's boundaries and jurisdiction. This challenge is coupled by (2) the limitation of our mandate, since we do not have the necessary administrative and institutional instruments to find common ground among different actors.

M.T.: One last issue that FAO faces is that historically, people do not deeply think about food in urban development, taking it for granted and excluding it from the agenda. Even in Habitat III we had to push for food-related issues to be included in the concluding document.

Many governments do not directly perceive the benefits of urban agriculture. They consider that food can be imported and therefore there is no necessity of developing urban food systems. However, we try to make the case that this is contingent upon how you perceive your food system: city authorities need to adopt a critical approach to the food system in order to see how it can be improved. This can usually be found in sustainable management practices of the environment. For instance, waste management has constituted a key persuasion tool at FAO because local governments are increasingly concerned with the excessive of organic food waste, which can be dealt with through urban agriculture.



Vegetable vendor in Analakely market in Antananarivo, Madagascar
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What are the main differences between the Global North and the Global South when it comes to urban agriculture?

G.S.: In the Western world, it is generally more normal for governments to think about food issues in cities, as they are forced to consider this relationship more deeply and seriously into account than most of developing countries. Their civil society is stronger and more demanding in relation to the way it is fed, and their institutions are somehow more open to this kind of thinking. For instance, cities have adopted numerous initiatives to make food systems more equitable and sustainable, including the Milan Urban Food Policy Pact, signed in 2015 by cities from all over the world during the Milan Expo 2015, embodying the international commitment for the coordination of food policies. This initiative, key to involve cities at the global level on this topic, was led by Milan with the support of major European and

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North-American cities, such as Toronto and New York. Meanwhile, countries in the developing world are slowly moving towards the normalization of urban agriculture in food systems, especially Latin America.

M.T.: There are key distinctions to be made between developed and developing countries in relation to urban agriculture, as they have different functions. The Global South often employs urban agriculture to fulfill food security and nutritional needs. In Latin America and in Africa, people cultivate in very limited spaces through innovative methods but for the end goal of food security, for them to feed their families and be able to survive. In comparison, urban agriculture in the Global North tends to be used as a mean to lead a more sustainable way of life or to create social ties within a community. There, urban agriculture has functions that are distinct from food security per se.