**BRUSSELS POLICY BRIEFING N. 50**

**Growing food in the cities: Successes and new opportunities**

*Organised by CTA, ACP Secretariat, European Commission (DG DEVCO) and Concord*

**Tuesday 10th April 2018, 9h00-13h00**
***ACP Secretariat, Avenue Georges Henri 451, 1200 Brussels***
http://brusselsbriefings.net

## 1. Context: More of the world is urbanised

Towns and cities in the world's developing countries are growing on an unprecedented scale. In 1960, the global urban population was 34% of the total; however, by 2014 the urban population accounted for 54% of the total and continues to grow. By 2050 the proportion living in urban areas is expected to reach 66% (UNDESA). Sub-Saharan Africa's annual urban growth rate is 3.6%, almost double the world average.

The rapid growth of cities in the developing world, coupled with increasing rural to urban migration, has led to a boom in mega-cities. In 1990, there were ten mega-cities with 10 million inhabitants or more. In 2014, there are 28 mega-cities, home to a total 453 million people. Six mega-cities are predicted to exist in Africa by the year 2030 – Luanda (Angola), Lagos (Nigeria), Johannesburg (South Africa), Kinshasa (Democratic Republic of Congo), Dar es Salaam (Tanzania) and Cairo (Egypt). There is one mega-city, Cairo, which has had a population of more than 10 million since 2000.

Currently, approximately one-third of the world's population is living in slums and informal settlements. If prevailing trends continue, this figure could reach 2 billion by 2030. Changes in climate, coupled with humanitarian crisis, add to challenges faced by cities and the urban poor. Agricultural production and urban food supply are increasingly affected by droughts and floods. More and more refugees and internally displaced persons are seeking refuge in urban neighbourhoods and demands for urban food are increasing.

Sustainable development cannot be achieved without significantly transforming the way we build and manage our urban spaces. One of the main challenges in making cities safe and sustainable is ensuring access to safe and affordable housing, and upgrading slum settlements. It also involves investment in public transport, creating green public spaces, and improving urban planning and management in a way that is both participatory and inclusive (Sustainable Development Goal 11: Sustainable Cities and Communities).

*The concept of "green cities" - designed for resilience, self-reliance, and social, economic and environmental sustainability - is usually associated with urban planning in more developed countries. It suggests high-tech eco-architecture, bicycle greenways and zero-waste, "closed loop" industries. However, it has a special application, and significantly different social and economic dimensions, in low-income developing countries. There, the core principles of greener cities can guide urban development that ensures food security, decent work and income, a clean environment and good governance for all citizens.* (FAO)

## 2. The multifunctionality of urban agriculture

Urban agriculture[1] is defined as 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, reusing 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 areaǁ (Luc Mougeot 1999:10).

[1] Urban agriculture in the developing world: a review Francesco Orsini, Remi Kahane, Remi Nono-Womdim, Giorgio Gianquinto. 2015. https://hal.archives-ouvertes.fr/hal-01201393/document

UA[2] is in most of the cases an informal activity quite difficult to characterize with accurate data and trends. Urban agriculture includes vegetable and fruit tree cultivation, as well as other specialized crops (e.g., medicinal and ornamentals), wood production, small-scale animal rearing (ranging from common, such as bovines and poultry, to local species, such as Guinea pigs), bee keeping, and also aquaculture (combined fish and plant culture). It is generally conducted near markets and occurs in limited spaces due to the high command. Urban agriculture uses city water and recycles organic discards. It has, therefore, a beneficial role in managing natural resources for a sustainable environment.

Urban agriculture plays a significant role in feeding urban populations around the globe. The Food and Agriculture Organization of the United Nations reports that 800 million people worldwide grow vegetables or fruits or raise animals in cities, producing what the Worldwatch Institute reports to be an astonishing 15 to 20 % of the world's food. It is estimated that 130 million urban residents in Africa and 230 million in Latin America engage in agriculture, mainly horticulture, to provide food for their families or to earn income from sales. (FAO).
Horticulture helps empower the urban poor, and contributes to their food security and nutrition and can help grow greener cities. There are parts of the world where urban and peri-urban agriculture account for 50-75% of vegetable consumption within that city.

Urban and peri-urban agriculture (UPA) takes various forms such as micro-gardens, micro-irrigated commercial gardening on urban peripheries, hydroponic micro-gardens in slum areas, green rooftops in densely populated city centres, organoponics and simplified soilless cultures…. UPA ranges from very basic family-type gardens to technology-driven top investments in vertical farming with high productivity and revenues.

Urban agriculture has ecological benefits by reducing the city waste, improving urban biodiversity and air quality, and overall reducing the environmental impact related to both food transport and storage.

Urban agriculture can offer another source of food as well as employment and income for urban dwellers. A recent analysis of 15 developing and transitional countries shows enormous variation in the share of urban households that participate in agriculture, ranging from 11% in Indonesia to 70% in Nicaragua and Viet Nam.[3] Still, urban agriculture accounts for only 5% to 15% of total agricultural production in the studied countries, and most households consume the food they produce rather than sell it. Although the contribution of urban agriculture to income is generally low (less than 10% in 10 of the 15 countries), urban farming is linked with improved dietary diversity in two-thirds of the countries. However, despite its demonstrated benefits, the contribution of urban agriculture may be limited by production and legal constraints related to the availability of key inputs such as water, safe handling of agrochemicals and disposal of animal or crop waste.

Urban households involved in UPA are generally more food secure and benefit from a more diverse diet. Urban and peri-urban food production also helps increase the availability of healthy and affordable food, mainly fresh fruits, vegetables, eggs and dairy products, for a larger number of urban consumers. In order to assure that UPA contributes to improved urban food security, support in terms of access to land, technical guidance and training on good production practices and farmers and consumers' education is required. Additionally, potential health hazards caused by use of wastewater and agrochemicals, poor food handling, urban pollution and the raising of animals close to people in combination with poor sanitation should be reduced.

Food production, processing and marketing contribute to generating income and employment for many poor urban households (income generated by the informal food sector is often equivalent to or higher than the official minimum wage). The sector specifically provides an opportunity for social and economic integration of women, urban newcomers and youth. It helps reduce their vulnerability by diversifying livelihood opportunities and functioning as a safety net in times of economic crisis.

[2] Urban agriculture in the developing world: a review Francesco Orsini, Remi Kahane, Remi Nono-Womdim, Giorgio Gianquinto. 2015. https://hal.archives-ouvertes.fr/hal-01201393/document

[3] International Food Policy Research Institute. 2017. 2017 Global Food Policy Report. Washington, DC: IFPRI. https://doi.org.10.2499/9780896292529

## 3. Favourable policies and planning in cities to encourage UA

Although many poor households benefit from urban agriculture, land cultivation and livestock production are actually illegal in many cities. Urban agriculture often occurs on "unused" land. Farmers lack legal rights and thus have less incentive to make costly improvements. For example, instead of installing costly irrigation, farmers often use wastewater irrigation that, if polluted, can pose health risks to consumers.
Given the potential benefits of urban agriculture, government policies for urban planning need to address land tenure for farmers and provide access to clean irrigation water, while also protecting public health.

Multifunctional landscape management, integrating agriculture, trees and forests help to make cities more resilient. It does so not only by diversifying urban food sources and income opportunities, but also by maintaining open green spaces, enhancing vegetation cover and water infiltration, and contributing to sustainable water and natural resource management. Urban forestry, including agro-forestry, especially helps to improve air quality, reduces urban warming, curbs erosion and enhances urban biodiversity. As water becomes increasingly scarce, UPA provides an ideal opportunity to productively use urban organic wastes and wastewater as well as collected rainwater; and official guidelines are currently acknowledging the use of untreated wastewater as long as sufficient risk reduction strategies are applied. Appropriate techniques and practices as well as health risk reduction measures should be promoted to ensure safe production and healthy environments.

Following the 2007-2008 food crisis, a United-Nations high-level task force called for a paradigm shift in urban planning to one that encourages urban and peri-urban food production and the professionalization of some of the actors involved. The main challenge facing framers in the cities is lack of space and the poor quality of soils and unreliability of water supplies. Therefore, zoning land for agriculture should be a priority to allow farmers to invest in the plots. The traditional challenges facing agriculture are to be found in UA: high cost of inputs, lack of quality seed, unavailability of credit to buy equipment…Furthermore, farmers in UA are rarely organised (i.e. cooperatives, associations and networks) and have limited access to markets.

In October 2009, representatives of city governments, ministries of agriculture, research institutes, NGOs and international organizations from 12 countries in Latin America and the Caribbean met in Medellín, Colombia, to develop strategies for reducing high rates of urban poverty and food insecurity across the region. They met as many countries were emerging slowly from the effects of global fuel and food price inflation, which had pushed the cost of living beyond the resources of many of the region's 160 million urban poor. The Medellín meeting proposed a new agenda for an urban transition toward social inclusion, improved quality of life, equity and sustainability. Its Medellín Declaration urged national, state and local governments to incorporate *urban and peri-urban agriculture*, or UPA, into their programmes for eradicating hunger and poverty, ensuring food and nutrition security, promoting local development and improving the urban environment.

## 4. New opportunities for Urban Agriculture

While many of the other activities are most of the time transitional, urban agriculture is likely to become a permanent feature of most cities, both in developing and developed countries. The rate of urban population involved in agriculture is estimated at about 50 % in Accra, Ghana, 80 % in Brazzaville (Congo), 68 % in the five biggest cities of Tanzania, 45 % in Lusaka (Zambia), 37 % in Maputo (Mozambique), 36 % in Ouagadougou (Burkina Faso), and 35 % in Yaoundé (Cameroon). In Kenyan cities, about 29 % of the families are employed in urban farming. From a study of Zezza and Tasciotti (2010)—using survey data from fifteen countries across the four principal development regions, i.e., Asia (Bangladesh, Indonesia, Nepal, Pakistan, and Vietnam), Africa (Ghana, Madagascar, Malawi, and Nigeria), Eastern Europe (Albania and Bulgaria), and Latin America (Ecuador, Guatemala, Nicaragua, and Panama)—the shares of urban households that earn income from agriculture vary from 11 % in Indonesia to almost 70 % in Vietnam and Nicaragua. In 11 of the 15 countries in dataset, the share of households participating is over 30 %.[4]

[4] Urban agriculture in the developing world: a review Francesco Orsini, Remi Kahane, Remi Nono-Womdim, Giorgio Gianquinto. https://hal.archives-ouvertes.fr/hal-01201393/document

Many urban dwellers tend home-based gardens primarily for household food, especially horticulture and animal products, improving the nutritional status in children. For example, in Cameroon, almost all the leafy vegetables consumed by poor urban residents in Yaounde are grown in the valleys surrounding the city.

To assess the state of urban and peri-urban agriculture in Latin America and the Caribbean, FAO conducted a survey in 2013 in 27 countries. Data was provided on agriculture in 110 cities, municipalities and towns. Data confirmed that UPA is widespread in the region, practised, for example, by 40 % of households in Cuba, and 20 % in Guatemala and Saint Lucia. Cuba's policy dates back to 1997, when the government decided to promote urban agriculture nationwide. Its UPA programme has established in Havana a network of agricultural supply stores, municipal seed farms, composting units, veterinary clinics and centres that breed biological pest control agents. Urban farmers are entitled to agricultural insurance and production loans. In Havana, the use of synthetic fertilizer and pesticide is prohibited by law. To keep soil healthy, the UPA programme provides green manure and vermicompost, and links gardeners to sources of manure, household wastes and agro-industrial residues for making compost. Havana's gardens are so productive and cost-efficient that the national Ministry of Agriculture promotes agro-ecological production in rural areas as well.
In Brazil, support to UPA is part of the national Zero Hunger policy. Implemented by local authorities, it includes the building of farmers' markets, training for school gardeners, the allocation of vacant urban spaces for agriculture, and reduced taxes on land used for the purpose.

UPA includes large farming areas that produce, vegetables and root crops, grazing land for goats and sheep, dairy farms and intensive livestock production units. The main benefit is improved access to food. Urban food producers and their families enjoyed a more diverse diet than other urban dwellers, and were more likely to consume fruit and vegetables regularly.

Women are the driving force behind urban agriculture in many countries, and particularly in the Caribbean, Bolivia, Colombia, Ecuador, Honduras and Nicaragua. A high proportion of urban farming families are female-headed: 90% in Managua, 86% in Haiti, 70% in Belize City and 25% in Quito.
Urban farmers come from all age groups but most of them are from low-income households and they take up farming as means of reducing their spending on food and making extra income from sales which allow them to pay school fees, medicines, and consumer goods.

Another strong support for UPA is that national governments in Caribbean countries regulate and support urban areas. In Antigua and Barbuda, support to backyard gardening includes the supply of seeds, seedlings, fruit trees and inputs, free of charge or at minimal cost. In Guatemala, the Ministry of Agriculture, Livestock and Food has created a Department of Urban Agriculture, which provides producers with training, tools and inputs. In some countries, UPA is promoted by national research institutions. Argentina's *Pro-Huerta* gardening programme has been operational for more than 20 years under the National Institute of Agriculture and Livestock Technology, and has helped to establish 8 000 community gardens, 7 000 school gardens and half a million family gardens.

- **Vertical farming: the future for African cities?**

Vertical farms use high tech lighting and climate controlled buildings to grow crops like leafy greens or herbs indoors while using less water and soil. Because it is a closed growing system, with controlled evaporation from plants, this farms use 95% less water than traditional farms. At the same time, most vertical farms do not need soil because they use aeroponics or hydroponic systems – these dispense nutrients needed for plants to grow via mist or water. This technique is ideal for meeting the challenges of urbanisation and the rising demand by consumers for high quality, pesticide-free food.
Commercialization of vertical farming is catching on in Asia, Europe, USA, Russia and now Africa. Many private companies are interested in growing crops in hydroponic, aquaponics and aeroponics systems in warehouses, greenhouses, containers and high scrapers. There is also a burgeoning interest in the production of medicinal plants in vertical farms.
Feeding Africa's rapidly growing urban population will continue to be a daunting challenge, but vertical farming – and its variations – could be one of the most innovative approaches that can be tapped into as part of an effort to grow fresh, healthy, nutritious and pesticide-free food for consumers. However, initial financial investments are very important as well as the need to have a reliable lighting (and electricity) power. Solar energy prototypes and low-tech versions are being studied.

## 5. The way forward:

Many urban agriculture policies still mainly focus on urban and peri-urban food production for reasons of food security, while commercial urban agriculture, agro-processing and value addition activities are often not well addressed (Dubbeling and Pasquini 2010). Though general agricultural policies and plans do focus on articulating production with (urban) markets, these aspects are dealt with in a general way and do not differentiate different types of production systems, such as rural, peri-urban and intra-urban. They therefore easily underestimate the contribution of urban and peri-urban production to income and employment generation.
Urban policies need to acknowledge the role of urban and peri-urban agriculture in urban development, ensure urban food supply and strengthen livelihoods of poor urban producers. This includes removing barriers and providing incentives for urban and peri-urban agriculture (UPA) as well as improving natural resource management in urban and peri-urban areas.

In order to be sustainable and attract youth, the sector needs further enterprise development and entrepreneurial skills development, improved processing and marketing capacity, access to finance, identification of lucrative markets (i.e. organic…).
There is a need for capacity building of producers' organisations in order to professionalise the sector as well as facilitating access to land for urban production. Even when the urban farmers are not the owners of the land, they should feel encouraged through medium- to long-term investment strategies as contributors of multifunctional green infrastructure of the cities.
Food safety issues and traceability are key for all the actors of the chain and the end consumers.

Increased recognition of the role that food can/does play in responding to various urban sustainability concerns provides new market and engagement opportunities for the private sector. Private sector players can fulfil an important role in speeding up and implementing scalable urban food system innovations. Because of their large consumer markets, more direct consumer relations, and close collaboration between various players in the food supply chain, city regions offer traditional and new private sector players some unique opportunities.[5]

**Objectives of the Briefing:** To improve information sharing and promote networking, CTA, the DG DEVCO from the European Commission, the ACP Secretariat, Concord and various media organise since 2007 bimonthly briefings on key issues and challenges for agriculture and rural development in the context of EU/ACP cooperation.

**Target group:** Around 150 ACP-EU policy-makers, civil society groups, research networks, development practitioners, private sector representatives and international organisations based in Brussels.

**Outputs:** A short report and a Reader in printed and electronic format will be produced shortly after the meeting. Input and comments before, during and after the meetings will be included in the Briefings Website: http://brusselsbriefings.net.

[5] M. van Veenhuizen, M. Dubbeling (RUAF Foundation) and Katharina Felgenhauer (IWMI). The Role of the Private Sector in City Region Food Systems. 2018
http://www.ruaf.org/sites/default/files/Policy%20Brief%20The%20role%20of%20private%20sector%20in%20city%20region%20food%20systems.pdf

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**Programme**

08h00-09h00 Registration
09h00-09h10 Introduction of the Briefing

**Introductory remarks:** *Viwanou Gnassounou, Assistant-Secretary-General, ACP Secretariat Leonard Mizzi, Acting Director Devco C, Planet and Prosperity and Head of Unit Rural Development, Food Security, Nutrition, Europeaid, European Commission; Isolina Boto, Manager, CTA Brussels Office*

**09h15-11h00 Panel 1: Trends and opportunities in urban agriculture**
This panel will give an overview of the main trends in urban and peri-urban agriculture and the various ways of growing food in the cities across the ACP and in Europe.
Panellists:

- What do we know about urban agriculture?
  *Henk de Zeeuw, Senior Adviser, RUAF Foundation, The Netherlands*
- Successes of Urban agriculture in Europe
  *Axel Timpe, COST-Action Urban Agriculture Europe*
- Innovation on vertical farming technology: the case of Growing Underground
  *Richard Ballard, Co-Founder, Growing Underground, United Kingdom*

**11h00-11h15** Coffee Break

**11h15-13h00 Panel 2: Successes in urban agriculture across ACP regions**
This panel will share some successes from the field, which show that growing food in the cities can offer opportunities for young entrepreneurs. It will particularly focus on innovative businesses and serving urban market needs.
Panellists:

- Urban agriculture: business for young entrepreneurs?
  *Angel Adelaja, CEO, Fresh Direct, Nigeria*
- The experience of micro-gardening in West Africa
  *Coumbaly Diaw, FAO subregional coordinator, Senegal*
- New opportunities in hydroponics in Kenya and lessons learnt
  *Peter Chege, CEO, Hydroponics Kenya*
- Hydroponics: the experience of Jardins Hydroponiques d'Haïti
  *Pierre François Benoît, CEO, Jardins Hydroponiques d'Haïti*

Closing remarks

**13h00 Light Lunch**