

Urban food policies

Proceedings of the international meeting on experiences in Africa, Latin America and Asia.

16-18 November 2015, Montpellier, France

MARKETS

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URBAN/RURAL CONNECTIONS



United Nations
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UNESCO Chair in
World Food Systems
France



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ISBN 978-2-900792-28-5

Citation: Debru J., Albert S., Bricas N., Conaré D. (Eds), 2017. Urban food policies. Proceedings of the international meeting on experiences in Africa, Latin America and Asia. 16-18 November 2015, Montpellier, France, 200 p.



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Acknowledgements

Montpellier SupAgro's UNESCO Chair on World Food Systems and CIRAD thank:

– for their collaboration: the French Development Agency, the Food and Agriculture Organization of the United Nations and its Food for the Cities Programme, the Charles Léopold Mayer Foundation for the Progress of Humankind, the International Sustainability Unit of the Prince of Wales's Charitable Foundation, the RUAF Foundation and Mercadis (Montpellier Méditerranée Wholesale Trading Centre).

– for their support: Agropolis Fondation, the Fondation Daniel et Nina Carasso, the Agence universitaire de la francophonie, the Mediterranean Agronomic Institute of Montpellier and Montpellier Méditerranée Métropole.

In addition to the members of the Organizing Committee and our authors, our particular thanks go out to Laure Haon (UNESCO Chair on World Food Systems), Pascale Morin (CIRAD) and Sylvain Quéré (Mercadis) for their contribution to the organization of the event.

For their participation to the field trip and the conferences we thank Christophe Cour (Mercadis), Vincent Haluska (Montpellier city councillor), Isabelle Touzard (Vice-President of Montpellier Méditerranée Métropole) and Michel Escoffier (former General Secretary of the Fédération française des marchés d'intérêt national).

Finally, for their contribution to the edition of this book, we express our sincere thanks to Ophélie Robineau (CIRAD) and Caroline Brand (UNESCO Chair on World Food Systems).

Foreword

France was the victim of terrorist attacks on the night of Friday 13 November 2015. In spite of the tragedy occurring just two days before the event, the organizers decided not to cancel, thus paying tribute to life and honouring the work accomplished, in the hope that the future opportunities promoted by the meeting would help us to make progress towards a better world. The circumstances did lead to the cancellation of six guests' participation (the representatives of Maputo, Colombo, Medellín and Rosario), but did not keep the event from running smoothly or impair the quality of the exchanges. Although they were unable to be with us in person, this book has greatly benefited from their contributions.

Presentation and context of the international meeting

In recent decades, owing to the impact of both globalization and decentralization, the governments of cities and urban areas have become increasingly powerful political actors. Since the 1990s they have mobilized to implement environmental policies that reflect a greater level of commitment than their national governments' (Rio Declaration, Agenda 21, the Aalborg Commitments, etc.). As a result, alliances have emerged that enable them to have a joint impact on national and international policies (Metropolis, UCLG, ICLEI, ORU Fogar, etc.). The food system, previously driven primarily by national and international policies, has since the agricultural price crisis of 2008 also emerged as a local policy issue. This is reflected in recent statements by city collectives advocating the implementation of local policies to promote a more sustainable food system (2013 Bonn Declaration of Mayors; 2015 ICLEI Seoul Declaration; 2015 Milan Urban Food Policy Pact). In that way, urban governments are seeking to address the sustainability challenges generated by the dominant industrial food system and exacerbated by growing urbanization, which amplifies distancing and concentration phenomena.

Aware of the resources available to them (knowledge concentration, financial means, public authorities, biomass, labour force, citizen initiatives, infrastructure, services and markets), they are conducting experiments and building food policies aimed at both ensuring food security for the population (urban as well as rural) and improving the sustainability of the food system by focusing on its environmental, social and economic impacts.

Studies are beginning to be done on urban food policies, especially in cities of industrialized and emerging countries where policy making and formalization is longest established and most advanced (Toronto, Bristol, Belo Horizonte). Initiatives such as these are also becoming more common in developing countries in a variety of contexts.

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Given the multitude of actors engaged in experiments on alternative models, research is also focusing on these new issues. It is helping to build exchange networks to improve knowledge of these initiatives and their effects on food systems.

It was in that context that the UNESCO Chair on World Food Systems at Montpellier SupAgro and the French research centre CIRAD, in association with the French Agency for Development (AFD), organized the international meeting on Urban Food Policies held in Montpellier on 16, 17 and 18 November 2015. Among our other partners for the event were the Charles Léopold Mayer Foundation for the Progress of Humankind (FPH), the International Sustainability Unit (ISU) of the Prince of Wales' Charitable Foundation, the Food and Agriculture Organization of the United Nations (FAO) and the RUAF Foundation. We also enjoy the support of the *Agence Universitaire de la Francophonie* (AUF), the Agropolis Foundation, the Fondation Daniel and Nina Carasso, the Mediterranean Agronomic Institute of Montpellier (CIHEAM-IAMM), and Montpellier Méditerranée Métropole.

To provide a complementary perspective on the international conferences held on these issues over the last two years, which have highlighted a number of examples of urban food policies in industrialized countries, we have sought to give a voice to representatives of local governments of cities and urban areas of Africa, Asia and Latin America.

The only exception to that policy has been the inclusion of Montpellier Méditerranée Métropole, which hosted the sessions. Montpellier is an internationally renowned agriculture and food research centre. In 2015, its intercommunal structure, Montpellier Méditerranée Métropole, adopted an agroecological and food policy that had been devised in close cooperation by researchers, elected city officials and agents. On 15 October 2016, together with 115 cities worldwide, Montpellier Méditerranée Métropole signed the Milan Urban Food Policy Pact. At this meeting, therefore, we deemed it appropriate to present the innovative policy adopted by this Mediterranean Rim metropolitan government, and invited attendees to take part in an interesting field trip on 16 November 2015.

Through the organization of a dialogue between these urban government representatives, better knowledge and understanding has been gained of urban food policies in the world, how they are set,

how they operate, and what their impacts are. One contribution of the meeting has been to show how cities can have valuable leverage, beyond national policies and international agreements, for the improvement of food security and food system sustainability.

While many studies have shed light on the issue of urban and peri-urban agriculture, other modes of intervention are still little known and rarely debated. Through concrete examples presented by fourteen policy-makers and technical managers from local urban authorities, we explored three forms of strategic leverage that can be employed by governments of cities and urban areas:

1. Markets and logistics

Markets, as central locations where food can flow into and be distributed across the city, are an important driver for the use of urban governments. Our definition of markets in this case includes wholesalers, open-air markets, retail stores or kiosks, supermarkets, fairs, hawkers, storage warehouses and food processing areas (slaughterhouses, cottage industry zones or industrial parks, for example). Urban governments can have an impact on the food distribution system, in particular, through infrastructure control (construction, maintenance, renovation), the regulation of activities (by means of permits, specifications, or siting), or logistical organization or facilitation. All of these tools have been deployed in such places as **Montevideo** (Uruguay), **Maputo** (Mozambique), **Lusaka** and **Kitwe** (Zambia).

2. Public and out-of-home catering services

Public and out-of-home catering services include not just the provision of food to schools, hospitals and prisons, but also to workplaces (company cafeterias, private catering areas, food courts, etc.). While urban governments do not directly manage catering services, they are able to play a role in their organization and regulation. They can, for example, act to ensure access to quality food for all, influence types of food production through government contracting, improve job quality, educate consumers, and reduce waste and pollution. Those goals have been actively pursued by cities like **Medellín** (Colombia), **Colombo** (Sri Lanka), **Dakar** (Senegal), **São Paulo** and **Curitiba** (Brazil).

3. New types of relation between urban and rural areas

Historically, cities have shown little concern for the specifics of food production, farmers' working conditions and remuneration, or the effects of modes of production on the environment and biodiversity. Instead, cities have rather been looked at simply as markets where competition is rife, including between their agricultural periphery and more remote areas. The geographic, economic and cognitive divide between urban and rural populations has generated misunderstandings and concerns. In an attempt to overcome that divide, cities and rural areas are now seeking to invent new, more balanced and supportive, ways of relating to each other. Such new relationships are most clearly in evidence vis-à-vis peri-urban areas, but also need to be forged with more remote rural areas. They now take the form of relocation of the urban food supply, urban investment in rural areas, the provision of urban services to local farmers, twinning or contracts between urban and rural areas, but also experimental forms of food production and contributions by urban representatives to agricultural policies and, conversely, by farmer representatives to urban policies. Such new connections between urban and rural areas were explored in the context of policies instituted in **Tianjin** (China), **Quito** (Ecuador), **Rosario** (Argentina), **Curitiba** and **São Paulo** (Brazil).

The emergence of local food policies is leading to a reconsideration of issues the food system can help deal with, such as health, agriculture, the environment, etc.—a review that cannot be done without grasping the links between national and international policies. We invited Nango Dembélé, Minister and Commissioner for Food Security of Mali, to address that issue and put into perspective the factors that can either hinder or spur the development of new actions for a more sustainable food system.

All of the contributions cited are presented in this document. We hope you will find them useful and enjoyable.

— The organizers.



INTRODUCTION

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▣ Nicolas Bricas is an agricultural engineer by training, specializing in development economics and the socio-anthropology of food. After 6 years of commitment to research action with NGOs to promote local food production in sub-Saharan Africa, he joined Cirad in 1989, where he was in charge of research programmes on food changes in the world. Since 2008 he has been a member of the French multi-stakeholder task force on food security (GISA), where he has done research on global food security governance. He was co-facilitator of a joint CIRAD/INRA think tank on research issues in sustainable food systems (DuAline). More recently, he has led a group looking into urban food policies and the sustainability of urban food systems in the framework of the Surfood programme. Since 2016, he has been Director of the Unesco Chair on World Food Systems.

What are the stakes for city food systems?

Nicolas Bricas

CIRAD, Joint Research Unit "Markets, Organizations, Institutions and Actors' Strategies" and UNESCO Chair on World Food Systems

More than half of the world's population now lives in cities. Of course, not all countries use the same definition of a "city", and the concentrated population thresholds that define it may vary from 2,000 to 20,000 inhabitants! But what always typifies a city is the proportion of its non-agricultural population. City dwellers are very dependent on country dwellers for their food supply, and the city's self-sufficiency in food is limited, at best, to vegetables and perhaps poultry. United Nations projections are that city dwellers will account for 63% of the world population in 25 years. Will the world be able to feed itself as it does today if industrialized countries' urban food model becomes the norm? Probably not. Nevertheless, it seems to be in cities that some solutions for tomorrow are being found.

The challenge of agricultural production models to feed the cities

The rapid growth of cities in the nineteenth and twentieth centuries was made possible by agriculture's success in producing enough to feed a growing number of people not involved in agriculture. On average, worldwide, one farmer now feeds 5.5 persons. But that ratio is 4.2 in Asia and 142 in North America!

That growth has been driven by industrialization—in other words, a production system that draws on non-renewable resources. Mechanization and increased labour productivity were made possible by the use of coal and oil, which also helped to free agriculture of its ancestral function of producing energy and materials. Construction needs less wood and so fewer forests, while farm work and transport needs fewer animals.

Agriculture is now mainly devoted to animal and vegetable food production. The dire predictions of Malthus¹ have been confounded through the use of petroleum (to produce chemical nitrogen) and phosphorus and potassium as fertilizer, and through massive water consumption: since the nineteenth century, food production has grown faster than the population. So abundant has it become, indeed, that livestock as well as humans have been better fed, allowing meat and dairy products to be cheaply produced. In our newly affluent societies, less value has been assigned to food, leading to unconscionable waste: nearly 30 percent of global food production according to FAO figures.

If that trend continues, two outcomes are possible. First, we forge ahead regardless: with a 70 to 100% increase in food production by 2050, depending which author we read, to cope with population growth and changing consumption patterns, taken as a given, that generate more and more animal products and waste. That option ignores an unresolved issue: the origin of fertilizers and energy resources. Indeed, so great an increase can only be sustained if deforestation and mineral resource depletion continue unabated. Alternatively, consumption patterns may change, as consumption of animal products is realigned with production capacity so that non-renewable resources are no longer recklessly squandered. That would mean living within our means, in an agroecological feedback loop of energy, water and fertilizer cycles. And of course, considerably reducing waste, not by repurposing unsold food products but by reducing them to the minimum economically acceptable level. That scenario, which has been explored in such forward-looking analyses as Agrimonde (Paillard *et al.*, 2010) and Afterres 2050 (Solagro, 2015), seems the only one with any long-term viability, but it would require a sea change in food systems. The challenge is not just to deal with the exhaustion of mineral resources, but also to reduce pollution. The industrial food system generates high nitrogen loads, plastics pollution from packaging, and great amounts of greenhouse gases (GHGs). The international organization GRAIN claims that about half of worldwide GHG emissions come from the food system.

1. Malthus, a British economist (1766–1834), observing that population grows exponentially while resources grow linearly, predicted disaster.

Cities can help devise new systems. Urban metabolism analyses (Barles, 2002) show that since industrialization, cities have acted as gigantic pumps, concentrating materials. Their supply chains are longer and longer, moving nitrogen, phosphorus, etc. in the form of food from the countryside—sometimes halfway round the world—to the cities. But they do less and less recycling of the waste, which turns into sludge in wastewater treatment plants. Often it is dumped outside the city, when it does not go directly into the rivers or the sea. One symptom of the problem: the “supply chain” so important in the agri-food economy has been understood not to include the issue of waste, as consumption has—over-hastily—been deemed to be its end link. While chemical nitrogen resources from petroleum or mined phosphates are becoming scarcer, there is a growing realization that cities constitute vast deposits of fertilizer, which sustainable agriculture can certainly not do without.

The challenge of food-related jobs

Feeding a city means not only producing more than the agricultural population consumes, but stabilizing the products for storage, processing them for more convenient use, and distributing them to a concentrated population. All of these activities of the agri-food sector represent millions of jobs. In countries with rapid population growth, as in Africa, it is estimated that twenty or thirty thousand jobs per million inhabitants need to be created each year. Where urbanization is recent, living conditions in the cities are so different from the countryside that young people flock to the city. That situation raises serious issues for the food system. It may generate both farm-related rural activities (supply of inputs and services to agriculture, crop processing, storage, transport, marketing) and urban activities (processing, distribution, catering). If, however, highly labour-intensive food systems are the goal, they must resist the pressures of industrialization and business concentration and manage the severe capacity mismatch between small businesses and huge international corporations.

Promotion of such job creation is now one way to combat food insecurity, which, though linked to shortfalls in food production in some

rural areas, is increasingly correlated with growing inequalities. The people who go hungry are those who lack access to the means of food production and sufficient purchasing power to feed themselves properly. From that standpoint, agri-food activities are, in particular for women in the numerous countries where they manage most such activities, a very important income source and a way to increase their capacities, as suggested by Sen (Broutin and Bricas, 2006). By reduction of inequalities is meant, in particular, the reduction of those between the cities and the countryside, for while food insecurity is mainly a rural and indeed peasant phenomenon, one reason for that is that cities have the power to impose prices that afford their suppliers too little profit. Hence, there is a need for urban-rural solidarity and new relationships, which may be based on urban investments in rural areas, forms of contractualization whereby farmers can take advantage of the opportunities afforded by the cities rather than turn to international markets. Wholesale markets managed by cities are very important in that connection in that they give small producers market access.

New nutritional challenges

In developing countries, urbanization is changing the face of food insecurity. Protein-energy undernutrition is falling, but new nutritional pathologies are emerging. Obesity and associated diabetes, cardiovascular disease and some cancers are by no means any longer restricted to affluent industrial societies; they have become a major public health problem. The incidence of such pathologies is alarming in all cities in Latin America, Asia, the Pacific and even Africa. Having greater purchasing power, city dwellers are able to consume products high in fat, sugar and salt. More calories are consumed even as there is less need for them because of lifestyles involving less physical activity and more sedentary work activities. Such overnutrition does not prevent deficiencies in micronutrients (in particular iron, zinc, vitamin A and iodine) that are essential for physical and intellectual growth. Food insecurity also takes the form of diseases caused by unwholesome food: diarrhoea, a principal cause of infant malnutrition, food poisoning, and acute or chronic foodborne illness in developing countries. In their cities' poor neighbourhoods, food

processing, catering and food distribution are heavily dominated by micro-businesses. Public authorities often take scant interest in such businesses, and given the environment in which they operate, with little access to resources (drinking water, healthy locations, training, credit, technical advice, etc.), they tend to peddle unwholesome food that is also low in nutritional quality (street food that is often overly fatty, sweet or salty). These new realities are a real challenge for food policies. They call into question the old policies, which promoted an increase in caloric availability, whereas what is needed nowadays is a way to manage both pathologies, of excess and deficiency, while increasing the wholesomeness and nutritional quality of food.

The challenge of distancing

The changes in the food system can be interpreted as a distancing process. Geographic distancing: as cities expand and agricultural specialization grows, food must be fetched from farther and farther afield. Economic distancing: between the producer and the consumer, intermediaries proliferate. As supply chains lengthen, there is a change in the way confidence in food quality is acquired: at first based on interpersonal trade relationships, it is now built through contracts, standards, reputations or prices. When the intermediaries in question are faceless financialized enterprises or laboratories that deal in chemistry or genomics, building such confidence is a huge challenge—all the more so in that the distancing is also cognitive. Fewer and fewer city dwellers have lived, or have relatives who have lived, on a farm. Out of ignorance, idealization, or demonization of agriculture and the contemporary agri-food industry, misunderstandings and conflict are becoming more frequent. The distancing is also political. Consumers feel they have lost all control or direction of the system. Despite the development of political consumerism that engages in boycotts or “buycotts”, they increasingly feel powerless to influence the system.

One factor that helps explain local urban governments’ mobilization with respect to food issues is the prospect of regaining some control over the food system. That is nothing new. Cities manage land in order to reserve green space or even agricultural plots in the heart of built-up areas or on the outskirts. They organize food supply and

distribution and manage sales outlets: wholesale or retail markets and supermarkets. In many countries they manage catering, and in particular school catering. Finally, they manage organic and inorganic waste. What is new is their willingness to rethink how these urban levers are applied to the new food challenges, especially as regards those raised by the countless civic and entrepreneurial initiatives that are undertaken more and more often in cities with the goal of producing, selling or eating differently.

The things invented by citizens or certain businesses in their search for alternatives, plus the things cities invent in terms of new and more participatory ways of devising policy, can catalyse new food systems that are more sustainable in social, economic, environmental and political terms. However, changes in dominant systems will not happen with only the levers available to cities. Governance must be local and global. Today, food systems are shaped by national and international policies and the practices of major industrial groups, which must also adopt new strategies, particularly under pressure from networked cities. On 15 October 2015, some one hundred world cities signed a Pact to that effect in Milan. Together, they are determined to make their voices heard at higher levels, where decisions are made that affect them. ★

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MARKETS AND LOGISTICS

- 📍 Kitwe, Zambia
- 📍 Maputo, Mozambique
- 📍 Lusaka, Zambia
- 📍 Montevideo, Uruguay

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▣ Paule Moustier has been an economist at Cirad since 1990. Her research focuses on the organization and performance of food chains supplying the cities of Africa and Asia. From 1990 to 2000, she conducted many research and assessment missions on the supply of food products to African cities (notably the Republic of the Congo, Guinea-Conakry, Guinea-Bissau, the Central African Republic, Cameroon, Senegal and Madagascar). From 2002 to 2009, she was an expatriate in Hanoi, Vietnam, where she coordinated the research consortium Malica (Markets and Agriculture Linkages for Cities in Asia). She has conducted research on supermarket development in Vietnam and its effects on the poor as consumers, distributors and agricultural producers, and on the integration of street vendors into Vietnam's urban development. She also supervised an IFAD-funded project on the access of small rice, vegetable and meat producers to modern distribution channels. She is currently director of the MOISA Joint Research Unit (Markets, Organizations, Institutions and Actors' Strategies) in Montpellier.

What market planning policies should apply to urban food systems in developing countries?

Paule Moustier

CIRAD, Joint Research Unit "Markets, Organizations, Institutions and Actors' Strategies"

Public and private issues

In Africa and Asia alike, rural and peri-urban food systems have responded very quickly to cities' growing demand. City dwellers are supplied with food with limited public intervention, in contrast to other services (drinking water, electricity, road maintenance, etc.). Public authorities' responsibility is to facilitate the operations of private food system actors, and especially not to complicate them, so that food supply will be sustainable, i.e. free of any significant shortages, accessible to all, and moderate in its use of scarce resources such as energy and capital.

In developing countries, cities are mostly supplied by the informal sector, which urban authorities generally resist (Cole and Fayissa, 1991). "Informal" does not mean disorganized. Food sectors are organized geographically and characterized by personalized relations (Moustier, 2012).

Levers for action

The main levers for public authorities to act on food distribution are related to the development market infrastructure (renovation or construction of new wholesale or retail markets) and support for new distribution models, such as supermarkets or farmers' markets. Installation of wholesale markets, renovation of retail markets, and

promotion of supermarkets are often done in the name of “modernization”, which seeks the following objectives: transparency and competition; economies of scale; improvement of hygiene; fluidity of transport; control of transactions (taxation, recording). The objective of food security (including food safety), which is less often pursued, nevertheless comes to the fore through favouring direct contacts between producers and consumers (e.g. at farmers’ markets) and promotion of organic agriculture, as in the cases of Brazil and Laos.

Successes and failures

Numerous market redesigns based on the above-mentioned modernization mindset have failed in practice, for the following reasons: they were wrongly located given the traders’ transport constraints, the new infrastructure was too expensive, or users did not support them. To be successful, public action must aim at improving existing facilities. The right means are: concreting and roofing of markets, organization of cleaning services, and the establishment of storage and credit facilities. Again, projects cannot succeed unless traders’ organizations are involved (Paulais and Wilhelm, 2000). Thus, in Tanzania, the EU- and AFD-funded redevelopment of the wholesale maize market in Kibaigwa between 2002 and 2011 has proven successful, judging by its increased volume of trade (Baugé and Berchoux, 2013). It was built on the site of an informal market served by a good road, and the porters’ organization had been involved. In contrast, the Igalaga potato and maize market was set up *ex nihilo*, and farmers have difficulty bringing their crops to market, so it does little business.

Exclusion problems

Promotion of new markets and supermarkets often leads to the exclusion of populations with a low standard of living. When markets are established in urban areas, the result in almost every case is the exclusion of many disadvantaged merchants because points of sale are fewer and more costly. The example of the Shanghai retail markets has been documented by Zhang and Pan (2013), who ascribe the high inflation of 2010 to the privatization of open-air markets. As private operators had no interest in renting unprofitable market stalls, the

number of open-air markets fell sharply. The municipality wants to convert retail markets into supermarkets, but these tend to mishandle fresh produce.

In Hanoi, while food supply is dominated by the numerous retail markets and street sellers, the municipality concentrates its investments on the largest retail markets and supermarkets, exacerbating the problems of employment and access to food for the poor (Moustier *et al.*, 2009; Wertheim-Heck *et al.*, 2015).

Conclusions

Cities in developing countries are characterized by the coexistence of a popular class and a middle class. Hence the diversity of food distribution systems has to be preserved. Out of a concern to modernize trade, municipalities may engender “white elephants” that exclude poor populations. Market redesign may be necessary to relieve congestion in some neighbourhoods, promote competition and improve food quality; it can only be successful, however, where existing food flows are well understood and there is proper consultation with traders, especially on financial aspects. Transaction sites should be conceived differently for short versus long circuits, and for wholesale versus retailing. Those points are illustrated in this chapter by the presentations of cities in Uruguay (Montevideo), Zambia and Mozambique.

Certain priority areas for research can be identified. Often, little is known of the spatial organization of supply flows. It would also be useful to better assess the benefits of centralization and decentralization of distribution in terms of sustainability, especially regarding the access of low-income populations to different types of distribution systems (transportation, price), and the energy cost of each. ★

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Kitwe, Zambia

Sustainable urban food policies through market infrastructure and logistics

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Food security is defined as access to sufficient, safe and nutritious food to meet dietary needs and food preferences for an active and healthy life. Hence, it is essential to overcome bottlenecks that pose a challenge to urban food systems. These include inconsistent current policies regarding the management of market infrastructure and logistics, thus perpetuating urban poverty, postharvest losses, decreased income and inefficient resource use. The provision of functional market infrastructures based on harmonized policies would therefore undoubtedly enhance urban food security.

General context of food public policies

Kitwe boasts a population of 522,092 (Central Statistical Office, 2011) and covers an area of 777 km². Achieving sustainable urban food security is always an issue for urban development because of the role food plays in citizens' subsistence and wellbeing, and city growth. The Poverty Reduction Strategic Paper (Government of the Republic of Zambia, 2002) addresses the scourge of urban poverty in Zambia by outlining measures needed to achieve sustainable economic growth, such as the development of market infrastructure and technological skills, as well as market information provision. Given that the local government is a supreme policymaking body at the local

level and responsible for formulating policies, it is essential to assess food system policies, market infrastructure and logistics in Kitwe. AGRA (2015) points out that many African countries have pushed for increased productivity in agriculture without making an equal push for improved markets, hence resulting in high transport costs, high postharvest losses, while maintaining the vicious circle of poverty due to elusive food security.

National policy framework, Kitwe city bylaws and legal framework

The management of market infrastructure for agricultural products in Zambia is governed by a number of national laws and city bylaws. This legislation includes the Markets and Bus Stations Act, the Local Government Act, the Public Health Act, the Urban and Regional Planning Act, the National Agricultural Policy and city bylaws. The question may then be asked as to whether these policies are geared towards achieving sustainable urban food security through developed and well-functioning markets. The National Agricultural Policy identifies the lack of access to markets as a major problem for producers in the agriculture sector. This policy promotes market infrastructure development and marketing of Zambian agriculture products (Government of the Republic of Zambia, 2004). National policy interventions have focused on establishing markets to channel food commodities from surplus to deficit areas, promoting long-term strategic reserves to bridge the hunger period, ensuring that farmers obtain a reasonable income, while promoting sufficient and dependable annual production to feed the city's population.

Kitwe City Council bylaws, as enshrined in the Local Government Act (Chapter 480, Section 110), affirm the Council's mandate to regulate the growing of crops within the municipal boundaries (Government of the Republic of Zambia, 2012). City bylaws pertaining to food systems are confined to land acquisition procedures and do not cover aspects regarding food production, processing, marketing, distribution, infrastructure development and waste management. The Council, however, utilizes other legal instruments, such as the Urban and Regional Planning Act, which mandates planning for all types of land use. The Public Health Act promotes the distribution and

storage of quality food and clean environments as a basis for good health. However, urbanization, population growth, taxation (market levies), hurdles in land acquisition procedures, etc., have resulted in the emergence of illegal occupancy of land for gardening, street vending, water pipe vandalism to access water, and in some cases raw sewage has also been used for gardening. These trends in illegal activities have given rise to substantial controversy with regard to urban management and are out of line with existing legislation.

Leading case studies

Bylaws need to be formulated by local authorities to enhance the sustainability of urban food security. For example, a vote was taken by the Board of Supervisors at the Los Angeles City Council to reduce property taxes on some vacant urban lots if owners leased them out as vegetable gardens or fruit orchards (Paige, 2015). This policy aims to increase food access for low-income families, create jobs, improve public health and ultimately urban food security. In 2008, the City of Ndola in Zambia proposed that the Urban and Periurban Agriculture policy for the city be developed as a way to help residents by providing a regulatory framework for enhanced urban food security (Ndola City Council, 2008).

Recent policies and actions

The Zambian government implemented the National Decentralization Policy in 2013 for efficient and effective service delivery through the devolution of functions from central government to local authorities, as provided for in the Government Circular No. 10. Decentralization essentially aims to ensure inclusive development and access to services. The devolved sectors include primary education, agriculture, extension services, social welfare and primary health care.

The informal trade sector is currently being regulated in Kitwe. This encompasses improvement and expansion of market infrastructure to overcome the precarious conditions that prevail in major trading places, such as Chisokone Market, where the construction of a modern market has already been earmarked. Furthermore, three modern urban markets, namely Nakadoli (photo), Buchi/Kamitondo

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PHOTO NAKADOLI MARKET INFRASTRUCTURE, KITWE



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and Ndeke, have been built with EU funding. As policy guidance, the International Labour Organization (2000) advises that the identification and removal of legal, fiscal, and administrative barriers that tend to hamper the inclusion of informal sector operators in the modern economy would help ensure social protection, safety and healthy working conditions.

The Farm Input Support Programme involves the provision of agriculture input subsidies, i.e. seeds and fertilizer. This national policy is focused on increasing maize production, improving household food security and income, while creating an enabling environment for the development of private sector input supply chains. The programme is locally managed through the District Agricultural Office, which has been entrusted to the local authority.

Regarding food supply and distribution aspects, the local authority further undertook projects focused on the improvement and construction of roads and bridges to enhance the flow of food citywide and throughout the region.

Impacts of the actions

These impacts are as follows:

- › Decentralized management of food production programmes at the local level has enhanced sustainability and interaction between the involved actors, including producers, cooperatives, farm input suppliers, local authorities and the Ministry of Agriculture.

- › Enhanced productivity among farmers who receive input subsidies.
- › Maintenance of a wholesale market for vegetables—commonly known as ‘the green market’—located within the town centre. In this context, a green market is a trading place that deals with vegetables only.
- › Increased demand for built environment has, however, posed an urban food security challenge as farm owners are increasingly rezoning their properties to meet other planned land uses. The future implications of this policy include total reliance on imported food by the city, hence the need to regulate land-use changes by the local authority.
- › Trend of newly constructed market infrastructure being turned into white elephants due to marketeers’ resistance to paying market levies, resulting in continued informal vending and untapped economic benefits.

City interventions, market infrastructures and mode of governance

The city endeavours to promote cohesion among key authority institutions and stakeholders through inclusive strategic planning. The local authority has further embarked on a process of creating subdistrict structures at the community level for improved urban governance. With FAO’s implementation of the Food for Cities programme in Kitwe, it is envisaged that the urban food system will be given the spotlight it deserves. This programme fosters the City Region Food Systems concept through the strengthened capacity of local stakeholders to improve food and nutritional security for Kitwe residents. Furthermore, the programme seeks to reinforce urban–rural linkages for more efficient, inclusive and resilient food systems.

Market systems in Kitwe can be classified as formal or informal. Formal markets include supermarkets, hotels, restaurants and marketplaces established by the Kitwe City Council. There are 26 markets under the Kitwe City Council and the city accommodates large supermarkets, hotels and restaurants. The formal system ensures decent sanitation and storage facilities. Informal markets include street

vending and non-gazetted markets located along shop corridors, and have some undesirable features such as dust that render products unhygienic. Kitwe's road network is fairly good, but most feeder roads that lead to farm blocks are generally gravel. Kitwe City Council has thus procured earth moving equipment to improve these roads. The construction of Mufuchani Bridge across Kafue River aims to establish a link between markets and the Chantete farming block so as to reduce distances to reach markets (Kachemba, 2015). The Council has also created an enabling environment for investors wishing to develop cold rooms, warehouses and slaughterhouses to enhance product control and hygiene (Kitwe City Council, 2012). The Council also guarantees employment for market workers and further provides annual budgetary allocations for market infrastructure maintenance and logistics.

Kitwe hosts several stakeholders with key roles in ensuring urban food security. The only forum aimed at bringing together city actors is the District Development Coordinating Committee, which was created under the provisions of Government Circular No.1 (1995)—it holds quarterly meetings. However, there is need to scale-up the Committee membership as not all stakeholders involved in the food industry are members, hence holding back the urban governance process.²

Policy experience and recommendations

Although a milestone has been reached in harmonizing policies that drive urban food systems through implementation of the decentralization policy, inclusive decision making and policy formulation remains minimal. This is because local authorities still lack full autonomy on a variety of fronts, including delayed fiscal decentralization. The study showed that city bylaws are not adequate to effectively address all urban food security challenges. Hence, Kitwe must develop a specific policy that addresses urban agriculture, food wastage, marketing and infrastructure development.

Based on the above findings, it is therefore recommended that the following measures be explored:

2. As defined by UN-Habitat (2002), urban governance is a sum of the many ways public and private individuals and institutions plan and manage common city affairs.

- › Develop a urban agriculture and food policy and promote enabling legal and policy frameworks.
- › Develop bylaws that prohibit rezoning of city farmland as a means to enhance urban food security.
- › Develop well equipped and functional markets.
- › Provide training for producers and traders on food handling and processing.
- › Create e-governance, ensure provision of market information and enhance the multi-stakeholder dialogue. ★

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Maputo, Mozambique

Regulating informal markets

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Formal and informal markets

The Municipality of Maputo—also popularly referred to as the ‘City of Acacias’—covers an area of 346.77 km². It is located on the east coast of Mozambique and is administratively divided into seven municipal districts. It was elevated to the category of city in 1889 and, according to the 2007 census, it had an estimated population of 1,205,709 inhabitants.

The main economic activities of Maputo are manufacturing, construction, trade and finance, but informal activities predominate. All economic activity sectors depend on the informal sector to supply the market with raw materials and finished products, since the formal sectors are not sufficiently developed to meet this demand. This situation is a challenge for the Municipality and for the Government of Mozambique because these informal activities partly take place on the public roadsides, creating a lot of embarrassment because they are not officially allowed, but are necessary.

The Municipality hosts 63 markets (41 formal and 22 informal) and 5 municipal trade fairs, for a total of 68 municipal markets. Depending on their organizational, infrastructure, service provision levels, these markets are subdivided into levels A (adequate organization with infrastructure for the provision of comprehensive services), B (developed with infrastructure for some services) and C (less developed in terms of infrastructures and service provision, i.e. informal markets, as specified below).

The fees charged are based on the market classification. Hence, according to Article 4 (nº 7) of the City Bylaw on Markets and Fairs,

approved under the Resolution 94/AM of 23 October, 2008, regarding market tax levies, informal markets are assimilated to level C markets, with the corresponding levels of fees charged.

Implemented policies

After a long period of hesitation, the Board in charge of markets and fairs of the Municipal Council of Maputo finally endorsed a plan to formulate a bylaw to regulate informal sales in Maputo—it will be formally presented in September 2016. Hence, in 2015, significant advances were achieved regarding approaches that could be applied to deal with informal sales. The decision makers have therefore now understood that taxing informal trade could be a financial boon for the City of Maputo.

Therefore, in coordination with the Informal Economy Association of Mozambique (AEIMO) and the Association of Operators and Workers in the Informal Sector (ASSOTSI), a survey of informal vendors who operate along the roadsides is under way, with the aim of determining both the income generated by these activities and the tax fees that vendors are required to pay, especially in the downtown area. On the other hand, the Municipal Council of Maputo has had regular meetings with informal vendors in order: to check the ways they handle food products; to provide them with guidance with regard to obtaining a health card (ensuring that they do not have any contagious diseases); to inform them about wrapping food sold from foodtrucks (see below) to avoid contamination, as well as about food preservation, hygiene and cleaning, in order to mitigate the outbreak of endemic diseases and guarantee safe food.

A new informal sales activity recently emerged, i.e. the sale of food from foodtrucks, with great potential due to the high demand for this service. But this new trend is worrisome and often contested by official catering service operators, because of unfair competition and the imminent public health threat it represents. The Municipality of Maputo, civil society and public health authorities are concerned about this phenomenon. Hence, the Municipal Council of Maputo held a Forum on Public Health in December 2014, with invitations addressed to Ministry of Health agents from the markets and fairs division, to the National

Association of Municipalities of Mozambique (ANNAM), to representatives of informal vendor associations, among other relevant actors. This forum concluded that informal food sales activities could continue since the vendors complied with guidelines regarding wrapping, hygiene and cleanliness in the handling of food products.

Municipal strategy to organize informal sales

'Informal sales', 'roadside sales' or simply 'sales in inappropriate places' are growing exponentially in Maputo, requiring prompt effective responses from the Municipality. However, due to the complexity of this informal activity—because of the many different facets and peculiarities and especially the fact that it involves highly disadvantaged and/or low-income people—a sensitive yet structured approach is needed to organize these activities, while minimizing negative impacts on vendors.

The Municipal Council of Maputo has thus exchanged experience with other cities such as Durban and Barcelona that are faced with the same situation. This enabled us to draw up a strategy based on the four pillars described below, and it is now being implemented.

Improvement of infrastructure of municipal markets and fairs

The Municipality of Maputo—with a view to improving the quality of services rendered to vendors in the markets and fairs, and to thus urge them to settle at their allocated outlets, and encourage informal or street vendors to sell their products in the municipal markets—has launched a number of market construction and rehabilitation projects. These include the construction of the Craft, Food and Flower Fair of Maputo, rehabilitation and restoration of the central market, construction of a new fish market and requalification of Xipamanine, Jeneth, do Povo and Museu markets in order to modernize and make them more attractive so as to stimulate interest and encourage informal vendors to return to the markets.

It should thus be noted that the requalification process is participative, with the market vendors involved in discussions on all aspects of the project. The infrastructure (stands, kiosks, etc.) are designed with a prior consultation with the beneficiaries, particularly vendors,

vendor commissions and relevant associations, so as to ensure that they will have a pleasant selling place that meets their needs. The construction process must always take aesthetic aspects into account with the aim of making the city more attractive, while ensuring that the facilities are tailored for the concerned activity.

Review of municipal bylaws

There is a certain degree of skepticism amongst politicians and citizens of Maputo on the city becoming a large marketplace under the conditions described above. Municipal officials are thus often faced with substantial criticism with regard to implementing an informal selling strategy, organizing and formalizing activities, taking vendors' opinions into account and promoting their involvement in the process, as well as that of relevant associations, like other African cities that have passed similar bylaws.

This new approach to informal sales will organize vendors and make them accountable, but they are also required to contribute to the growth of the city's economy. This professionalizes them, thus making them feel less marginalized and an integral part of the city's social fabric.

Training and communication

Communication is one of the main challenges in the relationship with informal vendors, because the social view of them has conventionally been that they are littering the streets and markets and disorganizing the city. The Municipal Council is currently seeking to have a closer relationship with these vendors. There is now, for example, a memorandum of understanding between the Municipal Council of Maputo and the Association of Operators and Workers in the Informal Sector (ASSOTSI, now AEIMO), which establishes the mechanisms of coordination between the Municipality of Maputo and informal vendors. This enables municipal officials to regularly coordinate some activities such as cleaning, handling of products and foods to ensure proper hygiene, as well as collecting the Municipal Personal Tax.

Regarding the training component, the municipal officials plan to provide courses on entrepreneurship, business management, hygiene,

fiscal education, selective collection and packaging of solid waste, etc. The training component therefore is crucial for the environment and for the sustainability of vendors' businesses, while safeguarding the city's image, vendors' prosperity, and fostering economic growth in the country. Informal vendors have thus become taxpayers. The long-term prospect is that these informal vendors will eventually become successful entrepreneurs, enabling them to leave the streets over the short to medium term.

Thematic fairs

Downtown Maputo has the highest concentration of informal activity than anywhere else in the city thanks to the variety of services available, thus providing a great business potential for informal vendors. Municipal officials thus attempted to disperse informal activities by introducing thematic fairs. This has provided the municipality with a means to collect some revenue, while also gradually setting the organizational framework for vendors, including the establishment of selling areas, operating hours, presentation techniques, cleaning before and after the day of selling, etc.

On thematic fair days, products sold at the fair cannot be marketed in other places of the city.

Impact of the organization of informal sales

This action will enable vendors to become well organized in their activities. The markets have already contributed by maximizing fee collection for the municipality, thus enhancing the municipal finance sustainability, in turn ensuring good governance. It has also created opportunities and more jobs for the neediest people, while promoting economic growth and poverty reduction.

Urban authority interventions

As discussed above, the governance process is participatory, with citizen surveys carried out prior to any interventions in neighborhood markets. Urban authorities have provided an opportunity for all interested parties, including citizens, civil society, experts, NGOs, ASSOTSI and the Association of Carriers and Street Vendors (ASSOCAVA) to be

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involved in the process. Maputo municipal authorities also provide these organizations with training, knowledge on endemic disease outbreaks and handling of food and drinking water. Urban authorities have sought to adopt inclusiveness policies that meet both sellers' and citizens' expectations.

This experience has influenced local policy, while generating practical and workable alternative solutions, since all interested parties work in close collaboration with the local government. The process of passing a new municipal bylaw to regulate informal sales activities is thus ongoing, and is taking the complexity of this activity in Maputo City into account. ★



Lusaka, Zambia

Alleviating food insecurity through market infrastructure provision

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General context – Global and national policies

As we move away from Millennium Development Goals (MDGs) and begin to embrace Sustainable Development Goals (SDGs), it cannot be denied that issues related to the effects of urbanization on food security are of serious concern. In fact, the second SDG aims to “end hunger, achieve food security and improved nutrition and promote sustainable agriculture”.

The Zambian government is committed to working towards these global aspirations, as can be seen in the Revised Sixth National Developing Plan (SNDP) 2013-2016. In this Revised SNDP, agriculture, livestock and fisheries are among the priority economic growth sectors, while focusing particularly on the development of a private sector driven agricultural system. The Zambian government’s commitment to promoting the market access and service development aspects of this sector is a key focal point of this paper. In this regard, SNDP “seeks to create an enabling environment that will facilitate an efficient supply of agricultural inputs, increase private sector participation and improve the functioning of markets” (*Revised Sixth National Development Plan*, p. 121). Furthermore, it is hoped that supporting institutional market arrangements will enhance the performance of the

sector by revitalizing cooperatives, establishing strong agricultural marketing systems and providing farmers with access to trade information, thereby enhancing the system performance. In this sector, the government also seeks to increase market infrastructure access by investing more in storage facilities for marketable surplus production as well as enhancing farmers' access to local and national markets (*Zambia Agriculture Investment Plan*, p. 9).

Steady enhancement of the performance of the agriculture sector is now critical to Zambia, partly because it is the third most highly urbanized country in Sub-Saharan Africa. Over 40% of its total population of about 15 million people is estimated to live in urban areas and 37% of the urban population live in Lusaka, the capital city (World Bank, 2012). Thus, Lusaka is the city most affected by Zambia's rapid urbanization, which has contributed to increasing food insecurity, particularly in terms of high food prices. Regarding demand, urban population growth has magnified the food demand, while on the supply side the influx of the rural population into the city has reduced the farm labour force, thereby reducing the production of food commodities to supply the urban population.

This paper discusses interventions by the local authority (Lusaka City Council) to improve food security in the city. Opportunities that have not been fully explored but which could alleviate the current situation are also discussed.

Implemented actions

Market infrastructure provision

The Lusaka City Council—the local authority for the city—is mandated under the Markets and Bus Stations Act (2007) to “provide for the establishment and regulation of markets, establishment of market management boards and to address any other matters connected with the foregoing” (Markets and Bus Stations Act, 2007). Four types of markets are currently operating in the city, i.e. council markets, cooperative markets, street markets and self-built markets.

Council markets are constructed through government or donor funding or via private resource mobilization by the Council. These

markets are fully operated by the local authority in terms of infrastructure building, maintenance and daily management. Lusaka City Council presently has 10 such markets.

Cooperative markets, on the other hand, are constructed through initiatives of residents who identify a suitable location and start trading until the market gradually grows by itself. The residents then put up infrastructure without any government intervention. Although they are also guided by the Markets and Bus Stations Act like other council markets, cooperative markets are run by management boards formed by the market stakeholders themselves and the board is responsible for all market related matters, such as provision of amenities, maintenance, etc. Currently there are about 60 cooperative markets dotted around the city. Note that the local authority has no role in cooperative markets and that there have been previous efforts to engage with the cooperative management boards to try to bring them under the Council's umbrella, but these efforts have been hampered by strong resistance.

Street markets are another type. These markets are temporary arrangements that operate once or twice in a week. They are usually initiatives of clubs or groups of people who organize themselves to trade with the permission of the local authority. The number of street markets is difficult to estimate because they are temporary in nature.

Despite the existence of the above mentioned types of markets, there is still a huge shortfall for market infrastructure for the growing population, which has led to the introduction of the fourth type, or so-called self-built markets.

Increasing market infrastructure access – Design and implementation of actions

Self-built markets are a more recent initiative of the local authority. This type of market arose when the local authority's revenue base was eroded due to several government policy changes. This resulted in insufficient resources for the local authority to provide services and facilities such as market infrastructure to the community. Thus, building of market infrastructure has not been possible for more than two decades. This problem has been further compounded by Lusaka's

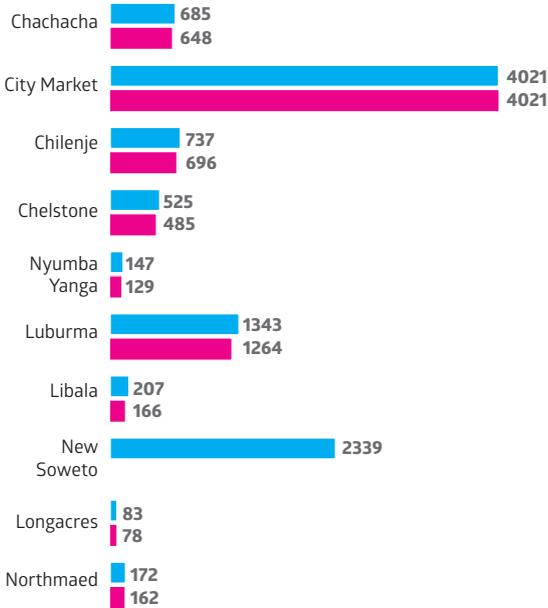
high urbanization rate. Self-built markets are primarily created, designed, allocated and managed by the local authority. However, unlike the council markets mentioned earlier, self-built markets are not built by the authority. The authority identifies suitable land and designates it as a market. Various council procedures are then followed to adopt the market with full participation of the community and with the involvement of the Area Councillor in charge. After adoption, the local authority advertises that market plots are available and they are offered to successful applicants. The local authority then designs plans that must be followed when individuals build their stands. When the stands are built and operational, operating traders are levied by the local authority on a monthly basis.

Impact and challenges of self-built markets

Since the introduction of self-built markets, the local authority is currently managing 17 of them. This has created opportunities for income generation, while increasing accessibility to goods and services. Note, however, that the market stand occupancy rate is higher in council markets than in self-built markets. While council markets have an occupancy rate of about 83%, that of self-built markets is 63%. This is because when traders default in council markets, the council evicts them and offers the shop to other clients. However, in the case of self-built markets, defaulting tenants cannot be evicted because they own the shops. Figures 1 and 2 illustrate the occupancy rates of council markets and self-built markets.

In spite of this market space provision initiative, a number of issues should be addressed to increase the impact of these markets. Firstly, as mentioned earlier, the self-built market occupancy rates could be better if the Council could—through agreements signed when the market plots are allocated—compel market plot occupants to build their shops and make them operational within a specified period of time or face repossession. Secondly, as the Council does not deliberately specify that the market should be oriented towards selling food, shop owners are free to sell whatever they deem fit. This means that quite a few of these markets are trading non-food items, thereby reducing the impact that they could have on food security. If the

FIGURE 1 OCCUPANCY RATES OF COUNCIL MARKETS SELF-BUILT MARKETS



SOURCE: LUSAKA CITY COUNCIL, MARKETS UNIT

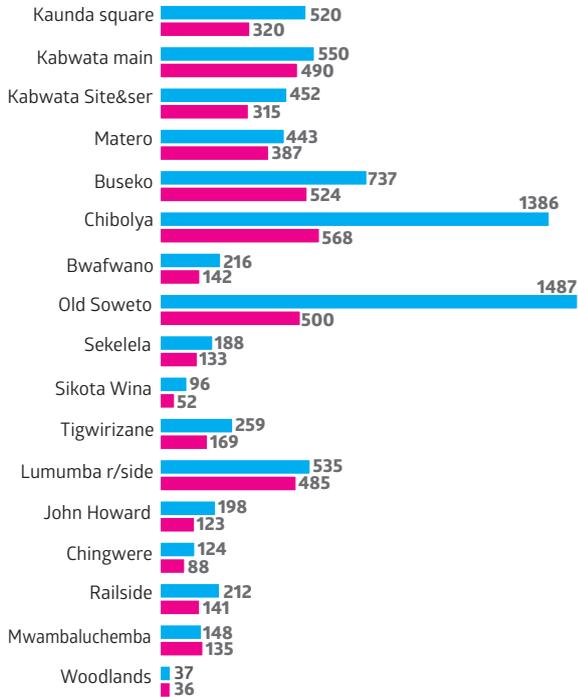
markets were designed such that—even when built by individuals—the Council would decide on the kind of commodities that should be sold at particular locations within the market, they would have more of an impact on improving food security. A deliberate bias towards allocating space for food sales would significantly increase the ripple effect of these markets by contributing to food price reduction, accessibility to food, while also providing a market for agricultural produce from nearby periurban gardens. This is not a problem in other markets because they are specifically designed and built to facilitate the sale of food.

Another major issue is that all of the 17 markets that have been created so far are only meant for retail marketing. They are not

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FIGURE 2 OCCUPANCY RATES OF SELF-BUILT MARKETS



SOURCE: LUSAKA CITY COUNCIL, MARKETS UNIT

designed as farmers' markets. They lack important infrastructure such as cold storage facilities and simple processing and packaging infrastructure that could prompt farmers to supply these markets with their produce. This has partly resulted in farmers selling outside of existing markets in unsanitary conditions. Their produce thus reaches the general population without any kind of official health inspection because the local authority's health inspectors are only mandated to inspect food sold within the market. This also poses a serious health hazard and increases food insecurity with respect to food safety.

The existence of middlemen, despite the provision of market infrastructure, is a further issue. These middlemen rent/own shops in the markets, whereas farmers supply them with produce. They form cartels amongst themselves and have an upper hand in setting prices at which the farmers can sell to them. Furthermore, they mark up the price of whatever produce they buy from farmers, thereby increasing food insecurity.

Another issue concerns the recent emergence of so-called home shops. This phenomenon has currently mushroomed, providing home owners with the opportunity to sell from their homes, thus avoiding the markets where they would ordinarily have to pay levies to sell from there. Therefore, even where infrastructure is provided, it is not being utilized due to the existence of this alternative.

Enhancing the efficiency of self-built markets

Past efforts at providing market infrastructure have not been deliberately geared towards alleviating food insecurity. This is because, even when a market is specifically allocated for the sale of food, enforcement is lacking. In addition, market facilities that are usually set up do not favour the sale of farm produce. This means that even when such infrastructure is provided, traders sell other non-food items, thus creating an artificial food shortage and pushing the price up. To enhance the performance of the self-built market initiative, the Council should enforce such policies and ensure that all markets have sufficient space allocated for food items, especially farm produce. In line with national policies that seek to enhance the marketing aspect of the agricultural sector, similar policies should be promoted at the

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local level to encourage the development of marketing facilities in support of small-scale local farmers from nearby peri-urban areas. Supporting the enhancement of marketing systems for farmers would likely keep the price of farmers' produce to within reasonable levels for consumer's, i.e. not artificially inflated by traders. This cannot be overemphasized considering the pressure that urbanization has had on food security of the urban population. The Council thus needs to broaden its prospects related to market infrastructure provision by investing in market infrastructure that is mindful of farmers' needs, while drawing up local policies that are implemented through by-laws that favour food production and marketing in the city. ★

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Montevideo, Uruguay

The Montevideo Model Market, analysis and prospects

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Supplying Uruguay with fresh produce

Data from the National Directorate of Agricultural Statistics currently show that the agricultural sector occupies nearly 2% of the cultivable surface of Uruguay, with some 23,000 ha being devoted to horticulture, 80% in the south of the country and 20% on the northern coast. Vegetables represent 15% of the gross value of agricultural production and come almost exclusively from family farms. Potatoes are an exception to this, with more specialized producers, increasing investment, high yields and a concentrated seeded area.

Most fruit and vegetable production goes to supply the domestic market, with the exception of citrus, 40 to 50% of which is exported, and, to a lesser extent, deciduous fruit trees and blueberries. There is no constant vegetable export stream. Horticultural sector demand in Uruguay, then, is essentially for the consumption of fresh produce. Fruit and vegetable consumption at the national level was about 340 g/person/day (250 if we exclude tubers), these figures are less than those recommended by the World Health Organization (WHO), namely 400 g/person/day, excluding potatoes and yams.

Since 1937 the Montevideo city government, through its Model Market (*Mercado Modelo*) has had an infrastructure and logistics policy designed to connect vegetable production to urban consumers. In that sense, the Model Market—which uses the latest information and

communication technologies—plays a fundamental role in supplying fresh food to the city of Montevideo but also the entire country. It is Uruguay's largest wholesale trading centre for fruit, vegetables and farm produce, with some 60% of all fruit and vegetables for Uruguayans' consumption passing through it.

Model Market characteristics

The Model Market's main business goal is to provide infrastructure, logistics and other services to help develop the trade in fruit and vegetables in a context of transparency and equal opportunities for producers and consumers, so contributing to the sustainability of the food system in its territory.

Among its goals, therefore, are the development of a transparent pricing system reflecting swings in the market and able to effectively modulate production and consumption and the reduction and/or elimination of margins or middlemen that provide no added value.

The Model Market also contributes to food security by guaranteeing the health quality (safety) of products marketed for public consumption and minimizing food waste and losses in the course of their production, transport and marketing. It is also committed to improving the Quality Management System (QMS, reference standard used: ISO 9001:2008) and its effectiveness in meeting clients' needs at less cost while the organization remains economically and financially viable.

Production and (essentially urban) consumption are balanced through market-garden supply chain activities:

- › By providing administration of spaces, logistics, monitoring services, security, cleanliness and facility maintenance for wholesale fresh fruit and vegetable marketing and market information services for stakeholders in the national market-garden supply chain. With its present service network the Model Market is able to operate with more than 550 (mostly small and medium-sized) businesses.
- › By generating and distributing standardized, impartial, accurate and timely information to all supply-chain actors that distribute products, from the producer to the consumer, as for example price

quotes, weekly reports, monthly analyses of changes in the fruit and vegetable basket, consumer bulletins noting the week's outstanding products in terms of price, quality and supply, specific product reports, etc. In that connection it should be noted that the Model Market's information system is state-of-the-art for Latin America and has therefore generated a number of international experience-sharing exercises. Information on foodstuffs is produced in conjunction with the Ministry of Livestock, Agriculture and Fisheries (MGAP) using an innovative approach known as an agricultural observatory. The "Senda Plan" should be noted too: developed jointly with the Inter-American Institute for Cooperation on Agriculture, with financing from IDB/MIF and IDRC (Canadian foreign aid), it seeks to provide broad access to information on the Model Market and extend access to information technologies to all those who participate in the Market's operation.

- › By providing training in a number of different forms: courses, workshops, discussions, etc., on various topics related to national and regional market gardening trade, food quality, product handling, etc.
- › By reaching agreements between institutions (linking several levels): in developing its public-facing working policy, the Board of Directors of the Model Market (CAMM) considers that it is strategically important to reach agreements with a number of institutions so as to help use the various resources more effectively to disseminate knowledge and information, provide training, etc.

CAMM now has the following working/collective groups:

- › post-harvest inter-institutional working group,
- › MGAP Farm Branch,
- › National Food Institute (INDA), central purchasing unit—Ministry of Economy and Finance,
- › Uruguayan Institute of Childhood and Adolescence,
- › Cuesta Duarte Institute, PIT-CNT (national trade union confederation).

Model Market governance mode

From the organizational point of view, the Model Market is a delegate of the Departmental Government of Montevideo and is administered through a co-management-based committee whose membership is drawn from the various sectors involved in the market's operation. It should be noted that in Uruguay, the State has traditionally played a very important role in food supply organization and that the Constitution provides, indeed, that departmental governments shall "ensure public health" (Art. 275). At the departmental level, the organizational law of the Departmental Government of Montevideo stipulates, in Article 35, that intendants have jurisdiction in "all matters regarding supply and the market, the establishment, abolition or transfer of markets". Accordingly, CAMM devises, supports and implements policies for food chain development, from production to final consumption, and equitably defends the interests of all actors in the chain.

To that end, the Model Market is administered by a Co-management Board of Directors made up of representatives of the municipal government, MGAP, and the various producers', wholesalers' and salaried and self-employed workers' groups.

The future: advent of the Montevideo Food Unit

The current operations of the Model Market (now almost 80 years old) has limitations in terms of health and safety in food handling and storage, to which must be added certain shortcomings and deficiencies of its marketing structures that constrain the sector's competitiveness, to wit: difficulties in the proper conduct of logistical and distribution operations (resulting in increased losses); a paucity of facilities and infrastructure for efficient operation (parking, refrigeration and processing capacity, loading docks, access and commercial services, etc.); problems related to access control, traffic and mobility. These infrastructural deficiencies, and the fact that the Market is operating at full capacity (97%) strongly limit the opportunity to respond, in the current conditions, to any increase in future consumption.

The main objective is to make the Model Market a modern multi-sectoral wholesale centre (the Montevideo Food Unit, UAM) handling a wide array of perishable and semi-perishable foods such as fruit,

vegetables, cereals, meat, fish, eggs, dairy products, flowers, preserves and other foods, whatever their type of preparation, packaging and marketing for wholesale trade.

The UAM project is a public-private initiative designed around the need for modernization of the commercial structures of the city and the nation and the need for replacement of so old a structure as the Model Market to comply with and extend our public food supply policy. Thus, the UAM will obviate certain limitations of the current Model Market while preserving its strengths, namely: the extensive food products on offer (accounting for more than half of the fruit and vegetables consumed in the country), its national reach, and the fact that it sets the standard prices. The UAM will also seek to increase added value in the market gardening sector.

Finally, the platform will continue to comply with public policy by focusing on:

- › Improving Uruguayans' diets, health standards, quality of life for current and future generations, and the prevention of noncommunicable chronic diseases;
- › Consolidating the image of a country that produces quality foods;
- › Improving collective demand for products with which more than 70% of producers are familiar, something that will have economic, social and territorial impacts.

International outreach of Model Market practices

At the international level, the Model Market has inspired other endeavours of a similar kind in Latin America, such as the initial phase of a South-South cooperation programme now underway between the Model Market and the Government of Bolivia to replicate its experience in four Bolivian towns.

The Model Market experience will serve as a reference for Latin America, based not on infrastructure and logistics facilities but on all the difficulties that must be overcome to keep operations going and all the aspects of trade information and its dissemination to the various stakeholders in the food supply chain.

For example, the market is involved in the international project "SMS (Short Message Service) assessment and link to the private

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sector”, whose main objective is to investigate the functionality of SMS (text) messages as a way of disseminating agricultural market information and the strategies used by countries, to achieve a direct link with the private sector at the various point in the chain. The Market Information Organization of the Americas (MIOA) has selected Costa Rica, Ecuador, Mexico, Uruguay, and Trinidad and Tobago as participants in the project. ★

Markets and logistics. Wrap-up of discussions and conclusion

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Urban food supply and distribution systems can operate, perhaps more easily than other urban services such as access to water or electricity, without public intervention. The cost of the food supply may be reduced, however, and its wholesomeness improved, by investments in the construction, renovation or maintenance of transport, storage and processing infrastructure or in markets (wholesale, central, retail, street etc.), i.e. in tangible infrastructure. These objectives can also be achieved by acting on such intangibles as standards and regulations: establishing quality standards or reducing information asymmetries, with respect to prices, in particular.

The presentations dealt with the food policies of the cities of Kitwe and Lusaka in Zambia, as well as the modernization of the wholesale market “El Mercado Modelo” in Montevideo, Uruguay. The lessons learned in all three cities, as well as their recommendations, can be summarized under five headings.³

Food security and safety and the sustainability of food supply systems are prerogatives of central and local governments

Whether in Kitwe, Lusaka or Montevideo, local governments have the legitimacy and legal jurisdiction to design and implement policies to ensure food security for their population, market access for producers,

3. As the Maputo representative was unable to attend owing to the terrorist attacks of 13 November, the case of Maputo was left off the agenda.

and food system sustainability. In Zambia, the provision of market infrastructure, both tangible and intangible, is among the measures recommended by the Government in its policy documents on development and poverty reduction, while the 2007 Markets and Bus Stations Act specifically assigns responsibility for bus stations and markets to municipal governments. To make municipal policies more consistent and to give greater leeway to local decision-making bodies, the latter recommend that prerogatives (responsibilities) and fiscal decentralization (the means) be harmonized.

A successful food and nutrition security policy must simultaneously consider aspects related to supply and demand

In the area of food and nutrition security, the supply and demand aspects are inextricably linked. Thus, an increase in agricultural productivity is not enough if high transport costs and post-harvest losses drive prices higher than they might otherwise be. One common feature of the three local decision-making bodies of Zambia and Uruguay is that they implement ambitious food procurement policies that promote both urban food security and the development of agricultural supply chains that will provide gainful employment and sustainable food systems. For these programmes and their constituent actions to succeed, local, regional, national, and even international policies need to be linked in a particularly coherent way. The *Mercado Modelo*, for example, regulates fruit and vegetable imports based on the capacity of domestic production to meet the demand. Again, it is imperative to harmonize the legislative framework with the prerogatives granted to local governments, and to endow that framework with the ability to evolve quickly to adapt to changes. Hence, the municipality of Kitwe noted that legislation forbidding the use of urban land for agriculture needs to be made more flexible and that if its own mandate were broadened beyond land tenure issues, it would be in a better position to cope with cases of illegal land occupation without endangering food security.

The location of market and exchange infrastructure is fundamental

Market location is crucial: the place a market is moved to or built anew may make the difference between a fully functional market and one that remains empty. If it is not connected to other exchange and transport infrastructure, the costs borne by users (producers, carriers, wholesalers, retailers, consumers) are liable to be much greater or indeed prohibitive. It is important, therefore, to involve all stakeholders in deliberations on market infrastructure projects from the outset, so that costs and benefits for each can be analysed.

It is important to start with what exists and take a pragmatic approach

All three presentations stressed that it was important to start with what already exists and heed the difficulties expressed by populations rather than seeking at all costs to quickly get to an “ideal” place. Among the solutions that have proved successful are: to tax street vendors to encourage them to relocate rather than try to drive them away or force them into a market; to improve hygienic conditions at product exchange sites rather than try to move traders and consumers elsewhere; to change incentives to invest in storage infrastructure rather than penalize traders when they use the markets for that purpose; etc.

Regulation by public authorities is important to make markets functional... and market infrastructure is per se a regulatory tool

Markets, and particularly wholesale markets, but more generally all tangible and intangible infrastructure for the exchange and distribution of food products, are susceptible to public regulation: thus, because it protects domestic production by regulating imports, the Montevideo wholesale market is shown to a tool of national trade policy. By promoting transparency in pricing, it also makes situations of information asymmetry rarer. In Lusaka, legislation allows the municipality to assign market spaces preferentially to traders who use them as intended (to market food products) and in an efficient manner

(by ensuring stable supply while reducing losses and wastage). As a result, occupancy is maximized, and the market powers intrinsic to closed and confined spaces can be regulated.

Conclusion of discussions

Food exchange and distribution infrastructure, both tangible and intangible, is a regulatory tool that food and nutrition security policies can take advantage of. The discussions led to two points for further study: the need to increase exchanges between researchers and public authorities, and the need to include agricultural product quality upgrading (processing, quality) in central governments' mandates. ★



PUBLIC AND OUT-OF-HOME CATERING SERVICES

- 📍 Curitiba, Brazil
- 📍 Medellín, Colombia
- 📍 Dakar, Senegal
- 📍 São Paulo, Brazil
- 📍 Colombo, Sri Lanka

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Public food services, a leverage effect toward more sustainable city food policies ?

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The lack of sustainability of current food systems is no longer an issue (food consumption accounts for 20-30% of environmental impacts, Tukker *et al.*, 2006). However, the absence of a consensual scenario to solve environmental problems, whilst simultaneously ensuring the necessary level of agriculture productivity, serves as an alibi for decision makers who are still tempted to foster economic levers, often through budget cuts, to the detriment of environmental aspects. Epidemiological data on food-related diseases, such as 'diabesity', resulting from high fat and sugar contents in Western style diets, further confirms the seriousness of the problem. However, it is essential to find a reasonable trade-off between the freedom of choice of consumers and overcoming unhealthy eating habits. The introduction of environmental indicators in food system economics would be a step further towards clarifying the levers for action, but otherwise externalities should be introduced in cost evaluation. However, a sustainability metrics method recognized by all stakeholders is still lacking.

The ratification of the Milan Urban Food Policy Pact by more than 100 cities worldwide highlights their willingness to play a role in new cooperation models—the idea that cities can be crucial in fostering sustainable food systems is gradually gaining ground because urban areas bridge local and global food systems. Decision makers are thus now being asked to put the question of city food policies on their

agendas. Meanwhile, the implementation of innovative food practices is flourishing, which is transforming cities into creative social areas (Schiff, 2013). This innovation spirit should not overshadow the existing jurisdiction with regard to public food procurement, which could serve as leverage to shift the paradigm towards regenerative food systems, whose value is still underestimated. By giving evidence that an in depth 'cooking from scratch' re-engineering approach is propedeutical to high quality public meals, several pioneers have already paved the way to re-qualify public food services (PFS) (Lacourt and Mariani, 2015). An effort is now needed to broaden the interest and attractiveness for cities regarding such services, which are too often outsourced at the lowest price.

Indeed, PFS may become a tool for change, thus dynamising local economies while being a food education protagonist (including boosting awareness on the whole food life cycle from farm to waste) through experience, not theory. Today, 40% of calories are consumed out of home. The overall social foodservice market (including meals served in schools, universities, nurseries, administrative buildings, retirement homes, hospitals and prisons) of all EU-28 Member States was estimated to represent €82 billion in 2013 (GIRA Foodservice, 2014). This is low compared to the €1,048 billion annual turnover of the whole European food and beverage industry (Fooddrink Europe, 2014), but it is certainly enough to give a significant signal in favour of change and innovation. Therefore, public procurement seems to be an appropriate economic lever to create suitable market conditions for more sustainable food systems, while also fostering local authorities' legitimacy and efficiency in raising public awareness and promoting synergies with civil society regarding the emergence of more sustainable food production and consumption patterns. However, the fact that PFS provides food on a daily basis to one out of six European citizens should not be overlooked.

The synergic effect of PFS on urban food policies in fostering food security and sustainable food systems mainly arises from both of the following features:

- › The possibility of pre-planning the demand for large quantities of staple food according to the different seasons throughout the

year. Such demand is currently handled separately by all of the different buyers.

- › The potential impact of exemplarity in promoting food education, social inclusion and local economies through easier access to healthy meals, while also considering the benefits of reducing the hidden costs of food waste and patient malnutrition in hospitals.

The proposals put forward to create useful tools for decision makers and to identify a consensual methodology able to mainstream existing good practices include:

- › A mapping system that takes several parameters into account, such as: the location of public kitchens and restaurants, while highlighting all delivery points; the required volume of processed and served food; staff number and qualifications, etc.; supporting the identification and programming of measures to optimize food supply chains in large cities; embedding alternative food systems; and a coordination framework between all public tenders based on eco-efficiency criteria, particularly for logistics, to pool means and needs.
- › A common monitoring system to assess generic environmental impacts such as energy, water consumption and food waste to allow comparison of cook-serve and cook-chill/freeze serve methods of meal production at a very large scale in order to update meal production environmental metrics and facilitate planning and investment processes.
- › A specific yet to be developed activity code to classify an activity representing up to 21 billion meals served every year in EU and managed with public funds, would raise awareness on the real costs and global economic weight.

Such operational instruments could surely provide objective data to frame and compare individual services to deal with common PFS challenges and objectives, but they certainly cannot substitute the societal vision of public food services, which is crucial for the necessary paradigm shift. This vision, identified during the specific sessions of the conference devoted to catering services, questions, in a positive

and concrete way, the mainstream scenarios generally prescribed by current public decision makers, whereby industrialization replaces individual human know-how and eliminates valuable jobs, whereas massification is used to reduce costs, at the expense of quality, environment and local economies. ★

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Curitiba, Brazil



Popular Restaurant and School Nutrition Programmes: multisectoral policies

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Public policies to improve food safety

In 2003, the Brazilian government recreated the National Council of Nutrition and Food Safety, involving 17 ministries and 42 organized civil society representatives. Three years later, the Federal Law nº11.346/2006 created the National System of Nutrition and Food Safety, which focuses on improving the food safety situation through social participation and on a multisectoral action to be replicated in Brazilian states and cities. It was in this context that the federal government proposed the creation of some nationwide social programmes to enhance the nutritional setting, including the Popular Restaurant Programme and the School Nutrition Programme.

Locally, since 1986, Curitiba has had a Municipal Secretariat of Food Supply, which was initially focused mostly on social access to food. In 2005 and 2006, the Secretariat underwent a conceptual reorientation and started to work on three main fronts: social food access, public commercial units, and alimentary and nutritional education. So when Curitiba inaugurated its first Popular Restaurant in 2007, this multisectoral aspect already prevailed, as was also the case regarding the School Nutrition Programme.

Years later, Brazil published the following official definition of food safety: “Everyone’s right to regular and permanent quality foodstuff

access, in sufficient amounts, without compromising the fulfillment of other basic needs, having as a basis healthy eating habits, while respecting cultural diversity and also being environmentally, culturally, economically and socially sustainable.”

When setting the budget law for the 2014–2017 period, the Curitiba municipality developed a government programme named *Curitiba Mais Nutrição* (Curitiba More Nutrition). This programme, coordinated by the Secretariat of Food Supply, brought together many actions and programmes from different secretariats and municipal institutions. These combined programmes and actions aim to align and leverage efforts, optimize results and seize opportunities that arise between the different institutions’ actions. This programme works simultaneously on four axes that are embedded in each of its actions and programmes, respecting the commitment to their individual goals:

- › Access to quality food – guaranteeing that food reaches citizens in proper amounts and quality, prioritizing lower income populations;
- › Proper eating habits – striving to reorient eating habits of the community;
- › Co-responsible consumption – implementing policies to promote the marketing of products from sustainable production chains, while also promoting co-responsible consumption, and;
- › Municipal management of food and nutrition – providing guidelines for municipal food and nutrition management and its development, while enhancing the coordination and effects of such actions.

With this government programme, *Curitiba Mais Nutrição*, the Popular Restaurant and School Nutrition Programmes became even more widespread.

Two implemented actions

Popular Restaurant of Curitiba

Part of a series of 20 programmes of the Municipal Secretariat of Food Supply (SMAB), which converge in many municipal actions and programmes, the Popular Restaurant programme was initially

proposed by the Federal Government. Curitiba serves 4,200 daily meals in its four restaurants (photo).

In each of its units, meals are prepared in top quality kitchens by a hired catering company that works under the supervision of the Secretariat, even though they have their own head of nutritional supervision.

The guidelines of these Popular Restaurants aim to promote a natural, healthy, balanced, high protein diet, while respecting regional eating preferences. The daily menus, selected by SMAB nutritionists, are well received because of the daily variations and the fact that they are 1,300 calories on average. Meals are basically composed of rice, beans (a traditional essential ingredient in Brazilian cuisine), meat (with daily variations of pork, poultry, fish and beef in different recipes), a daily option, as well as greens and fruit for dessert.

For instance, the total cost of a meal is R\$5.60 (Brazilian real), only R\$2.00 of which is paid for by clients, while the remaining R\$3.60 is subsidized by the municipality.

These Popular Restaurants have more than one goal. Besides offering meals at a social price, they also promote a better eating

PHOTO POPULAR RESTAURANT, CURITIBA



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profile and have other benefits for the community. One example is the variety of actions for food and nutritional education, workshops, guidance initiatives and demonstrations that the Secretariat hosts in suitable locations for high numbers of people who benefit from its services, many of whom are in vulnerable food safety situations.

From the regional sustainability standpoint, through a federal government programme, part of the input used for meal preparation is procured directly through family agriculture, while prioritizing regional and organic production. This procurement is an important source of wealth for smallholder farmers, thus enhancing regional growth.

From a social perspective, the Popular Restaurant programme jointly acts with the Social Action Foundation (FAS-Curitiba), catering to homeless citizens, students, etc. It also provides support for homeless citizens' care.

School Nutrition Programme

Another programme conducted within the Intersectoral Chamber of Food and Nutritional Safety is the School Nutrition Programme, which was drafted by the Municipal Education Secretariat in a strategic partnership with its Health and Food Supply counterparts.

Briefly, this programme is responsible for meals served to kids in the Municipal Education Network—a total of five daily meals for each student enrolled in a full-time education programme. There are 184 municipal schools, 199 Municipal Early Childhood Education (CMEI) units, 80 Specialized Municipal Special Care (CMAE) units, 84 full time schools and 118 philanthropic entities. In total, over 275,000 meals are served to 146,628 children, and in some cases these meals are vital for their healthy growth.

For operational reasons, daily meals served at CMEIs are produced by hired companies in industrial kitchens, following a menu created by Municipal Education Secretariat nutritionists.

According to its broad intersectoral perspective, which strives to guarantee municipal food safety actions, the Municipal Education Secretariat maintains strategic partnerships to ensure that school meals are part of a more global effort to improve peoples' eating

patterns and quality of life. One example of this is the partnership between the Secretariats of Education and Health, which have jointly developed a programme called *Mama Nenê* to promote breastfeeding according to the standards recommended by international organizations in health areas. Besides an extensive guidance effort, education units have dedicated areas to enable mothers to breastfeed and collect breast milk to be later provided to their children by trained professionals.

The Education and Health Secretariats conduct nutritional research on all children in the public network during their years of attendance to closely monitor the results of actions and children's health status, thus facilitating monitoring of the current situation and decision-making on measures to be adopted.

The Municipal Secretariat of Education recognizes the importance of a good educational environment in the development of food and nutritional actions. Considering that the children involved are growing, it is crucial to connect with families in order to point out their necessary roles in promoting healthy eating habits.

Hence, personal initiatives of teachers often lead to establishing partnerships. For instance, many educational projects developed by individual teachers eventually attract the whole teaching community. To ensure unification and achieve results, technical experts from the Municipal Health, Education and Food Supply Secretariats assess the educational parameters and train teachers, parents, school coordinators, meal assemblers and professionals who handle breast milk administration. These projects are assessed, promoted and replicated.

In a combined strategy, food supply professionals offer a diversified range of food education workshops, courses and games which are conducted in schools in areas under the Municipal Food Supply Secretariat.

Moreover, in partnership with SMAB, many schools make use of gardens located inside schools to grow produce as part of the school curriculum—this strategy generally results in educational gains, better eating habits and a healthy lifestyle among students. Special attention is given to gardens adapted for wheelchair students, which was first suggested by a school director and later accepted and adopted by

SMAB agricultural technicians.

When it comes to input sources, the guidelines of the National School Nutrition Programme, a federal government programme, stipulate that products from family agriculture, especially organic products, should take precedence and be purchased directly from farmers.

Besides the marketed quantities, direct purchases from family farmers could also lead to the development of supply chains. During this process, many problems arise with regard to logistic chains, product classification and small-scale producer management. In order to solve these problems, the municipality is developing partnerships with state government institutions to improve the quality and consistency of services so as to ensure a better competitive environment for producers.

The results obtained

In the case of Popular Restaurants, the most clearcut measurable result is not statistical, but instead comes from monitoring people who are served meals daily in its four units. Clearly, the benefits are crucial for people's physical health and lifestyles, while also being essential for preserving their sense of self dignity.

From an objective perspective, over one million meals are served per year, with savings of over R\$8.5 million being made in comparison to average meal prices in similar conditions, which is about 2.2 times the public cost to run the programme. An average of 52 eating education initiatives and surveys are conducted yearly.

Similarly, regarding the School Nutrition Programme, perhaps the most subjective results are the most important. However, two figures are undeniable. The first one is the reduction in the number of underweight or malnourished children, i.e. around 60% over the last 19 years, while the second one concerns overweight children in Brazil—a contrary scenario. In 2014, for the first time in many years, there was a 1.09% reduction in the number of overweight or obese children.

Other figures are related to the 100 million meals served annually through the municipal education and training network of 1.7 thousand education professionals, including teachers, trainers, coordinators,

school inspectors, as well as students, parents and breast milk managers, to promote healthy eating as a way to improve nutritional content and guidance within the school context.

Involvement of city authorities

All of the presented initiatives were undertaken directly by the municipal administration. However, the most important achievement of this administration is clearly in successfully integrating actions from many departments, and the underlying rationale is that the solution for one scenario often represents a possibility for another one.

Both the Popular Restaurant and School Nutrition Programmes are known nationwide, and come with specific legislation. However, the constant search for improvements in projects and actions focused on food safety (access, quality, sustainable health-oriented eating habits) has shed considerable light on the city of Curitiba as an example of the successful implementation of national guidelines for Food Safety. ★



Medellín, Colombia

Commitment to food security and nutrition

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Food and Nutrition Security Plan

Food and nutrition security (FNS) is a subject which, over the last few decades, has taken on greater importance in terms of local, national and international public policy.

In Colombia, FNS is a State commitment inherent to fundamental rights and the cycle of life and is treated by an intersectoral and interdisciplinary approach and through risk management. The National Food and Nutrition Security Policy (PSAN) was defined in document 113 (2008) of the Document of the National Economic and Social Policy Council (CONPES).

Medellín is the only city in Colombia with a public policy (including programmes, projects and strategies) in this area. Since 2005, the City has taken up the challenges and made the requisite effort to optimize resources and ensure improvements, not only in the area of food and nutrition, but also in terms of inhabitants' quality of life and food security.

Medellín City Council's agreement 038 of 2005 defines the "Public Food and Nutrition Security and Sovereignty Policy", whereby the Food Security Directorate of Medellín was established (now the Food Security Unit) and more comprehensive actions were taken to address the theme of FNS from a more inclusive and participatory point of view. Food supplementation programmes have evolved from simple welfare programmes to a broader and more intersectoral food security concept. Thenceforth, a number of research and development approaches were set in motion, including the Food and

Nutrition Profile, the Food Management System, the Food Supply Plan, enhanced urban and peri-urban agriculture initiatives, formulation and implementation of the Medellín FNS Plan, and institutional enhancement of the Food Security Unit. The goal is to spur action that will guarantee food and nutrition security for the entire population.

Medellín's 2016–2028 Food and Nutrition Security Plan takes the form of a road map providing citizens with opportunities for integrated, sustainable and fair development. What it seeks is strength, organization and accountability for communities so that they can aim for a kind of urban development that tracks the complexity of the food theme. Another focus of the Plan is the need to help regulate public policy in the course of its implementation and to devise various actions which, through collective, intersectoral work, will help improve the quality of life of Medellín's population.

Actions taken

The actions now being taken under the Ten-year Food Security Plan, which were developed in accordance with the City's food security policy, have four specific components:

- › Food and nutrition management: this is an instrument of Medellín's Public Food and Nutrition Security and Sovereignty Policy, which applies the food supply component with a focus on the most vulnerable population groups. It generates regional development in that it creates productive systems, involving farmers in the *corregimientos* and city dwellers engaged in agricultural pursuits, in order to improve the quality of life of the citizenry.
- › Structural processes: are focused on a cross-cutting approach to the different programmes and projects and reflect the processes of political, legal, technical and administrative enhancement undertaken under the municipal FNS policy and the various FNS schemes being implemented in a number of sectors.
- › Production and self-sufficiency projects: seek to encourage rural and urban families in the city of Medellín to become self-sufficient, to generate surpluses (in particular in rural areas) and to develop ways of obtaining food other than by purchase. The work is done

with the inhabitants of the *corregimientos* who take an interest in agriculture and wish to participate in these projects.

- › Educational and research projects: are focused on research into food-related mechanisms and models based on food practices and habits, ancestral food supply knowledge, the state of food and nutrition security, citizens' biophysical conditions, environmental awareness, etc.

All of these actions revolve around different processes aimed at providing food supplementation to all population groups, with different care arrangements. Community restaurants are presented in this chapter—school cafeterias and community refectories—whose clientele are, respectively, school-age children and adolescents and persons 60 years of age and up. The catering strategy, which is part of the food and nutrition management component presented below, shows how education, information, communication, monitoring of health conditions and association with productive projects in the case of community gardens can help to improve food security for all citizens.

School meals programme

Medellín's municipal school meals programme is the responsibility of the Secretariat for Social Integration and the Family and is coordinated by the Food and Nutrition Security Unit; it is implemented in association with the secretariats of Education, Health, Finance and Planning. Active participation by the educational community (parents, teachers and students) is also sought. The programme develops school cafeteria projects for children and adolescents and the School Glass of Milk. Its objective is to "contribute to food security of children of both sexes aged 5 to 17 years by providing a food supplement during the school year, to promote study, to reduce early school leaving, and to promote correct eating habits and healthy lifestyles with the active participation of the family and the educational community in general".

The school cafeteria project comprises three levels of care: delivered breakfast/snack, prepared breakfast/snack and delivered lunch, along with a simple breakfast ration for rural areas. The School Glass of milk project has a single level of care.

In addition, the following, educational and participatory communication strategies, to strengthen actions to benefit children and youth in the city, are being developed:

- > Educational meetings;
- > Knowledge remobilization;
- > Gastronomic workshops and practical support;
- > Support for the school cafeteria space;
- > Educational demonstrations (collective educational meetings on different themes);
- > Orientation and strengthening for school meals committees;
- > Actions and support for educational institutions.

Educational meetings and demonstrations, gastronomic workshops, and refectory support are gamified based on playful, activity-based, participatory teaching models.

Community refectories for adults

The community refectories project aims to contribute to food security for adults through food supplementation and the conduct of educational projects on healthy eating habits and lifestyles.

The refectories are operated in association with religious communities, non-profit foundations and volunteers. Their operating and maintenance functions (food supply, preparation and distribution, vegetable garden maintenance) are among the project responsibilities.

All participants receive one or two food rations, breakfast and/or lunch daily from Monday to Friday, with a menu designed and prepared to supply 55% of the target population's daily requirements in terms of calories and nutrients.

The project is currently being implemented by the SACIAR Foundation, one of Medellín's food banks, which deals with larger- and smaller-scale farms from neighbouring municipalities, to which, through alliances, it provides the means of production for food preparation. In addition, some refectories have their own vegetable gardens, which provide food for themselves and enable them to provide food for participants to prepare at home.

Participants are received where the food distribution takes place, which is also where nutritional assessments are done and psychosocial

meetings and recreational days are held, as well as the rehabilitation of adults suffering from undernutrition through the provision of nutritional supplements.

Impacts of the actions

The impacts are follows:

- › Strengthening of the municipality's public food security policy through education, which is deemed a decisive factor in quality of life. Validation of the proposed implementation of the food and nutrition education plan and allocation of budgetary resources.
- › Standardization of food supplements, taking into account the population group, household composition and food security conditions.
- › The School Meals Programme is now in operation at 476 educational institutions subject to the official registration system, in the City's 16 communes and five *corregimientos*. Those institutions daily accommodate 293,000 children and adolescents, with an annual investment of COP 80 billion (the Ministry of Education paying a 23% share).
- › The community refectories for adults welcome 1,650 participants in twenty refectories in various City communes. The endeavour also provides training and recreation activities, while the client community's involvement in its management precludes development of a welfare mentality.

Governance mode and relationships between actors

To implement the municipal Food Security Policy and Plan, the Administrative Department of Municipal Planning has established constructive mechanisms that include ongoing planning, advice and follow-up.

Food security actions are a City responsibility, and even though they are conducted by the Food and Nutrition Security Unit of the Secretariat for Social Integration and the Family of the municipality of Medellín, they are also the concern of all actors, whether public or private, and of civil society in general. Successful implementation of the Policy and Plan depends on coordination and linkage between institutions and sectors, both inside and outside the municipality of Medellín. Also fundamental is the sharing of responsibility with the other public, private, community

and civil society stakeholders as well as the other authorities concerned with food and nutritional security. The role of the secretariats of Social Integration and the Family, Health, Economic Development, Education, Women and Planning is paramount. It is important, too, to gradually integrate other authorities in order to give effect to meeting scenarios that can optimize available resources, as organization of the existing public supply is preferred to innovative actions. All of the above will be achieved through spaces for joint planning, monitoring and ongoing evaluation of actions taken.

Local, national and international influence of this experiment

Medellín is one of the few cities in Colombia, and indeed worldwide, to have a Food and Nutrition Security Unit. Established in 2009, the Unit reports to the Secretariat of Social Integration and the Family and has the requisite technical, administrative, financial and legal resources to work toward food security in all of Medellín's *corregimientos* and communes.

As a national and international focal point, the City of Medellín took part in the evaluation of national orientations set out in CONPES document 113, which defines PSAN development. Observations and comments were made with a view to improving and adapting the document based on Medellín's experience of food security policy-making.

At the regional level, the Department of Antioquia is also working under Ordinance 017 (2003), by virtue whereof it created its own departmental food and nutrition security policy. One of the linkage processes that should be noted is food supplementation, identified jointly by the municipality and the Government in the formulation of the international cooperation project *Food Smart Cities for Development (FSC4D)* together with 15 other cities and NGOs worldwide. That project was presented to the European Commission, and the importance of decentralized cooperation in food and nutritional security was stressed. ★



Dakar, Senegal

Supplying catering and improving diets through micro-gardening

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Facts about Dakar

Dakar, the capital of Senegal, occupies the whole of the Cape Verde Peninsula in the extreme west of the country, on the Atlantic coast. It is Senegal's main port of entry, with a world-class harbour and airport. Dakar plays important administrative, economic, political and cultural roles that make it a top-tier city for Senegal, but also the entire West African subregion. Its assets have resulted in intense urbanization, with the corollaries of uncontrolled spatial development and a continuous rise in demand for urban services.

Dakar has a population of 1,101,468 in an area of 82.2 km², 14.9% of the area of its region, making for a very high human density (13,402 inhabitants/km²). That rapid increase, accentuated by the rural exodus and the city's function as the "lungs" of the country's economic activity (80%), has made it difficult to control urban sprawl.

The disappearance of woodland and farmland as housing expands has had an impact on citizens' quality of life. As the municipality's priority mission is to improve quality of life and living conditions for the citizenry, the challenge it faces is to feed a city packed to the gills where arable land is ever scarcer. Micro-gardening⁴ is an alter-

4. This consists of putting a market garden on tables. The technology is simple, using recycled materials (wood) and a substrate composed of products found locally (rice straw,

PHOTO ONE EXAMPLE OF MICRO-GARDENING IN DAKAR

© AUTHOR

native sustainable food system for a population facing poverty and malnutrition.

Framework of the micro-gardening project

This project, “Consolidation of Micro-gardens for Food and Nutrition Security in the Municipality of Dakar”, is part of the process of micro-garden development that was introduced in Senegal by the Food and Agriculture Organization of the United Nations (FAO) in 1999. In 2001 that process was folded into the Special Programme for Food Security (SPFS).

In May 2004, in keeping with the relations of friendship and cooperation between the twinned cities of Milan and Dakar, and thanks to the financial support of the Italian Ministry of Foreign Affairs, the two cities signed a memorandum of understanding with FAO whereby a decentralized cooperation project was put in hand to promote micro-gardens in the urban and peri-urban environment of the municipality of Dakar. The main project goal was to achieve social and nutritional stability.

The first phase of the project was begun in 2006 and, over a period of three years and with a US\$465,000 budget, achieved very

groundnut shells) that are inexpensive and accessible to all. The micro-garden consumes little water because any excess is recovered through a drain and reused. The fertilizers used are organic compost, vermicompost, or chemicals fertilizers (but in very small quantities). All vegetables are grown except tubers (cassava). Micro-gardening may be done in backyards, schools, on terraces or in public areas.

significant results. The project won an international award (the Dubai Award) for best practices in the horticultural sector, given by the municipality of Dubai. The award money of US\$30,000 will bolster the budget for the second phase and enhance outcomes for the benefit of other cities of the sub-Saharan subregion. As of today more than ten thousand people have been trained under this project. Thanks to the institutional backing of the City of Dakar and the technical support of FAO and the partners (non-governmental organizations [NGOs], technical services), the micro-garden technology (photo) has been popularized right across the city, in particular by giving access to free training and by providing technical assistance to production sites.

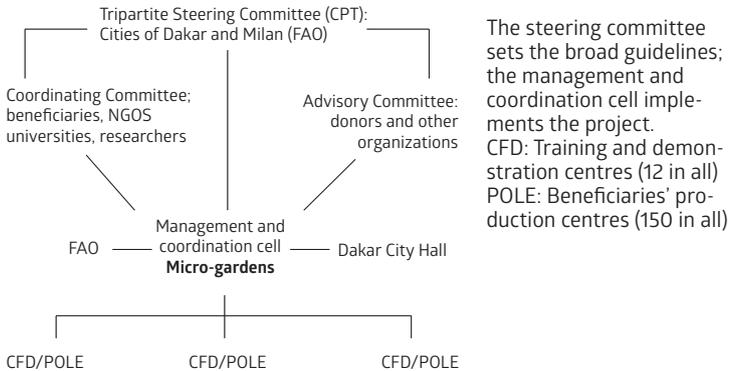
Local people were organized into groups. Each group harvests what it has produced, to provide food for its members. Women's groups, schools, and eventually school cafeterias, centres for persons with disabilities and detention centres are the priority. The produce is for the group to consume, while meals are cooked at the level of the households and centres. Any surplus is sold or exchanged between groups.

Impacts of the micro-gardening project

Consumption of micro-garden-grown vegetables by vulnerable groups, such as seniors and women, has enhanced their quality of life, as they have gained access to fresh vegetables, which previously they could not afford. Today, all kinds of vegetables are used in dishes. Only rice, which is the staple food in Senegalese cooking, is bought. Women with illnesses (diabetes, anaemia, obesity, etc.) have had the opportunity to compose a diet and have observed medical improvements. Students and youth with disabilities have got into the habit of consuming vegetables, often absent from their diet in the past. Inmates of jails and detention centres no longer have a vegetable deficiency, as vegetables are now part of their diet.

Project governance mode

The City of Dakar is working to make this system sustainable by providing growing areas to the citizenry, securing them and ensuring a water supply. It is also doing the requisite technical monitoring of the production sites.

FIGURE GOVERNANCE MODE AND LINKS BETWEEN ACTORS INVOLVED

SOURCE: AUTHOR

The City of Dakar is being financially supported for this project by the City of Milan and Italian Cooperation for Development; technical assistance is provided by FAO, NGOs and public institutions such as the Ministry of Agriculture. That support is formalized by the signing of agreements between institutions. The governance mode and the links between the actors involved are represented in Figure.

Having been made aware and informed of the project by the City of Dakar, citizens themselves lobby governments for access to it. The City has set up centres where people are trained and supervised from a technical standpoint.

Project outcomes

This food system has become a model. Policy-makers have chosen sustainability by integrating the micro-garden system and practices into the City's development plan. As micro-garden technology is quite uncomplicated and very inexpensive, the project can perfectly well be replicated through the city and the Dakar region. The Government has taken steps to replicate it in the rest of the country as well. ★

São Paulo, Brazil

Logistics of school meals



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General context of school meals

The City of São Paulo, the capital of the State of the same name, has a population of about 11.9 million, according to the figures of the Brazilian Institute of Geography and Statistics. School catering is among the State's responsibilities (article 208, section VII of the Brazilian Constitution of 1988).

The National School Meals Programme (PNAE) is one of the oldest and most ambitious such initiatives in the world. Its salient feature is its universal coverage, as it provides meals to all students enrolled in the public school system. The City of São Paulo makes a significant contribution to the initiative through its municipal school catering programme (PAE/SP), which is recognized as a model by the National Education Development Fund (FNDE).

Logistics, being the main problem posed by food distribution in urban catering programmes, makes up the lion's share of the budget. In this area, São Paulo has set up one of the largest systems in the world: the City controls the logistics and distribution of school meals from A to Z while verifying quality and sound management of public money.

In São Paulo, 1.965 million meals are currently being served daily to some 926,000 students at 2,800 institutions. These meals ensure a balanced diet, providing the necessary nutrients for children's growth while helping to educate the responsible consumers of tomorrow. To cope with this great challenge the City created the School Catering Coordination Office (CODAE), which reports to the Municipal Education

Secretariat. CODAE certifies the quality of all products distributed through its supply and logistics division, comprising a multidisciplinary technical team.

A logistical challenge for the largest metropolis in South America

Logistical management of the school meals programme is complicated by a number of factors: the size of the city of São Paulo, the number of distribution points and the large volume of food provided (Table 1).

TABLE 1 VOLUME (KG) OF PRODUCTS TO BE SUPPLIED TO SCHOOLS IN 2014.

Product	Quantity (kg)
Meat	2,393,508
Eggs	7,495,731.3
Fresh fruit and vegetables	18,311,976
Bakery products	2,034,558
Powdered milk	19,030,287
Perishable goods	8,159,348.5
Highly perishable goods	326,940
Total	57,752,348.8

SOURCE: PUBLIC FOOD SUPPLY PROGRAMME (PAPA), DECEMBER 2015

As logistics support, the City makes use of storage and delivery companies to serve each of the institutions. In all, some 180 city vehicles (pickups and vans) are used for these deliveries.

Fresh produce accounts for 30% of the food costs for school meals. In mid-2013, quality control technicians for these products developed a project whereby fifteen types of fresh produce would be acquired in a quality category lower than was previously chosen (Table 2). For example, in its vegetable classification, the General Grocers' Association of São Paulo (CEAGESP) divides carrots, beetroot and eggplants into three categories: Extra AA, Extra A and Extra. Initially, the contract called for the purchase of the superior category, i.e. Extra AA. After doing market studies on prepared food to evaluate yield and wholesale availability, CODAE came to the conclusion that the products could be chosen from a lesser category, at much less cost,

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without compromising quality or yield. The main difference between the two categories is the more or less uniform size of the vegetables; the classification now used allows a broader tolerance in that area while still respecting the set limits.

TABLE 2 FRESH FRUIT AND VEGETABLES THAT HAVE CHANGED CATEGORY

Product	Former category
Extra A zucchini	Extra AA
Type 5 Brazilian garlic	Type 6
Extra A sweet potatoes	Extra AA
Extra A eggplants	Extra AA
Extra A beetroot	Extra AA
Extra large yams	Extra A
Small Brazilian onions	Extra AA
Extra A carrots 16–20 cm	Extra AA
Extra A chayotes	Extra AA
Extra yams	Extra A
Lima oranges Type C 72–76 mm	Type B
Lumias Type C 72–76 mm	Type B
Tahiti limes Type B 94–121 mm	Type A
Extra AA lucumas	Extra AAA
Extra A cucumbers	Extra AA
Extra A tomatoes	Extra AA

SOURCE: CODAE, DECEMBER 2015

To ensure a smoother transition, and so that the look of the food would not cause concern, purchasing in these new categories was phased in and the professionals concerned had advance notice and detailed explanations.

Also in 2013, following a team change at CODAE, new concepts and innovative formats were tried, the most important being the purchase of products from family farms organized into cooperatives

or smallholder associations. These products now account for 22% of all federal procurement. The food supply now also includes organic or agroecological products, in keeping with municipal regulations governing the introduction of such foods. As of today, 6% of all federal government resource transfers go to the purchase of these organic foods.

These procurement policies have a double impact: on the one hand, they ensure that quality food will be supplied to schoolchildren, and on the other hand they provide income for family farms.

Effects observed

The purchase of lower-category foods saved the State some 14%, or R\$ 12 million (Brazilian reals), on its annual fresh produce budget, with no loss of quality. Those resources could then be reallocated to other items. The resulting savings, of some R\$ 20 million since the beginning of the process, have enabled greater flexibility in CODAE's financial management. The programme is continuing to fulfil its commitment to transparent and efficient resource management.

In schools, the change of category has had no impact: the new products were accepted and duly prepared and their nutritional quality was unimpaired.

Interaction between school meals coordination and other sectors concerned

Through FNDE, an agency of the Ministry of Education, the federal government transfers funds to the States, federal districts and municipalities, and directly to the managers of public agencies responsible for school meals. The managers then administer the federal government funds in accordance with enrolment and the Programme guidelines.

PAE/SP is managed by upwards of 200 professionals from various fields concerned with school meals: nutritionists, veterinarians, agronomists, lawyers, accountants and other administrative professionals.

São Paulo has been able to take up every challenge posed by the complexity of its school catering system. That success, which is a model for federal agencies with an interest in the topic, is based on the competence of CODAE, which delivers a significant amount of

quality food while ensuring food safety and smart management of public resources, saving money but avoiding any food shortage. Nutritional quality and balance are always the priority; and family farms also enjoy a guaranteed procurement policy, which spurs national economic growth and income distribution.

For the school catering policy to work, interaction between institutional actors is fundamental. Dialogue is established with civil society organizations, universities, and government agencies at the level of municipalities, states and the entire country, to improve the whole school catering process in São Paulo. With particular reference to the change in category for fresh products, CEAGESP is playing a pioneering role, as it was that Association that suggested the development of that policy through its *HortiEscolha* programme (which aims to guarantee a market for lower-category foods while ensuring their profitability and quality).

Project reproducibility

Any programme, whether conducted at the level of the municipality or the State, can review expenditures in the public budget, as was done by PAE/SP. This project proposes an inventive public resource management method aimed at achieving a sustainable mode of consumption. Numerous other systems can and should be considered in the context of smart, sustainable budgeting.

Regarding plant foods, it is important to consider the nutritional quality sought by the various programmes before deciding on a change of category. That quality absolutely must be maintained in order to avoid damaging the programme's quality/price ratio. The success of this type of process can be ensured through preliminary study and a comprehensive economic analysis. ★

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Colombo, Sri Lanka



Ensuring food security for the most vulnerable

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General context of health policies and food security

Since food and nutrition are the foundation for good health—which influences the physical and intellectual growth of the population and is the basis for productivity—the Sri Lankan Ministry of Health and Nutrition is entrusted with the responsibility of formulating national policies that are relevant to nutrition, food hygiene, safety and health as a whole. When food security is concerned, other stakeholders are involved at the national level, such as the Ministry of Agriculture, Ministry of Irrigation and Water Resources Management, Ministry of Industry and Commerce and the Ministry of Fisheries and Aquatic Resources Development. Governance in Sri Lanka is a three-tier system: central, provincial and local government levels.

Under the country's constitution, health is an issue that is devolved to the provincial and local levels. The City of Colombo, the economic capital of Sri Lanka, is governed by the Colombo Municipal Council (CMC), where the democratically elected Mayor and Councilors are the policy makers. CMC is the oldest and largest local authority in the country, as well as in the region. Its Public Health Department has the mandate to protect the public health of 1.4 million city dwellers, including both residents and temporary internal migrants or the floating population. Approximately 40% of that population is considered to be nutritionally vulnerable: school children and employees of private and government sector institutions. To meet their daily food requirements, they are highly reliant on cooked food outlets, which are known as 'canteens'. Similar entities in many other

parts of the world are known as cafeterias, restaurants or refectories. In accordance with the definition given in the Macmillan Dictionary, a canteen is a “room in a factory, school or hospital where cheap meals are served”. Hence, by definition, they are meant for cheap food which leads to less profit, which in turn reduces the nutritional quality. Nevertheless, these canteens play a very important role in ensuring urban food security and food system sustainability.

CMC does not directly manage catering services or provide food to schools or workplaces where the most vulnerable people are found. But the CMC Public Health Department plays a key role in their organization and regulation. This paper attempts to demonstrate how a local authority can intervene to ensure access to quality food for the most vulnerable segment of the city’s population by using its mandate to exert the authority and empowerment which it received from the Municipal Council By-Laws and the Food Act No. 26 of 1980. Other aspects of the said policy, such as nutritional values of food and developing healthy dietary habits among the target group, etc., are not discussed here.

The policy and strategies adopted

A School Canteen Policy was formulated by the Ministry of Health together with the Ministry of Education at the central level. The main objective of the policy is “to optimize the educational performance among school children by improving their nutritional status.” This means that canteens must be available that offer nutritious, hygienic and safe food that will prevent food-related disorders and inculcate healthy dietary habits. Out of 10 strategies identified to be implemented under the policy, only those that are relevant to this study were adopted. This includes ensuring the hygiene of the food provider, supporting and strengthening human resource development so as to improve food quality and safety, and strengthen the supervision, monitoring and evaluation of the caterers. Although the policy focuses on school canteens, through this study CMC decided to implement the same policy for canteens in work places where the other major nutritionally vulnerable category of the population is found.

Study design

An applied research study design was used, and a situational analysis of city canteens was carried out at the outset to identify problems and gaps. In component one of the study, 62 randomly selected school canteens (62/141) and 41 workplace canteens (41/95) were studied using an observational/inspection checklist with the objective of ascertaining the status quo regarding the food hygiene standard. A checklist and data recording sheet were used to record the observations obtained in the school canteens. In addition, focus group discussions were conducted with school headmasters and heads of the workplace institutions, and also with the persons operating the canteens to obtain their perception of implementing the school canteen policy and guidelines. In component two, the knowledge, attitudes and practices of food handlers were assessed using an interviewer administered questionnaire and by direct observation using a checklist.

Situational analysis findings

The study identified barriers and found why the majority of canteens are experiencing difficulties in complying with the stipulated guidelines. The majority (89.8%) involved small-scale and short-term contract caterers, where 75.8% of the canteens were run in rented or leased premises with no right to build or make any alterations and repairs to the building. This had a direct negative effect on food safety. The inappropriateness of the present system of selecting canteen operators through a tender procedure and the lack of resources in government schools and workplaces negatively affected the implementation of canteen guidelines. As a result, the canteens continued to sell unhealthy and unsafe food items despite the restrictions. An absence of canteen registration and certification procedures, and the especially low prices of food items sold by the canteens—which inevitably leads to cost cutting—were among the other problems identified.

Poor food hygiene and safety standards represented a major food security concern in canteens. According to the CMC Public Health Department epidemiological database, this has led to a high incidence of food poisoning and foodborne diseases such as typhoid

and paratyphoid fever, hepatitis A and dysentery of *Shigella/E. coli/Salmonella* origin among consumers. The commonest food safety violation was mixed storage of cooked and raw food in the same refrigerator, thus facilitating a greater extent of cross-contamination.

Food handlers with proper food hygiene training were greatly lacking as most handlers were from the very high turnover informal sector. They had undergone no pre-employment or periodic medical inspections. Their knowledge on foodborne diseases and food safety was rather inadequate (only 23.3%). There was a statistically significant positive correlation between the knowledge and the educational level and experience of food handlers.

Actors involved and intervention of the Colombo City Authority

Three main stakeholders were identified: the consumers, providers and regulator. The consumers were employees from government and private institutions, and to a larger extent dependent school children. These consumers were the most vulnerable group because, if an employee who is a parent or breadwinner of a family falls sick owing to contaminated food consumption, the entire family is affected. Dependent school children again were highly exposed and vulnerable to the negative effects of poor food safety. The providers were canteen owners and heads of the relevant institutions and schools. The Public Health Department of the Colombo Municipal Council is the official regulator. Through its authority, the national policy was implemented at the local level.

Impacts of the action

The programme was launched in early 2015 with the objective of maintaining high standards of hygiene and food safety. All canteens serving food to school children and employees in workplaces within the Colombo Municipal Council area are now being registered by the CMC Public Health Department. They are being supervised by both the Public Health Inspectors and the school authorities on five food safety principles recommended by the World Health Organization. These principles include: cleanliness, separation of cooked food from

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raw food, thorough cooking, avoiding the food temperature danger zone, and using safe water and safe raw material for cooking. The food handlers had to be educated, certified and registered. Accordingly, a basic food safety and hygiene training programme for food handlers of these canteens was launched and is currently ongoing. These handlers were subjected to a medical test to screen for chronic typhoid carrier states, after which they were issued certificates and listed by the Public Health Department as registered food handlers. Canteen kitchen improvement was initiated and monitored, while boosting target group awareness. All canteens that met the criteria were issued a plaque stating: "This is a registered canteen by the Public Health Department of the Colombo Municipal Council" (photo). A central food safety unit was established at the Public Health Department where people could issue complaints, thus sometimes prompting investigations and subsequent appropriate legal actions. The Ministry of Education and relevant workplace authorities are duly informed regarding the performance of their respective canteens. This enables informed decision making on canteen tenders for the forthcoming year.

An analysis of the preliminary results revealed a significant reduction (43%) in food-related complaints and reported food poisoning episodes (2 vs 12) among vulnerable people who consume food in these canteens. It is still too early to assess the extent to which the programme is actually reducing the foodborne disease incidence rate.

How experience has influenced the local policy

Under the constitution of Sri Lanka, health is an issue that is devolved to the provincial and local levels, whereas most policies are formulated at the central level. The policies are then implemented at the provincial or local level. In this particular instance, the government's School Canteen Policy very clearly states that it "will be implemented through the Central and Provincial Ministry of Education." But there is no reference to the Ministry of Health at any level, nor to the public health department of any municipal authority and its involvement in applying the policy. Nonetheless, municipal health departments

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throughout Sri Lanka have the mandate to protect the public health of city dwellers, while also having the expertise, authority and infrastructure to implement it successfully.

This was an excellent case study which demonstrated how a food policy formulated at the national level could be implemented effectively at the local level with relevant strategy adjustments to tailor it to the local situation. ★

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Public catering services. Wrap-up of discussions and conclusion

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Discussions during the session on the theme of public and out-of-home catering services brought up interesting insights into the social role of the catering service, including the need to integrate the values of respect for the environment and local traditions. At the same time as health and hygiene regulations are becoming ever stricter, there is an increasing reliance on the use of semi-processed industrial products. In industrialized countries, this modernization is most often conducted at no extra cost, or even accommodates budget cutting; the effect is a progressive deskilling of kitchen staff and a bigger role for procurement management and quality control services at companies that are rationalizing production. Emerging countries often move directly from a very rudimentary catering mode to this type of industrialized service, managed by foreign companies that import their expertise and products, with no regard for local resources.

Meal quality

Health quality is fundamental to the service. In Colombo, Sri Lanka, a project based on the adoption of a control policy has helped raise the health quality level of meals. In São Paulo, Brazil, seasonality and diversity in menus are sought as well as health quality, taking into account consumers' tastes and appreciation, particularly with regard to school meals.

In Montpellier, France, an interesting correlation has been found between the amount of waste and the quality of the meal. Hence, it has been proposed that the meal be quantified in calories rather than

grammes, to track eaters' nutritional needs as closely as possible and limit wastage.

It is a popular misconception, but a very persistent one, that a fruit's appearance is an indicator of its quality. The City of São Paulo, Brazil, is working to demonstrate that even if products are not aesthetically perfect, they can be used to prepare a quality meal. It has saved money by deciding not to purchase produce of greater aesthetic quality, opting instead for equivalent foods of a lower category.

The concept of meal quality is also related to cooks' qualifications. The catering cook can become a new type of professional, one whose expertise involves mastering environmental aspects while cooking meals which, though repetitive, are made with inexpensive fresh products that are in season and of good quality. Training for such a profile is now being put in place in France.

Service organization

The example of São Paulo illustrates the level of service organization needed at the level of a large urban centre—in school catering, for instance, we are speaking of two million meals served daily in 3,000 schools, requiring a staff of 8,000 professionals, including 200 city employees just for programme management. In terms of logistics, 180 vehicles are used, twice a week, to deliver fresh produce, and monthly for non-perishable products. These figures show the potential lever effect of this “gigantic public restaurant”.

Among other action lines mentioned by participants, when local products are bought there is a lever effect on sustainable food supply chains—ecologically sound and accessible to the entire population—and other “alternative” systems. There are many administrative and operational obstacles to such an endeavour, but its advantages are clear. São Paulo's school catering system is now able to procure bananas from small producers in a neighbouring region.

Mealtime can become a teachable moment in itself. There are many examples of vegetable garden projects, as in Dakar, Senegal, where school catering has partnered with micro-gardening projects. There are virtually no agricultural areas left in the city, and fresh produce is imported. A project like this can lead to a rediscovery of vegetables. In

Mali, school meals may be the element that motivates parents to send children to school. So there we have a tangible response to a need for nutrition and education, both very positive for the children's future. In Medellín, Colombia, and Lima, Peru, schools offer a breakfast based on milk or more traditional recipes. Hence, their educational role is combined with one of social integration. Neither does the mission of feeding malnourished population groups concern children only. In Curitiba, Brazil, popular restaurants serve balanced meals to vulnerable groups.

Budget constraints and governance: the role of the State

The question of the financing and sustainability of projects, in particular educational ones, was mentioned. In Brazil, Colombia and Senegal, the State is investing in them or finding external support (for example, the twinning of Dakar with Milan). In Peru, certain support programmes that had been undertaken by the State but had run out of steam or lost their way temporarily have recently been restarted by the City of Lima.

Participants stressed how important it is to reinvest savings, for example from waste reduction, in the funding of educational projects, quality food supply, etc.

State support is fundamental. During the discussions some background was provided on Brazil's projects, which exemplify a support policy developed over the long term. Such is the cost of the social benefits, which, though undeniable, are difficult to quantify. Brazil has developed a virtuous system for project governance, implementing a circular dynamic between three different levels: local (municipal), regional (states/regions) and federal. Policy development takes place through a bottom-up approach based on actions in the field and the territorial context. Regulations are then established—top-down but in line with the facts on the ground—by pooling and unifying actual practices.

Conclusion of discussions

For public catering to be improved, the role of this “public food service” must be redefined, and its mandate beefed up, in such a way as to ease budgetary constraints that are clearly counterproductive. ★



NEW TYPES OF URBAN/RURAL CONNEXIONS

- 📍 Tianjin, China
- 📍 São Paulo, Brazil
- 📍 Quito, Ecuador
- 📍 Curitiba, Brazil
- 📍 Rosario, Argentina

URBAN FOOD POLICIES

PROCEEDINGS OF THE INTERNATIONAL MEETING, NOV. 2015



Dr. Cecilia Tacoli is a Principal Researcher at the International Institute for Environment and Development (IIED). Her work explores how urbanization processes transform the relations between rural and urban areas, people and enterprises. She has written and edited several publications on this topic, including *The Earthscan Reader in Rural-Urban Linkages*, and has researched the links between migration, environmental change and urbanization with partners in Africa, Asia and Latin America. She is especially interested in how these transform gender relations, and their impact on urban and rural food consumption and insecurity. She served as lead/contributing author on the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC).

What can cities do to make their relations with rural areas more sustainable?

Cecilia Tacoli

*International Institute for Environment and Development,
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Urbanization has substantial impacts on rural areas and on the use of natural resources. To make relations between cities and countryside more sustainable, it is important to understand the context-specific nature of transformations taking place within both urban and rural areas. These transformations have different impacts on different groups—in many cases affecting their food security. Innovative experiences suggest that governance systems and institutions supported by national and regional actors and working in close synergy with civil society play a central role in ensuring more sustainable relations.

Understanding urbanization, rural transformation and their impact on food security

Gaining greater insight into changes occurring in both urban and rural areas is essential to understand urban-rural relations and make them more sustainable, while also recognizing that these changes are context-specific and highly diverse.

Urbanization has marked impacts on food consumption. The world is rapidly becoming predominantly urban, with an estimated 54% of the global population currently classed as urban. However, this figure is an average and hides substantial regional differences. For example, the proportion of the population of sub-Saharan Africa that is classed

as urban is estimated to be around 40%, compared to around 80% in Latin America and the Caribbean. While the projected outlook that the world population is increasingly urban is essentially accurate, policies are only effective if they reflect the reality of specific regional and national contexts.

Urbanization is often assumed to drive profound dietary changes, with increases in the consumption of animal-based foods (meat and dairy products), whose production is in turn responsible for the use of large amounts of natural resources such as water and animal feed. But higher incomes rather than urbanization drive dietary changes. Wealthier groups tend to live in urban centres, but there is also a large proportion of urban residents who suffer from hunger and malnutrition. These poorer groups tend to rely on informal food systems rather than modern supply chains, although there are often overlaps between the two.

Rural transformations include a growing number of rural net food buyers—both poor groups and middle-income groups that have moved out of farming. But urban demand stimulates production mainly of perishable horticultural foodstuffs produced in well-connected locations. Urban-rural links in relation to other foodstuffs such as cereals or tubers are much less developed, due particularly to the geographical distances involved.

Finally, adapting to and mitigating the impacts of climate change will require better integration between rural and urban areas, people and policies as natural resources will require more careful management to support diverse and potentially competing demands.

Defining urban-rural relations

How we define urban-rural relations has important implications for policy formulation and implementation, and calls for different roles of institutions and governance systems.

Urban-rural linkages involve spatial flows and relations between rural and urban areas. From this perspective, proximity is important as it facilitates access to markets, but it is also crucial to adequately manage natural resources that are essential for both rural and urban areas. However, the boundaries and governance systems are not always clear.

Urban-rural linkages can also be described as the relations between sectors—agriculture, industry and services. Local processing and transformation of agricultural products—in turn generating non-farm employment opportunities—are perhaps the best way to support diverse local economies and poverty reduction. Indeed, agriculture as a percentage of rural incomes is generally declining, and it is increasingly clear that diversified local economies are essential for equitable and sustainable rural development. From this perspective, ‘urban’ is not limited to individual cities but comprises networks of urban centres that include small towns. These networks are the ‘geography’ of food systems and of sectoral interactions between rural and urban areas, people and enterprises.

In all cases, governance systems and institutions are pivotal to urban-rural relations. Food security and natural resources are public goods, which require public interventions of two kinds. The first one relates to spatial urban-rural relations and focuses on ‘short chains’ and on the important role that municipalities can play via their involvement in food procurement, distribution and production in urban and periurban areas. The second type of intervention relates to transboundary, multi-stakeholder and multi-institutional systems and networks that are supported by regional and territorial approaches. These call for a different architecture for the governance of rural-urban relations.

In summary, in order to achieve more sustainable rural-urban relations, it is important to take specific contexts into account—both urban centres and rural areas are diverse. It is also important to understand the dynamics of rural transformation and related regional disparities. From a food systems perspective, it is useful to distinguish between perishables and non-perishables, formal and informal systems, with a focus on low-income groups and inequality. Finally, alliances of local urban and rural institutions have proved to be the most effective, especially when supported by national governments.

These issues were discussed in more detail during the session dedicated to urban-rural relations. Examples from East Asia and Latin America are presented in the following pages. ★



Tianjin, China

Improving urban-rural integration through the development of urban agriculture

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³China New Rural Planning and Design, Beijing, China

Backgrounder on the City of Tianjin

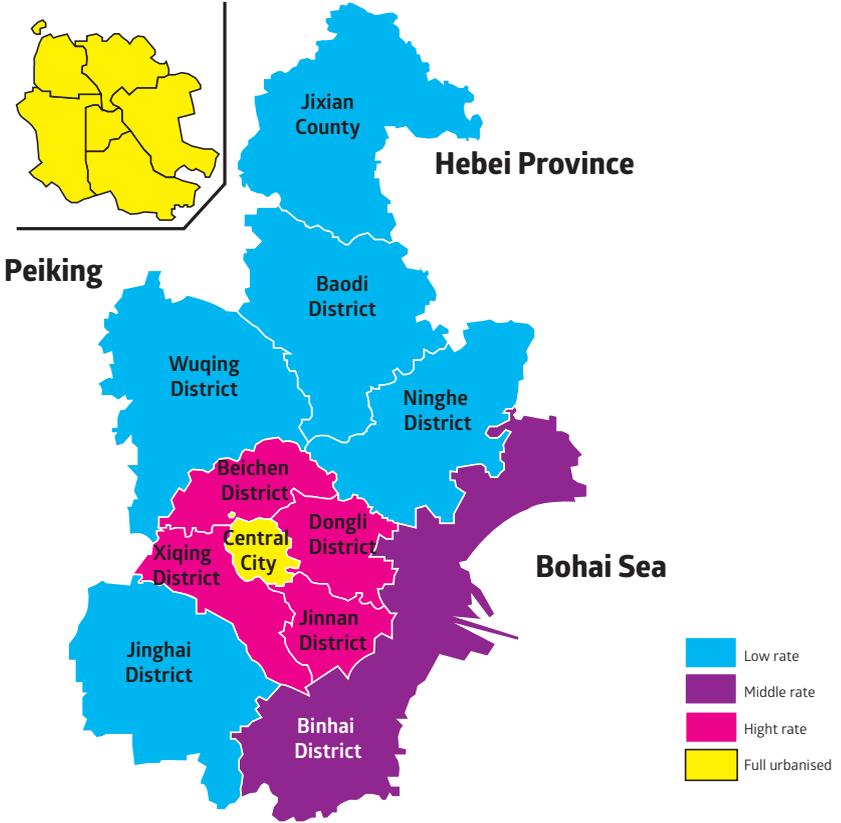
Given the great differences between urban and rural areas, urban-rural integration is always an issue in China, as reflected in the recent Central Document No.1 (2010-2016), which focuses mainly on education and medical service equalization, improvement of rural infrastructure and farmers' employment, etc.

Tianjin is one of the four main urban municipalities in China and is located just 120 km from Beijing (Map). It still has more arable land than Beijing and Shanghai, upon which a relatively high percentage of agro-products are grown for self-sufficiency (Table), and urban agriculture plays an important role in the urban economic structure. Tianjin is also an industrial and coastal city within the Jing-Jin-Ji megalopolis. In 2013, its urbanization rate reached 81.55%, which is much higher than the national average.

NEW TYPES OF URBAN/RURAL CONNEXIONS

TIANJIN, CHINA

MAP THE URBANIZATION RATE OF TIANJIN



SOURCE: TIANJIN STATISTICAL YEARBOOK IN 2014

TABLE THE AGRO-PRODUCT SELF-SUFFICIENCY RATE OF BEIJING, TIANJIN AND SHANGHAI IN 2014 (UNIT: %)

City	Vege- tables	Fruit	Meat	Eggs	Milk	Aquatic products
Beijing	26.09	22.40	33.72	34.76	89.20	7.09
Tianjin	60.78	23.65	52.33	62.48	136.14	58.29
Shanghai	32.97	20.62	18.72	11.73	31.34	26.21

SOURCE: THE PUBLIC DATA OF TIANJIN RURAL BUREAU

However, industrial and agricultural convergence in rural areas is becoming an urgent issue due to the rising resource-environmental pressure under the acceleration of urbanization. Tianjin authorities are therefore exploring and introducing policies that foster urban-rural integration.

Actions implemented by the authorities

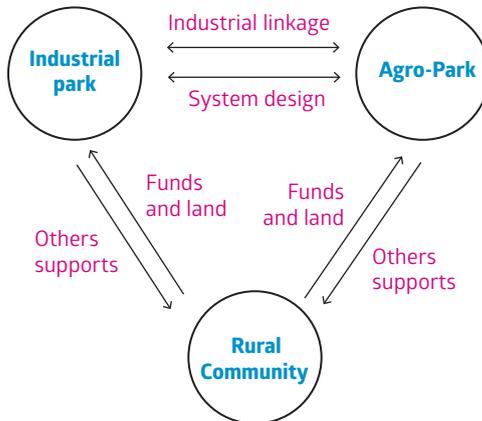
Agricultural structure adjustment is the first implemented action. Tianjin has adjusted its agricultural structure in compliance with the agricultural production reform, and in response to the coordinated development of Beijing-Tianjin-Hebei and climate change (smog). This adjustment involves what is called, 'one decrease, three increases' (decreased grain production, increased vegetable, aquatic commodity and forest-fruit production) in order to balance food production and consumption, as well as the quantity and quality of agro-products. The authorities have also reformed the agricultural subsidization policy by merging the former three-pronged subsidy (for farmers, seeds and agricultural material) into a blanket agro-support subsidy, thus enhancing the precision, directivity and effectiveness of this policy.

Tianjin is also promoting beautiful countryside construction projects, in order to enhance the rural living environment under the national 'Beautifying China' campaign. In recent years, the government has earmarked some villages as demonstration sites. It has also taken effective measures (fiscal funds and counterpart cooperation), especially in three areas: building rural infrastructure (roads, power

networks); increased public services for farmers (medical, educational, employment); and rural eco-environmental management (garbage disposal, afforestation). These measures enhance the rural environment and farmers' livelihoods.

But most importantly, since 2009 Tianjin has been exploring a new urbanization mode to balance urban and rural development by implementing the so-called 3-zone interaction policy. This policy, as its name suggests, includes industrial parks, agro-parks and rural communities (figure), and is also tailored for peri-urban areas. The authorities have thus chosen 54 typical towns (demonstration towns), which were pooled into four batches so as to be organized according to the 3-zone interaction policy, while also encompassing farmers' homesteads and other arable lands. Farmers' homestead lands were first taken away to be used for farming, and now the local government is taking more of that land to develop secondary and tertiary industries and for urban construction. In parallel, farmers have pooled their land and transferred the land-use rights to cooperatives or leading enterprises—trading their homesteads for apartments in communities, and getting jobs in agro-parks and industrial parks. The greatest benefit of

FIGURE FRAMEWORK OF 3-ZONE INTERACTION IN TIANJIN



SOURCE: MAO KE-JUN, POLICY STUDY ON URBAN MODERN AGRICULTURE IN TIANJIN

this policy, in addition to generating an attractive living environment, is that it provides jobs for farmers.

Assessment of taken actions in Tianjin

Regarding the effects of the actions on the food supply capacity, agro-production in Tianjin is now oriented towards environment-friendly, high-grade and specialty commodities. Because of the 3-zone interaction policy, these agro-parks—through introducing new varieties and technologies to modernize agriculture—substantially improve land and labour productivity, while ensuring high agro-production levels, especially vegetable and livestock production. At the same time, the government set up a 1.1 billion yuan (¥) agriculture support fund in 2015, which was earmarked for plantation structural adjustment, intensive vegetable seedling and agricultural park projects, etc. According to the ‘one decrease three increase’ rationale, Tianjin has decreased the grain planting area to 26,666 ha, increased the area for vegetable and fruit crops, forest stands, livestock grazing, etc., to 20,000 ha, and rebuilt a 6,666 ha fish pond in order to guarantee a reliable food supply for the city, and upgrade citizens’ nutritional diet.

The 3-zone interaction policy also promotes urban development of the countryside, and has resulted in 400,000 farmers becoming urban residents, which is historical progress. Meanwhile, from the farmers’ income perspective, because of their multiple sources of income, rural residents’ disposable income growth rate has exceeded that of urban residents for the first time since 2011, and farmers’ income rose from ¥11,891 in 2011 to ¥17,014 in 2014. Tianjin will continue to increase the intensity of fiscal funds, while especially intensifying transfer payments to public services and infrastructure through the establishment of industrial funds, interest subsidies and security provision, guiding capital investment in agriculture and rural areas. The aim is to establish a mechanism for long-term increases in farmers’ income and to ensure that farmers will continue to have several sources of income.

Finally, recreational agriculture plays an important role from the urban-rural communication perspective. Each recreational agriculture

demonstration village or park gets ¥500,000-1,000,000 in fiscal subsidies for recreational facilities and infrastructure construction. This attracts more people into the country, thus speeding up urban-rural interactions. Recreational agriculture in Tianjin has increased by 30% since 2000. In late 2014, there were 2,510 recreational agriculture and rural tourism businesses in Tianjin. This situation involved 52,800 direct employment staff, 261,000 indirect employment jobs, and 14.73 million tourists, and ¥1.05 billion in direct revenue and ¥3.96 billion in comprehensive revenue, including agro-product sales and tourism income.

Role of the different stakeholders

The authorities play a role in planning, coordination and guidance. First they collaborate with relevant departments, farmers or other stakeholders so as to ensure the implementation of a range of policies. Then they provide funds and policies to facilitate industrial development and infrastructure construction. They also provide public services for farmers, cooperatives and enterprises, such as free training, discount loans, etc. For example, they offer discount loans to leading agribusinesses in Tianjin. They also provide special funds for training farmers on professional farming techniques (¥40,000,000 for training 40,000 farmers in 2016).

Through land sharing and labour, farmers are involved in and linked to the urban-rural integration process. With the acceleration of urbanization, farmers transfer their land-use rights to leading companies or other farmers (cooperatives) for about ¥1,000 per year. This gives them the opportunity to work in these companies or elsewhere, thus giving them another source of income.

Promotional value of taken actions

The 3-zone interaction policy is instrumental in fostering the Tianjin urban-rural integration model, and it overcomes problems regarding capital and land for urbanization. It is suitable for urban and surrounding suburban areas and has clear non-agricultural industrial development potential. However, it cannot always be applied to other places, especially places far away from the city or areas at the centre

of the city. Indeed, in the former, land resources are quite adequate, but land revenues are quite low, and thus not attractive to enterprises.

In 2010, Huaming, a town located in Dongli District—which was classified as the Urban Best Practices Area of the Shanghai World Expo—set an example by promoting urbanization. According to the book ‘A New Exploration of China Urbanization: Thinking from Tianjin Huaming Demonstration Town’, economic factor recombination is the essence of the ‘3-zone interaction’. So Huaming has achieved the target of conserving arable land, saving energy and resources, creating jobs and increasing farmers’ income. This was an exemplary urban-rural interaction and set the stage for four kinds of income for farmers, including: shares in cooperatives, salaries for factory work, apartment rental income and rural pensions. Many other big cities are now copying this model from Tianjin to enhance their urbanization practices.

Urban-rural linkage in Tianjin

These policies have been implemented since 2010 and so far the aims of boosting intensive development using land resources, expanding the area for development, improving the local ecological environment, recycling the economic model and changing farmers’ lifestyle in Tianjin have been met. In conclusion, the urban-rural linkage in Tianjin is becoming increasingly tighter, and the urban-rural gap is narrowing. Farmers are becoming richer through the multiple actions implemented. Moreover, its 3-zone interaction mode has set an example in China, providing experience and references for other cities to follow. ★

São Paulo, Brazil



National policy and local territory: linking agricultural policy and policy for food and nutritional security

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Public policies at national and municipal levels

Guaranteeing food and nutritional security and the right to adequate food has been on the Brazilian government agenda since 2003, and a top priority for the country's development. The *Fome Zero* programme has been one of the main strategies implemented to eradicate hunger and poverty, while also targeting other dimensions of food and nutritional security, such as healthy food production and meeting people's nutritional needs.

In this sense, guaranteeing a market for family farm production, as well as making nutritional food available for population segments affected most by food insecurity, are the two main goals of Brazil's National Food Purchase Programme. These above-mentioned programmes were developed under a public policy created in 2003 by the federal government, that has since then generated strong positive results. It was subsequently bolstered, in 2009, by a law earmarking at least 30% of federal fund transfers for the

provision of food to schools via purchases of produce from family farms (Law 11.947/2009).

Nonetheless, in spite of previous initiatives, these regulations only started to be seriously implemented at the local scale under the current administration (2013-2016): since 2013, the local government has been investing in structuring a municipal policy on food and nutritional security, and in strengthening local organic family farming.

With nearly 12 million inhabitants, the city of São Paulo has a wide territorial extension and a highly marked socio-spatial segregation pattern that mirrors its urban expansion trend. The intensification of population growth in the middle of last century, combined with a lack of adequate social policies, drove low-income inhabitants from the formal housing market to the outskirts of the city. Without any infrastructural planning, this urban sprawl gradually extended over environmental protection areas and agricultural lands that were generating produce for city markets. This relatively well-documented process has had a variety of social, urban and economic consequences, with urban poverty and high socio-spatial segregation being just two of the most visible impacts.

In addition, in early 2013, the lack of knowledge of civil society and public officials regarding the food and nutritional security issue turned out to be an aggravating factor, thus hampering implementation of the public policies. Social demobilization and the recurrent abandonment of public policies related to these issues—as reflected by the many difficulties encountered by regulatory agencies in interpreting the policy—had to be overcome. Moreover, the food supply was limited at the local level and it was hard to obtain information on the food production situation in other municipalities. Technical and health standards were highly complex, thus hampering access of certain groups to the programme. Finally, there was the issue of distribution logistics, since the city restricts the movement of cargo vehicles and there are 1,900 food delivery points for school meal provision.

Connection of multisectoral public policies

To meet the challenge of dealing simultaneously with the enormous issues and complexities in São Paulo—high levels of social vulnerability,

food insecurity, environmental threats and rural land speculation—an approach is needed that will ensure a common direction to the implemented actions, while also having the reach and scale necessary to cope with these issues. The integration of sectoral public policies to cover the entire family agriculture value chain—from vulnerable farmers to consumers affected by food insecurity—could be a key to setting up a strategic action. Hereafter we discuss the relevant actions undertaken by several São Paulo municipal departments, namely the Department of Labour, Development and Entrepreneurship, the Department of Urban Development and the Department of Education, as well as the main results achieved so far.

Food and nutritional security and family agriculture

The actions undertaken are based on two regulatory frameworks, which were recently sanctioned by Mayor Fernando Haddad: (i) Law No. 15,920/2013, which laid the foundations for implementing and consolidating the Municipal Policy for Food and Nutrition Security, by obliging the municipality to gradually ensure adequate and healthy food for its population; and (ii) Law No. 16,140/2014, which requires the inclusion of organic or agroecological farming based produce, preferably acquired from local producers, in meals served at municipal schools.

The first law led to the creation of the Municipal Council for Food and Nutritional Security (COMUSAN-SP), and the Intersecretarial Chamber of Food and Nutritional Security (CAISAN), while also stipulating that public conferences are needed on this subject, thus establishing the pillars of this policy in São Paulo.

The second law promotes purchases of family agriculture produce for municipal school meals. The municipal law broadens the horizons of the federal law—which already mandated the allocation of at least 30% of federal funding for family agriculture produce purchases while waiving the conventional bidding process—by also specifying that organic food and local production should be favoured in public purchases.

This immediately generated visible results. In 2012, a single family agriculture produce purchase was made (for parboiled rice), for a total

URBAN FOOD POLICIES

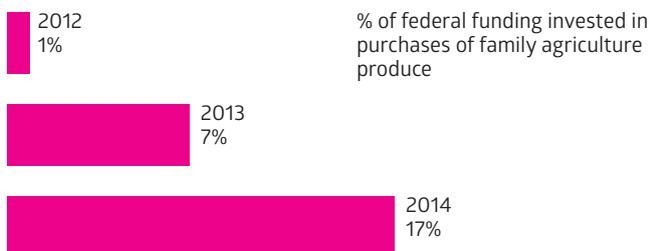
PROCEEDINGS OF THE INTERNATIONAL MEETING., NOV. 2015

of 564,000 Brazilian reais (R\$; or €138,312), i.e. less than 1% of the allocated federal funding, only directly benefitting 29 families. In 2013, R\$6,053,400 (€1,484,710), or 7% of the federal funding, were invested in produce from 343 family farms, while in 2014, R\$16,043,120 (€3,933,786), or 17% of the federal funding, were invested in produce from 910 family farms (figure).

The purchase, in 2013 and 2014, of a batch of long-grain rice that had been cultivated in certified agroecological system was very symbolic. This acquisition was made possible through interactions with farmers and underpinned by the guidelines set in the public policy. Municipal school students have hence been consuming organic rice since 2013, which is a novel trend in municipal schools. In 2015, the family agriculture produce acquisition strategy was geared towards innovating school menus, with the aim of: (i) recovering traditional local dietary habits by serving dishes made with cassava flour, boiled cassava root, corn flour, pork meat, yogurt, etc., (ii) continuously increasing the amount of fresh food, such as bananas and oranges, in meals, and also (iii) continuing to buy rice grown on agroecological farms.

Beyond purchases for school meals, the Municipality is also striving to expand other forms of purchasing. As part of the institutional purchasing program, the Municipality signed the Instrument of Adhesion to the Federal Food Acquisition Programme in 2013, which allows the distribution of healthy food produced on family farms to

FIGURE PATTERN OF FEDERAL FUNDING APPLICATIONS TO FOOD PURCHASES FOR THE SCHOOL FEEDING PROGRAM IN SÃO PAULO



SOURCE: DAE/SME - DIVISION OF SCHOOL FEEDING/DEPARTMENT OF EDUCATION

400 social assistance entities, thus benefitting thousands of socially and economically vulnerable people. Moreover, in order to encourage other forms of local agricultural produce distribution, the Municipality is setting up markets specialized in produce from agroecological and organic farms (currently 5), while increasing the number of conventional markets (currently 880). It is also strengthening the social character of public markets (currently 15) and municipal grocery stores (17), as a way of ensuring affordable prices for healthy food, while also gradually introducing produce from local family farms in these public facilities.

Urban and environmental policies

Currently, none of the produce from family and organic agriculture used in preparing school meals is produced locally, i.e. from periurban areas around São Paulo, despite the fact that part of this demand could be fulfilled by local farms located in this fringe area. Around 400 rural farmers, producing vegetables and some fruits, are located south of the city. The population living in this periurban area is one of the most vulnerable in São Paulo, with 84% of its 40,000 inhabitants earning a very low wage of R\$1,576/month (€193) at most. In addition to the socioeconomic vulnerability, there is an environmental aggravating factor, i.e. the majority of local farms still use traditional (and polluting) cultivation techniques.

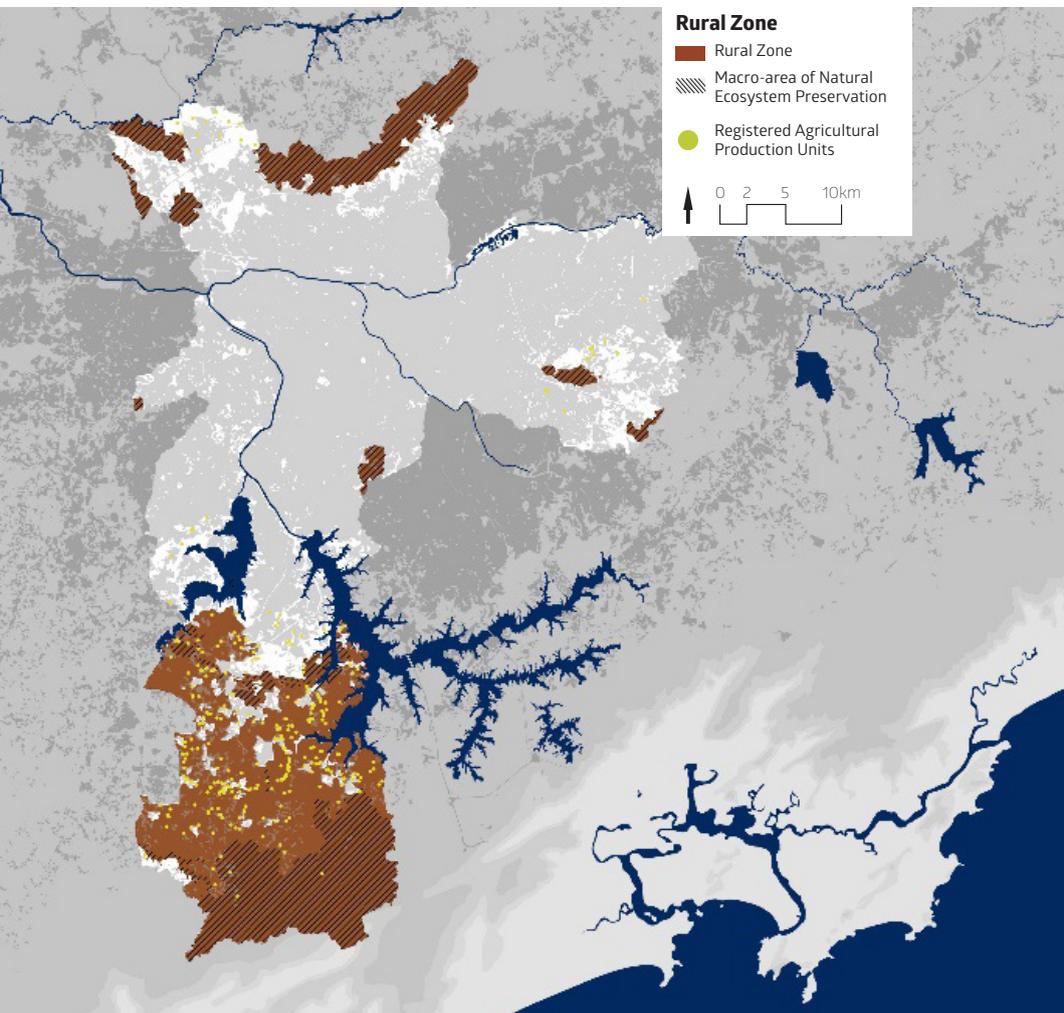
In order to strengthen sustainable farm production on the urban fringes, which could also inhibit continuous irregular urban expansion into environmentally protected areas, São Paulo's new Strategic Master Plan has, among other innovations, redefined the rural zone (Map). This measure gives, for example, local family farmers access to federal funding programmes for agriculture.

Since the rural zone largely corresponds to a perimeter set to protect the city's water supply sources, the Municipality is promoting the expansion of organic, and not traditional, farming. With technical assistance provided by the Municipality, in 2015, 35 farmers had already made the transition and were registered as agroecological producers, while another 14 farmers have been certified as organic producers, and others are currently going through this process.

URBAN FOOD POLICIES

PROCEEDINGS OF THE INTERNATIONAL MEETING, NOV. 2015

MAP RURAL ZONE AND AGRICULTURAL PRODUCERS IN SÃO PAULO



SOURCE: MUNICIPAL LAW 16,050/14 (MASTER PLAN); CARTOGRAPHIC BASE: MDC/SMDU; EMLASA, 2007;
PREPARATION BY: SMDU, 2014

Social engagement and governance

The actions described are anchored in a broad process of social participation, engagement and control, which has been essential for strengthening and implementing this policy. Participatory instances were created or renewed, such as COMUSAN-SP, which was restructured in 2015 with the following new composition: 2/3 of its members from civil society and 1/3 from the government. CAISAN is an inter-departmental body responsible for the intersectoral coordination of all actions related to food and nutritional security in the Municipality. CAISAN links representatives of eight different departments and is currently focused on formulating the Municipal Plan for Food and Nutritional Security.

In addition, the Municipality has hosted and promoted several events, seminars, meetings and debates, mobilizing local farmers, civil society organizations and representatives of different levels of government. The redefinition of the rural zone, for example, was a response to a demand from civil society within the framework of the Master Plan participatory process. There are also several ongoing actions that aim to broaden public awareness on this issue. These include the creation of 32 school-greenhouses, one per subprefecture, the hundreds of school gardens set up for students in a way to facilitate their educational appropriation of the agriculture production process, and the gardens and nurseries of the Community Programme, which now has more than 100 people registered (with the prospect of increasing this number in 2016), who receive municipal grants to attend to training sessions and develop their activities jointly with the community.

Another example is the Municipal Conference on Food Security and Nutrition—the sixth edition was held in 2015, with the participation of various sectors of civil society, resulting in the drafting of 78 proposals.

Impacts on local policy

The policies implemented have a strong social feature, whereby benefits are directed towards both ends of the production and consumption chain, ranging from farmers whose income is ensured

to citizens requiring good nutrition for their development (especially children).

2015 has seen substantial development of such policies. Through monthly meetings, CAISAN is enhancing linkages between municipal departments in order to effectively institutionalize the policies and build the Municipal Plan, while setting goals for the next 4 years based on proposals made at the 6th Municipal Conference for Food Safety. The extent of municipal public purchases of family agriculture produce has prompted family farmers (not just of this municipality) to form associations and cooperatives. The recent high consumer demand for healthy local food has encouraged a change in the current economic rationale in favour of fair trade. Moreover, young people are returning to the rural properties of their families, which they previously shunned.

However, many obstacles still have to be overcome. It is necessary to expand the scope and range of actions undertaken, while facilitating direct purchases of local produce (not only from other municipalities) for school meals, which has not yet been possible. Moreover, logistic solutions must be found to facilitate purchases of produce from family farmers and cooperatives, especially fresh produce for school meals. The Municipality is thus currently developing a pilot project to use a publicly owned distribution centre on the east side of the city to store produce from family farms for school meals in this area.

Hence, there are positive prospects for further development and enhancement of this policy's reach and scale in the coming years. As a local and sustainable development strategy for the city, both for its urban and rural areas within the city boundaries, this experience may become an example to be followed by other local governments in Brazil. ★

Quito, Ecuador



Agriculture: fostering healthy production in solidarity

Alexandra Rodríguez Dueñas

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Responding to the challenges of urbanization

Quito has adopted a number of measures to tackle the present and future challenges of growing cities. In a context of rapid urbanization, the city is focusing on issues pertinent to food and population. Urban agriculture first appeared in Quito around 1999, at which time 26% of children were suffering from malnutrition, 48% of the population was below the poverty line, the unemployment and insecure employment rate was 57%, and the city was dealing with problems of overcrowding, lack of access to basic services, and food insecurity. Dollarization had resulted in decreased wages, an economic and social divide, a sharp drop in public spending, an increase in internal migration and emigration, deterioration of green spaces, in particular public ones, and a loss of agricultural land and protected environmental areas.

In 2000, a number of local and international actors supported an urban consultation on agriculture, organized by Quito, that aimed to establish a municipal urban agriculture project. The result of that consultation was an action plan which, among other things, created a pilot vegetable garden pilot in the *El Panecillo* neighbourhood in the city's historic centre. That was the genesis, in 2002, of the official participatory agriculture project of the municipality of Quito, AGRUPAR. Through that initiative, the local government sought to take actions that would reconcile urban agriculture with economic development,

food security, territorial organization and social integration, all in response to the challenges posed by population growth, urbanization, poverty, food supply, and sustainable development.

While it is true that urban agriculture is not governed by any public policy, like peri-urban agriculture it is nevertheless subject to a set of national, provincial and local standards. The AGRUPAR project is in line with the social, economic and environmental policies and objectives of the metropolitan district of Quito⁵ as regards the territorial organization it plans for 2025.

Project components

Urban agriculture is among the strategies adopted by the municipality of Quito for the economic and social integration of vulnerable population groups. Its approach is also consistent with the Milan Urban Food Policy Pact, to which the city acceded in order to develop a sustainable food system.

The AGRUPAR project is intended to improve the quality of life of the most vulnerable population groups in the district through agricultural activities that contribute to food and nutrition security, income enhancement, job creation and environmental management through the production, processing and marketing of foods from vegetable gardens (photo). The project seeks to build technical capacity, but also to sustainably and safely develop agricultural production and the agri-food industry by focusing on very small businesses, creating tight networks and gaining access to differentiated markets. A further goal is to boost the district's resilience and sustainability.

The AGRUPAR remit spans the eight administrative areas of Quito; with an area under cultivation of 27 ha, the project covers 82% of the rural and 88% of the urban areas. It includes various types of urban and peri-urban agriculture and offers alternatives to the traditional monoculture model. Among the foci of its activities are agricultural production, leisure, food security and sovereignty, occupational therapy, citizen participation, education, health, environment, gender and social integration. The project is aimed at some 300,000 persons:

5. *Ordenamiento Territorial del Distrito Metropolitano de Quito.*

PHOTO AN URBAN FARMER - PUERTAS DEL NORTE GARDEN, LA DELICIA ADMINISTRATIVE AREA, QUITO



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female heads of household (84%), adults, persons with disabilities, children and adolescents, schools, rural farmers, refugees, migrants, and detox and social reintegration centres.

Results achieved

Thanks to its broad scope, AGRUPAR has led to an exchange of knowledge between countryside and city, a factor in restoring the social fabric and bridging the urban/rural dichotomy. Knowledge, customs, and cultural diversity are highlighted, and the city becomes a vector of biodiversity. Urban agriculture is a “story” that develops through chores and seeds, the legacy of all those who have left the countryside for the city. The story is passed down from one generation to the next in the form of cultures, modes of consumption, food preparation and community life. In the city these are reflected in collective work (*minga*⁶) and community barter (exchange of products).

The project has plots ranging from a single square metre to

6. “*Minga*” denotes a type of bee practised in Andean regions: collective work for social purposes that can be festive and fun.

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7,500 m² and now consists of 2,500 gardens and 1,280 items of production equipment (microgreenhouses and microirrigation systems); 53% of its production is for personal use and 47% for sale. The gardens are used to grow fruit and vegetables and medicinal and ornamental plants, but also for beekeeping and the breeding of poultry and guinea pigs. Their production also extends to processed foods, such as preserves, snacks, freeze-dried food, baked goods and meats. These processes have boosted urban agriculture, which is now a hotbed of microenterprise, with the creation of 45 food processing companies and 100 companies growing and selling fresh produce.

The food is marketed through alternative short supply chains, including sales direct from the garden, through neighbourhood grocers, basket delivery or organic markets. The latter are the main sales channel: there are now 14 organic markets operating weekly all year long, and the project total is 4,018 markets.

In economic terms, the farmers supported by the AGRUPAR project generate average additional income of US\$ 151, consisting of the sale of surpluses and what they save by consuming their own production. As a result, 17.5% of project farmers are earning more than US\$ 300 a month, which is very close to the minimum wage in Ecuador. To enable small farmers to obtain the business loans they need, 48 community banks have been created. And in ecological terms: 1,950 t of organic waste is recycled as fertilizer; the city's biodiversity has been enriched with 72 edible species; and the total area devoted to urban agriculture has become an indicator of sustainable development in Quito, given that its operations are also taken into account in local businesses' carbon footprint offset strategy.

Project governance

The AGRUPAR project is being run by the Metropolitan Economic Promotion Agency (CONQUITO), a dependency of the Production Development and Competitiveness Secretariat of the municipality of the Metropolitan District of Quito. The CONQUITO governance model affords the AGRUPAR project an institutional basis, technical legitimacy and sustainability thanks to the cooperation of the public, private and academic actors that make up the Assembly and

Council of CONQUITO. The actions of the Agency are coordinated with other municipal entities: Health, Territory (habitat and housing), Environment, Culture, Municipal Assistance, Social Integration, District Trade Agency and *Empresa de Rastro* (slaughterhouse quality control company). Depending on the initiative, links have also been established with the national government, through the following ministries: Agriculture, Social Integration, Justice, Industries and Productivity, Health and Education.

Each year a budget is set aside for project implementation by the municipality of Quito, on the basis of the annual operational plan of the CONQUITO agency (US\$ 361,094 in 2016). Project needs are rounded out by strategic public-private partnerships, which also help with its deployment, including outside the district. Similarly, international cooperation has played an important role in the project's expansion beyond Ecuador. Links to the academic community have facilitated studies and support for the activities on the ground. Farmers themselves make a significant contribution by developing production infrastructure, equipment and livestock production, but also by maintaining the crops.

The project relies on a technical team made up of agriculturists and food engineers, who receive the supplies they need to conduct administrative and practical activities. Implementation strategies are based on: training and specialized technical assistance, which have led to the enrolment of 16,700 persons (84% of them women); a differentiated sales system; value added to surplus production; and strategic public-private partnerships.

Since 2015, moreover, the city administration has set up agroecological organic markets through its district-level trade agency, with the purpose of fostering local fair trade and responsible consumption. These markets also provide a meeting space for producers from Quito and the region. Another actor, the "Farmers' Solidarity Network", provides social agribusiness with the raw materials it needs, while establishing links with restaurants in keeping with inclusive trade or the corporate social responsibility model.

Influence on local or national policy and reproducibility

Because of its impact on public policy, this project has helped to change local regulations on such things as urban wildlife, in order to encourage the raising of certain livestock species. Urban agriculture also affects social responsibility regulation, particularly as regards environmental, economic and social issues, by seeking to make the different actors jointly responsible. The AGRUPAR project has proposed that the words “urban agriculture” be included in the Ecuadorian organic law on food sovereignty, which currently speaks only of rural agriculture. The new wording is not yet in place in legislation, but it is important to embark on discussions and deliberations. The AGRUPAR project has helped to develop regulations for production development in Ecuador and the creation of good agricultural practices for vegetable gardens. However, a legal framework has yet to be established for urban agriculture in Quito. As a local and national exemplar of these agricultural practices, the AGRUPAR project encourages other local governments to adopt them through technology transfer and the sharing of knowledge with other initiatives.

The accession of Quito to the Milan Urban Food Policy Pact came about at the behest of the AGRUPAR project. Within the municipality, the project is a catalyst for efforts and helps bring the various measures to fruition by taking initiatives consistent with the lines of action of the Pact, the goal being to create a sustainable and resilient food system for the city. ★

Curitiba, Brazil



Role of a co-responsible consumer market

Marcelo Franco Munaretto

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Public policies to improve food security

Curitiba is a city of 1.88 million inhabitants which is 100% urbanized, so it lacks sufficient food production within the city limits. However, Curitiba has 28 more cities within its metropolitan area, which coexist in an interdependent manner regarding waste and water management, as well as food production and consumption, among other relations.

Curitiba is the capital and the largest consumer market of the State of Paraná, one of the most significant markets for agribusiness in Brazil. Even so, most Curitiba inhabitants seem to have lost their understanding of and intimacy with countryside concerns.

Since 1986, Curitiba has had a Municipal Secretariat of Food Supply, which was initially focused mostly on social access to food. In 2005 and 2006, the Secretariat underwent a conceptual reorientation, and started to work on three main fronts: social food access, public commercial units, and alimentary and nutritional education.

Brazil published the following official definition of food safety: “Everyone’s right to regular and permanent quality foodstuff access, in sufficient amounts, without compromising access to other basic needs, having as a basis the exercise of healthy inducing eating habits, that respect cultural diversity and that is, at the same time, environmentally, culturally, economically and socially sustainable.”

When setting the budget law for the 2014–2017 period, the Curitiba municipality developed a government programme named *Curitiba Mais Nutrição* (Curitiba More Nutrition). This programme, coordinated by the Secretariat of Food Supply, brought together many actions and

programmes from different secretariats and municipal institutions. The overall aim is to align and leverage efforts, optimize results and take advantage of opportunities that arise between the actions of the different institutions. This programme works simultaneously on four axes that are embedded in each of its actions and programmes, while respecting the commitment to its individual goals:

- › Access to quality food – guaranteeing that food reaches citizens in proper amounts and quality, prioritizing lower income populations;
- › Proper eating habits – striving to reorient eating habits of the community;
- › Co-responsible consumption – implementing policies to promote the marketing of products from sustainable production chains, while also promoting co-responsible consumption, and;
- › Municipal management of food and nutrition – providing guidelines for municipal food and nutrition management and its development, while enhancing the coordination and effects of such actions.

The co-responsible consumer market concept is founded on the understanding that all food chain links (input production, primary production, food processing, distribution and final service delivery processes) are geared towards reaching consumers. In order to put this important municipal government programme to work in accordance with the concept of the human right to adequate food,⁷ the public body acts: by prioritizing the acquisition of products from sustainable production chains, especially from within its metropolitan area, for public purchases catering to social action programmes, school meals and food supply; by prioritizing farmers' associations, such as family farming co-ops, when creating new opportunities for marketing within municipal markets and fairs; by developing sustainable consumption campaigns and events promoting local sustainable agribusiness; by articulating and strengthening family farming organizations, geared towards their insertion within the capital's market; by linking food

7. In Portuguese, *Direito Humano à Alimentação Adequada*.

education to the production chains; and by ensuring linkages with strategic partners with regard to providing technical support for rural areas and to better meeting the demands of the population, while serving as a platform to help farmers obtain rural credit.

Note that the practices presented here do not solely consist of one action or programme, but rather an alignment of many different mutually-enhancing actions, some of which are multisectoral. Some of the component programmes are described in the following chapter.

Some implemented actions

Fairs with social prices as a direct rural/urban connection

Programa Nossa Feira (Our Fair Programme) is a commercial Secretariat programme oriented towards social food supply run by family farming co-ops that trade a large deal of fruits and vegetables directly to the population at set prices that are 40% lower than average retail prices (photo).

Each co-op participant of this programme works in five street fairs a week, from Monday to Friday. The fairs are set up at strategically located public sites near public schools, high-density housing

PHOTO PROGRAMA NOSSA FEIRA



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estates or public transportation terminals, mostly in city areas with a low market supply of fruits and vegetables. The fair opening hours are also a strategic element. The fairs run from 5 pm—the time when parents are going to pick up their kids at school and when workers are returning to their homes—and remain open until 9 pm, so they also serve as a pleasant meeting point for the community.

The fairs are organized with eight to ten tents, including one main 80 m² tent where the co-op sells a minimum variety of 35 seasonally available fruits and vegetables. All of these products are sold at a single preset price, which is mathematically calculated by the Secretariat of Food Supply to ensure consumer savings of at least 40% compared to retail prices. Meanwhile, the co-ops still obtain a better profit than they would get when selling to wholesale markets. In the other tents, consumers find products like fish, grains and cereals, luncheon meats and sausages, traditional breads and pies, and traditional snacks, thus giving the fairs a countryside atmosphere.

In order to enable this project, the Secretariat team works side-by-side with strategic partners prior to the inauguration of the fairs and focuses considerable effort on convincing, organizing, formalizing and supporting the co-ops. After the fairs are launched, the team continues working on assisting market producers with strategic linkages, rural extension, technical support and orientation.

This programme ensures that tonnes of inexpensive, fresh and healthy food are available to urban consumers, while enhancing and equitably distributing profits among producers. The programme also prompts producers to organize and professionalize themselves. In addition, as long as the co-ops cover the operational costs of the fairs, public expenses to run this huge benefit for the population are minimal to non-existent.

Municipal market as a co-responsible consumption promoter

The municipal market of Curitiba, thanks to its characteristics, is a reference centre for quality products. Moreover, through a recent refitting to make the market suitable for hosting some specific events, it has become a stage for showcasing agribusiness and sustainable production that is very attractive to agribusiness stakeholders.

The municipality and its partners regularly host events, courses and workshops to promote local food chains, conscious consumption and proper eating habits. These initiatives fulfil an important role in boosting the awareness of urban inhabitants on rural perspectives—which is an essential support for decision making on consumption habits and economic and regional policies. They provide an opportunity for producers and agribusiness stakeholders to more closely interact with the consumer market, while enhancing the overall understanding of consumers' concerns, which in this case pertain to sustainability.

Based on the same concept, the municipal market opened a new area for the public in 2009 as the first Brazilian public market for the sale of exclusively organic products. This market, along with 13 organic food fairs, has become a reference for consumers, further promoting the production and trade of organic products.

The role of the municipal government as a major purchaser to promote sustainability

According to the municipal government plan, the municipality's public procurements prioritize products from sustainable local chains. This incentive action gives small producers a substantial edge and provides opportunity for growth and investment in appropriate production structures.

Two examples are: the Green Exchange Programme, where families from poor areas can exchange recyclable material for fruits and vegetables from family farms; and the Family Mart, a social programme where registered low income families can buy quality foodstuffs at prices that are 30% lower than the average retail price. In addition, the Family Mart ensures great opportunities for small farmers, thus promoting local brands in city markets. In accordance with the terms of Federal Law no. 11,947 of June 16, 2009, through the direct buying system, the municipality has been gradually increasing the share of produce originating from family farms (mostly organic products) in school meals—it is targeting a total share of 30%. However, this purchasing process has revealed problems family farmers are facing with regard to logistics and sorting of products. To

solve these problems, there is an ongoing partnership between the municipality and several entities to guide production chains, with a focus on consumer demand.

Urban agriculture

Much more than simply being a commercial concept, another way to connect both urban and rural realities is through urban agriculture, which has two forms in Curitiba.

The first focuses on the use of vacant land for growing vegetables, resulting in the production of quality food at low cost. The use of this land and urban voids generates many different benefits for the city, including public safety, while having social and environmental impacts favorable for integration of the community. To implement this strategy, the Municipal Supply Department therefore promotes the use of land for community associations by providing seedlings, seeds and other basic supplies. The Secretariat also takes care of soil preparation and provides technical guidance.

The second is focused on growing produce in small backyards, vases or planting pots. There is an educational aspect to this form of agriculture, which promotes intimacy between humans and nature, thus bringing people closer to their food.

The results obtained

The most significant results obtained are as follows:

- › A 32.6% increment in co-op earnings through the *Nossa Feira* programme, compared to the income they would get by selling their products on the wholesale market. In addition, profits are fairly distributed among associated producers, and the 40% savings benefitting urban citizens help the local economy.
- › Greater consumption of fruits and vegetables, mostly in lower income families. In the last 2 years, the number of people who consume fruits and vegetables at least five times in a week grew by 5.8%, and the number of people who eat at least five meal portions a day grew by 5.7% in the same period. Of course, there are many reasons for this achievement, but these programmes have clearly been influential.

- › With the Secretariat's intervention, a consortium of nine co-ops was created, thus enabling farmers with this enhanced support and potential to achieve new commercialization and investment levels. The consortium includes more than 4,000 associated producers.
- › From January to September 2015, the Secretariat's commercial units held 16 events with 153 actions to promote different food chains of local interest, plus 112 actions to promote co-responsible consumption among 9,960 children.
- › Although there are no statistics available, the professionalization of small family farmers is clearly due to the fact that they are now selling their produce directly to consumers and are thus more aware of consumers' quality and quantity requirements and hence able to adjust their produce supply to closely meet consumer demand.

Involvement of city authorities in the process

All the municipal government bodies develop and coordinate the presented initiatives, while counting on many governmental and nongovernmental partners, especially co-ops, municipal market licensees, the state's Governmental Institute of Rural Extension, the Rural Federation, and the federal government with its National Programme of School Catering, in addition to many other institutions involved in agribusiness and food chains.

The city authorities have a critical role in providing the best possible opportunities to sustainable local food chain stakeholders, while boosting public awareness on the need for co-responsible relations between urban and rural inhabitants and promoting safe and sustainable products.

Influence of the initiatives on local and national policies

On the local scene, intersectoral action is one of the most relevant advances. Many entities have been involved, achieving substantial results, including high social benefits with regard to food security, sustainability and social justice at low cost.

From a legal standpoint, the municipality has an influential role as a promoter of sustainable food systems within the City Plan bylaws.

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Considering the state's role, it is clear that its support is crucial in the organization of supply chains and their development is not only oriented towards produce, but also towards meeting the market demand.

When it comes to the federal role, public action is primarily focused on supporting family farming through institutional purchases, which represents fundamental support to the sector. However, the results of initiatives conducted in Curitiba have reflected positively and fostered the commercial development of organizations representing family farming and sustainable production chains. ★

Rosario, Argentine



Promotion of sustainable food production

Raúl Terrile

Food Programme Coordinator, Production and Local Development Secretariat, Municipality of Rosario, Argentina

Backgrounder on the City of Rosario

The City of Rosario is located in central Argentina, on the shore of the Paraná River. In agricultural production, Rosario is a perfect example of the soya export model, which is based on the use of transgenic seeds and large quantities of agrochemicals: over the last 25 years, Argentina's consumption of these products in Argentina has risen 983% (from 38 to 370 million kilograms), while the area under cultivation has increased by 50% (from 20 to 30 million hectares). The city has gradually lost its food autonomy and become increasingly dependent on external sources of supply (other parts of the country). It is estimated that fruit and vegetables travel 300 to 1,000 km to get there, and those distances have a cost, not to mention an impact on the quality of the products and the environment (greenhouse gas emissions, transport, etc.). What's more, as they are produced using chemicals, vegetables and other food from the vicinity of Rosario do not always meet the quality criteria of foods free of physical, chemical and biological contaminants. It should be noted, too, that on food markets consumers generally look for price and appearance, paying little heed to the nutritional quality of products grown using best ecological practices.

Description of public policy and the measures taken

Since April 2014, the Food Programme of the municipality of Rosario has been conducting a project promoting sustainable production

of food in its peri-urban area and in the region. The project seeks to promote exchanges between the city and its surrounding area, production and consumption in neighbouring areas, quality of produce, and responsible consumption. Its goal is to foster production of healthy, high-quality vegetables in the peri-urban zone of Rosario, without the use of physical, chemical and biological contaminants, to be sold through dedicated marketing channels.

The action lines being pursued have a threefold purpose:

- › To promote best practices in agriculture;
- › To process crops in an agroecological manner;
- › And to introduce regional production to supplant products imported from other areas of the country, so as to support the local economy (one example is potatoes, which are brought from a distance of some 800 km away despite the availability of good potato-growing land only 30 km away).

These actions are being taken in the following institutional and legal framework:

- › Ordinance 9144/13 regulates the use of urban land, establishes an 800-ha fruit and vegetable protection zone⁸ on the perimeter of the city where building is not permitted, and encourages vegetable and fruit production and animal husbandry for local supply;
- › Ordinance 8871/11 regulates the use of phytosanitary products and delimits the Rosario agricultural zone (a 100-m swath outside the city limit where no spraying is allowed, then 500 m where only low-environmental-impact agrochemicals are authorized);
- › Provincial law 11.273 regulates the use of agrochemicals and also establishes protected areas around the cities. The Congress is currently examining an amendment, already approved in the Chamber of Deputies, that would establish 20-m peri-urban zones where no spraying would be allowed, to promote agroecological production;
- › At the national level: a) the *Pro Huerta* programme developed by the National Institute of Agricultural Technology (INTA⁹) and the

8. *Área de protección frutihortícola*, APP.

9. *Instituto de Tecnología Agropecuaria de la Nación*.

Ministry of Social Development implements actions to promote agroecological production in the vicinity of cities; b) the Family Farming Secretariat, which is part of the national Ministry of Agriculture and maintains policies for the integration of vulnerable and family producers, has a programme dedicated to the promotion of agroecological models.

That has been the framework for the development of a project for production of fruit and vegetables according to best management practices in horticulture (BMPs) in the peri-urban area of Rosario, with the produce being sold to city hotels and restaurants. To that end, a cooperation agreement has been reached with the association of hospitality and restaurant businesses of Rosario¹⁰ (AEHGAR) on the integration of best practices and quality products. That has made it possible to establish direct production and consumption links between producers who follow BMPs and those restaurants and hotels that wish to offer unique products. The endeavour lets such establishments display products that comply with the *Producto de Mi Tierra*¹¹ seal of quality awarded by the province of Santa Fe (in which Rosario is located). That accreditation, granted to food obtained using best practices in production and handling, rewards originality, tradition and excellence and makes these products more visible and recognizable to consumers in the various marketing channels. Meanwhile, producers receive a premium of 20% on the price of their products as a reward for their greener methods.

Alongside this project, an agroecological conversion programme is under development. The programme is aimed at horticultural producers and encourages them to grow fruit and vegetables free of agrochemicals. Under this approach, the role of the Food Programme of the municipality of Rosario is to encourage horticultural operations to adopt that mode of ecological agriculture; their experience will then serve as a model. The operations receive participatory technical support on the ground, as well as financial support for the purchase

10. *Asociación Empresaria Hotelero Gastronómica de Rosario*.

11. "Product of My Land".

of specialized equipment. Commercial assistance and management are provided to hotels and restaurants who agree to highlight these unique products and serve as models for other establishments. The products are also sold by greengrocers (retailers). Finally, agroecological products are marketed by direct sales in the form of baskets, through reference points (organizations and institutions that supply their own partners). In specialized markets (of which Rosario has two), a training plan on Good Agricultural Practices (GAPs) and good handling practices is planned to disseminate agroecological practices and promote adoption of GAPs.

Results achieved

Four producers (50 ha) follow best management practices in horticulture and sell their produce directly to hotels and restaurants in Rosario.

Three hotels and four restaurants offer BMP-certified products labelled "Productos de Mi Tierra", whose excellence they also promote to their clientele.

One Rosario horticulturist has switched his 2-ha plot to agroecological produce, and sells his certified fruit and vegetables to families, social organizations and restaurants, while four horticulturists in Soldini, a town near Rosario, have also switched to agroecological production and sell their produce to social organizations.

Producers who adopt this system enjoy better production conditions (less contamination, integration as family farms, access to social benefits) and the produce obtained is of better biological quality, according to laboratory analyses comparing it with conventional produce.

Quite apart from the significance of this approach in terms of preservation and consolidation of horticultural land in the peri-urban area, it also makes an important environmental contribution (reduction of the effects of global warming and greenhouse gases).

Mode of governance applied

The sale of GAP-compliant products has received support from the Ministry of Production of the province of Santa Fe in the form of:

- › Resources provided to producers for i) technical assistance (two technicians, training and monitoring of GAPs, and sales), ii) the acquisition of GAP-compliant equipment (vegetable trailer, washing equipment, packing crates, signs and other packaging materials);
- › The “Producto de Mi Tierra” certification administered by the government of the province of Santa Fe, which does quality control throughout the production process;
- › Development of an advertising campaign that has helped participating restaurants to impress upon their customers the special quality of the fruit and vegetables produced in accordance with GAPs and used in their dishes.

Within the municipality of Rosario, project implementation was entrusted to the Food Programme of the Production and Local Development Secretariat, which coordinated actions by various stakeholders.

It has been possible to integrate these activities into the Rosario environmental plan and the “Sustainable Rosario” programme, which are taking cross-cutting actions with the cooperation of all municipal areas to reduce, control and/or slow down the effects of global warming.

Constant dialogue has been undertaken with:

- › Other Rosario-area fruit and vegetable growers, to involve them in the project;
- › AEHGAR, which has also encouraged dialogue between its partners and served as a link to participating institutions;
- › The Rosario Regional Development Agency, which amassed the funds;
- › The Rosario Food Institute, which monitors food quality in the city;
- › The National University of Rosario, the College of Agricultural Engineers, the National Agri-food Hygiene and Quality Office, and INTA, which contributed their experience and took part in training activities for producers and technicians.

Results of this experiment

The government of the province of Santa Fe considers this experiment a model for policies to promote sustainable food production systems in peri-urban areas.

At the level of the Food Programme within the municipality's Production and Local Development Secretariat, the project helped to officially establish and strengthen the Sustainable Production Programme for the peri-urban area of Rosario.

Argentine municipalities are increasingly adopting environmental protection regulations that limit the use of agrochemicals and establish chemical-free zones around cities that are therefore suited to agroecological production. In terms of reproducibility, it is possible to adapt this experiment to other contexts, provided the political will is present and incentive policies for production chain actors can be adopted. It is fundamental for small family producers to be supported, so that they can upgrade their infrastructure, equipment and knowledge, and thus develop processes to achieve better food production quality. Further efforts are needed to encourage short supply chains, meetings between producers and consumers, quality certification processes, responsible consumption campaigns and training.

Feedback on the experiment and potential

Products that stand out for their quality are increasingly popular with consumers. When they have access to reliable information on how to obtain healthy locally produced food, they make a responsible choice.

Producers must be able to organize at the local but also regional level, so as to offer restaurateurs the variety they demand, with the products of local producers complementing those from the wider region.

Restaurants too need to band together, as each individually will not support a high level of production. Producers' commitment will be forthcoming to the extent that progress is made. They can also display their products at fairs and permanent markets for characteristic products, in strategic areas of the city. Dialogue between a given region's producers and consumers will foster the emergence of a regional identity.

Some of the producers that took part in the experiment were able to see the benefits of producing unique food products: for them, it guarantees a demand for their products; further, they increase their income and obtain recognition from a certain segment of society. Producers will make changes to their production system when economic advantages result, in addition to social and environmental benefits.

It is essential to adopt public policies that support sustainable production systems by setting up technical assistance programmes and by subsidizing equipment for the work to be done before, during and after harvest. ★

Urban / rural connexions. Wrap-up of discussions and conclusion

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Urban-rural relations are increasingly recognized as being pivotal to sustainable development and food security. As urban and rural people, areas and enterprises become increasingly connected, local and national policies need to ensure that economic growth goes hand in hand with environmental sustainability and reduced inequality.

In this session, we learned about and discussed several initiatives at municipal and regional levels. The presentations from China, Brazil and Ecuador highlighted how food security and safety, as well as the management of environmental resources within and around urban centres, have become priorities for several municipal governments. The discussions revolved around a number of interrelated issues.

Environmental protection

Managing and protecting natural resources upstream of built-up areas—especially large urban centres and urban conglomerations such as Tianjin (China) and São Paulo (Brazil)—is a major concern for local governments. Expanding administrative boundaries to incorporate key natural resources such as water and agricultural land makes a difference, as exemplified by São Paulo (Brazil), Quito (Ecuador) and Tianjin (China).

Land tenure

Related to natural resource management, land tenure systems represent a major tool to control urban expansion and protect ecosystems, especially in the face of mounting concern about uncontrolled urban sprawl in periurban areas. In São Paulo (Brazil), informal land markets have developed in the city's watershed. As these often host low-income settlements, there may be potential tension between the need for social protection of vulnerable groups and environmental protection.

Institutional architecture

The expanding role of municipal governments in governing rural-urban relations raises a number of issues, several of which are closely linked to decentralisation, with funding being first and foremost. In most cases, municipal governments do not have the capacity to raise sufficient funds locally and they are forced to rely on financial support from central governments. This in itself is not necessarily a problem, but it can become so if it erodes local decision-making power. There remains a need for innovative funding approaches that support local initiatives. This can be done by providing greater support for learning exchanges between municipalities, while keeping in mind that approaches rather than blueprints are likely to be far more useful. More fine-grained information for local governments is also needed. For example, the municipality of São Paulo (Brazil) has very limited detailed information on activities and land use in the southern area of the municipality, where most of the agricultural production is based.

Who are the producers and consumers?

Low-income producers—smallholders and family farmers—need access to markets and relatively wealthy consumers who can pay higher prices. Low-income consumers, on the other hand, require access to cheap but good quality food. Reconciling the two is not easy. Private distribution channels/markets are effective when they connect low-income producers with higher-income consumers, but otherwise public intervention is necessary. In Curitiba (Brazil), the municipality sets prices in farmers' markets which, by cutting out the middlemen,

offer higher selling prices to producers and lower purchase prices to consumers. However, replicating this on a large scale seems difficult, especially in cities where informal food markets are widespread.

Public procurement fostering local supply

This is an important tool, especially in Latin American cities, but much less so in Chinese and African cities. This led us to think that effective public procurement requires a combination of factors. These include a relatively strong civil society, capable and motivated local governments and technical capacity, all of which is often closely linked to social protection programmes and nutritional education and training programmes, especially those targeting children.

Urban and periurban agriculture is mainly about perishables

This was pointed out again and again in the discussions. It is important for a number of reasons: perishable commodity production has a high profit potential, and is therefore likely to attract investment from middle-income urban residents. It also requires less land to be viable, and is therefore supported by agro-development policies around large cities such as Tianjin (China). This production also benefits from demand from wealthier urban consumers, and proximity is of crucial importance. But perhaps the most significant point is that urban and periurban food production can generally only meet part (albeit a substantial part) of urban residents' food needs. Staples, on the other hand, are likely to be produced and delivered from faraway places. Focusing research solely on urban and periurban agricultural production patterns would largely concern perishables, whereas access to both perishables and staples should be taken into account when focusing on consumption patterns.

Conclusion des discussions

The results of initiatives implemented in East Asian and Latin American cities have shown that it is possible to aim for more sustainable urban-rural linkages and food systems. They also suggest that to be effective these initiatives need to encompass a wider range of issues, beyond

NEW TYPES OF URBAN/RURAL CONNEXIONS

food production and natural resource management, most notably access to resources for urban and rural low-income groups, along with institutional architecture and governance systems which are a key to sustainable development. ★



**MONTPELLIER
MÉDITERRANÉE
MÉTROPOLE, EXAMPLE
OF ONE APPROACH**



Montpellier, France

Montpellier Méditerranée Métropole: Design of an agroecology and food policy

Valérie de Saint Vaulry

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Since 1 January 2015, Montpellier Méditerranée Métropole¹² has been putting in place seven strategic pillars for the future—vectors of territorial development—including one entitled “Agroecology and Food”.

Its cross-cutting public policy on agroecology and food builds on other areas of public policy already occupied by Montpellier Méditerranée Métropole: development, town planning and public areas, preservation of biodiversity, raw and drinking water, risk management, waste prevention and management, urban logistics, economic development, economic integration, social cohesion, citizen participation, solidarity and education, energy, public health, tourism.

Many planning and action items in the area of agriculture and food appear in the city’s structuring documents, and particularly its Territorial Consistency Plan (SCoT). As a foundational plan, the SCoT organizes development by defining urban, agricultural, and natural spaces and ensuring respect for the balance between these spaces.

As a concern of local public action, the theme of agriculture and food policy is something new in France, as prior to 2014 it was chiefly

12. Montpellier Méditerranée Métropole is the local government (450,000 inhabitants, 31 cities and towns).

a ministerial responsibility and has been the subject of regional plans only since 2008. France's *Act on the Future of Agriculture, Food and Forestry*, enacted on 11 September 2014, sets out the issues surrounding a national food policy and emphasizes that it must be grounded in the various territories. It mentions the development of "territorial food projects."¹³

Internationally, local policies focusing on the agriculture and food issue have become more common. The chosen theme of Expo Milano 2015—Feeding the Planet, Energy for Life—highlights the crucial importance of that issue, as well as the importance of local authorities' grasping the issues related to it. As a signatory to the October 2015 Milan Urban Food Policy Pact, metropolitan Montpellier is committed to working closely with food system actors "to develop sustainable food systems that are inclusive, resilient, safe and diverse, that provide healthy and affordable food to all people in a human rights-based framework, that minimize waste and conserve biodiversity while adapting to and mitigating impacts of climate change."

A cooperative territorial agroecology and food policy

In autumn 2014, Montpellier Méditerranée Métropole asked a collective of scientists—geographers, sociologists, and agronomists—to support the definition of a farm and food policy in their territory. The scientists held two workshops, where elected officials and officers of the City and municipalities were invited to respond to a portrait of the territory and the presentation of pioneering experiences. The discussion afforded participants an opportunity to begin mapping out a common vocabulary and a shared vision of the territorial agricultural and food mosaic; a number of considerations and avenues for approaching a future agroecology and food policy emerged therefrom. During the workshops, it became clear that the problems encountered by the municipalities varied with their geography—location (urban, suburban, rural), social demography and economic fabric—as well as their political stance.

13. Article 1, Title III.

In June 2015, on the basis of these shared perceptions, the Metropolitan Council approved a common political framework (objectives, service components, principles of action) whereby existing and planned initiatives could be best *partnered* and *made visible* while *acting on* the most effective levers.

Accordingly, policy committees focusing on service components and cross-cutting action will henceforth bring together municipalities both within and without the metropolitan area, the State, the agricultural sector, associations, companies, agricultural research actors, consumer representatives, etc., depending on the interest they express. The roadmap first proposed by Metropolitan elected officials is thus subject to ongoing review as proposals and actions of the food and agriculture ecosystem are added, and so becomes a real territorial roadmap.

Metropolitan agroecological and food policy

The policy has five ends in view, which each municipality is invited to rank in its own order of priority and to which each will contribute on its own scale and on the basis of its own projects:

- › Offer healthy, locally sourced food to as many citizens as possible in accordance with the recommendations of the national nutrition and health programme launched in 2001.
- › Support the agricultural and agri-food economy and employment therein. Often enshrined in public policy for its amenities (landscape preservation, firefighting, contribution to the preservation of water quality, etc.), agriculture is still primarily an economic reality, which creates employment and value based on its production function and the entire value chain: agri-food processing; agricultural tools, technologies and services; logistics and distribution; diversification of activities in tourism; out-of-home catering services, etc.
- › Preserve the heritage of the countryside and its natural resources (biodiversity, ecological quality of water, soil and air). That goal is to be included in the SCoT revision now under way in accordance with the government's Ecophyto plan, launched in 2008 following the Grenelle Environment Forum, which aims to phase out the use

of phytosanitary products in France while maintaining an economically viable agricultural system. This applies to all “agricultural practitioners” (farmers, but also amateur gardeners and local officials in charge of maintenance of roads and natural spaces, etc.).

- › Limit greenhouse gas (GHG) emissions and adapt to climate change in line with COP 21¹⁴ and the guidelines of the French Ministry of Agriculture, Agri-Food and Forestry. While agriculture does contribute to GHG emissions, it can also promote CO₂ sequestration in soils. Thus, an increase of 4 parts per thousand or 0.4% of the organic matter contained in the upper soil layer would suffice to offset the entire planet’s GHG emissions.¹⁵
- › Promote social cohesion by caring for the link with nature and the relationship between city and countryside. Food and a stronger link with nature, in particular through garden spaces,¹⁶ could be effective vehicles for the City’s policy. In particular, the various sectors of the agriculture and food economy could support remobilization and economic integration actions directed toward citizen groups with little labour market attachment.

Service components for public action

The City proposes a framework for action based on six service components, each of which is directed toward specific partners and targets.

COMPONENT 1 — Consolidate the fabric of market gardens involved in direct sales

Action 1-1. Identification of farms that are innovating in the peri-urban area and can serve as exchange and demonstration sites, where everyone can come to train in agroecology, and support for the creation of a “resource farm” as a midpoint between professionals and the general public.

14. 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), which was held in Paris in December 2015.

15. www.agriculture.gouv.fr/rejoignez-linitiative-4-pour-1000

16. That is, agricultural plots or gardens (individual or collective) where vegetables, fruit or grains are grown, as well as pasture areas.

MONTPELLIER MÉDITERRANÉE MÉTROPOLÉ, EXAMPLE OF ONE APPROACH

Action 1-2. Development of a guide to points of sale for local products, so that consumers know where to buy and producers know where to sell.

COMPONENT 2 – Promote local procurement in the city, in particular with regard to catering

Action 2-1. Stocktaking of what is happening in terms of catering in the municipalities, to evaluate drivers of action.

Action 2-2. City support for municipalities, to help them draw up their catering contracts, which are a real driver of local procurement and local farm development.

Action 2-3. Product-by-product structuring of supply chains (apple, tomato, durum wheat, etc.). This involves bringing voluntary actors together, particularly within the wholesale trading centre.

COMPONENT 3 – Support agricultural and agri-food innovation

Action 3-1. Feasibility study on the emergence of a food processing cluster.

Action 3-2. Coordination and enhancement of existing or planned innovation support mechanisms.

COMPONENT 4 – Enhance and promote local products and Mediterranean gastronomy

Action 4-1. Creation of a “terroir identity”, in particular by coordinating the various terroir festivals held in the region.

Action 4-2. Work on agri-tourism tours in conjunction with the City tourist office created on 1 January 2016.

COMPONENT 5 – Mobilize citizens in the area of agroecology and responsible and sustainable food supply

Local citizen initiatives in food and agroecology are numerous and often of great value, but are not very visible, and their social and environmental benefits could be significantly greater if they were coordinated, perhaps pooled, and given additional resources.

Action 5-1. A “gathering” of citizen initiatives on a cooperative website to share experiences, heighten the visibility of existing or

planned initiatives, and possibly pool similar or complementary initiatives.

Action 5-2. Co-organization of a forum in the autumn of 2016, which will publicize the initiatives put up on the cooperative website and bring together regional actions and all citizens interested in agroecology.

Action 5-3. Award of small grants to citizen initiatives in agroecology and food, via the launch of a “call for wishes” to stimulate the emergence, pooling and spinoffs of such initiatives, on such themes as the fight against food waste, food education, or nature in the city.

COMPONENT 6 — Forge a consistent approach to the integration of agriculture into development projects

This will call for substantive work with development professionals and on planning documents, so as to preserve the most fertile land and have agricultural specifications taken into account from the outset of development operations, particularly with respect to urban agriculture, commercial town planning and urban logistics.

Cross-cutting service components

The three fundamental themes below are pervasive in the action plan.

1. Mobilize public and private land: the City implements a progressive landholding structure. It puts some of the available city and municipal land to use to support the startup of agroecology project backers and active farmers and to relocate part of its food production. Again, in conjunction with the agricultural council, the City weighs actions concerning agricultural land currently in production but threatened by the retirement of farmers without successors. The last component of its action concerns fallow plots.

2. Communicate, learn, share: the region needs a space where stakeholders can share experiences and pool knowledge, databases, and existing and planned initiatives.

3. Train: training workshops are available to elected officials and technicians of the City and the municipalities on the theme of agriculture and food, which not everyone has the same understanding of.

Move forward through experimentation

Unlike metropolitan Montpellier, some other regions have opted to spend considerable time and resources on a thorough, comprehensive diagnosis. Montpellier's deliberate choice is to experiment, to move forward by doing and learning, drawing on the experiences of other regions and countries—successes and failures both—and to change course as we go. That means that governance is formed by action within each of the six service components and at all four territorial levels: infralocal, local, metropolitan, suprametropolitan.

Our approach is intended to be open and inclusive, being based on the concepts of *partnering* and *making visible* mentioned above. Particular attention is and will be paid to links with the agricultural sector, with civil society, and with agricultural research (including agronomy, but also urban planning, social sciences, geography, etc.). ★

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Montpellier, France

Catering in the City of Montpellier: three actions for a more sustainable food supply

Luc Lignon

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Metropolitan Montpellier's¹⁷ agroecological and food policy (P2A) was launched in June 2015. In particular, it focuses on the implementation of an action plan to encourage local supply (short supply chain) in the City and metropolitan area, for example through school catering. At the metropolitan level, school catering accounts for over 30,000 meals a day, so it constitutes an important source of development for the agricultural and entrepreneurial world and an important public health issue. It is one of the vectors for adoption of best practices in nutrition, making a school meal an expression of the fundamental link between primary production and consumption of the prepared dish: "farm to table".

The City's commitment to a sustainable, responsible, healthy and high-quality food supply for school meals

School meals: Objectives and issues

By its very nature, school catering has its own quality objectives: food health and safety, together with educational, social and economic

17. Montpellier Méditerranée Métropole is the local government (450,000 inhabitants, 31 cities and towns).

considerations. But new social and environmental issues, equally important to our future, have entered the collective awareness of elected officials, consumers and producers.

Food supply is pivotal to the great problems of our time, as are health, the climate and the economy.

Because school meals form the basis of children's education in nutrition and taste, we need to begin with the children, making their mealtime count: it is the perfect time to build their taste and convey positive messages.

Presentation by the City's school catering directorate

The City of Montpellier itself manages meal production and distribution at its 84 school cafeterias and 42 recreation centres. The City's central production unit prepares and distributes some 1,650,000 meals a year, or on average 12,400 a day, 1,800 a day Wednesdays and during school holiday periods.

Action 1: A proactive and effective local procurement policy

The first link in the production chain is food purchase. To develop a proactive and effective local procurement policy, there are two essential prerequisites:

- › Much upstream work to assess the supply available from local producers (primary production, agri-food industry, etc.);
- › Reliable identification of the need for school meals in the City (nutrition plan, menu cycles, data sheets, etc.).

The procurement policy has a twofold focus:

- › Proactive selection criteria at the contracting stage: 80% quality, 20% pricing for the City of Montpellier;
- › A specific allotment for performance: based on the targeted product or family of products.

There should be added value for all stakeholders (community, guests, families) in the allotment scheme, to be established on the basis of the achievement of overall performance in line with the previously mentioned objectives and challenges for caterers.

Action 2: Introduction of organic farm produce in school meals

There would be no sense in pushing for quality, environmentally sound catering without at the same time seeking to introduce organic produce. That is the approach the City of Montpellier has decided to support in its school catering.

In full awareness of the underlying issues, it has chosen to phase in organic produce:

- › By choosing “symbolic” products to begin with and providing real added value in terms of regular supply, nutrition and taste,
- › By verifying the targeted products’ ongoing availability and consistent quality,
- › By minimizing the financial impact through gradual budget uptake,
- › By prioritizing short supply chain products.

The City of Montpellier has chosen a highly symbolic product: bread. Beginning in February 2016, organic bread will be distributed daily in all school cafeterias and outdoor activity centres in the City.

Action 3: Provide an education in better eating habits through responsible, sustainable food supply

Given the climate issues so vital to the future of our planet, the City of Montpellier has sought to embark on a path towards a responsible and sustainable diet. When children are educated in better eating habits and given alternatives to the “all animal protein” model, a positive dynamic is established that can lead to more environmentally conscious dietary habits. The school catering unit has worked in partnership with the municipal children’s council and the City’s Climate Plan team to come up with the first environmentally aware alternative meal.

This “green citizen” meal will be produced and distributed once in each menu cycle, or four times year, for a total of some 46,000 meals a year.

2016/2017 Objectives

- › To improve the allotment of some product families.
- › To implement a continuous improvement process in school catering.

- › To up the frequency of alternative “green citizen” meals to 1 a month or some 115,000 meals a year.
- › To implement a plan to combat food waste for school catering in the City.

One of the major elements of the food waste plan will be training for school cafeteria in food science and meal distribution.

The Montpellier Méditerranée Métropole action plan for completion of component 2 of its agroecology and food policy (P2A)

The description of component 2 is: “To promote local supply in the City and metropolitan area, in particular in catering.”

How could such a policy be implemented at the metropolitan level?

- › Determine who can work with whom, given the widely varying supply and demand.
- › Reconcile supply and demand through better knowledge of the constraints on all parties.
- › Modernize the wholesale trading centre (MIN Mercadis), which is the dedicated entry portal for the City’s short supply chain.
- › Enhance public contracting, in particular through the formulation and drafting of calls for tenders and specifications.
- › Support the structuring of the bidder’s sector by supporting the quality and logistics organization of the sectors.

To implement component 2, it will first be necessary to conduct an inventory of the catering services of all 31 cities and towns in Montpellier Méditerranée Métropole, the main objective being to equip Metropolitan Council members and the various service teams in the metropolitan area with a decision-making tool that can help them adopt a true win/win approach in balancing supply and demand.

To conclude: the benefits of a healthy, balanced, quality diet that is environmentally responsible and sustainable are not in question, and are familiar to all. Catering, and in particular school catering, has a major role to play in the proposed continuous improvement of food system quality, from procurement, to production, to information and training, to meal distribution. ★

Montpellier, France

The Montpellier Méditerranée Wholesale Market dedicated to territorial development

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France's wholesale trading centres (MINs) are public market management authorities that provide wholesalers and producers with collective management services tailored to the characteristics of certain agricultural and food products. The MINs are tools for achieving sustainable territorial development in France, with objectives including land use planning, environmental quality improvement, food security improvement, and the fight against food waste.

The Montpellier MIN

MIN Mercadis Méditerranée—the sole MIN in Occitanie apart from Toulouse— has since 2002 been associated with Montpellier Méditerranée Métropole;¹⁸ it is a member of the national federation of wholesale markets. Its mission is to distribute and market staple foods (see box). It is located at the centre of a number of highly productive farming and livestock regions (Roussillon, Languedoc, Provence, Causses, Cévennes, Hauts-Cantons de l'Hérault, Tarn, etc.). Its catchment area covers four departments. With a logistics platform of close to

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10 hectares (ha), it offers high-performance equipment and services to maintain refrigeration and food safety (cold chain, EEC accreditation, etc.). Fine wines from the vineyards of the Languedoc-Roussillon region are also stored in controlled temperature and humidity conditions. Neighbouring shops, restaurants, supermarkets and hypermarkets buy from regional wholesalers, distributors, and producers and thus have access to a wide array of fresh seasonal fruit and vegetables. The MIN is an essential service for local producers and shops, as it brings together in one place all those involved in fresh food distribution and logistics at the wholesale level. It offers a variety of products and prices unparalleled in the region.

An exceptional tool for Montpellier Méditerranée Métropole

The public policy of Montpellier Méditerranée Métropole has since 2015 been built around seven strategic pillars, one of which, called “agroecology and food”,¹⁹ seeks to provide healthy, locally produced food to all citizens and to support that sector of the economy while protecting the environment by limiting greenhouse gas emissions. By making and keeping the agricultural sector a lever of economic development, it promotes local producers and short supply chains.

Thus, the MIN is an economic actor that plays a major role in the agriculture and food policy of Montpellier Méditerranée Métropole.

The Montpellier MIN in figures

- > 220 companies
- > 500 permanent employees
- > €120 million worth of transactions annually
- > Upstream: 50% from local production
- > Downstream: 50% into the city (urban logistics)
- > A catchment area of 1 million consumers (Hérault, Gard Ouest, Lozère, Sud Aveyron)
- > 30% of the fruit and vegetable market (INSEE and MIN statistics)
- > 3 business lines: food 83%; horticulture 8%; logistics 9%
- > peak traffic of 1,200–1,300 vehicles a day
- > 9.5 ha

19. See article “Montpellier Méditerranée Métropole: Design of an agroecology and food policy”, also in this chapter.

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PHOTO TOUR OF "CARREAU DES PRODUCTEURS" AT THE MONTPELLIER MIN



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As the primary regional food hub, it sets up synergies between the productive, industrial and logistics sectors serving regional agricultural production,

- › Providing opportunities to producers and distributors (farm-to-table products, short supply chains) and a physical meeting place for professional buyers and producers ("*carreau des producteurs*", photo);
- › Helping to promote and maintain the establishment of local companies and producers in the area;
- › Meeting consumers' demand for quality locally sourced foods;
- › Accommodating consumers' eclectic preferences (ease of purchase, organic or ethnic products, short supply chains, online purchasing, catering) as well as catering firms and independent shops;
- › Maintaining competition to ensure fair pricing (both profitable for the producer and as low as possible for the consumer, thanks to fair competition between distributors);
- › Enforcing safety and health standards;
- › Participating in foodstuff monitoring (better traceability) and the promotion of quality products; and
- › Meeting the challenges of the circular economy (actions against waste, etc.).

It also serves to bring together local production zones and urban areas.

The MIN's key position in supply within and beyond the Montpellier metropolitan area makes it an essential actor in the local and regional economy, generating 500 direct jobs. For each direct job at the MIN, a national study indicates that eight indirect jobs are maintained—upstream, in production, and downstream at the retail level.

“With Mercadis, 3,000 traditional retailers and restaurateurs, caterers and fast-food vendors are now enjoying variety, freshness and pricing that suit everyone's needs. As an identification mechanism pursuing a short supply chain accreditation policy that supports peri-urban market gardening, Mercadis satisfies consumer expectations, encourages the local economy, promotes employment and embodies our environmental values.”
(Philippe Saurel, President of Montpellier Méditerranée Métropole).

Incubator role and logistical dimension

The MIN is an incubator for the agri-food sector: numerous companies have been created within its walls, then further developed (among the best known being Pomona, Thiriet, etc., which are active department-wide or even beyond). The MIN's healthy local food processing cluster, inaugurated in 2015, now hosts 5 start-ups with 40 employees, which meet society's demand for green and local food. Over the last three years, 50 new companies/producers have chosen the MIN to market all or part of their products (favouring supply diversity).

Fifty percent of the MIN's product flow goes to traditional independent food shops in dense urban areas (urban logistics): 200 companies market their products through us to 3,000 companies/restaurateurs (1,000 of them buying on site, 2,000 on a delivery basis). At the economic level, logistics is an essential competitiveness factor for the area. With the growth of e-commerce, orders are increasingly multi-channel and multi-service. Citizens' expectations of very quick delivery, with the minimum disturbance by delivery vehicles, necessitate storage and assembly facilities near city centres. ★

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**THE PUBLIC FOOD
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LEVELS**

How should the various levels of food system governance be linked?

The spirit of this meeting has been to take note of a new, multipolar world geography and to draw inspiration from initiatives being conducted in “emerging” or “developing” countries. It might be recalled, too, that one of the pioneering cities in urban food management was Belo Horizonte, Brazil, which in the early 1990s was the testbed city for the future “Zero Hunger” project later rolled out nationwide.

In Mali, food security is also a national priority, one that is embodied in strategies implemented at different territorial scales. Linking the different levels of governance is a real challenge for the coherence of policies to combat food insecurity, as well as for coordination of the various sectors concerned: nutrition, health, infrastructure, access to credit, etc. The Minister and Commissioner for Food Security of Mali, Mr. Nango Dembelé, will address that point. ★

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▣ Nango Dembélé has over 30 years of experience working on food and agricultural policy issues in West Africa, with particular focus on Mali. Since May 2014, he has been Minister and Commissioner for Food Security in Mali. From September 2013 to April 2014, Dr. Dembélé held the post of Minister of State for livestock, fisheries and food security within the Mali's Ministry of Rural Development. In that post he worked intensively with local and international industries to attract private investment in various agricultural value chains and to promote commercial farms. During the last fifteen years, before his appointment as Minister of State, he was a University of Michigan (MSU) faculty member, based in Mali, where he coordinated collaborative research on food and agricultural policy and the dissemination of research results to policymakers in West Africa.

Mali



A necessary coordination of public food supply policies at various levels

Nango Dembelé

Minister, Commissioner for Food Security, Republic of Mali

Food supply policies since the 1980s

From independence to the present day, a variety of policies and strategies have been devised for the agricultural sector and food system, with varying degrees of success. Since 1981, like other countries of the subregion, Mali has adopted a liberal vision of food security management that gives the private sector greater responsibility; this contrasts with some two decades of public management. In 1981 the Government of Mali and the funding agencies decided to establish a structure for consultation and common action, known as the Cereals Market Restructuring Programme (PRMC), as part of the Government's structural adjustment programmes. The objectives initially set for the PRMC during its first four phases, which have been largely achieved, include: disengagement of the State from the production and marketing of agricultural products, liberalization of cereal markets and agricultural prices, and establishment of an environment conducive to the advancement of private and community operators in the cereal sector.

The PRMC gradually evolved into a real food security system, being called upon to prevent and manage the food crises that regularly face the country. It remained so until 2002, when a national food security strategy (SNSA) was enacted to strengthen it. The SNSA seeks to meet the people's essential nutritional and food requirements by increasing

and diversifying agricultural production and by enhancing people's incomes through better organization of the staple foods market.

The establishment of the Food Security Office (CSA) on 18 May 2004 is a consequence of this strategy for the implementation of identified priority activities. Operational management of food crises is coordinated by CSA, whose mission is to develop and coordinate the manner in which the national food security policy is implemented.

Mali's current political environment reflects the fact that the national plan contains "umbrella" policy and strategy documents on nutritional and food security, such as: i) the Agricultural Orientation Act (LOA) adopted in 2006; ii) the Strategic Framework for Growth and Poverty Reduction (CSCR) (2012-2017); iii) the National Decentralization Policy Framework Paper (DCPN) (2005-2014); iv) the 2006–2015 Ten-year Plan for Implementation of the Millennium Development Goals in Mali (2007); v) the Agricultural Development Policy (PDA) enacted in 2013.

At the international, regional and subregional levels, the Government of Mali's approach and actions are governed by the following international and regional principles and exhortations: the Rome Declaration on World Food Security and that arising from the World Food Summits of 1996 and 2002; the statement by the heads of State and Government of the member States of the Permanent Inter-State Committee on Drought Control in the Sahel (CILSS), in 2000 at Bamako; the appeal of the African Union (AU), launched at the Summit on food security and regional integration held at Lomé, Togo, in 2000; the Maputo directives on the Comprehensive Africa Agriculture Development Programme (CAADP); the Agricultural Policy of the West African Economic and Monetary Union (WAEMU), through its Regional Special Programme for Food Security; the Common Agricultural Policy of the Economic Community of West African States (ECOWAS).

If we take these laws, policies, strategies and initiatives together, we can see how great, and how synergetic, is their focus on the achievement of food and nutritional security. The various agricultural and food policies and strategies have enabled Mali to register ever greater cereal surpluses over the last ten years. The cereal surplus was estimated at more than 600,000 tonnes in 2015. A large segment of

the population, however, still lacks sufficient access to a satisfactory food supply, whether in quantity or quality. The September 2015 food security survey shows that the national incidence of food insecurity is 24%, with severe food insecurity at 4%. The corresponding rural and urban figures are 25 and 8% respectively.

Food insecurity, therefore, is primarily a rural problem. It results mainly from the strong centralization of food policies, even though these have allowed food security to be achieved at the macroeconomic level. For households and individuals in rural areas to gain access to an adequate food supply will require the mobilization of all development actors through a multilevel territorial approach to public food policies. Hence, local authorities will play an important role alongside States and subregional and international organizations.

If local authorities are in touch with conditions on the ground and can mobilize all actors in their territories, they will be able to provide appropriate responses to local problems, both short-term (crisis management) and long-term. As their role is complementary to the other actors', the main challenge is to determine how to coordinate the various levels of governance to ensure consistency in their responses.

This article will present the institutional framework for food security management based on the territorial approach. It will look at coordination between the various levels of governance in Mali based on two examples of public food policies, draw the appropriate lessons from the experience, and present an outlook, then a conclusion.

The territorial approach to food security management in Mali

Mali's national food security strategy considers local, subregional and global markets as well the evolution of the concept of self-sufficiency in food towards food security, with its four dimensions (food availability, access to food, food use, and stability of supply), to which food sovereignty was recently added. Moreover, responsibility for managing the interface between the national market and the subregional and international markets lies with the subregional authorities, which apply common external tariffs and maintain a certain commercial

infrastructure. Thus, Mali has storehouses in its border towns whose role is to receive some of the stock from regional ECOWAS reserves.

Enactment of the SNSA by the Government of Mali, in 2002, led to the 2003 reform of the institutional food safety management framework. As food security could no longer be the exclusive prerogative of the central government, in 2003 the Government of Mali published its decree No. 03-176/P-RM, then, in 2007, its decree No. 03-176/P-RM, which established Mali's institutional food safety management framework, which fits into the decentralization structures, namely the regional council, the cercle council and the communal council. The regional level appears to be the one at which the multi-sectoral actions aimed at ensuring food security can best be coordinated, whereas the cercle and commune level is better suited to local and participatory development projects and programmes to achieve poverty reduction and to deal with the various cyclical food crises.

The institutional framework comprises the following bodies:

- › The National Food Security Council, chaired by the Prime Minister,
- › The Coordination and Monitoring Committee on Food Security Programmes and Projects (CSPPSA), chaired by the Minister and Commissioner,
- › The Regional Food Security Committee, chaired by the regional governor,
- › The Local Food Security Committee, chaired by the prefect, and
- › The Communal Food Security Committee, chaired by the sub-prefect.

Examples of linkage between different levels of governance on public food policies

Public policy on the constitution and management of local food security stocks (cereal banks)

To better manage the combined impact of the locust invasion and drought affecting the 2004/2005 agricultural season, CSA established cereal banks in all 703 communes in Mali, with one 20-t bank of millet/sorghum per commune. This was intended to make up the deficit in cereal production observed during the agricultural season

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and involve decentralized communities in the management and prevention of food crises. The cereal banks thus created constitute local food security stocks for populations faced with an unstable farm production system that is at the mercy of weather and pests.

These local stocks were made available to the communes in accordance with a memorandum of understanding signed by the Commissioner for Food Security, the regional governor and the mayor of the commune concerned. That memorandum of understanding set out the rules of the operation and management of the cereal bank, that is, the roles and obligations of the various levels of government (local, regional and national) in the creation, management, follow-up and evaluation, and supervision of cereal banks in Mali.

Embodiment of a public food security policy in territorial plans

West Africa's "Sahel 21" process, an unprecedented brainstorming exercise involving actors from the international, regional, national and local levels, served to set out a 21st century vision and development priorities for the countries of the Sahel. At the request of the heads of State and government, CILSS expressed that vision and those priorities in the field of food security and sustainable natural resource management in a "strategic framework for sustainable food security in the context of poverty eradication". The strategic framework then became the benchmark for all countries of the Sahel, which embodied it in national food security strategies according to the principle of subsidiarity. The same principle guided the embodiment of Mali's SNSA in its territorial food security plans at the the commune, cercle, and regional level as well as for the entire nation.

Drawing up of the territorial food security plan

A communal, local or regional food security plan is a set of objectives defined by the community, strategies to be implemented, and actions to be taken within a certain time to achieve structural food security.

Development of food security plans by local actors

Development of the communal food security plans took place as follows:

1. Organization of training workshops in the main village of each cercle, jointly by the CSA and the Project to Mobilize Food Security Initiatives in Mali (PROMISAM) of Michigan State University, with funding from USAID. The purpose of these workshops was to build community capacity for the development and follow-up/evaluation of food security plans.

2. Preparation of plans, in two phases:

- › The diagnosis and communal consultation phase, which ensured real input to the process by the local population.
- › The programming phase, using the information received from the population during the diagnosis and based on the four pillars of food security.

The food security plans also incorporated the Economic and Social Development Programmes (PDSECs), which had previously emphasized infrastructure development (health, schools, roads, etc.) at the expense of food needs. As development primarily serves to meet community members' food needs, food security plans having the general objective of structural satisfaction of the food needs of the population are essential components of the PDSEC.

Food security plans developed at the communal level and adopted by the communal councils were combined at the cercle level and adopted by cercle councils, thus becoming local plans. Those local plans were then merged to form regional plans, which were adopted by the regional councils. The National Food Security Programme (PNSA), which was drawn up and adopted at the national level, is based on the identification of actions defined by local communities to achieve structural food security. Local food security plans are thus the foundation of the PNSA.

Lessons learned, outlook and conclusions

The overall renewal rate of the cereal banks established by CSA is low (28.71%), which seems to indicate a long-term viability problem. Past experience with cereal banks has shown that their success at the local level will depend on the development of local capacity for better supply management.

THE PUBLIC FOOD POLICIES AT VARIOUS LEVELS

It appears from an evaluation of the implementation status of a sample of the local food security plans in seven regions that there is great variability by region and within any given region.

Thus, the financial implementation rate was:

- > 21% for the Timbuktu region in northern Mali;
- > 23.4% for the Koulikoro region;
- > 74.1% for the Mopti region.

The low rate of implementation of local plans in some areas may be explained essentially by communes' poor capacity for mobilization of local and external funding, local elected officials' inability to imbue their technical and financial partners and the State with sole responsibility for food security at the communal level, and a lack of technical capacity at the local level (mainly related to local elective authorities' inability to mobilize the officers of decentralized State technical services).

The main lesson that can be drawn from this experience is that merely linking the various levels of governance of public food security policies is not enough to ensure those policies' success. Intersectoral coordination between different actors at different levels of governance is fundamental. Multisectoral, multi-stakeholder platforms need to be set up to provide such coordination and increase the power of local elected officials so that they can call upon the officers of decentralized State technical services.

The outlook for perfecting territorial food security policy essentially depends on the improvement of intersectoral coordination through a redrawing of the legislation. That redrawing will need to be done in the context of the greatest political project of the Algiers Agreement on Peace and Reconciliation in Mali, namely regionalization.

Regionalization is a major political project, one that will institutionalize the territorial approach to public policy and enhance intersectoral coordination through the creation of regional development agencies with responsibility for major territorial projects. Allocation of 30% of the national budget to the regions and their ability to raise new resources will increase their capacity to fund territorial projects. ★



GENERAL WRAP-UP AND OUTLOOK

Wrap-up of parallel sessions and outlook

Florence Egal

Independent expert, Food security, Nutrition and Sustainable food systems

Urban-rural linkages are central to current debates on food security and sustainable development. Local and national policies must contribute to economic development while promoting social equity and sustainable environmental management.

The group discussions highlighted the need to pursue decentralization and strengthen governance. If food security and safety and the sustainability of food systems are recognized as prerogatives of local authorities and municipalities, these should be enabled to carry them out by building their technical capacity, setting up appropriate financing mechanisms (tax decentralization and innovative financing), and revising the legislative and regulatory framework.

The delimitation of administrative boundaries, whose original purposes were quite different, needs to be revisited so that natural resources can be managed around major centres or expanding conurbations. Urban food supply must be rethought from a territorial perspective: there is a need to optimize the production, processing and distribution of local foods and to combine them on a seasonal basis with imported products, while respecting the environment and working conditions.

Markets, schools and social centres provide excellent entry points for an integrated approach to sustainable diets, and their locations must be planned accordingly. Public procurement and institutional catering constitute an extremely effective tool for reorienting not only people's food habits but also the whole of the food system, and for strengthening social integration.

Effective intersectoral collaboration, especially between the social

and environmental sectors, is a prerequisite for trade-offs between the different approaches. This will require the harmonization of often contradictory regulations, as well as urgently needed legal protection for both producers and low-income consumers. The trend toward growing standardization for economic or hygienic/sanitary reasons must be reversed if we are to make the most of local resources, skills and culture.

The participation of the different food system actors (technical sectors, private sector, NGOs, but also the general public, and especially marginalized groups) in the planning, implementation and follow-up of the actions to be taken must be complemented by a dialogue between the different administrative levels (local, regional and central) and horizontal city-to-city networking.

Innovative local initiatives are popping up everywhere but are not necessarily coordinated by local authorities, which does not facilitate scaling up and integration into relevant local and national policies. Collaboration between researchers and public authorities would make it easier to establish interdisciplinary teams to identify and analyse such initiatives and gather much needed practice-based evidence. An inter-city knowledge management system would speed up the dissemination of successful innovations and the sharing of training and communication materials.

A territorial approach to sustainable food systems is desirable in order to ensure better coordination of development policies and to broaden a vision that is too often limited to economic considerations, taking into account the right to food and sustainable environmental management. A pragmatic process, starting with what already exists and the experience of actors on the ground, will be the best guarantee of a progressive, viable transition and rebalancing of the territorial food system. ★

Milan Urban Food Policy Pact: the way forward

Stefania Amato

Foreign Affairs Department – Development Aid, Mayor’s Office, City of Milan, Italy

On 15 October 2015, more than 100 cities signed the Milan Urban Food Policy Pact (MUFPP)—a commitment towards making their local food systems more sustainable and equitable (photo). This great accomplishment was made possible via the enthusiastic work of many cities and advisors brought together by the city of Milan to exchange views on this issue. Therefore, the city of Milan was compelled to draft a follow-up proposal that was submitted to the partner cities. From 16 October 2015 to early February 2016, concerned cities have been exchanging ideas on how to shape the future of the Pact.

The proposal developed through the consultation aims to unravel the different combined functions outlined in the Pact: to enhance the

PHOTO MUFPP SIGNING CEREMONY HELD ON 15 OCTOBER 2015.



© COURTESY OF THE COMUNE DI MILANO

understanding of the city/region approach to the development of sustainable food systems; to boost public awareness on the topic; to strengthen the role of cities and enhance that of partners willing to contribute to the efforts of city mayors; and to support cities in taking action.

This 'way forward' is expected to consolidate the path undertaken so far and to continue stimulating and supporting mayors' work towards achieving more sustainable and equitable food systems. More concretely, the MUFPP general objectives are:

1. To enhance mayors' and cities' commitment in upholding urban food policies that foster health equity, sustainability and sustainable and fair food economies;

2. To promote the signature of the Pact by other cities in the world so to ensure broader adoption of this approach.

The structure put forward to ensure that the goals are achieved includes the following elements:

1. A Drafting Committee that identifies the governance model to be adopted,

2. A MUFPP Secretariat that ensures that new cities fulfil their commitment to the Pact, while developing activities associated with the MUFPP award and the annual meeting, and facilitating dialogue among the different networks,

3. An MUFPP Award and Annual Meeting to monitor progress made by cities, bring together stakeholders and ensure global visibility,

4. A Food Network Alliance to ensure information sharing among different networks that in turn support cities in carrying out local actions,

5. A C40 Food Systems Network for peer-to-peer exchange among cities in order to carry out local actions. ★

www.foodpolicymilano.org/en

IPES-Food, international experts on sustainable food systems

Corinna Hawkes

Centre for Food Policy, City University London, Great Britain

IPES-Food is an International Panel of Experts dedicated to advancing Sustainable Food systems chaired by Olivier de Schutter and Olivia Yambi. As an independent panel, the expertise of its members—from academics to social movements—spans the entire food system.

By identifying systemic levers of change through a food systems lens, IPES-Food places problems in the context of the wider functioning of food systems, while focusing on the role of the differential power exerted by various food system actors.

IPES-Food is producing reports and policy proposals to advance sustainable food systems. A report on urban food policies will be published in 2016. The purpose is to inspire action by giving examples of how to drive the transformation to sustainable food systems. It will provide examples of what city governments are doing towards the transition to more sustainable food systems, and a political economy analysis of the pathways to policy implementation in select case studies. ★

www.ipes-food.org



OVERALL CONCLUSION

Overall conclusion

Nicolas Bricas, CIRAD

MOISA Joint Research Unit and UNESCO Chair on World Food Systems

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RUAF Foundation

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Florence Mouton

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The renewal of urban food policies that has taken place over the past decade can be traced to the fact that cities in industrialized countries are coming to terms with the negative externalities and the limits of the industrialized food system. Those cities are in any case the ones that have had the lion's share of attention. And yet, of the hundred-odd cities that signed the Milan Urban Food Policy Pact, about a third are in Latin America, Africa or Asia. The evidence that they presented to the international meeting in Montpellier, which is collated in this book, shows that while their urbanization experiences are quite different from those of cities in the industrialized countries, they too are keenly aware of the food issue.

Given the rapid urbanization they must deal with, they are looking to make sure of their food supplies, in quantitative as well as qualitative terms. To do so, many of them are going to distant sources of supply, including imports, and industrial distribution channels that are considered modern, such as supermarkets. Compared to cities in the industrialized countries, the search for alternatives is less often their primary motivation for the design of urban food policies. Instead, some of them want to speed up the industrialization of their food systems. That notwithstanding, we need to rid ourselves of the simplistic vision of urban food policies in the developed world as alternative and those in developing countries as "normalizing", for the limits of industrialized

and globalized food systems in the developing world are already becoming clear. Over-reliance on imports has made many cities vulnerable to sharp price rises on international markets. Supermarket development has put competitive pressure on the micro-commerce sector, which provided many jobs to less well educated population groups. When there are thousands of unemployed young people in cities, a socially explosive situation builds up, as was seen during the riots resulting from soaring international prices in 2008 and 2011. Cities of the global South are seeing explosive growth of obesity and the diseases associated with unbalanced diets. As eaters' relationship to food systems suffers from geographic, economic, cognitive and political distancing, their anxiety grows.

The international meeting in Montpellier and this book, which emerged therefrom, have sought to give a voice to cities of the global South from whom little has so far been heard. The evidence they have presented shows that their problems, while different, still have similarities to those found in the North. The North/South distinction is fading. In both cases, policy design at first focused narrowly on securing food supplies, on urban agriculture and therefore on relations with agricultural production, but the issues addressed have broadened. They now include nutrition, health and the wholesomeness of food, the fight against food insecurity, and environmental management, to name only these. The issues of climate change, biodiversity and land grabs are also coming to the fore. Clearly, the issue of city food supply is no longer just an agricultural one. Increasingly it overlaps with town planning, health, social action, culture, trade, etc. The issue of relations with the rural world nevertheless remains. There is still a risk of conflict between the cities and the countryside, and heavy pressure on producers to provide quality food at low cost. Again, a new synergistic relationship between the cities and the countryside has yet to emerge. That is why the "City-Region Food System" concept, which aims to strengthen the relationship between rural and urban communities, is being promoted.²⁰ Significantly, that issue was made an explicit agenda item at the United Nations Conference on Housing and

20. Cf. <http://cityregionfoodsystems.org/>

Sustainable Urban Development (Habitat III) held in Quito in October 2016. Pending the implementation of real urban food policies, many cities are progressively integrating food issues into their political agendas.

More generally, the food issue is now interlinked with issues of territorial development and decentralization. However, political and institutional contexts are very different between North and South: in many countries of the global South, the nation is still very much a work in progress. Decentralization is more recent there, and local institutions still underdeveloped. Resources and power are monopolized by capital cities, at the expense of secondary towns. While local communities' power is everywhere growing, their scope for action remains limited. Because their food economy (transport, trade, processing, catering, waste) is still often largely informal, policy design and implementation are problematic. For example, many cities have no statistics on their food systems. It is only recently that their universities and research centres have begun looking at the food industry and cities, as up until now they have mainly focused on rural and agricultural issues.

Many cities have created their food policies gradually, expanding their activities step by step. Fewer, however, have planned their action in different sectors from the outset, based on a global view of all the problems they encounter and a general diagnosis of food situations. Most often, cities' policies are made up as they go along. They nevertheless need diagnostic tools and references to map out their actions. Networking of cities is most germane thereto, and is indeed addressed by the Milan Pact. It would seem vital for experiences to be increasingly shared among them through meetings such as the one in Montpellier. One might suppose, however, that the exchanges that occur are between twinned cities or are mediated by national or regional networks of cities conducting food policies, as has lately been happening in certain countries.

In following the presentations and discussions at the meeting, however, it has become clear that the changes in cities' food systems are to some extent beyond their control. National policies, international agreements, and the strategies of large corporations in the food sector also shape city dwellers' food supply, and cities have

URBAN FOOD POLICIES

PROCEEDINGS OF THE INTERNATIONAL MEETING., NOV. 2015

little power to counter those influences when necessary. That is one of the important issues affecting cities' food futures and their ability to organize collectively to exert some political influence at the levels mentioned. But this is not solely an issue of balance of power: every day, through a host of private, associative or citizen initiatives, cities are finding new ways of producing, exchanging, eating, all of which constitute responses, "from within" in the words of G. Balandier, to the food problems they encounter. While the problems mainly affect cities, that is also where most of the resources needed to solve them can be found.

Hence, what the organizers of this international meeting are seeking to do is: to decompartmentalize food issues so that all of the city's policymakers can have input; to foster knowledge exchanges between cities; to heed societies' genius for invention; and to devise diagnostic tools to help in policy development. This book stands as a first step in that exercise. May it be the first of many! ★



ANNEXES

Partners presentation
Acronyms and abbreviations
List of participants

Partners presentation

UNESCO Chair on World Food Systems

The Chair, hosted by Montpellier SupaAgro, was created in 2011 out of a multidisciplinary group of teachers and researchers from various institutions of the Agropolis campus (Montpellier). It constitutes an open, borderless space for exchanges and experiments to promote an alternative food system, especially in cities, in the conviction that food is much more than an economic sector. Important issues are bound up with it: environment, health, sharing and solidarity, the construction of identities and cultures, artistic practices, etc. Each of these different functions has corresponding scientific disciplines, which the Chair intends to open up in order to develop a holistic approach to food through three types of activity:

- > training (in particular through the professional master's programme "Innovations and Policies for Sustainable Food Systems", SupAgro-CIRAD);
- > dialogues between science and society at large, to make food research accessible to the largest possible audience;
- > research programme coordination.

On this last point in particular, the Chair is coordinating a project on the sustainability of urban food systems (Surfood). In practice, this has meant supporting the definition and implementation of the agroecology and food policy of Montpellier Méditerranée Métropole. This international conference on urban food policies, indeed, is part of that project.

www.chaireunesco-adm.com

CIRAD

CIRAD is the French Agricultural Research Centre for International Development. Its activities concern the life sciences, social sciences and engineering sciences, applied to agriculture, the environment and territorial management. Its work centres on six main topics: food security, climate change, natural resource management, reduction of inequalities and poverty alleviation. CIRAD works with its partners in southern countries to generate and pass on new knowledge to support agricultural development. It puts its scientific and institutional expertise at the disposal of policymakers in those countries and global debates on the main issues concerning agriculture. It also supports French scientific diplomacy operations.

CIRAD has one main objective: to build sustainable farming systems capable of feeding ten billion human beings by 2050 while preserving the environment. It considers that to develop long term and draft appropriate public policies, societies have to participate in generating the knowledge they need. That development through research relies on the ability of the countries concerned to build a suitable higher education and research system that is supported by the authorities but remains independent. On a local and a global level, through its long-term partnerships, it contributes to the development of farming systems that benefit all, and particularly smallholders, who make up the majority of farmers. In this way, it responds to the global challenges of food security and climate change, and also the 17 UN Sustainable Development Goals (SDGs) and the Paris agreement on climate change.

www.cirad.fr

French Development Agency

AFD, a public financial institution that implements policy defined by the French government, seeks to combat poverty and promote sustainable development. With a presence on four continents and a network of 75 offices, the Agency finances and supports projects that improve people's living conditions, support economic growth and protect the planet. In 2015, AFD spent €8.3 billion to finance projects in developing countries and overseas departments and territories. This involved investment in human capital, support for the private sector, financing of public transport, and support for States' public policies, but also those of territorial authorities, in order to promote fairer and more sustainable development pathways.

In addition to financing, AFD contributes to the increase of sustainable development knowledge and to international discussions; as a result, it is able to adapt its operations to changing uses, needs and frameworks for action, and it was in that connection that AFD supported the "Urban Food Policies" meetings. Some local authorities of developing and emerging countries are pursuing innovative food policies that deserve to be known and appreciated. The link between urban policies, agricultural value chains and rural territories appears crucial—particularly in sub-Saharan Africa, a vital sphere of action for AFD—in meeting the challenges of food security, climate change mitigation and biodiversity preservation in the context of very significant population growth.

www.afd.fr

Agence universitaire de la francophonie

The Agence universitaire de la Francophonie is an international association of French-language universities, more than 800 of them, in more than 100 countries.

AUF's Western Europe Office (BEO), and specifically its AUF Development Centre, supports the 207 institutions of higher learning and research that are AUF members, in Andorra, Belgium, France, Greece, Italy, Luxembourg, Malta, Portugal, Spain and Switzerland. On behalf of the entire Agency, BEO conducts highly focused activities in business intelligence and the promotion of European projects.

The Agency's goal in supporting scientific events is to see that more science is done, and published, in French. Its support for the francophone symposium on urban food policies organized by the UNESCO Chair on World Food Systems also gave AUF the opportunity to support the dissemination of high-level research. A further goal was to encourage the creation of networks for the exchange of alternative and sustainable practices that may ultimately have a constructive impact on international food policies.

www.auf.org/beo

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Agropolis Fondation

AF is a French foundation that supports, funds and promotes innovative research and higher education in agriculture and sustainable development. It gathers a network of 37 research laboratories (~1,400 researchers) in and around Montpellier (France).

It covers five scientific domains:

- > Genetics and genomics, ecophysiology, plant breeding;
- > Plant-microorganism interactions, pests and diseases, integrated crop protection;
- > Agroecosystems and natural resource management (including ecosystem services);
- > Agrifood innovations, food and non-food uses of crops, transformation processes;
- > Agriculture and society, including governance and innovation processes.

It fosters crosscutting initiatives and programmes linking these domains and their disciplines to develop systems approaches on societal issues, such as agrobiodiversity management, developing cultivated plants for tomorrow, adaptation to climate change and agroecology.

Recognizing that cities host more than 50% of the global population and that food quality, availability and access is a vital issue that links urban ecosystems and surrounding agroecosystems, AF supports initiatives such as the international meeting on Urban Food Policies, which aimed to identify and address research gaps in an effort to anticipate development problems linked to urban food system sustainability.

www.agropolis-fondation.fr/uk

Charles Léopold Mayer Foundation for the Progress of Humankind

FPH is a Swiss foundation that studies the long-term evolution of societies. The Foundation has chosen to support civil society actors contributing to three major systemic changes:

- > Design of new modes of regulation and governance;
- > Adoption of common ethical principles;
- > Implementation of new lifestyles and production and consumption modes and new ways of acquiring and disseminating knowledge.

In its partnerships, the FPH pursues the following lines of action:

- > Networking of actors;
- > Development of shared analyses and proposals;
- > Social and political advocacy for these proposals.

The subject of urban food systems is dealt with under a specific line item of the "transition to sustainable societies" programme, which seeks to make societies more respectful of social cohesion, people's well-being, and solidarity values within environmental boundaries. Urban food systems are a vital issue in this era of massive worldwide urbanization. The shift to sustainable food systems calls for a transformation in city food supply governance that will require the participation of local authorities, citizens, researchers, and public or private companies having a role to play in the supply, processing, preparation and distribution of food products.

That was the thrust of the partnership of FPH in the Urban Food Policies symposium, which addressed the above issues through a series of selected case studies and promoted interdisciplinary exchanges between various groups.

<http://www.fph.ch/?lang=en>

The Fondation Daniel et Nina Carasso

FDNC was created in early 2010 under the aegis of the Fondation de France, in memory of Daniel Carasso, founder of Danone in France and Dannon, Inc. in the United States, and his wife. This family foundation is run by an executive committee consisting of the daughter of Daniel and Nina Carasso, her husband, her children, and other qualified personalities.

FDNC is a funding organization active in the field of philanthropy and the public interest. It is financing projects in two major areas contributing to human fulfilment:

- › Sustainable food systems, embodying considerations at once environmental, economic, social and hygienic or medical, to be kept in mind from the production of food to its consumption.
- › The relationship between art and the citizen.

In the area of sustainable food systems, FDNC supports the UNESCO Chair on World Food Systems, a powerful tool for explanation of the issues. Based on knowledge from disciplines as diverse as social science, agronomy, nutrition, etc., the Chair is forging an in-depth, comprehensive and understandable vision of agri-food issues. The Urban Food Policies symposium has once again illustrated this ability to take a step back, to explore potentials, and to gain a broader perception of the alternatives.

www.fondationcarasso.org/fr

Mediterranean Agronomic Institute of Montpellier

IAMM is one of the four institutes of the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM), an intergovernmental organization created in 1962 under the auspices of OECD and the Council of Europe and whose membership comprises thirteen Mediterranean Member States: Morocco, Algeria, Tunisia, Egypt, Lebanon, Turkey, Greece, Albania, Malta, Italy, France, Spain, Portugal.

The mandate of CIHEAM-IAMM is to provide master programmes for future senior agricultural managers in the Mediterranean countries, to conduct studies, research and appraisals on Mediterranean agriculture in its international context, and to undertake projects of cooperation for development with actors of the Mediterranean basin. The Institute has accreditation to award national master's degrees. It also offers vocational training, language courses and a doctoral platform. Its core competencies lie in the areas of agricultural policies, rural development, natural resource management and food systems.

The partnership of CIHEAM-IAMM with the Urban Food Policies symposium reflects how central to its concerns are sustainable food systems. The critical importance of focusing on food security and food systems is evident from the current situation of Mediterranean countries and the food shifts taking place there in a climate of worsening resource scarcity and rapid urbanization.

www.iamm.ciheam.org

International Sustainable Unit

ISU was set up by HRH the Prince of Wales in 2007 in order to help broker consensus on solutions to various international sustainability challenges. ISU's chief concern is to help improve the management of natural and social capital and enable a transition to sustainable food, water and energy security for all. ISU feels there is a great opportunity for stakeholders to help drive this process by organizing and working at a city/territorial level, in particular by approaching food system challenges at this scale. Urban food policies play a potentially important role in catalysing more sustainable models for development, particularly in building synergy between rural and urban functions, which is essential for creating maximum social returns from urbanisation—not just in cities, but in villages and towns as well. Since 2013, ISU has been working to help advance leadership on this agenda. This experience has shown the critical importance of exchanging knowledge between cities and groups of stakeholders from civil society who are driving innovation, thereby allowing for learning to be shared, knowledge to be created and successful approaches to be replicated with reduced risk.

ISU was particularly supportive of this UNESCO initiative as it was geared to stakeholders from developing country contexts which often lack the resources enjoyed by those from richer countries who have a greater capacity to engage in global knowledge exchange.

www.pcfisu.org

Montpellier Méditerranée Métropole

During the winter of 2014–2015, with the support of a group of researchers—geographers, sociologists, agriculturists—elected officials from the 31 municipalities of Montpellier Méditerranée Métropole reached a shared diagnosis and proposed common objectives and business lines on issues of agriculture and food; these form the basis of the Agroecology and Food Policy approved by the Metropolitan Council on 29 June 2015.

The Policy, in turn, will shape the action plan being jointly drawn up with the municipalities, the agricultural sector and citizens. The plan's goals are: to bring agroecological principles to bear in farming practices; to give everyone access to healthy food, sustainably and locally produced; to support employment; to preserve landscape heritage and natural resources; to actively adapt to climate change; and to foster social cohesion through a renewed link between nature and the city.

As a signatory, in October 2015, to the Milan Urban Food Policy Pact, Montpellier Méditerranée Métropole has resolutely committed to the issues addressed by the UNESCO Chair on World Food Systems and raised during the Symposium. Among those fundamental issues are:

- > City region food systems, the optimization of city food supply in cooperation with neighbouring territories, in particular through wholesale markets,
- > Ways of making land available for agriculture.

Such theoretical exchanges and the sharing of best practices are essential inputs to public policy. They will help us to build a more sustainable, healthier world in partnership.

www.montpellier3m.fr

Food and Agriculture Organization of the United Nations

FAO is an international organization that is working

- > To eradicate hunger, food insecurity and malnutrition,
- > To eradicate poverty and promote social and economic progress for all,
- > To sustainably manage and use natural resources.

Through its Food for the Cities Programme, FAO provides assistance to local authorities in developing sustainable and resilient city region food systems. To that end, it supports governments and other local actors in the evaluation of their food systems at city-region level and identification of their key priorities, allowing an evidence-based process of planning and design of sustainable and efficient food policies in collaboration with relevant authorities. FAO is providing support under the Programme to Colombo, Sri Lanka; Lusaka and Kitwe, Zambia; Dakar, Senegal; and Medellín, Colombia. The Urban Food Policies symposium is fully coherent with FAO's work in that it puts forward local initiatives and food policies aimed at building more sustainable urban food systems. The Organization's involvement with the symposium has also led to valuable exchanges between the various municipal representatives present, and in particular representatives of the cities involved in the Food for the Cities Programme.

[www.fao.org/in-action/
food-for-cities-programme/en/](http://www.fao.org/in-action/food-for-cities-programme/en/)

RUAF Foundation

The RUAF Foundation is an international network and leading centre of expertise in the field of intra- and peri-urban agriculture and city region food systems. RUAF seeks to contribute to the development of sustainable cities by facilitating awareness raising, knowledge generation and dissemination, capacity development, policy design and action planning for resilient and equitable urban food systems.

For more than 15 years, RUAF has supported local and regional governments, urban producer organizations, NGOs, CBOs, research centres and other stakeholders in over 40 cities around the world with training, technical assistance, action-research and policy advice. In addition, it supports local, national and international knowledge exchange, advocacy and learning activities.

RUAF's areas of work include:

- > Planning resilient urban food systems;
- > Short food chains and local economy;
- > Food security and social inclusion of the urban poor;
- > Productive reuse of waste and wastewater;
- > Urban agriculture and city adaptation to climate change.

The exchange of experience—aimed at increasing the understanding of urban food policies and programmes and analyzing lessons learned for improved strategy and policy development—is pivotal to RUAF's work. The Montpellier seminar is an important tool and opportunity to facilitate such learning and networking, thus warranting RUAF's support.

www.ruaf.org

Acronyms and abbreviations

AEHGAR	Association of hospitality and restaurant businesses of Rosario (Argentina)
AEIMO	Informal Economy Association of Mozambique
AF	Agropolis Fondation
AFD	French Development Agency
ANNAM	National Association of Municipalities of Mozambique
ASSOCAVA	Association of Carriers and Street Vendors (Mozambique)
ASSOTSI	Association of Operators and Workers in the Informal Sector (Mozambique)
AU	African Union
AUF	<i>Agence universitaire de la Francophonie</i>
BMP	Best Management Practices in horticulture
CAADP	Comprehensive Africa Agriculture Development Programme
CAISAN	Intersecretarial Chamber of Food and Nutritional Security (São Paulo, Brazil)
CAMM	Board of Directors of the Model Market (Montevideo, Uruguay)
CEAGESP	General Grocers' Association of São Paulo (Brazil)
CFD	Training and demonstration centres (Dakar, Senegal)
CMEI	Municipal Early Childhood Education units (Curitiba, Brazil)
CMAE	Specialized Municipal Special Care units (Curitiba, Brazil)
CODAE	School Catering Coordination Office (São Paulo, Brazil)
COMUSAN-SP	Municipal Council for Food and Nutritional Security (São Paulo, Brazil)
CMC	Colombo Municipal Council (Sri Lanka)
CILSS	Permanent Inter-State Committee on Drought Control in the Sahel
CSA	Food Security Office (Mali)
CSCR	Strategic Framework for Growth and Poverty Reduction (Mali)
CCSPSA	Coordination and Monitoring Committee on Food Security Programmes and Projects (Mali)
DCPN	National Decentralization Policy Framework Paper (Mali)
ECOWAS	Economic Community of West African States
EU	European Union
FAO	Agriculture Organization of the United Nations
FDNC	<i>Fondation Daniel et Nina Carasso</i>
FNDE	National Education Development Fund (Brazil)
FNS	Food and nutrition security
FPH	Charles Léopold Mayer Foundation for the Progress of Humankind Food
FSC4D	Food Smart Cities for Development
GAP	Good Agricultural Practices
GHG	Greenhouse gases
IAMM	Mediterranean Agronomic Institute of Montpellier
INDA	National Food Institute (Uruguay)

ACRONYMS AND ABBREVIATIONS

INTA	National Institute of Agricultural Technology (Argentina)
IPES-Food	International Panel of Experts on Sustainable Food Systems
ISU	International Sustainable Unit
LOA	Agricultural Orientation Act (Mali)
MDG	Millennium Development Goals
MGAP	Ministry of Livestock, Agriculture and Fisheries (Montevideo, Uruguay)
MIN	<i>Marché d'Intérêt National</i> / Wholesale Trading Centre
MIOA	Market Information Organization of the Americas
MUFPP	Milan Urban Food Policy Pact
NGO	Non Governmental Organization
P2A	Agroecological and food policy (Montpellier, France)
PAE/SP	Municipal school catering programme (São Paulo, Brazil)
PDA	Agricultural Development Policy (Mali)
PDSEC	Economic and Social Development Programmes (Mali)
PFS	Public Food Services
PNAE	National School Meals Programme (São Paulo, Brazil)
PNSA	National Food Security Programme (Mali)
PRMC	Cereals Market Restructuring Programme (Mali)
PROMISAM	Project to Mobilize Food Security Initiatives in Mali
PSAN	National Food and Nutrition Security Policy (Medellin, Colombia)
SCoT	Territorial Consistency Plan (Montpellier, France)
SDG	Sustainable Development Goals
SDTE	Department of Labour, Development, and Entrepreneurship (São Paulo, Brazil)
SMAB	Municipal Secretariat of Food Supply (Curitiba, Brazil)
SMDU	Department of Urban Development (São Paulo, Brazil)
SME	Department of Education (São Paulo, Brazil)
SNPD	Sixth National Developing Plan (Lusaka, Zambia)
SNSA	National food security strategy (Mali)
SPFS	Special Programme for Food Security (Dakar, Senegal)
UAM	Montevideo Food Unit (Uruguay)
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
WAEMU	West African Economic and Monetary Union
WHO	World Health Organization

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Urban food policies

Proceedings of the international meeting on experiences in Africa, Latin America and Asia.

16-18 November 2015, Montpellier, France

MARKETS

CATERING SERVICES

URBAN/RURAL CONNECTIONS

Over the last few decades, local governments have become increasingly powerful political actors. The disengagement of States, food crises and the concentration of people in cities—exacerbating the current food system’s harmful effects on sustainable development—have led cities to develop their own food policies.

While these issues are not new, there has up to now been little discussion of the perspective of local authorities in urban areas and how they can help address the issues, especially in Africa, Latin America and Asia. The response of the UNESCO Chair on World Food Systems of Montpellier SupAgro and CIRAD was to organize the international Urban Food Policies meeting, held in Montpellier from 16 to 18 November 2015.

By giving a voice to the representatives of cities and regions, the UNESCO Chair on World Food Systems of Montpellier SupAgro, CIRAD and their partners have helped to show not only that cities have the leverage they need to make a contribution, alongside national policies and international agreements, to food security and the sustainability of food systems, but also that the cities of the global South are often at the leading edge of these developments. This book contains the proceedings of the international meeting.