

# CITYFOOD: Linking Cities on Urban Agriculture and Urban Food Systems



*“We call for the development and implementation of holistic ecosystems-based approaches for city-region food systems that ensure food security, contribute to urban poverty eradication, protect and enhance local level biodiversity and that are integrated in development plans that strengthen urban resilience and adaptation” - Bonn Declaration of Mayors, signed by 20 city leaders, June 2013*

# RESILIENT URBAN FOOD SYSTEMS:

## WHY SHOULD LOCAL AND REGIONAL GOVERNMENTS BE ENGAGED?

*“ Creating healthy, happy and sustainable communities in our cities requires **resilient food systems for the city region**. Until now this aspect of sustainability has largely gone unaddressed by cities, but the time has come for **local governments to put food systems on the table** and take the lead on sustainable food systems, and the right to food, for their urban populations. ”*

Konrad Otto-Zimmermann,  
former Secretary General,  
ICLEI-Local Governments for  
Sustainability, December 2012

### **Food on the urban agenda**

Today's world is characterized by urbanization, growing urban markets, urban poverty and food insecurity, rising food prices, growing dependence on food imports and challenges posed by climate change. Increased attention for city-region or urban food systems responds to the need to place food higher on the urban agenda. This requires new levels of attention from actors who have been traditionally less engaged in food and agriculture decisions, including professional planners and local and regional authorities.

- For resilient city-region food systems, following from other sector planning, multiple and diverse sources of food supply are needed. Localized production in the form of urban and peri-urban agriculture is recognized as one of these sources (but by no means the only one), which increases food and income security at household level and buffers shocks to food price hikes, market distortions, and imported supplies.
- City-region food systems offer at the same time opportunities for resource recovery (urban waste) and climate change adaptation (e.g. designating low lying areas and flood plains for agriculture to prevent construction and reduce the impact of floods).
- Resilient city-region food systems are also characterized by lower urban footprints, or foodprints, and reduced emissions related to food transport and food waste. This is achieved by protecting the agricultural land base around cities, optimizing the role of agriculture in providing other urban and ecosystem services, and strengthening urban-rural linkages.
- City-region food systems offer new enterprise and marketing opportunities, while local production and consumption will also result in keeping money in the local economy.
- City-region food systems are an increasingly important driver for many other urban policies such as health and nutrition, education, economic development, transport, environment, waste and water management, disaster risk reduction, adaptation to climate change and social welfare.



# WHAT CAN CITIES DO?

## EXAMPLES OF SUCCESSFUL CITY FOOD STRATEGIES

### Cities act

Cities present constraints but also opportunities for building sustainable urban food systems. They can preserve food diversity, stimulate food innovations (short supply chains, urban agriculture, new forms of supply procurement, etc.), and have the potential to optimize resource management, infrastructure and waste recycling.

### Examples of successful city food strategies include:

- Promoting and integrating urban agriculture in city planning, zoning and building standards.
- Including urban and peri-urban agriculture and forestry in land use planning, city climate change adaptation and disaster risk reduction.
- Preferential public food procurement for the public sectors (hospitals, schools, offices).
- Productive and safe reuse of urban waste and wastewater in urban and peri-urban agriculture.
- Supporting food projects for the urban poor/disadvantaged.
- Supporting local small and medium enterprises in food processing and distribution.
- Promoting innovative forms of multi-functional agriculture.
- Short chain marketing and value adding by farmers in the city region .
- Use of smart and local food labels.
- Supporting farmer markets and local food hubs.
- Education and learning opportunities on “Good and Healthy Food” production, consumption and nutrition.
- Forming Food Policy Councils or Platforms.
- Reducing food waste and linking to Food Banks.

### ROTTERDAM, THE NETHERLANDS

Rotterdam supports “Regional Trade Missions”. Based on an assessment of the type of products that are grown in and around Rotterdam, local producers are brought in contact with potential local buyers. This helps strengthen sustainable local economic development and stimulates new entrepreneurial activities.



Producers, traders, consumers, and the food industry are further connected by facilitating local farmers and neighborhood markets; organizing a Harvest Festival; and developing a logistical system for city-region products (linking supply and demand).

## BELO HORIZONTE, BRAZIL

Over the past 10 years, Belo Horizonte has applied a multi-pronged approach to its city-region food policy by:

- Providing food and nutrition assistance to schools (200,000 school meals/day), 191 day care centers, 19 elderly homes, homeless and food banks (distributing 1,260 kilograms of food a day).
- Subsidizing food marketing in four popular restaurants (serving 14,000 low-cost and healthy meals a day).
- Supply and food market regulation in 21 service points offering 20 food items against a set price.
- Promoting farmers markets and organic food fairs.
- Fostering urban agriculture: supporting 126 school and 48 community gardens and promoting fruit cultivation in open spaces.
- Preferential procurement of peri-urban agriculture products.
- Promoting healthy eating habits and lifestyles through communication and education including the training of food handlers.
- Employment and income generation in bakery schools and pedagogical kitchens.
- Establishment of a school food council, a municipal council for food and nutrition security, and a multi-stakeholder forum on urban and peri-urban agriculture.



**What makes Belo Horizonte successful?** The city boasts strong political leadership, commitment, and champions for the holistic inclusion of food security in the urban agenda. It has also developed platforms that include all actors working on food system issues and a comprehensive city food and nutrition strategy. The city leverages federal and state resources for food security and social welfare towards local policies and programs. In addition, it builds on and links to other local initiatives and community-based programs.

## LINKÖPING, SWEDEN

Linköping connects different actors including local businesses and technology providers in closing food, energy, and waste systems. Heat from an adjacent power plant will be used in a food factory for stimulating plant growth. Waste from the greenhouse will be supplied to an adjoining waste plant, while residual energy from the greenhouse will be supplied back to the electricity grid. A vertical farm design developed by Plantagon International AB is promoted to maximize production/surface area. This example shows that innovative technology provides opportunities for new food system designs.



**What makes Linköping successful?** Linköping exhibits strong political leadership and courage to make an attractive and energy efficient city. Officials utilize and listen to research, local businesses, and innovative technology providers. There is much technology based knowledge available for cities, but it needs to be understood and used. There is a need to foster relationships with younger businesses and put appropriate technologies in place that need not be high-tech.

## A holistic approach for city food strategies

To develop resilient city-region food systems, a holistic approach which integrates all aspects of the food system, is required. This includes urban and peri-urban agriculture, and strengthening the rural-urban interface to ensure connections between rural supplies and urban consumption. Street food, retailers, food processing and distribution, nutrition, and health as well as linkages to water, waste, transport, and energy systems should also be taken into account.

## The urban nexus

City-region food systems represent a key example for the Urban Nexus. Nexus solutions identify synergies for increasing resource efficiency and overcome a single silo mentality. Good approaches are emerging, particularly in the nexus between water, energy, and food, and constitute a relevant contribution to greening the urban economy.

## Examples from different cities around the world show that requirements for successful food strategies include:

- Outlining how food can help meet different and multiple **policy objectives**.
- Joint food system assessment, visioning, and design of a comprehensive **food strategy** or action plan.
- Linking local, regional, and national food security, social welfare, economic or climate change **programs**, including those from different stakeholders.
- Involving various **government departments and disciplines** on food issues (e.g. health, agriculture, economic development, marketing, climate change, transport, land use planning, social welfare, and education) with a strong coordinating department or champion.
- Creating space for broad **multi-stakeholder involvement** (local government, private sector, civil society, universities) in planning and implementation of food strategies and related projects.
- Building on **existing local initiatives**: supporting community-based and innovative private sector food projects, replicating and up-scaling successful initiatives.
- Creating a **facilitating legal system**.
- Leveraging of **financial resources** from framework and larger scale programs at city level.
- Designing a variety of (short-term) projects that have strong possibilities of success to help build credibility, next to promoting institutional and policy **uptake of food strategies**.
- **Media attention** and public dialogue on food issues and the multiple roles of agriculture.
- **Monitoring** of clearly defined indicators for the desired changes in the functioning of the urban food system.
- Strong **political leadership** and longer term continuation of the process.

*“ It is important to work across different municipal departments and seek diverse champions to enhance the integration of food issues in their respective mandates and budgets. ”*

Lauren Baker,  
Toronto Food Policy Council

## TORONTO, CANADA

The City of Toronto is a municipal food policy leader, with a long history working to ensure access to healthy, affordable, sustainable and culturally acceptable food. The Toronto Food Policy Council (TFPC) was established in 1991 as a subcommittee of the Board of Health to advise the City of Toronto on food policy issues. The TFPC connects diverse people from the food, farming, and community sector to develop innovative policies and projects that support a health-focused food system, and provides a forum for dialogue and action amongst different actors across the food system. The TFPC has contributed to a number of municipal policies, including the City's Official Plan, Environmental Plan, Food Strategy, the Golden Horseshoe Food and Farm Action Plan, and the Urban Agriculture Action Plan. In 2010, the Toronto Food Strategy was developed by Toronto Public Health in partnership with a number of other organizations and city divisions. The Food Strategy Team has mapped healthy food access across the city, launched a Mobile Good Food Market, started Foodworks, a Food Handler and Employability project, and is undertaking research related to healthy food retail and community food procurement.



**Who were the various government actors involved in Toronto?** Public health, environment and efficiency office, social development, economic development and culture, planning, parks, forestry and recreation, housing and long-term care, employment and social services, and licensing and standards.

**What is still needed?** Broader involvement of the private sector and the food industry; better documentation and evaluation in order to demonstrate successful processes for social, food system, and other municipal/regional impacts; and stronger linkages between municipal food policies and provincial and federal food, agriculture, public health, and other policy domains are still lacking.

## SEFERIHISAR, TURKEY

Seferihisar highlights the importance of culture in food systems through the Cittaslow movement. The city is committed to considering all aspects of the food system, from seed to plate. Education, training, and local seed exchanges take place throughout the city region. Local and regional crop varieties are encouraged. Strong political commitment is important, with the Mayor of Seferihisar calling for community based, bottom up approaches, involving all actors, and addressing the importance of local seed preservation.

## BOBO-DIOULASSO, BURKINA FASO

With support of UN-Habitat and RUAF Foundation, Bobo-Dioulasso designs for multifunctional and productive land use of urban green-ways, engaging local communities as well as local and provincial government agencies, in an effort to protect urban and green open spaces and enhance their role in reducing the Urban Heat Island effect. This illustrates the use of ecosystem services and green planning in dry savannah zones and the potential to link green infrastructure, food systems, and climate change plans and strategies.

# CHALLENGES AND GAPS FOR CITY FOOD SYSTEM DEVELOPMENT

## Scaling up

Despite growing attention amongst city governments and international organizations on the importance of urban food and agriculture, there is a need to shift scale from isolated and ad hoc projects to larger scale programs and funding; from pilot and individual cities to wider uptake at the local and national level. This is not happening due to a lack of larger scale awareness. Information (dissemination) is limited on the need for urban food and agriculture for resilient city development and on other aspects such as current and potential practices, policies, and technological innovations. Urban food systems are still neither on the agenda of multilateral and bilateral donors, nor part of international declarations. There is a lack of recent and standardized data on the impacts and associated benefits of urban agriculture and food systems, and a lack of local and international financing.

## Need for training and technical assistance

In order to facilitate local implementation and up-scaling, more training, technical assistance, and policy advice is needed on both multi-stakeholder planning and design of city food systems and strategies, and on integrating food and agriculture into land use and city-development planning.

Cities express demand for training and assistance on improved resource recovery and re-use, on enhancing resilience of urban food systems to climate change and development of urban and peri-urban agriculture models that have the greatest impact on climate change mitigation and adaptation, on raising land/space rent of agricultural production, and on different organizational and governance mechanisms for the promotion of short food chains and localized food hubs.

## Lack of guidelines and toolkits

There is a need for practical guidelines on methods and tools for city-food system assessment, planning, design and monitoring. Guidelines could also address other gaps and innovations such as assessment of environmental benefits, services, risks and hazards of urban agriculture; innovative mechanisms for financing of urban agriculture or compilations of successful local and national food policies.

Technical guidelines are also needed on how urban agriculture systems can viably be embedded in buildings and other urban structures. Most rooftop programmes for example still focus on green rooftops and few data, costs-benefit analysis, technical guidelines and impact analysis are available for the promotion of productive rooftop gardens in various climates and cities.

## Linking and learning

An increasing number of cities, networks and organizations, in both the global North and South, are discussing, implementing or working on aspects of more resilient city-regional food systems. By encouraging horizontal, city-to-city learning opportunities and exchanges, lesson learned can be identified and localized and adapted to specific contexts. More support is needed for medium-sized cities where urban growth pressures will be greatest and institutional capacities may be weakest, for regional governments and in linking local and regional governments to work at city-regional level.

*“ We urge that appropriate mechanisms be made available for capacity building and to ensure direct access and scaled-up financial support for the implementation of urban adaptation, including the development of resilient food systems. ”*

Bonn Declaration of Mayors,  
June 2013

## DUMANGAS, THE PHILIPPINES

Being a flood and drought prone area, Dumangas organizes Climate Field Schools that seek to combine indigenous knowledge with scientific methods. It helps local communities to strengthen their food security and livelihoods by teaching farmers to read weather forecasts, interpret satellite photos, set up their own weather stations, and to decide what and when to plant based on this timely information. Its overall goal is to reduce disaster risks and enhance the capacities of local institutions, communities, and especially rural women.



**What makes the program successful?** Dumangas recognizes the role of rural farmers in the long-term resilience of the city-region food system and enhances their capacity and production systems. This results in reduced damages to infrastructure which lessens reconstruction and rehabilitation expenses for the government. In addition, the livelihoods of both producers and inhabitants are protected and local production is preserved and increased, contributing to a more resilient urban food supply system.

## AMMAN, JORDAN

In 2005, the municipality of Amman created an urban agriculture bureau. In collaboration with other stakeholders, the city implements several projects such as the production and distribution of seedlings, the establishment of over 300 rooftop and more than 4,000 school and home gardens, and the safe re-use of grey-water in agriculture. A land bank was developed in order to better link land owners and (potential) producers. Land use guidelines were developed that require 15% of each plot to be used for greening or agriculture. Training and technical assistance on improved (ecological) farming and access to markets are provided to peri-urban producers.



A special logo was developed to promote local, fair, and healthy production characteristics of the products. By excluding intermediaries and valorizing distinctive product qualities, better price margins were obtained.

**What makes the Amman program successful?** Amman institutionalizes urban agriculture and food strategies in municipal structures, programs, plans and budgets and facilitates multi-stakeholder partnerships with a wide variety of organizations. These include the Ministry of Agriculture and the Ministry of Environment, the Royal Directorate for the Environment, the University of Jordan, credit and financing organizations, and civil society organizations. Such partnerships help to leverage needed resources (financial, knowledge etc.) and find synergies between different actors.

## A new ICLEI / RUAF initiative

In response to the demands for information, training, technical and policy advice, and financial assistance by an increasing number of cities, ICLEI and RUAF Foundation launched at the Resilient Cities 2013 Conference in June 2013, the CITYFOOD network on resilient city-region food systems and urban agriculture. Cities and partners are invited to join and contribute.

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### The purpose of this network is to:

- Raise awareness on resilient city-region food systems and urban and peri-urban agriculture.
  - Create an advocacy platform for cities to gain political recognition and support from national governments and international support organizations.
  - Provide information to cities around the world, stimulate exchange of experiences, identify and disseminate important lessons, good practices, practical guidelines and toolkits.
  - Provide cities with training and technical and policy assistance and guidance in managing their food systems and in engineering resilience.
  - Facilitate cooperation between cities worldwide and between local governments and civil society in this important policy area.
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### Activities undertaken by the network will include, amongst others:

- Training as well as technical assistance and policy advice on the topics of food system assessment and planning, food policy formulation and monitoring, urban and peri-urban agriculture, and other related topics of interest.
- Development and dissemination of fact sheets, business models, guidelines and tools in hard-copy and in an online library. This will include a section on national and municipal policies on urban agriculture and city-region food systems and reports on their impacts plus a compendium with information and examples of business models and prototypes for sustainable urban and peri-urban agriculture. In addition, guidelines and toolkits will be made available on food system analysis, food flows and footprint analysis, multi-stakeholder food systems planning, establishing food councils, and designing municipal food strategies.
- A City hub where cities can present online their food policies and programs, including their components and results.
- A Community of Practice where practitioners can share experiences on food system analysis as well as on the planning and design of city food strategies.
- The organization of inter-city exchanges and learning.
- Awareness raising and lobbying at international events.

# CITYFOOD: A NETWORK ON RESILIENT CITY-REGION FOOD SYSTEMS AND URBAN AGRICULTURE

*“ ICLEI and RUAF Foundation will be building institutional capacity and political commitment to resilient urban food systems through convening, for example, forums, trainings and workshops on the topic, providing technical and policy advice and preparing toolkits and other information materials. ”*

Marielle Dubbeling,  
Director, RUAF Foundation

## KESBEWA URBAN COUNCIL AND WESTERN PROVINCE, SRI LANKA

Kesbewa promotes space-intensive home gardens, productive rooftops, rainwater harvesting, recycling of organic household waste, and rehabilitation of paddy fields in flood zones and wetlands. They also support enterprise development in the form of nurseries and service outlets for seeds and other accessories, as well as for commercialization.

The city and province, through its Ministry for Agriculture, provide training and technical assistance to urban farmers in collaboration with NGOs, international support organizations like UN-Habitat and RUAF Foundation and research institutes.

The city envisions agriculture, agro-parks, and green spaces to be integrated in a future green city mosaic. Since 2004, the Province supports urban agriculture with a view to decreasing reliance on food imports as well as enhancing job and income creation. It also considers the implications for mitigating climate change, taking into account the potential to reduce food-miles, urban temperatures, and flooding while improving waste management and urban micro-climates.

**What makes these programs successful?** Kesbewa links food to other policy goals such as climate change and disaster risk reduction, waste management, and economic development. The programs work across urban boundaries at the regional level to optimize urban-rural linkages and food production. Working across jurisdictional levels is also important with regards to optimizing transport infrastructure, land use planning, and the use of available resources and knowledge at different levels.



## KATHMANDU, NEPAL

Kathmandu promotes productive rooftop gardening that provides an opportunity to grow food in inner-city areas in response to decreased agricultural land and a growing reliance on vulnerable food sources from other areas. The city, - in collaboration with local NGOs, national research institutes, and international organizations (like UN-Habitat and RUAF Foundation) - involves its engineers in the design of rooftop models suitable to the local context, trains masons in construction and building techniques, includes rooftop gardening in building codes, links gardeners to input supply and marketing enterprises, and promotes rainwater harvesting and composting of city waste. Radio programs and information leaflets are developed to increase community and policy interest and participation. Impact monitoring is also planned.



**What were the main reasons for the city to develop such programs?** The reasons included improved waste and water management, food security, nutrition, and climate change. Case studies show that intensive rooftop production helps families to become self-sufficient in vegetables and herbs and to potentially sell some surplus produce. Rooftop gardens may also have positive impacts on ambient and home temperatures, reducing heating and cooling demand, thus reducing emissions and saving costs.

# OPPORTUNITIES FOR INVOLVEMENT AND SUPPORT

## Invitation to collaborate

The CITYFOOD network is open to any city in the world and seeks to facilitate north-south and south-south exchanges. It will start simultaneously working on global information provision as well as developing training, technical assistance, food systems assessment, and planning in a select number of cities.

Local and regional governments willing to improve their capacities on city-region food systems and urban agriculture or wishing to formulate and implement urban food and agriculture policies and programs can express interest in joining the network, accessing its services, and co-funding specific support activities as well as local projects and programs in their city-region.

Local governments and other stakeholders can also engage in the City-Hub and Community of Practice, exchange experiences, identify “good practices,” and jointly develop new policy instruments and tools. Experienced city partners may also act as trainers or advisors to other cities on issues relating to their specific area of expertise.

The CITYFOOD network will collaborate with technical and financial organizations already working in the field of sustainable city-regional food systems. These include, amongst others, the FAO-Food for Cities Network, UN agencies, civil society networks and research centers working in related fields, other local government networks such as United Cities and Local Governments and Metropolis, and additional relevant international organizations.

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## Technical and financial organizations are invited to support the network by, for example:

- Providing core funding and support to the overall network.
- Financially supporting or sponsoring a city or specific model activities of one or several cities.
- Collaborating in organizing city learning and exchanges.
- Providing specific training or technical assistance to the network or to participating local and city-regional governments.
- Collaborating in the production and dissemination of training modules, specific guidelines, and toolkits.
- Participating in the organization of joint networking events.
- Jointly promoting international visibility of urban food systems in international agendas.

“ Cities must start to embrace the challenge of providing uninterrupted access to water, food, and energy, and improved quality of life of all of their citizens, while minimizing resource extraction, energy consumption, and waste generation, and safeguarding ecosystem services (...). In this regard, there is a clear role for urban food systems and agriculture as a key land use feature for more resilient city-regions. ”

Raf Tuts,  
Coordinator, Urban  
Planning and Design  
Branch, UN-Habitat,  
July 2013

**ICLEI - Local Governments for Sustainability** is the world's leading network of 12 mega-cities, 100 super-cities and urban regions, 450 large cities, and 450 small and medium-sized cities and towns in 85 countries. ICLEI's 14 Regional Offices proactively implement their sustainability agendas through numerous initiatives such as the Cities Biodiversity Centre (based in Cape Town) and the annual Resilient Cities Congress.

ICLEI has a long standing and highly regarded expertise on the topics of cities and sustainability, including biodiversity, climate change, resource efficiency, green urban economy, and sustainable infrastructure.

ICLEI promotes a holistic approach to the topic of city-region food systems, encouraging cities to mainstream strategies across existing plans and activities in order to strengthen the city-region food system. ICLEI's Strategic Plan: Preparing for Tomorrow - Strategy 2012-2018, with its eight city agendas, offers the framework for peri-urban agriculture and food security under various headlines, especially "Biodiverse City", "Resource-efficient City", "Smart Urban Infrastructure," and "Green Urban Economy".

**RUAF Foundation - International Network of Resource Centres on Urban Agriculture and Food Security** is a global center of expertise in the field of Urban and Peri-urban Agriculture and City Regional Food Systems, with a wide network of constituting, knowledge and implementing partners in Europe, Africa, Asia, the Middle East and Latin America.

RUAF Foundation seeks to contribute to sustainable and equitable city development by facilitating the integration of urban and peri-urban agriculture and food issues into urban policies and city/regional planning, strengthening urban – rural linkages and the development of short and just marketing chains within the city region, empowering urban producer groups, enhancing innovation in urban and peri-urban agriculture, fostering the role of agriculture in urban poverty alleviation, disaster risk reduction and adaptation to climate change, creation of green jobs, resource recovery and productive reuse of urban wastes and waste water in urban and peri-urban agriculture and multi-functional use of green open spaces in the city region. RUAF provides training, technical support and policy advice and assists in the design, implementation and monitoring/evaluation of research- and development projects in cooperation with local and national governments, international organizations, producer organizations, NGOs and other local stakeholders.



[www.iclei.org/cityfood](http://www.iclei.org/cityfood)



[www.ruaf.org](http://www.ruaf.org)

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