

RESILIENT URBAN FOOD SYSTEMS: OPPORTUNITIES, CHALLENGES, AND SOLUTIONS

Outcomes of the Resilient Urban Food Systems Forum

Bonn, Germany | 1 June, 2013



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RESILIENT URBAN FOOD SYSTEMS FORUM IN BRIEF

This report presents opportunities and challenges for the creation of resilient city region food systems. It is harvested from the Resilient Urban Food Systems Forum at the 4th Global Forum on Urban Resilience and Adaptation to Climate Change, and was held 1 June 2013 in Bonn, Germany. Outcomes and suggestions from the discussions, case studies, workshops, and dialogues with over 70 interdisciplinary actors present at the forum have been condensed here in take home messages to generate ideas and actions for those working on food systems in the city region.

What participants considered to be key elements in a food system and a city region is outlined first, followed by the noted challenges and opportunities of making city region food systems. Case studies highlight, in brief, progressive city examples. Suggestions for those working in the field of city region food systems, particularly local governments, are given throughout.

“Taking a food systems approach is about shifting a whole variety of dynamics to promote a wide range of urban regional improvements”

Lauren Baker, Toronto Food Policy Council, Canada

“There is no cookie cutter approach to the food system”

Keith Alverson, United Nations Environment Programme (UNEP), Kenya

Forum in numbers

1 day featuring an opening plenary discussion highlighting the importance for a city-region approach to food systems and linking this with adaptation to climate change and long term city planning

9 leading examples from city case studies

3 interactive and complementary workshops where participants designed the future they want from a city region food system

Key forum messages

Leadership and champions: Must think long term

Action: Mayors and city leaders supporting the development and implementation of city region food systems

Bottom up and community based approaches

Action: See what is already happening in your community and work together to enhance your food system.

Planning: Link food to several policy goals - integrate!

Action: Use food as a vehicle into established policy pathways such as health, education, procurement, and disaster management.

The Bonn Declaration of Mayors 2013: 20 city leaders committed to “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”

WHAT IS A FOOD SYSTEMS APPROACH FOR CITIES?

Urban food is much more than just food: it is about the system and taking an ecosystem approach. Looking at the food system and thinking about the resilience of your city-region will assist you with this process. We have learned that more holistic perspectives are needed. But what does this mean in practice? It means considering city and regional food in common avenues like health and education, but also in sectors that are usually neglected: transport and logistics – getting food to where it needs to be going, disaster and emergency management, urban food networks for urban poor, and food infrastructure.

We must also see food within the system in which the city sits. A systems approach to the city's food means local governments need to shift the dynamics in different municipal areas. Space must be made for different actors to get on board. Champions are needed, to broker between those different stakeholders. For example, it might be necessary to communicate with, collect information from, and involve the private sector or other actors that hold a wealth of knowledge and information on the food system.

TORONTO, CANADA

Is world renown as a municipal food policy leader, with a long history working to ensure access to healthy, affordable, sustainable, and culturally acceptable food. Toronto Food Policy Council shared its examples of food access mapping, increasing integration through public health program delivery, shortened and diversified food supply chains, urban agriculture, cultural foods, and global gardens. **What makes TFPC so successful?** Driving an agenda for over 20 years with very few resources means you have to make do with what you have got and use it to your advantage. Cities need political will and support for food system projects, but this can come from different avenues such as health or social programs. In TFPC's case, this complex weave of interests contributes to the longevity and success of the food system innovations. TFPC shows that in recognizing these areas it is important to start from bottom up community based projects.



LINKÖPING, SWEDEN

Takes a systems approach with local businesses and technology providers. Its district heating system will join food production and energy efficiency in making a food factory with the maximum level of natural growth. Plantagon will use vertical energy from the height of its buildings to gain productive ground in its city greenhouse. This example shows technology provides opportunities for food system design and creation, necessary in other areas such as aquaponics, roof tops, and other greenhouses.

What makes Linköping so successful? Strong political leadership and courage to make an attractive and energy efficient city, utilizing and listening to research, local businesses, and innovative technology providers. There is a lot of technology based knowledge out there for cities, but it needs to be used and understood. There is a need to foster relationships with younger businesses and put appropriate technologies in place that do not need to be high-tech.



BELO HORIZONTE, BRAZIL

The Municipal Secretary of Food and Nutritional Security has a vision to contribute to the improvement of life quality for the inhabitants of Belo Horizonte through actions which promote Nutrition and Food Security. Its most impressive example is the increasingly popular municipal run public restaurants which supply affordable, healthy meals to its citizens. **What makes Belo Horizonte so successful?** Strong leadership and commitment to the human right to food and nutritional security for citizens. The city provides training programs on food, school meals to students (aiding nutritional security), education within schools on healthy and nutritious food, local employment by procuring food from regional family suppliers, and of course, it delivers tasty, fresh menus daily to thousands of people from all over the city. To achieve this, the city leverages federal and state policies and funding on food security and social welfare toward locally specific policy and program designs.



CITIES NEED TO CONSIDER THE REGION

City regional food systems will play an important role in balancing and linking urban and rural food supply. Taking a city region approach means looking beyond traditional jurisdictional borders, sectors, and scales. It is important to understand that in reality, rural to urban farming systems exist in a continuum with multiple types of flows and interactions between them. Leveraging different resources (research, financial, knowledge, etc.) and finding synergies between different municipal programs can assist this process. For example, small scale land holders both in and around the city often cannot compete with conventional and large scale farms outside the city, creating a need for projects that recognize why these systems are important and innovate ways to apply their strengths in the local setting. Further, farmers need training and support in the face of changing weather patterns and localized climate impacts affecting production.

ROTTERDAM, THE NETHERLANDS

Has a project Regional Food Mission. This led to an assessment of Rotterdam products to see which products can be grown in and around Rotterdam and which supermarkets would be interested in buying these products. **How does it combine the city-region?** Introduction of a Regional Food Council - an Advisory board composed producers, food industry, traders, NGOs and consumers.



DUMANGAS, THE PHILIPPINES

In flood and drought prone areas, the Climate Field School combines 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. **How does it combine the city-region?** It trained rural farmers and improved their livelihoods, recognizing their role in the long term resilience of the city-region food system. **What are the socio-economic advantages?** Lessening damages to infrastructure which reduces reconstruction and rehabilitation expenses for the government; livelihoods of constituents are protected and kept continuously productive; resources can be utilized in other developmental endeavors; and increased and maximum agricultural production is attainable.



KESBEWA, SRI LANKA

Uses ecological and climate smart production technologies, which are promoted through the rehabilitation of paddy fields in flood zones and wetlands, while also supporting home-garden units for future integration into a greater green city mosaic. **How does it combine the city-region?** The regional government is working with guidance from international organizations to increase urban and peri-urban food production, thereby enhancing the city and the region's (Kesbewa is located in the most urbanized province in Sri Lanka) self-reliance in food, complementing rural production.



CHALLENGES CITIES FACE WITH FOOD SYSTEMS

“*The most important challenge (to the food system) for the country where I am from, Indonesia, is the climate change. The rainfall variation is causing so many problems to the local farmers; we need an urgent and official information system.*”

Damayanti Ratunanda,
Ministry of Environment of
the Republic of Indonesia

Poverty alleviation

Specifically, bridging local urban poverty and nutritional security is a challenge. The tendency to formalize the food sector means that the poor are often not heard, when they are particularly dependent on multiple food chains. This challenge is present in all cities. At the Forum, all cities, regardless of geographic location, faced the dual challenge of food and nutritional security and poverty alleviation.

Physical challenges

Climatic variability can lead to flooding and drought which both inhibit the food system. Combined with pressures such as population growth and urbanization, these demands on the urban region land base need to be viewed holistically – as a coupled social-ecological system. This is all interconnected with landscape planning, water, wastewater, and waste management.

The unknowns

Research is required on the vulnerabilities of food systems and also on assessing and quantifying the capacity for urban production and the economic and social co-benefits of an orientation to local production and consumption. Currently, there is a need for more concrete data and more coherent frameworks so that decision makers can translate research into workable policies and specific actions.

Lack of guidelines

There is a need to develop legal frameworks and assessments for food systems, including urban agriculture, that consider local risks. Space must be identified and preserved. Current urban agriculture practices compete with rising land prices, but can support multiple functions in green spaces and parks. Green spaces maintain permeable surfaces for flood mitigation, contribute to reduced heat island-effect, and provide community-building and other social amenities. In some places, building codes and regulations may need altering to incorporate food systems.

Considering everyone

Determining how to incorporate all actors in such a big sector is a challenge. Bringing in businesses, as well as academics, government officials, and different consumers (noting cultural diversity, changing urban diets and preferences) means there are different perspectives on the food system and its market structure, and how to distribute risks and benefits in a sustainable and just manner.

Global trade and agriculture

Actors in city region food systems are connected to global trading systems. There are connections between cities and countries based on these systems. For example, a country's export of a vegetable to another may be its main income - the food system approach requires us to consider the local growers as well as the end use consumers. It also means we must consider demands upon the natural resource base that provides the foundation for the linkages between production and consumption, and waste and replenishment.

WHAT CAN CITIES DO?

“ An adaptive and resilient community on disaster risks and climate change related hazards becomes a more progressive and productive community ”

Mayor Ronaldo Golez,
Dumangas, Philippines

Communication, training, education, workshops, in different sectors

- Team up with other actors: NGOs and international organizations where available. Make resource centers or hubs: Introductory curriculum with buddy or mentoring schemes (e.g. London had free “experts” such as planners, designers, architects working pro bono).
- Be creative and involve youth and elders: Educate school children on gardens and healthy eating. Go to farmers directly and enlist them to run training and adapt the programs to the students. Consider elderly care and intergenerational vocational training to teach, but also learn from, traditional gardening practices and knowledge.
- Recognize that food practitioners involved in the food value chain (e.g. producers, processors, and transporters) can be first responders in disaster situations and can be incorporated in programs for preparedness and training.

Attractive cities will incorporate start ups & city region food systems

- There is growing popularity and interest in gardens and local food in many cities.
- Food and healthy lifestyles make cities attractive places – use this to gain popular support.
- Community buy in and support is needed to ensure longevity - promote job creation.

See where food systems innovations are already taking place & combine

- Find out what retailers and businesses are doing and what local researchers are looking into in the city. For example, waste from household use and from food processing industries for biogas production (use in trucks, carpool, etc.)
- Link gardeners with entrepreneurs: Multifunctional usages of urban farms can make them competitive (e.g. solar harvesting, social initiatives, food supply etc.).
- Win-win situations: Clever use of spaces and ecosystem services (e.g. forestry and new greenways). Green spaces on roofs are ‘no regrets’ measures addressing climate change adaptation and mitigation while adding to the viability and resilience of city region food supply.

BOBO-DIOULASSO, BURKINA FASO

Developed a multi-functional plan for a productive and sustainable greenway developed by engaging various stakeholders, in an effort to preserve and protect their Trames Vertes in the dry savannah zone. It illustrates the use of ecosystem services and green planning spaces in dry zones and the potential for this to link up with food systems and green infrastructure at a large scale.

KATHMANDU, NEPAL

The potential of built-up spaces, such as rooftops, provides an interesting opportunity to grow food in inner-city areas in response to decreased agricultural land and a growing reliance on vulnerable food sources to other areas. Incentives such as subsidies for green roofs assists community buy in to the concept.

SEFERIHISAR, TURKEY

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, incorporating all actors, and addressing the importance of local seed systems.

TOOLS OR FRAMEWORKS FOR CITIES

National and international funding sources: Link the food system to climate related tools, and climate change investments and private funding, which in turn bridge the rural-urban linkages. Then develop pathways to become financially self-sufficient (e.g. Dumangas Climate Field School).

Assessments for food production: Create mapping of municipal food flows (e.g. Toronto). Use participatory approaches. Assess measures needed to enhance capacity of food handlers. Build on the responsive capacity of retailers who have strong disaster plans in place.

Communication: Use social media e.g. Twitter and Facebook to connect people and surface opportunities. Leverage mobile telephony, but consider challenges in emergency situations. Involve media and encourage work with communities to enable their perspectives to be better heard.

Policy tool: Integrate food policy strategies across municipal plans with committees to manage e.g. Regional Food Policy Council. Explore food systems using specific examples like peri-urban agriculture as part of the agenda for a sustainable city (e.g. Rotterdam, Toronto). Consider new ways to plan education, disaster management, logistics and traffic, which think about the food system. Provide a city certification scheme for peri-urban agriculture and city region systems.

Network: Identify and nurture institutions that can take up innovations so they are not just at the margins and encourage horizontal, community-to-community learning opportunities to 'localize' and adapt lessons to the specific context.



Opportunities for future discussions

- **Private sector inputs:** Retailers, suppliers, distributors, and transport operators were an important perspective missing from discussions.
- **Distant worlds:** Consumers are unaware of the impact of climate change on places that affect food supply, how can this aspect of food systems be better explored?
- **Regional:** How can the regional and rural perspectives be combined with city perspectives?
- **Seed systems:** The importance of this was noted but a greater exploration of this is needed.

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For more information about the forum visit:

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