



Figure 1. St Nicholas Market in Bristol. Photo by Visit Bristol, 2008.

FROM THE GLOBAL FOOD SYSTEM TO THE LOCAL DIMENSION THE URBAN FOOD STRATEGIES

Giorgia Tucci

European and global policies are increasingly moving towards new frontiers of sustainability, innovation and social inclusion. Many of the 2030 SDGs promoted by the UN, to which should refer all planning for the future development of cities, focus on urban food systems and waste food loss.

Recently, alongside the forms of reaction activated by organized civil society, experiments related to the so-called urban food policies, linked with holistic urban approaches, in which cities are configured as new actors in the food systems, are spreading internationally. The big news compared to this type of approach, of a punctual and sectorial type, is represented by the promotion by cities of real integrated and multi-sectorial food strategies (Urban Food Strategies, UFS), characterized by a holistic approach to supply chains of development through eco-efficient cycles linked with multidimensional agro-food systems and the multidimensionality of food. The article focuses on understanding how the holistic agro-cultural and social systems intercept spaces, actors, re-sources and dynamics present in a city, moving from the food system to promote a new kind the of agro-urban inte-grated system of where innovative food and multi-scalar approaches are combined.

food system / urban food strategies / food movements / urban policies / sustainability

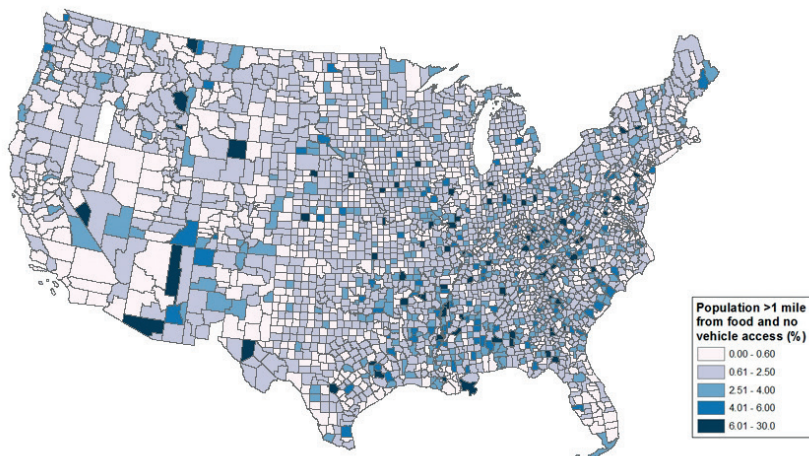


Figure 2. This map depicts food deserts in the United States by counties as reported by the USDA in 2010. Source: US Department of Agriculture, by Brianna Davis - 11/7/2016. University of Illinois Urbana-Champaign.

European and global policies are increasingly moving towards new frontiers of sustainability, in-novation, and social inclusion. 2030 Sustainable Development Goals (SDGs) promoted by the United Nations, that are a reference for the future development of cities, focus on reduction of food waste, sustainable food production systems, resilient agricultural practices [2 - Zero Hun-ger], management and recycle of waste, reduction of food losses along supply chains [12 -Responsible Consumption and Production], and sustainable cities [11 - Sustainable Cities and Communities].

Connecting to the international debate that legitimised the importance of the relationship between food, territory, and city, in many countries—in particular in the Mediterranean Area—food and nutrition (combined with heritage) are fundamental and recognised elements of culture, but also of economic development. The majority of consumers whose individual choices are decisive in defining the evolution of the food systems—associated to urban and territorial development —are already concentrated in cities and will increasingly concentrate.

At the same time, however, cities are the places where access to food is often problematic and where entire neighbourhoods exist, defined as food desert, where it is impossible to find fresh and healthy food. Various studies have examined the socio-economic and demographic characteristics of cities to understand what

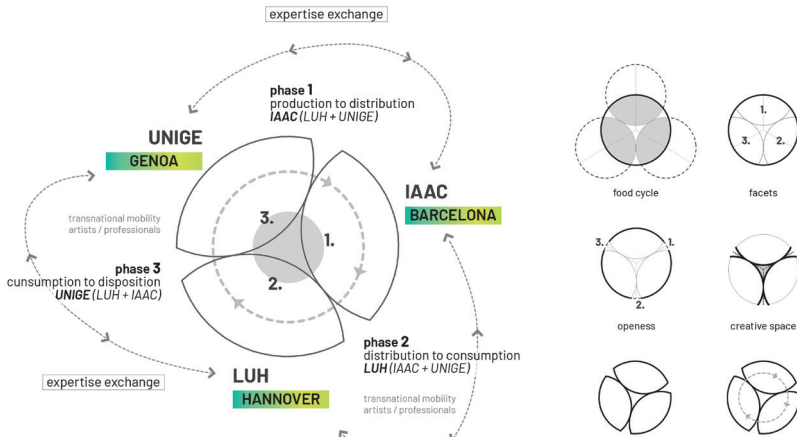


Figure 3. The Creative Food-Cycles Phases and partners: international exchanges. Image: LUH Regionales Bauen und Siedlungsplanung.

the factors for this problem are and to what extent they influence the food desert status. The USDA Economic Research Service, for example, in a survey developed on 2000 census and 2006 data on locations of supermarkets, super-centers, and large grocery stores identified more than 6,500 tracts of food desert in the United States. It was found that “areas with higher levels of poverty are more likely to be food deserts, but for other factors, such as vehicle availability and use of public transportation, the association with food desert status varies across very dense urban areas, less dense urban areas, and rural areas” (Dutko et. al. 2012).

The lack of availability of fresh and healthy food, but also the shift from small-scale family-owned businesses to massive corporatised enterprises has led to a loss of connection between producers and consumers and has raised concerns in terms of human health, environmental degradation, and animal welfare. Starting from the awareness of this weakness, cities have been and still are the political and cultural arenas in which the movement of opposition to the standardised food systems are manifested with greater evidence, through different phenomena. “Food movements” (FM) have therefore emerged around these problems in the 1970s as one of the main actors of the contemporary local food movement. In the United States, there were 1755 FM in 1994; this number increased to 8144 in 2013 (USDA, 2002, 2013) and today FM are spread all over the world, some of the largest are

found in Japan and Australia. Unquestionably, part of the popularity of FMs stems from their ability to bring communities together and create distinctive cultures, especially for those who feel that urban areas have become too impersonal and com-mercialised.

In addition to food movements, alternative bodies have spread rapidly over the past 30 to 40 years: Alternative Food Networks (AFNs), Solidarity Purchase Groups (GAS), farmers' market (FMs), direct sales, inner-city markets, Community Support-
ed Agriculture (CSA) are just some of the networks and practices that openly break with the dynamics and the values of the large-scale retail trade (GDO), proposing new values related to food production and consumption, genuine and cosmopol-
itan at the same time. However, it remains to be seen whether alternative move-
ments will transform the way food is produced and consumed, locally and globally, through sustainable, local, and fair practices and whether the growing world pop-
ulation can be fed with non-intensive agricultural methods promoted by the AFN as an alternative to conventional indus-trial agriculture. However, industrialisation and alternative food practices need not be mutually exclusive, on opposite sides of a political agricultural continuum. Jarosc stated that "globalisation of food is part of the development of local food systems" (Jarosc. 2008 p. 242).

More recently, alongside of forms of reaction activated by organised civil soci-
ety and local communities such as FM, experiments related to the so-called urban
food policies are spreading in-ternationally, in which cities are configured as new
actors in the food systems. The novelty of this type of approach, in a punctual and
sectorial form, is represented by the promotion of integrated and multi-sectorial
food strategies (Urban Food Strategies, UFS), characterised by a holistic approach
to supply chains and the development of eco-efficient cycles linked with multi-
di-mensional agro-food systems and the multidimensionality of food. In these dy-
namics some pio-neering realities can be identified, such as large North American
urban areas, among all Toronto with more than 100 public markets, Seattle—home
of the iconic Pike Place Market, one of the largest public markets in the US, as
well as a network of 16 neighbourhood farmers' markets— and Pittsburgh, often
called a "city of neighbourhoods" that has 48 markets in the city and inner ring
suburbs. Subsequently, the phenomenon also extended to London and to small
and medium-sized cities in the United Kingdom (which formed a network of Sus-
tainable Food Cities, today called Sustainable Food Places) and Northern Europe.
More recently, Southern European countries such as Italy, Spain, or Greece, are
also beginning to implement participatory food policies, agro-urban revaluations,

and new cohesion processes of social sharing. Milan is the first Italian city to have approved an urban food policy, but also the metropolitan city of Turin has started a project in a logic of an multiscalar approach—Atlante del Cibo di Torino Metropolitana—with the aim of building a support tool for future territorial policies.

Of significant relevance is the case of the city of Bristol—that received the European Green Capital Award in 2015—which developed a sustainable and resilient food plan that is integrated on a regional level (Who Feeds Bristol?, report March 2011). The Bristol Good Food Plan is grounded on thorough analysis of how the city and its regional food supply system operates and how the different elements of the system are interconnected. Who Feeds Bristol targeted the six key components of the food system: production, processing, distribution, retail, catering, and waste, investigating the provision of basic staple food items; the land use for current and potential food production; and the current food supply capacity from the surrounding region in relation to the food needs for Bristol. It also investigated which businesses were involved in distributing, selling and recycling or disposing of food across the city region and within the city itself. The plan identified eight themes that Bristol needs to address in order to ensure that in the future the city has a healthy, viable, and equitable food system that is as resilient as possible to any future shocks and challenges. The purpose of the food plan was to enable every organisation in the city to examine how they can influence the food system and where they can take action. All involved stakeholders—groups, organisations, businesses, individuals—are called to clarify where their input and expertise lie. Different groups lead on different themes according to their expertise; they can develop a clear advocacy and food policy leadership role for the Bristol Food Policy Council and enable strategies to create positive change in the food system.

The two main denominators of urban food strategies are the systemic approach to the theme of food linked with the urban potentials of patrimony, tourism and landscape, translated into policies aimed at integrating and connecting actors, resources, and tools as well as the inclusion of civil society within this processes. The next step towards which urban strategies, supported by the scientific community (Urban Food Actions Platform, FAO-UN), are moving is to understand how agro-cultural and social systems intercept spaces, actors, resources, and dynamics present in a city, moving from the food system—understood as a chain of activities related to the production, processing, distribution, consumption, and post-consumption, including related institutions and regulatory activities—to a new kind of agro-urban integrated system of where innovative food initiatives and

multi-scalar planning approaches are combined. Even if each city develops its own peculiar and contextualised process of defining, adopting, and implementing an agro-urban integrated agenda, it is possible to identify some common phases.

The Creative Food Cycles project follows this approach by addressing the theme of food at 360 degrees, from production to disposal, structuring the project into three main phases.

The production phase is substantiated in the city in the experiences of urban and peri-urban agriculture (producing in the city or around the city), the approach of commercial farms, agricultural parks, the heterogeneous set of horticultural experiences (social gardens, vegetable gardens collectives, private gardens, school gardens, regulated or abusive gardens, guerrilla gardening practices, etc.). With a view to the food system at the city-region scale, it is equally important to know the characteristics of production, analysing the agricultural sector in terms of quality and quantity. Specifically, the CFC project in this first phase aims to demonstrate how the use of technology can help to produce food in urban environments, or in close proximity, and to enhance urban resilience. Urban agriculture can contribute to enhance resilience beyond the provision of healthy food for citizens. Thanks to the use of digital fabrication and control interfaces, the aim is to create a hydroponic and aquaponics system in a close loop, teaching to citizens, architects, product and event designers how to build self-sufficient cultivations. The use of digital fabrication allows to install customised gardens and the use of sensors helps in controlling the performance. If soil cultivation cannot be practicable in many urban conditions, especially in dense city cores, hydroponic cultivation can represent a practical solution where the lack of space or farming knowledge are main limitations.

The distribution phase (GDO, retail stores, markets, alternative food networks, online commerce) is the service activity aimed at the transfer of food products from producers and processors to consumers. In general, food distribution intercepts urban dynamics in spatial terms (since it affects the way in which space is lived, designed, and consumed), social (in the relationship between actors), and environmental (because it generates impact in terms of pollution of the air and soil, energy consumption, etc.). In the CFC project, the concept of this phase is to focus on new models of distributing, marketing, processing—as well as cooking, displaying, sharing—food and regional products into a collective aggregation point (place-making effect). An “urban food hotspot” characterised by a multipurpose

stage able to connect different places to a single manifestation of material and immaterial open public activities, trends, and movements. The aim is to recollect different sensorial experiences, augmented reality data processing and art installations, into movable pieces of urban furniture; offering interactive ways for audiences to participate to a product or service, to address extended audiences, and ensure that their goods and commodities are attractive for customers. A sense of originality and unparalleled creativity are critical aspects that buyers take into consideration when shopping, consuming, and interacting in urban food issues.

The phase of consumption, combined with disposal, is complex and difficult to analyse, since it includes a multiplicity of issues, ranging from the spaces in which it is consumed (public and private collective catering, domestic catering), to the social and cultural implications related to habits, traditions, consumer choices, ways, and times of consumption, food accessibility, the relationship between food and health, etc. The disposal addresses the issue of waste and scraps, which FAO distinguishes in food loss (in the production, collection, distribution and transformation phases) and food waste (produced in the final stages of sale and consumption) and that it is becoming increasingly important in relation to issues such as climate change, social justice, and food education. In particular, within the CFC project, in this phase the process that brings food from consumption to disposal is explored, by offering not only options for new uses of the discarded products (from waste to resources), but also to define new potentials of meaning and of spatial expression in an artistic reinterpretation (from scrap to art). It proposes a series of actions and performances based on the combination of the exposition of projects and researches that explore a new way of thinking food after consumption, or that aim at a reinterpretation of discarded products in an art or reuse. The creation of ephemeral and flexible installations to define a new configuration of public spaces (urban and artistic scenography) in order to attract the attention of target groups and stakeholders in the framework of public events constitutes a further action; such as the reuse of abandoned heritage buildings in order to promote civic participation and a convivial dimension in different urban settings.

The analysis of the qualitative and quantitative aspects, of local relationship and linkages with the larger scales is concentrated on these elements and their integration; in a logic of a multiscale approach, with the aim of constituting an effective support tool for the territorial policies. An important challenge for the future will be to strengthen collaboration and knowledge sharing between actors of the food sector (groups, organizations, businesses, individuals, etc.), research organ-

isations, and enterprises by combining the technological capacity of enterprises, their practical, operational, and market visions, with the conceptual capacity, the experimental and creative role of research in order to launch proactive exchange platforms on the theme of food and its expressive capacity, as a cultural vehicle of identity, innovation, and social integration.

In the last decade, the agricultural sector has been the protagonist of constant experimentation in integrated agro-food production processes, thanks to the introduction of new technological devices it has proven to be able to minimize waste, maximizing production, exceeding the concept of precision agriculture to approach that of sustainable agriculture. In addition to traditional tools, new technological devices have spread (drones, sensors, robots, apps, etc.) capable of controlling and facilitating production processes. The new generations of agricultural entrepreneurs (farmers 2.0) have rediscovered a new system of “making agriculture” automated and innovative. This brief reflection underlines the aim to focus on the current dynamics and to promote social, technological, and logistical innovation processes in the transformation of the food sector in cities to facilitate the transition to a sustainable food system, which is changing the perception of how we live the city and which is able to support cities in a development process in line with the SDGs.

BIBLIOGRAPHY

- Bristol Food Policy Council (2013) *A Good Plan for Bristol*. Available online at: https://bristolfoodpolicy-council.org/wp-content/uploads/2013/03/Bristol-Good-Food-Plan_lowres.pdf
- Baker L. (2014). *Unfolding Story of Food*. Toronto: Toronto Food Policy Council. <https://tfpc.to/unfolding-story>
- Calori A. e Magarini A. (2015), *Food and the cities*, Edizioni Ambiente, Milano.
- Carey, J. (2013), *Urban and Community Food Strategies. The Case of Bristol*. International Planning Studies. https://www.joycarey.co.uk/wp-content/uploads/2016/01/Urban-and-Community-Food-Strategies_The-Case-of-Bristol.pdf
- Dansero E., Pettenati G. e Toldo A. (2017), Il rapporto fra cibo e città e le politiche urbane del cibo: uno spazio per la geografia?, *Bollettino della Società Geografica Italiana*. <https://riviste.fupress.net/index.php/bsgi/article/view/491>

- Dutko, Paula, Michele Ver Ploeg, and Tracey Farrigan. *Characteristics and Influential Factors of Food Deserts*, ERR-140, U.S. Department of Agriculture, Economic Research Service, August 2012. https://www.ers.usda.gov/webdocs/publications/45014/30940_err140.pdf
- European Green Capital Award 2015. *Bristol Green Capital Partnership*. <https://bristolgreencapital.org/who-we-are/european-green-capital-award/>
- Food desert. O'Connell Jonathan. *Washington Business Journal* (2008). <http://washington.bizjournals.com/washington/stories/2008/02/04/focus1.html>
- Graueholz, L., Owens, N. (2015), *Alternative Food Movements*, University of Central Florida, Elsevier, USA.
- Holt-Giménez (2011), *Food movements unite! Strategie per trasformare i nostri sistemi alimentari*, Slow Food Editore, Bra.
- Jarosc, L., (2008), The city in the country: growing alternative food networks in metropolitan areas. *Journal of Rural Studies* 24 (3), 231-244.
- Kickstarting Market City Strategies in Pittsburgh, Seattle & Toronto. Project for Public Spaces (2020). <https://www.pps.org/article/kickstarting-market-city-strategies-in-pittsburgh-seattle-toronto>
- Le città, come le persone, sono ciò che mangiano. Alessia Toldo, May 2017 in *Atlante del Cibo di Torino* Metropolitana. http://atlantedelcibo.it/2017/05/22/le-citta-come-le-persone-sono-cio-che-mangiano/#_ftn6
- Moragues, A.; Morgan, K.; Moschitz, H.; Neimane, I.; Nilsson, H.; Pinto, M.; Rohrer, H.; Ruiz, R.; Thusswald, M.; Tisenkopfs, T. and Halliday, J. (2013) *Urban Food Strategies: the rough guide to sustainable food system*. https://agri-madre.net/wp-content/uploads/2018/06/Urban_food_strategies.pdf
- Palassio, C. and Wilcox, A. (2009). *The Edible City: Toronto's food from farm to fork*. Coach House Books, Toronto.
- Pothukuchi K., Kaufman J. (2000), The Food System: A Stranger to the Planning Field, in *Journal of the American Planning Association* 66.
- Sustainable Food Places*. www.sustainablefoodplaces.org
- Toronto's Food Charter* (2001). http://www.foodsecuritynews.com/presentations/Toronto_Food_Charter.pdf
- United States Department of Agriculture USDA (2002). *U.S. Farmers Markets – 2000 A Study of Emerging Trends*. http://agmarketing.extension.psu.edu/ComFarmMkt/PDFs/emerg_trend_frm_mrkt.pdf
- United States Department of Agriculture USDA (2013b). *News Release: USDA Celebrates National Farmers Market Week, 4–10 August, Confirms Growth and Sustainability in Farmers Markets*. <http://www.usda.gov/wps/portal/usda/usdahome?contentid142013/08/0155.xml>
- Urban Food Actions Platform*, Food and Agriculture Organization of the United Nations FAO. <http://www.fao.org/urban-food-actions/en/>
- Who Feeds Bristol? Towards a resilient food plan*. Report by Joy Carey (March 2011). <https://bristolfoodpolicycouncil.org/wp-content/uploads/2012/10/Who-Feeds-Bristol-report.pdf>