PRESENTATION OF THE DOSSIER

CITY FOOD POLICIES

Securing our daily bread...
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Securing our daily bread.

This dossier proposes a reflection about the relevance of city food policies promoting social and ecological resilience, using the results of the social dialogue for a more sustainable food supply chain, taking place within the 2010-2014 Eating City platform. Indeed, cities concentrate people, goods, capital investments, infrastructure, knowledge and gradually expand worldwide, whereas rural exodus accelerates the decline of many territories. Despite the evidence that a city eats - it eats food and in some way the land needed to produce it -, food is not usually considered among the competences of a city. Moreover, food issues are too often diluted between different aspects related to health, nutrition, environment, production, public food services or local economy, all being treated separately in a counterproductive systematic approach.

PART 1- ANALYSIS OF THE THEMATIC

Today, more and more cities re-evaluate food as means to improve urban planning and management, thus opening simultaneously several avenues for reflection, research and action. In a stimulating space of innovation, they are looking at new roles for institutions in food innovation dynamics and at tailor-made interfaces of cooperation between urban centers and adjacent territories. Innovative propositions are experimented, to combine food democratic imperatives, open participatory processes and food issues institutionalization, whereas a long-awaited common metric system is still needed to assess the consequences of food systems on environmental, social, economic assets.

1-Moving towards a possible synergy between urban and rural territories.

- Urban versus rural...
- To reduce the gap...
- City food policies could make a difference...

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2- Mainstreaming sustainable urban food systems.

- To be or not to be ... a commodity?
- The metaphor of Urban metabolism to rebuild urban food supply chains…

3- Food policies must be based on a systemic vision.

- Interview with the Mayor of Milan, Giuliano Pisapia

PART 2 - 12 CASE STUDIES

Twelve case studies have been selected among a wide range of relevant experiences and classified in five categories that highlight different typologies of projects. The examination of all case studies shows that progresses are faster and easier where cities already having a deep concern for environmental issues and already have developed agenda 21 or environmental planning.

1. The Toronto experience: when food is about relationships and no more about commodities.

- A modern metropolis located in an agricultural province
- Toronto Food Policy Council: the backbone of the project
- The levers of action

2. Bristol Food Policy Council: Catalyst and enabler of the Bristol Food System.

- Bristol a former port city located in a rural area, open to trade, to innovation, environmentally friendly.
- Starting point and milestones of the project:
- When communities and small businesses are the heart of the work in progress food system.

3. FoodWorks: Innovative urban food programs in New York City

- New York City and New York State: when urban and rural territories develop long term visions that include food production.
- From the fight against hunger and obesity to a long term vision to improve NYC's Food System.
- The role of public plate.

4. Towards a sustainable Public Food Service in Copenhagen, using the lever of education and training.

- A rural-based gastronomy and a strong commitment to develop organic farming in Denmark
- The Copenhagen strategy for urban resilience and sustainable development
- Educating and empowering future generations

5. Paris: Improving food system sustainability through the supply chain challenge.

- A densely populated city merged in a grain-growing region
- The Agency of Urban Ecology: a tool to implement sustainability
- The lever of Public Food Service in Île de France

6. Rome: When school canteens become the biggest organic restaurant of the whole country.

- A vivid Roman Agriculture ecosystem.
- Across the spectrum of Roman sustainable food projects
- The School Food Revolution

7. Rennes' food policy: A local partnership focusing on local farming to reconcile the city with rural areas

- Setting the scene for the municipal project
- Starting point and milestones
- Towards a sustainable Food System

8. "Organic Metropolis Nuremberg": Increasing organic and local food production

- Nuremberg: a city located in a region with a strong tradition of agriculture and food production
- A city with a longstanding and deep concern for environmental issues
- Using the lever of Public Food Service

9. Saragossa : a city developing a sustainable vision between tradition and innovation

- A forward-looking city with a rich historical and cultural heritage
- A local Agenda 21 embedding an efficient policy for water management and biodiversity
- The lever of education to stimulate awareness and new behaviors

10. Brussels, a city-region which bets on urban agriculture to stimulate sustainable food-based local economy

- A multi-faceted city-region
- Starting point and milestones
- Turning the city into a Living Lab dedicated to food sustainability.

11. Geneva: using territorial marketing to increase food self sufficiency and local food consumption.

- Food self-sufficiency in the Canton of Geneva: an important politic issue
- All started with a law to promote agriculture
- To use public procurement to increase local food production

12. Turin, the Italian Detroit for a new culture of food

- An industrial city undergoing transition to a new personality
- Starting point and milestones
- Possible leverages for a future Sustainable Food Policy.

PART 3- SOME PROPOSALS TO GO BEYOND

These propositions are largely inspired form a preceding work: "La ville qui mange" (1) and result from the the thinking about the relevance of city food policies promoting social and ecological resilience.

The 15 original propositions have been reorganised in 9 final propositions based on the 12 case studies insights of this dossier.

1. Territorial and Institutional Tools.

- To integrate food strategy into the Agenda 21.
- To create territorial Agencies using plural-disciplinary approach based on subsidiarity and participation.
- To connect the different territorial levels of the Agencies for Food Policies.

2. Urban Planning: to create a continuum between urban farmers and rural city-dwellers.

- To integrate the management of edible landscapes, in and out the city, into urban planning
- To integrate food diversity and quality in all food distribution channels.
- To make solidarity and food waste management an issue for more food value within the urban food strategy.

3. The leverage effect of Public Food service for successful city Food Policies

- To implement tools for building capacity and monitoring the leverage effect for sustainable food supply chains
- To introduce more flexible rules for public procurement that allows territories adopting agriculture planning tools to increase local food production, to use public food services as a leverage to structure and support local food supply chain systems.
- To modernize Public Food Service with new production systems and skilled staff.

Bibliography:

(1) Nicolas Krausz, Isabelle Lacourt, Maurizio Mariani, (2013), La ville qui mange. Ed ECLM, Paris, p. 285, www.eclm.fr

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Preserving edible landscape © Risteco

Moving towards a possible synergy between urban and rural territories.

Author: Isabelle Lacourt

Urban versus rural...

According to the "Millennium Ecosystem Assessment (MEA) reporting categories system (2), urban areas correspond to «built environments with a high human density» whereas all what is not urban can be divided into nine other different categories ranging from marine, coastal, inland water, forest, dryland, island, mountain, polar and cultivated categories. This last one mostly corresponds to the so called rural area: « lands dominated by domesticated plant species, used for and substantially changed by crop, agroforestry or aquaculture production». Both rural - cultivated, and urban areas are strongly influenced by more or less dense human settlements. The MEA system describes boundary limits as following. Cultivated areas are characterized as «areas in which at least 30% of the landscape comes under cultivation in any particular year; includes orchards, agroforestry and integrated agriculture-aquaculture systems» whereas urban areas are described as «known human settlements with a population of 5000 or more, with boundaries delineated by observing persistent night-time lights [...]». Despite such definitions, urban and rural characteristics may overlap in the peri-urban areas where it is not always easy to make clear distinctions. Moreover, similar levels of population density and empty spaces may also characterize different living situations. Likewise, patterns of spatial distribution are evolving and look less and less like concentric circles enlarging from high density poles, to become more similar to a network of poles connected together and attracting people and businesses.

Indeed territorial development is driven by attractiveness and capacity to generate revenues, either productive (goods and services), social (public services such as schools hospitals or administrations) or residential (dormitory towns). Cities compete together and struggle over neighbouring areas to affirm their supremacy and richness. And where they are gradually expanding, worldwide, rural exodus accelerate the decline of farming.

Enforcement mechanisms exist to contrast the effects of a rapid liberalization of land-use planning. For instance, the principle of territorial equality that targets equal services for the population, such as mobility, is consistently applied in France where it has allowed to shape population distribution throughout the national territory. Today, such principle is challenged because it is responsible of the extension of peri-urban bed communities in rural areas. Moreover, to set up more or less tight protective barriers to safeguard rural spaces and their increasingly fragile resources, could result in artificially resilient "rural ghettos" which becomes too

expensive to maintain in a context of economic crisis and public budget cuts. The idea to allow permeability between urban and rural territories by working on innovative governance systems is taking root. It rests on the possibility to create and regulate solidarity mechanisms, by promoting cohesion and coherence between well- differentiated territories in order to allow these different spaces to collaborate and meet respectively common challenges (Table 1).

Table 1: The complexity of school canteens management in the city of Paris.

URBAN AND RURAL COMMON CHALLENGES
Services to the population
Landscape maintenance
Land management
People and goods mobility

To reduce the gap...

Several factors might contribute to reduce the gap between urban and rural attractiveness. Among them, the deep environmental crisis urging our globalized societies to escape from the logic of industrialized systems based on non-renewable resources and energy, is not the least as it undermines the autonomy capacity of urban more than rural spaces.
Indeed, until the assessment of territory has been based, beyond reasonable doubt, on economic assets related to financial and technological development, urban ecosystems have been considered as more attractive than rural ones. Shifting assessment towards a more holistic human well-being, constituted by secure, healthy living conditions, sufficient earnings for basic needs and possibility to get good social relations, allow to re-evaluate positively rural areas. The increasingly vulnerable ecosystems lead to a growing understanding of many benefits or ecosystem services (2), which were ignored until now. They include products, such as food, renewable / non-renewable energy, fiber, fresh water etc., regulating services, such as climate, flood and drought regulations, land degradation etc., supporting services such as nutrient cycling or soil formation and cultural services such as recreational, spiritual, religious and non-material benefits. Listing of all rural and urban services, (see table 2) including ecosystem services, allows to show the differences and the possible complementarity of urban and rural areas.

Table 2: comparison of main productive resources in rural and urban areas.

RURAL AREAS
Main productive resources
food (primary production) energy Landscape water nature goods (ex. biodiversity)
Regenerating context : contact with Nature and open spaces

URBAN AREAS
Main productive resources
Superior services (ex. health, academics, research etc.) Engineering Culture Inter-modality and worldwide connections
Stimulating context : contact with people

City food policies could make a difference...

Food has not been usually considered among the competences of a city for many reasons among which: food is mainly produced out of the cities and the latter are not directly implied in food production; authorities consider that citizens are mostly able to exercise their free will in choosing their own food habits; negative externalities related to environment or health are not perceived as a whole and therefore are underestimated or ignored; food is not seen as a modern factor of innovation able to foster and shape the future of urban settlements, but as a trivial commodity to be provided by an efficient global supply system; finally food issues are too

often diluted between the different aspects related to health, nutrition, environment, production, public food services or local economy, all being treated separately in a counterproductive systematic approach. But decision makers are caught up by the early intuitions of pioneers and are urgently asked to put on agenda the question of city food policies, working together with people communities and associations, as well as researchers and also companies, in a creative social space to design and experience new solutions bringing significant improvement to the overall quality of life. It is also becoming increasingly evident that city food policcity food policies will not bring satisfying results unless they are integrated with broader territorial management policies facing the question of horizontal solidarity between rural and urban areas at a local/regional level and in the same time at a global/ multicultural/ intercontinental level.

As consumer society is under attack, healthy clean and low processed food appears as one of the few goods to remain fully legitimated by a daily consumption, because it is a vital need for everyone. Today, a flourishing context of innovative practices related to agriculture diversification, rural tourism, and local food supply to promote food quality is echoed in the growing number of urban agriculture projects thus creating unexpected bridges to help mutual recognition and direct links between food producers and consumers, indistinctly in urban and rural communities. However, before to create a groundswell around the evidence that a city eats, it eats food, but also it consumes the land needed to produce it, food has to become a new pillar of urban management which is far to be the case today. This eye-opener gives a glimpse on new scenarios of cooperation occurring worldwide between urban and rural areas, in which the declared ambition of countryside is not anymore to become a residential area attracting redundant urban activities and people but rather to reinforce innovative and traditional activities such as agriculture and tourism as products and services able to improve the quality of life in urban and rural settlements in a logic of symbiosis, based on fair exchanges. This flourishing context around urban/rural food issues is reminiscent with the phenomenon of Living Labs and open and user-innovation, gathering public and private actors in an interdisciplinary approach, « to generate innovative improvements and novel solutions to real-world problems» (3).

Bibliography:

(2) Ecosystems and Human Well-being: a framework for Assessment. (2003) chapter 2 Ecosystems and Their Services. http://www.unep.org/maweb/en/Reports.aspx

(3) Living Labs, (2012) "Technology Innovation Management Review". http://timreview.ca/issue/2012/september.

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Logistics for food commodities

Mainstreaming sustainable urban food systems.

Author: Isabelle Lacourt

To be or not to be ... a commodity?

Although market economy substantially outweighs at global level, subsistence agriculture continues to exist whenever food production is necessary to meet basic human needs for personal/family survival. And when it manages to keep going, subsistence farming means more than minimum living standards because it sustains communities life and promotes relationship with nature, cohesiveness, sharing and even pride. As a matter of fact, these reasons are the same invoked to explain why urban farming has become a popular trend in the last years in cities largely dominated by market economy.

To fit the standards of industrialization, basic foodstuffs have been considered as commodities, loosing identity and qualitative differentiation, both re-introduced during the process of transformation and through the operation of branding and marketing. Food safety has also contributed to promote food industrialization, by upgrading high cost technologies and by prohibiting traditional processes, despite the evidence of numerous food scandals. The whole scenario has been detrimental to small scale farmers, fishermen, breeders and food craftsmen, as they cannot get value from any high quality production on mass markets. In the meantime, the substitution of traditional know-how by technologies has developed a high level of efficiency by increasing productivity and saving costs, but it has not taken into account negative side effects on environment, health and local economy that are becoming today a limiting factor.

The globalization of the market in a long-term business strategy has connected such industrialization process with increasingly sophisticated logistics allowing planning, implementing, and controlling of the effective flow and storage of goods, services, and related information. As food supply chain or food system refers to the processes that describe how food ends up on our tables, from farm to plate, the processes include production, processing, distribution, consumption and disposal. Coherently with food commoditization, logistics has become the main driver – and also the most profitable and fastest-growing segment of the food systems. Called to constantly evolve and deploy strategies to monitor, respond, and manage this complexity, it is now facing the challenge for expansion into emerging markets as well as the necessity to answer to

increased customer expectations such as high quality, low cost, flexible delivery, reliable performance, and sustainable low-carbon solutions in mature markets. It is also exposed to market volatility, referring to major shifts in customer demand volume, product or service mix, government regulations, new competitors, substitute products, short product life cycles, and requirements for rapid network nodal changes and redesign.

Indeed, food supply has been organized to avoid any disruption and has been generally taken for granted, until recent concerns raised by environmental impacts of transportation systems. The term “food miles” coined by Tim Lang in the early 1990s has been widely used to refer to environmental impacts and hidden costs of food logistics. These include air pollution, global climate concerns, noise, water pollution, accidents, land use and habitat fragmentation. But in spite of its wide use, “food miles” cannot be by an accurate indicator, as transport's environmental performances not only depend on distance: they are also correlated to transport mode, addressing shipping, air cargo, trucking, rail, pipelines and intermodal terminals and to the efficient loading of vehicles. The energy consumption of transport has almost doubled over the last three decades of the previous century and road transport had by far the largest share. Both air pollution and greenhouse gas emissions derives from burning fossil fuels and are strongly related to transport energy and vehicles' use.

While emphasis is given on the reinforcement for local food supply in cities to reduce transport environmental footprint, the critical issue of the “last mile” logistics, is too often overlooked. Indeed due to high population density in urban areas, all kind of goods, either produced locally or not, reaches the cities and must be transported to their final destination. Therefore “last mile” transport deals very largely with making deliveries in retail stores, restaurant and several other receivers located in all urban neighbourhoods. This logistic, which is the least efficient of all the supply chain, is also the most expensive due to greater constraints in terms of service, such as time schedule and number of deliveries. Usually performed in small trucks and vans that operate below their maximum carrying capacity, with high incidence of empty runs, it is also slowed in heavy traffic. Moreover most urban food deliveries are operated by old diesel vehicles that consume large quantities of fossil fuel and generate the release of higher quantities of pollutant emissions.

The metaphor of Urban metabolism to rebuild urban food supply chains...

A reaction movement is loudly calling into question globalized food systems, with the attempt to create direct connection between farmers and citizens. So doing, it seeks to increase access and quality of food while relocalizing production and distribution to promote both environmental sustainability and socio-economic justice. Consumers are asked to assume part of the responsibility by choosing food products not only by considering retail selling price but also food intrinsic qualities: health and nutrition but also social and environmental factors. Doing so they are asked to look at the whole food supply chain and re-evaluate the advantages of small scale and local production. Such alternative food systems are generally described and emphasized “in opposition” to the conventional global agro-industrial foods.

> In recent years, interest in alternative food systems (AFS) has grown both in the popular imagination and in the academic literature. The literature is rife with justifications (or hopes) for the continued and necessary expansion of AFS in the face of unsustainable conventional food provisioning […] The challenge now is to understand how AFS can in some sense disrupt this dichotomy and become more stable food sources capable of providing both “quantity” (more food for more people), and “quality” (social, economic, health, and environmental benefits)” Source : Albrecht et al., 2013 (4).

It is often assumed that economic development unfolds according to two options: to look at the past towards local economic models or to look at the future towards globalized-market dominant model. There could be a third option to combine old and new, using significant progress and useful knowledge. Caught in the crossfire of increasing both local food supply and urban last food mile , eco-efficiency food planners cannot

meet the challenge without taking a step backward. In this sense, to consider the broader perspective of urban food metabolism, where cities can be seen as “nodes of input and output systems” and where resources and energy are transformed in quality of life, products and waste can be a useful frame for managing food logistics (5). Indeed, such metaphor, when applied to urban food systems, allows to map in and out food-related flows along the steps of food production, supply, distribution and consumption, up to waste management. In such a wider picture, the “local food” issue shifts from the narrow environmental friendly logistics matter to the wider and long term question of food self-sufficiency, land-use planning and agriculture management, with economic, social as well as environmental benefits. Consequently, the matter of urban food-related logistics realigns on the match between supply and demand and on the “last mile” transport eco-efficiency, thus encompassing all foodstuffs, independently of their origin, local or global, in order to optimize urban food-transport system.

This implies that cities planners measure the population of all city-users, including inhabitants, visitors and tourists and also all commuters attracted every day for various businesses and services. According to the food requirements and also the eventual quantity of food produced by urban agriculture, these numbers will allow to calculate the total volume of foodstuffs, eaten at home or outside, within the frame of public food services or commercial catering, that need to be transported into the city. In the meantime the “out” food related flows will correspond to the waste production. A specific attention need to be paid to uneaten food, yesterday food waste and today more and more used for social purposes. It also need a detailed mapping of all activities (retailing system, food processing shops and laboratories (such as bakeries, meat shops, delicatessens etc.), restaurants, central kitchens, in order to optimize fleets routing and dispatch, vehicle and pallet loading, workforce scheduling, delivery etc. Today, this optimization is impossible because this last mile transport is individually managed by different actors. Even in the case of public food service where municipalities are the main purchasers, there is not an overall look on transport services allowing to combine and pool efficiently food delivery.

Infrastructures endowment must be supported by innovative projects and best practices in order to be demonstrative. Indeed as any other carpooling project, last mile food logistics optimization brings a lot of constraints to combine delivery services that usually works independently. It must be also kept in mind that this "last mile" logistics represents today a major challenge for alternative food systems, in particular to allow start-up local-food logistics platforms to be cost-effective, with the limitation of empty runs that undermine transport profitability (in particular, due to staff costs). Mapping and monitoring are two pre-requisite to create adequate food hubs infrastructures and suitable fleets of vehicles, efficient enough to pool food stuffs, centralize information and manage urban last mile food transport. That's why an urban observatory, working closely with urban planning services, is necessary to collect, analyze and combine all these information. Both mapping and monitoring are essential to better understand thresholds of effectiveness and to quantify last mile food logistics externalities in order to regulate and control last food mile transport system harmoniously within urban traffic.

Bibliography:

(4) Cayla Albrecht, Rylea Johnson, Steffi Hamann, Lauren Sneyd, Lisa Ohberg Lisa and Michael CoDye, (2013), Toward alternative food systems development: Exploring limitations and research opportunities, “Journal of Agriculture, Food Systems, and Community Development”, 3 (4), 151-159. http://dx.doi.org/10.5304/jafscd.2013.034.019

(5) Hans-Georg Bohle, (1994), Metropolitan Food Systems in developing countries: the perspective of “Urban Metabolism”, “Geojournal” 34.3, pp. 245-251.

CITY FOOD POLICIES

Food policies must be based on a systemic vision.

Author: Isabelle Lacourt

Historically, food has been a pivotal factor in the political construction of Europe, as Common Agriculture Policy has been one of the pillars of the European Union. Therefore, as food and drink industry is the largest EU manufacturing sector in terms of turnover and employment, it is not a utopia to think that sustainable food systems could become major assets of the Europe 2020 strategy of smart, sustainable and inclusive growth.

The present globalization movement was encouraged because it allowed to prospect an efficient worldwide based food production system. However, such system, handled today by private operators, is causing increasing problems. On one hand because it is based on intensive methods of production that are harming the environment and endangering subsistence farming. On another hand, because the resulting model of diet, despite it apparently solves starvation, is accentuating nutritional imbalances and food related pathologies among the populations. These and other reasons have been invoked to induce cities to come back to local food sourcing (both urban and peri-urban agriculture), in order to match citizens' basic food needs and also to re-appropriate urban food logistics management.

To handle such complex issues, however, cities must revise their usual competences, and need for that, to build up a vision in which the food issue shifts from its mere definition to a more systemic understanding. Indeed, food is not only a sum of calories and nutrients necessary to make our body working, but it is embedded in a whole system that influences our quality of life and includes all activities and infrastructures necessary to grow, harvest, process, package, transport, market, consume, and dispose food and all food-related items. This life-cycle thinking approach allows to build a model of food lifespan from origin to plate that makes possible to identify all food-related activities and infrastructures in and out the city and to design an organization chart that connects all actors and stakeholders involved in the food supply chain, giving them a role and a responsibility.

It is very important that urban planners and city managers understand that such a model is not self-standing. This is because "food systems" run within and are strongly influenced by cultural, social, economic and environmental contexts, all relationships that allows to make synergies between food

planning policy and other mainstream urban policies about more usual issues such as mobility, education, health, etc.
Indeed:

- food consumption is an integral part of all our lives including its history and culture;
- food is affecting our health and wellness, including nutrition, obesity and food safety;
- food environmental impacts are becoming an increasing concern;
- food also requires human resources that provide labor, research and education;
- food is a pillar of the economy, at local and global level.

The cases studies that are presented in the second section of this essay illustrates some of the integrated food systems planning approaches used so far, each of them being implemented with various methods and vision.

Not all the cities concerned by this study have developed a long term vision nor they have developed governance tools to achieve specific food policies. And even when they have done so, they have been aware that the interest of such exercise is mainly to engage all stakeholders to produce and assume ownership of a consensual road map in which are embedded specific priorities defined according to the local context.
To analyze the multiplication of such programs of action, it is useful to identify common patterns and processes of reflection. Several networks are currently working on the definition of sustainable food policies, which must be understood as statement of intents, according to the adoption of principles that guide decisions to achieve rational outcomes or new models of food governance. The latter are intended to regulate the processes of interaction and decision-making among the actors.

Within the 2015 Milan Universal Exposition, all participating countries are showing the best of their technology, to "guarantee healthy, safe and sufficient food for everyone, while respecting the Planet and its equilibrium". This event is an exceptional showcase to engage stakeholders in meaningful dialogue about the relevance of city food policies promoting social and ecological resilience. For the city of Milan, hosting the event it is an opportunity to use all the knowledge and research of participants and visitors of EXPO to engage a thorough reflection towards its own city food policy.

All the effervescence surrounding the projects of 2015 EXPO of Milan , the Food Chart and the Milan Food Policy Pact demonstrate the growing interest for the question of sustainable food systems and the strong belief that the leverage for change has to be implemented at urban scale, in relation with surrounding Regions. This awareness has emerged from the blooming of numerous networks, programs and projects, as Eating City, that have been launched mainly to develop a broader, shared understanding of sustainable food production and consumption by linking together the collective expertise of researchers, policy makers and practitioners. The role of these networks is fundamental to share information, to develop campaigns, to organize meetings. They also share information about all the initiatives driven by the members (food charters, strategies and action plans) and also in other countries (international inspiration). In some cases , stakeholders also try to clarify the food sustainability issue and give concrete insights about key issues in order to get involved cities in action plans.

At this stage, these networks have an essential role to play, to gather stakeholders in multi-disciplinary approaches, to share knowledge, identify critical points and define priorities, design new solutions in order to establish food policies able to frame and foster action plans.
Among more institutional networks such as Resilient Cities, the network launched by ICLEI, the World Mayors Council on Climate Change and the City of Bonn in 2010. It is promoting the question of urban resilience and involves over 1,000 metropolises, cities, and urban regions committed to promote global sustainability through local action. It has included, since 2013 a specific focus on food policies, mainly through the angle of urban agriculture strategies. It is now evolving towards a call for global action : "City Region Food Systems and Sustainable Urbanisation" launched in London in February 2015.

Interview with Giuliano Pisapia, Mayor of Milan :

1. The question may sound trivial, but why the Mayor of such a large city as Milan has decided to undertake the design of Food Policies for his city?

“Feeding the Planet, Energy for Life” is the theme chosen for the 2015 Milan Universal Exposition, where such issues as healthy and safe food, combating hunger and waste, water as a common good or sustainable development will be discussed. All these Third Millennium emergencies not only concern the largest metropolitan areas in the world but also the future of Milan and Italy. Expo 2015 has just speeded up our involvement.

During six months, Milan will become geographically the centre of a global debate about food, in a planet shared by 9 billion inhabitants in 2050 that is looking after a fairer and more balanced sustainable development. The Universal Exposition will deliver to the world a Food Chart, true pact among States, International Institutions and individuals. But Milan itself, as the city of Expo, is going further. It is carving out a precise role that looks far beyond 2015.

Taking for granted that food is energy and driving force of development, Milan has proposed to other international metropolises an "city food policy Pact", that will be signed by the relative Mayors, within a big event organised on the occasion of the World Food Day, next October. The city of Milan is working at present on the contents of the Pact, within a network of more than 30 foreign cities. In the meantime, together with the Cariplo Foundation, it is working on its own Food Policy as part of the construction of its Smart City strategy for a more intelligent and sustainable city that will insure a fairer future for its inhabitants.

2. What are the expected outcomes?

The Food Policy will give the city of Milan a central role in the urban agro-food system governance, to achieve some major objectives. First of all, to reduce food wastage: every year a family throws away the equivalent of 450€ of fresh food, bread, fruits and vegetables, with consequent impacts on the environment. Also, to improve human health and food access, to increase urban agricultural ecosystem biodiversity, to reduce food systems' environmental impacts, to foster innovation for healthy and sustainable food production and distribution. Improving food education is a priority too, because most of the impacts are due to lifestyles and consumption patterns.
All these issues are treated within the Milan Food Policy and will frame a systemic and holistic vision for healthy, tasty, fair and sustainable food, accessible for all citizens.

3. Which levers and which ways do you intend to use in order to proceed with the establishment and the management of Food Policy, independently from projects co-financed by European or national funds? In other words do you plan to create a permanent structure that will be able to monitor and manage this medium-long term process?

Also in light of Expo 2015, the rethinking of the overall urban food system is a central issue for Milan. This challenge does not mean only local food and peri-urban agriculture. A new and positive link must be forged between those who produce, distribute and manage the relationships with consumers. Food wastage must be overcome. "Smarter" logistics must be implemented. It is a modernisation tool, for the city and for the training of new generations.
The whole administration is currently working together with all the companies in which the Council has a share, in order to achieve the targets we set for ourselves: from waste management to food education schemes at school, not to mention combating waste, still in the schools, where it is a significant commitment: in the last year and half, the equivalent of a ton of food per day has been saved in the schools of Milan.
The exchange with the other Mayors clearly highlights how important is the need for a body in charge of the coordination of all the policies related to Food Policy.

4. Do you believe that the "City" should care about what its own citizens are eating, beyond free individual choices?

Sure I do. We need to raise awareness about what is at stake, in terms of social, health and economic issues. The public debate in Milan is mature enough to contribute to define targets and improvement actions.

5. Do you think that food can be considered as a Common good? And that food flows should be, at least, monitored by the City?

Expo is also an opportunity for the City of Milan to increase its own awareness and care of the commons, particularly about the sensitive issue of urban agro-food system. And the city administration can't help but be in the forefront.

6. Would it be useful that such policies were also represented at a higher institutional level? - for instance at a regional /national /European level; this to implement a new global food governance?

In the so-called "Urban Century", most of people will increasingly live in large urban areas. Today, more than half of the world's population lives in cities and in 2030, it will be 60%. Some of these large cities have a GDP that exceeds the one of numerous nations: Milan produces more than Colombia, Washington more than South Africa, London more than Indonesia.
Recent surveys reveal that the "New Face of Hunger", i.e. the deprivation of food, and above all of healthy food, will define unprecedented borders between neighbouring districts in all "averagely developed" cities. Therefore the management of all the agro-food related problems is becoming an explosive issue at a world-wide and local level - in the North and in the South of the Planet.

In a globalized world where mega-cities become more and more networked to build a sustainable development, great revolutions start at local level. Thus for food policies. Therefore, urban administrations can serve as aggregators to facilitate all the other stakeholders, reconciling the commitment of citizens, with the non-profit world, companies and other institutions. For practical policies.

Case Study number 1

CITY FOOD POLICIES

The Toronto experience: when food is about relationships and no more about commodities.

Author: sabelle Lacourt

City	Toronto
Country	Canada
Population: city area	2,6 millions
Population: metropolitan area	5,6 millions
Surface area	630 sq. km
Green areas	80 sq. km
Toronto green belt agricultural area	7.300 sq. km

When you understand that food is about relationships, not commodities, then the old dogma about "if you can't measure it, you can't manage it" loses some sheen. (Wayne Roberts). The main lever of Toronto Food Policy is the Toronto Food Policy Council (TFPC), a committee embedded in the Board of Health. Over the years, it has been building a Food Strategy based on the following philosophy "food cuts across the silos of government activity and therefore has the power to address multiple problems at once".

TFPC is not in charge of the implementation of policy but rather is asked to create a culture of change within government and support the capacity of local initiatives. It remains "behind the scenes", for instance performing surveys and mapping, to measure progress and identify new frontiers of action and overview food challenges and achievements.

Among lessons learnt from TFPC experience and from "the convening power of food" :

It has been instrumental in working with communities, policymakers, and city councillors to identify opportunities where policy change is needed and to provide advice. [...] The TFPC must also continue to balance its deliberations on a broad and growing range of potential food system issues with the strategic identification of specific opportunities for action.

Public food procurement is certainly a new horizon for the TFPC. Indeed the city has not put the same determination in developing ambitious targets for Public Procurement as it has done within the Foodshare project. It still has to exploit the potential of such lever to transform grassroots and communities-oriented programs into larger scale food systems, thus maintaining similar objectives and values such as providing healthy food and food education to all citizens" (C.L. Mah and L. Baker in "Citizen engagement in Health Casebook").

A modern metropolis located in an agricultural province

Toronto, located in Southern Ontario on the northwestern shore of Lake Ontario, is the most populous city in Canada. This commercial capital is placed among the Global Leaders in the Global Financial Centres Index. Leading economic sectors in the city include finance, business services, telecommunications, aerospace, transportation, media, arts, publishing, software production, medical research, education, tourism, and engineering. Toronto also was the first Canadian city to get a food policy council, designed to improve food security as a basic need.

The city is consistently rated as one of the world's most livable cities by the Economist Intelligence Unit and the Mercer Quality of Living Survey.
It is at the heart of the Greater Toronto Area and of the densely populated region in Southern Ontario known as the Golden Horseshoe. Since 1954, it occasionally expanded its borders through amalgamation with surrounding municipalities, most recently occurring in 1998. In 2011 it had 2.6 million residents, whereas the metropolitan area (CMA) had a population of 5.583.064 and the Greater Toronto Area (GTA) had a population of 6.054.191. Its cosmopolitan and international population reflects its role as an important destination for immigrants to Canada. Toronto is one of the world's most diverse cities by percentage of non-native-born residents, with about 49% of the population born outside Canada.

The city is surrounded by rural areas encompassing farmland and forests, hamlets and booming towns, with rural communities either close to cities or remote. They rely on tourism, manufacturing, natural resources etc. (6). The Ontario province is one of the major agricultural regions of Canada; it possesses just over half of the country's best agricultural land, almost all of it in the southern part of the province. Between 1971 and 2001, before a law to regulate urbanization was promulgated by the Ontario government, the proportion of good farmland into urban areas increased from 5,5 to 11,2%. Ontario's agri-food sector currently generates $34 billion in gross domestic product and sustains 740.000 jobs – which is about one in every nine jobs across the province. Many farms produce dairy or livestock and forage. Southwestern Ontario is the chief corn- and soybean-producing area. Winter wheat, barley, and beans also are grown. The Niagara Peninsula and the Holland Marsh, north of Toronto, produces fruit and vegetable due to a relative mild climate. Although forestry in Ontario does not rank with agriculture in terms of value of production, it is still one of the most important branches of the national forest-products industry.

Bibliography:

(6) Rural Roadmap: The Path Forward for Ontario, (2014), from Ministry of Rural Affairs, April 2014 http://www.omafra.gov.on.ca/english/rural/roadmap-2014.pdf

(7) Rod MacRae, Joe Nasr, James Kuhns, Lauren Baker, Russ Christianson, Martin Danyluk, Abra Snider, Eric Gallant, Penny Kaill-Vinish, Marc Michalak, Janet Oswald, Sima Patel, and Gerda Wekerle, (2012), Could Toronto Provide 10% of its fresh vegetable requirements from within its own boundaries? Part II, Policy Supports and Program Design, "Journal of Agriculture, Food Systems and Community Development", Feb. 2012, pp. 147-169.

To go further:

Golden Horseshoe : Food and Farming Action Plan 2021, http:// www.gtaaac.ca
(Golden Horseshoe Food and Farming Action Plan, and Implementation Strategy and Background Report)

Rural Roadmap: The Path Forward for Ontario, from Ministry of Rural Affairs, April 2014 http://www.omafra.gov.on.ca/english/rural/roadmap-2014.pdf

Toronto food Charter: http://www.foodsecuritynews.com/presentations/Toroto_Food_Charter.pdf

Toronto Food Policy Council: http://tfpc.to/

The Toronto Food Policy Council: the backbone of the project

Good food to promote health

Food policy councils were founded in the North American context about three decades ago. Since then, their applicability and popularity has spread worldwide. They generally operate at the sub-national (local, regional, or province/state) level and include citizen members from diverse perspectives across the food system, from food production to waste management. Food policy councils have embodied and promoted ideas about the benefits of participatory democracy, namely that citizens can play a meaningful role in policy deliberation on large and complex issues, even when much of the expertise, power, and authority in food systems are all concentrated in higher levels of government and the private sector. Food policy councils have often sought to establish a long-term role in advising decision makers on food issues and advocating for food system reform under different forms and functions: in particular they can either be formally embedded in government structures, or operate outside government.

Formed in 1991, Toronto Food Policy Council (TFPC) supports scores of programs with the shared goal of ensuring equitable access to food, nutrition, community development and environmental health, acting as professional lobbyist for the people on food and related issues. Since the beginning, TFPC has been largely based upon the idea that food and health are intimately intertwined.

The project "Foodshare Toronto"

The gestation of the TFPC began during the 1960s and carried on through the mid-1980s until the concept of "Foodshare Toronto" was introduced in 1985 by the Mayor Arthur Eggleton, to help fight hunger in the city. According to a report on poor nutrition among low-income people in Toronto made a year before by the board of Health, he addressed a letter to the City Executive Committee in which he outlined the philosophy of action that has then become TFPC's backbone: to use voluntary energy and goodwill, to be welcome and officially sponsored by the City, to receive a contained financial support, to be under the umbrella of the Health Department. In the following box, an extract of this letter:

> " Across metro [metropolitan area], one in six people live in poverty. Because rent, transportation, heat and electricity remain essential priorities that often cannot be reduced, it is the food budget that is trimmed by low income families. Consequently, thousands of people in Toronto, either on welfare, unemployment or with incomes too low to support a number of dependents, are quite simply going hungry. At the same time, a high percentage of food produced is wasted. Thus I am introducing, with those already involved in fighting the problem, a concept called Foodshare Toronto. It will be an information service and clearing house designed to direct people in need, as well as coordinate offers of donations and service for the community."

The project "Foodshare Toronto" started with space allocated into the City Hall, a telephone hotline provided by the City and a 20.000 dollars grant for a three month project soon extended to six month with an extra 20.000 dollars grant in order to run during the whole winter season. Over the next decades, the Toronto Food Policy Council was then able to raise millions of dollars of private and public funding for community-based food system activities. Bellow is a description of the Toronto Food Policy Council from an extract of the Toronto Food Policy Council 2011 Membership Update, Attachment 3 – Made Public by the Board of Health on May 9, 2011.

"The Toronto Food Policy Council (TFPC) is a now a citizen body of food activists and experts responsible for generating food policy for the City of Toronto. It has up to 30 members covering a wide range of expertises, all related to food. A member belongs to the Toronto Board of Health, two are members of Toronto City Council, three are members of rural and farm communities near the Greater Toronto Area, two are members of the Toronto Youth Food Policy Council, and up to 24 are residents of Toronto who bring knowledge and experience from a range of communities within the city. Council members are appointed for three year terms. The TFPC is free to

Staff working with the TFPC are employed by, and responsible to, The Toronto Department of Public Health.".

The early work of the TFPC was focused on issues of food security, social justice, and hunger. For example, the TFPC was influential in identifying key food and health issues requiring program and policy attention. Through the work of the Food and Hunger Action Committee and a related series of policy papers, municipal grants became available for implementing community food projects. The TFPC currently works on policy initiatives beyond the municipal jurisdiction.

In 2001, as a result of this policy work, the Toronto Food Charter was endorsed by City Council, as a support to the national commitment to food security providing a well-rounded roadmap in which Toronto not only acknowledge the importance food plays at personal and community level, but also in many core urban issues such as: health, education, well-being, standard of living, cultural pluralism, business and employment, environment and traffic pollution.

In 2008, the Board of Health approved the Toronto Food Strategy to guide the City towards a vision for a new food system that focuses on health. Indeed the city shifted the paradigm of food vision focussed on mass production of processed "convenience" foods that tend to be high in calories and low in nutrients towards healthy food that become attractive because culturally appropriate, affordable and accessible to all citizens, independently of their purchasing power. The Toronto Food Policy Council which was a key player in developing such strategy still continues to provide guidance and support on numerous Food Strategy projects.

In 2009, Toronto Youth Food Policy Council was launched to mobilize and engage youth to make change by building a just food system. The TYFPC envisions a Toronto where youth are informed, empowered, and mobilized to build a just food system. Indeed TYFPC acts to provide youth with an open space to network, learn from one another and share food related opportunities and to become an influencing voice in municipal food policy change.

GrowTO: an action Plan, to promote urban agriculture

Ontario province requires all municipalities to have an Official Plan, a legal document approved by Council that describes policies and objectives for land uses and how and where the community should grow. Such document, prepared in consultation with residents, reflects a community vision for future change and development and is one of the most important strategic documents that for instance define the general location for new housing, employment, office and retail areas, community services, parks and other land uses. Toronto's official plan adopted in 2006, presents the vision to guide the process of development in the city over the next decades To contrast the risk of urban sprawling, the city relies on "re-urbanization". For instance, preserving high quality agricultural lands to protect Toronto's food security is one of the key points identified in the Plan.

"By improving and making better use of existing urban infrastructure and services before introducing new ones on the urban fringe, reurbanization helps to reduce our demands on nature and improve the livability on the urban region." Source: Toronto Official Plan, in chapter 2, Shaping the city.

MacRae et al. (7) showed that scaling up urban agricultural activities in the City of Toronto could supply ten per cent of the city's commercial demand for fresh vegetables and create jobs. Both the province of Ontario and the city of Toronto adopted the same year, respectively, the action plan "Golden Horseshoe Agriculture & Agri-Food Strategy", to develop food and farming in an area considered as one of the largest food and farming clusters in North America, and the GrowTO Action Plan, to promote urban agriculture.

The city immediately identified a series of short-term activities, aligned with GrowTO priority areas and already implemented within existing resources; in parallel it has been working on the definition of longer-term opportunities and potential for extending existing partnerships. Indeed, the city of Toronto clearly admits that to scale up urban agriculture, "no one organization or level of government can do it all".

As community interest and expectation grows and new opportunities emerge, significant pressure is placed on limited resources to make the most of emerging opportunities and challenges, thus stimulating spontaneous bonding and research of win-win solutions among stakeholders, therefore producing heightened social, economic and health impacts for investments.
The Toronto Agricultural Program also aligns city-wide urban agriculture activity and outcomes with other key City strategies, including:

- Parks Plan 2013-2017,
- Toronto Strong Neighbourhoods 2020,
- Working as One: Workforce Development Strategic Plan for Toronto,
- Economic Development's Collaborating for Competitiveness,
- Climate Change, Clean Air and Sustainable Energy Action Plan,
- Toronto Public Health Strategic Plan.

It is expected that such alignment yields benefits such as the support of new social enterprises linked to urban agriculture, the development or enhancement of skills training for employment in agricultural related occupations or food production, the expansion of learning programs for youth or grant-making for agency-led urban agricultural initiatives.

When civil society is called into action...

Foodshare "armed wing" of TFPC

Most of food programs are run by the non-profit organization FoodShare born according to the will of the City's Executive Committee. FoodShare has first started to gather grassroots initiatives from community based groups in Toronto (Daily Bread Food Bank, Sole Support Women's Community Garden, Kitchen in Regent Park etc.). Then, it has pioneered innovative programs aiming to improve the way people eat and grow food across Toronto every day by fighting food deserts in the city.

Operated by trained, knowledgeable, and friendly volunteers,a Hotline has been operating since 1985. In 1997, it became FoodLink, to reflect an expanded mandate of referral to all types of food programs. In partnership with Community Information Toronto, the system was computerized and expanded to include everything from congregate dining for seniors to nutrition counselling, pre-natal programs, Good Food Box drop-offs and community gardens. Today the program continues to operate in partnership with 211 Toronto, Daily Bread Food Bank and North York Harvest Food Bank.

FoodShare's Bulk Produce Program for Schools and Community Groups offers locally grown and seasonal produce when available which is delivered directly to student nutrition program sites on a weekly basis. Approximately 260 schools, 20 non-profit child care centres, 75 parenting centres, and 15 non- profit agencies participate across Toronto.

FoodShare works in partnership with Toronto Public Health, Toronto District School Board, Toronto Catholic District School Board, The Toronto Foundation for Student Success, The Angel Foundation for Learning and other community agencies to support student nutrition programs through the Toronto Partners for Student Nutrition (TPSN) which provides intensive on-site support for 682 programs, in 463 schools across the City of Toronto serving approximately 144.000 healthy, nutritious meals and snacks to children and youth in schools and community sites each school day.

Good Food Box. This non-profit fresh fruit and vegetable distribution system is running like a large buying club with centralized buying and coordination. Individuals place orders for boxes with volunteer coordinators in their neighbourhood and receive it on a weekly, bi-weekly or monthly cycle. Customers benefit from the cost savings of bulk buying and time saved by this distribution method. Good Food Box contents match the following criterions: quality, value, culturally appropriate food, local and seasonal, sustainable growing practices, reduced packaging, and fair trade. Established in February 1994 with just 47 boxes, the FoodShare's Good Food Box program now distributes approximately 4.000 Good Food Boxes each month through about 200 neighbourhood drops.

Good Food Markets sell high quality, affordable fruits and vegetables, bringing healthy produce to neighbourhoods where it might not otherwise be available, and where farmers' markets are not viable because sales are too low to cover costs.

Over time, many markets add other features such as children's activities, information about social issues, bake ovens, freshly prepared foods, jewellery and clothing vendors, and harvest celebrations. 79% of Good Food Market customers come back for each and every market.

Good Food Café proposes a universal and healthy school cafeteria, serving attractive, delicious and nutritious food that students choose to eat and that is simple to prepare, proving that "good for you" can be easy for schools to prepare, and tasty too. Good Food Café currently operates in two French high Schools, serving fresh, homemade food daily to over 100 students (in a school of 340). The Good Food Café is also providing a daily hot lunch to a Public School, serving 150 students from Junior Kindergarten to Grade 6.

Baby and Toddler Nutrition Program.offers free food basics workshops to communities throughout the Greater Toronto area. The workshops are hands-on and give participants the skills and confidence to make simple healthy baby and toddler food from fresh and whole foods. The workshops specifically target priority neighbourhoods or communities facing food insecurity or lack of agency support.

Community Kitchens, to break down barriers.

A Community Kitchen is a public space where groups of people cook on a regular basis offering the opportunity for participants to share skills, socialize and reduce meal costs by cooking collectively. In 2013, there were over 100 workshops delivered in the community, serving over 1.500 parents and care givers. Community Kitchens are as diverse in their purpose and organization as the people who participate in them , either only prepare food to sit down and eat or preparing several meals in large portions to take home to their families. Community Kitchens can also help to establish a sense of well-being through the healthy cooking lesson itself.

- Power soups: every winter, thousands of cups of tasty and nutrient-dense soup are prepared in the FoodShare's kitchens, and are provided at a subsidized price or free of charge to local shelters. This allows shelters without the equipment or capacity to serve hot food to do so. Where drop-ins or shelters may only have been able to serve coffee and donuts before, they can now serve a hearty lentil soup, homemade and packed with vegetables.

- Food Youth Project equips youth marginalized by systemic inequalities with skills that will aid them in navigating the employment and community sector. The program employs 10 youth interns to work in either our Kitchen or Good Food Warehouse full-time for six months. It offers an opportunity for interns to build skills through on the job learning, mentoring, workshops and trainings.

- from 2006-2011, the Toronto Community Food Animators, a partnership between FoodShare, Afri-Can FoodBasket, and The Stop Community Food Centre, encouraged and advocated on behalf of gardeners throughout Toronto, and started over 15 community gardens. In 2010 the Toronto Community Food Animators also partnered with Toronto Community Housing Corporation to conduct city-wide consultations to create a strategy for expanding and better supporting community gardens in social housing across Toronto. A grant from the Toronto Atmospheric Fund allowed to develop a Guide to Mid-sized Composting operations to share our experience with others interested in mid-scale composting. The "Turning Trash Into Treasure" Compost Leadership program, launched in 2012, was funded by Earth Day Canada.

- Sunshine Garden and Market is run as a recreational and therapeutic gardening program which is open to Centre for Addiction and Mental Health (CAMH)'s in-patients and out-patients on a volunteer basis. During the winter, participants work once a week in the onsite greenhouse where they plant and raise seedlings and participate in a variety of workshops on organic gardening and growing food. The workshops are designed to empower participants by teaching them the core skills to grow their own food from seed to harvest. In 2013, participants harvested over 530 pounds of produce, canned 50 pounds of green tomatoes which they made into green tomato chutney in FoodShare's kitchen and canned over 40 pounds of tomatillos to make salsa.

Case Study number 2

CITY FOOD POLICIES

Bristol Food Policy Council: Catalyst and enabler of the Bristol Food System.

Author: Isabelle Lacourt

City	Bristol
Country	UK
Population : inner city	441.300
Population : overall city	1,1 millions
Surface area : inner city	24,5 sq. km
Green areas : inner city	4,50 sq. km
Surface area : overall city	110 sq. km
Green areas : overall city	34,50 sq. km

Bristol has brought in Europe the North American culture of Food Policy Councils, a multi-stakeholder organization that thinks, assesses and acts to improve food systems at local level. Indeed, starting from Food Life Cycle, eleven food experts have been able to model a simple and consensual system based on circular economy, able to convince both city councillors and citizens to get involved.

The city had already got a deep concern for environmental issues and was at the forefront of UK cities for its exemplarity for reduction of greenhouse gas emissions, green public procurement and waste management. It had also strongly bet on green economy development and innovation. This explains, amongst other things, the speed and scale of progress of the city to evolve towards the achievement of its Good Food project.

In terms of funding, Bristol, City Council is pragmatic to recognize the difficulty to invest large amounts of money in food projects, in a moment in which public funding is getting lower, due to the crisis. Therefore Bristol FPC first job has been to make an overall picture that encompass all food-related activities already running and to network and frame all of them, in order to successively build on it. This has allowed to take into account the existing voluntary action that is essential to fuel the project and that must be channelled for greater efficiency. Indeed in Bristol, the communities and small

A former port city located in a rural area, open to trade, to innovation, environmentally friendly.

Bristol is located in South West England and is included into the Greater Bristol, a conurbation which contains and surrounds the city that corresponds to the former county of Avon. Bristol has been a city with a county status since medieval times. Nowadays, Bristol City Council (BCC) consists of 70 councillors representing 35 wards. On May 3th 2012, the city held a referendum, and citizens decided to vote directly to elect the City Mayor instead of having a leader chosen by the councillors.

United Kingdom's eighth most populous city, Bristol is built around the River Avon and has also a short coastline. Indeed Bristol is a centre of culture, employment and education which prosperity has been linked with the sea since its earliest days. It is also a main university town. In the last 10 years Bristol City's population has grown by 10% and the value of its economy has grown by 40%. The rate of unemployment is around 7%, very similar to national average rate. Banking and insurance, professional services, health and social care, education, creative industries, electronics and aerospace industries, leisure and tourism, are among the main activities of the city. Health and social care but also education, retail and distribution sectors are among those providing more jobs. In the last years, green economy, especially digital and low carbon industries sectors experienced an encouraging +4,7% growth rate.

It is currently estimated that 10% of jobs are related to food systems, from production to consumption. Indeed over 2.000 food catering business are registered in Bristol. Most of them are small companies including food takeaways, coffee shops, etc. A part of these food-related jobs also derives from public food service. Hospitals, Care homes, schools canteens represents 25% of catering business, whereas another 24% is related to workplaces' canteens.

The South West region is the largest agricultural area of UK and also the country's most rural region with more than half of its five million residents living outside towns and cities. Agriculture is employing 3% of the population and generating a share of gross added value above the national average. It is predominantly a grazing livestock area, mainly for milk production. Cereals are largely used for livestock feed. There is also a consistent production of vegetables (potatoes, carrots, parsnips, cauliflowers, etc.). 175.000 hectares are organically farmed, or in-conversion, which represents 9% of the total agricultural area, compared to the national average of 4%. 37% of the nation's organic producers and/or processors, and 20% of the England area of land are located in the South West Region.

Recently, Bristol has been awarded by the European Commission as the 2015 European Green Capital, and is preparing to welcome a series of events related to this initiative. The jury recognized it as an efficient city with a growing green economy and "its potential to act as a role model for UK, Europe and the world". Indeed the city aims to be a "Laboratory of Change, based on innovation, learning and leadership."

To go further:

- EU Green Capital Award 2015
http://ec.europa.eu/environment/europeangreencapital/

- Core Strategy (2010) City plan:
http://www.bristol.gov.uk/page/planning-and-building-regulations/planning-core-strategy

- EU URBACT II project 'Sustainable Food in Urban Communities'
http://urbact.eu/en/projects/low-carbon-urban-environments/sustainable-food-in-urban-communities/partner/?partnerid=646

- Urban and Community Food Strategies. The Case of Bristol, International Planning Studies Volume 18, Issue 1, 2013

- bristolgoodfood.org - Helping create a good food system for Bristol:

- "Bristol Good Food Charter"
http://bristolgoodfood.org/wp-content/uploads/2012/03/The-Bristol-good-food-charter.pdf

- "A Good Food plan for Bristol"
http://bristolpound.org/blog/2013/12/05/bristol-food-policy-council-launches-good-food-plan-for-bristol/

Starting point and milestones of the project:

A local contribution to Global Climate Change

In 2000, Bristol was the UK pilot of the Local Governments for Sustainability (ICLEI)'s Cities for Climate Protection programme. The City developed the Bristol Climate Protection and Sustainable Energy Strategy that set a target to reduce emissions by 60% by 2050 from a 1990 baseline. It was one of the first UK municipalities to adopt such a strategy. In 2002 it adopted a plan to improve its environmental performance, followed in 2004, by a Climate protection and Sustainable Energy Strategy and Action Plan (CSESP). To implement this action plan BCC created a dedicated 4 persons staff team, in addition to specialists working on energy and biodiversity management. Since the 2004 strategy, Bristol successfully reduced its CO_2 emissions by 15% between 2005 and 2009.

In 2009, Bristol joined the Covenant of Mayors and set more ambitious CO_2 reduction targets to reduce emissions by 40% by 2020 and 80% by 2050, from a 2005 baseline. To meet these commitments it created the current strategy and action plan – The Climate Change and Energy Security Framework. Today, Bristol can claim to have the lowest CO_2 emissions per capita of any major city in the UK. To reach such a result the city has invested 30 million pounds to reduce emissions from its own process (such as street lighting, non-domestic building savings, staff awareness, biomass boilers etc.).
From 2001 to 2011 it implemented 2 successful Transport Plans, focusing on managing demand, improving public transport and cycling, and encouraging 'active travel' to successfully reduce private car use, investing 100 million pounds to reduce CO_2 emissions from transport. Indeed, this has produced a true cultural change among citizens, making them use less their cars not only for leisure but also to go to work.
Since 2001 the city also invested up to 1 million pounds in the program "Bristol Green Doors", to support community action and run educational events to inspire, encourage and enable domestic green refurbishment.

From Bristol Local Plan (1997) to the Core Strategy (2010)

> " Bristol's Sustainable City Strategy aims to reduce Health & Wealth Inequality, raise the aspiration and achievement of our children, young people and families, make Prosperity Sustainable, in a city of Strong and Safe Communities. Challenges are: Climate change, Regeneration and Affordable Housing, Transport and Digital Connectivity. Culture & Creativity are the best opportunity"

Within such a vision, the Parks and Green Space Strategy was adopted in 2008 in response to the high demand for good quality and accessible green space:

> "green infrastructure can make the urban landscape more attractive whilst also providing opportunities for sports and recreation, active travel, wildlife, food growing, climate change adaptation such as urban cooling, flood storage capacity and pollution amelioration."

The management of these green infrastructures is related with the Bristol Biodiversity Action Plan also adopted in 2008. Indeed city's green infrastructure has been recognized to provide essential ecosystem services such as flood storage, carbon absorption and reducing the urban heat island effect. There is an on-going commitment to review existing wildlife sites to ensure that they remain worthy of protection. Since 2010, the area of protected sites has increased by 6.5 ha. In 2012, the city council and the Avon Wildlife Trust funded a 3-year 300.000 pounds project: "Feed Bristol" to promote wildlife friendly food growing at the Feed Bristol Centre a 7-acre site. 12.000 people of all ages and backgrounds including school children are encouraged to grow their own food on-site in an organic and wildlife friendly manner supported by experienced horticulturalist and a team of 'Growing Leader' volunteers.
The Core Strategy also includes Strategic planning policies to ensure local, sustainable management of waste. Bristol has the lowest waste per capital of any major English city and substantially (23%) lower than the UK average.
During the last full financial year 2011/12, 46.8% of municipal waste was recycled, reused or composted. Recyclable waste is bulked up at a local depot before being sent to various re-processors for recycling. The City Council requires the waste collection contractors to report the destination of all waste collected in Bristol and provides this information to citizens – to give them confidence that waste collected for recycling is

recycled. All waste collected for recycling is processed in the UK.

From the Sustainable Procurement Strategy to the City Food Policy Council.

The City Council has implemented a Sustainable Procurement Strategy in 2009, containing a set of eleven objectives to procure sustainably and influence others to do so.
Under this strategy, and through a national programme for sustainable procurement, Bristol City Council has advised and run the UK South West Sustainable Procurement Network, through actions of training, organization of conferences and hosting a best practice website. By increasing the share of the total consumption of eco-labelled, organic and energy-efficient products, the City Council has substantially improved the environmental performance of its procurement, by setting up Public tenders that give weight to green issues such as packaging, sustainability of materials, design, global warming and ozone depleting potentials, suitability for intended use, environmental performance in use or product or service lifespan. Food procurement was included in such an approach.

In 2010 the City launched a municipal Food Charter that addressed all aspects of the food system and was intended to frame and give long term perspective to the food purchasing policy. The Food Policy Council was launched one year after, in 2011, at the March Bristol Food Conference and included 11 members, belonging to different organizations and bringing high level expertise from the following sectors such as food business (production, wholesale, catering, retail), local government, business development, Health, Community, Education/training NGOs specialized in food sustainability, including a local organization gathering experts and consultants: Bristol Food Network C.I.C. voted to "support, inform and connect individuals, community projects, organisations and businesses who share a vision to transform Bristol into a sustainable food city".
In parallel and in synergy, Bristol was also one of five initial Partners in the EU URBACT II project 'Sustainable Food in Urban Communities'. Indeed the project first concern was about the reduction of food system carbon impact and matched perfectly with the Bristol Climate Protection and Sustainable Energy Strategy. But the project also focused on the development of a local strategic group of food professionals and the production of an action plan: this aligns perfectly with new-born Bristol Food Policy Council and its agenda to foster sustainable food systems in the city.

The leverage: when communities and small businesses are the heart of the work in progress food system.

Public Food Service: using the level of green procurement.

According to the Sustainable Procurement Strategy that has been implemented since 2009, Bristol has reached good standards of food procurement with 30% of school meals being prepared with organic food. On the top of that, other quality and sustainability criteria have been used such as 45% of frozen fish is certified MSC (Marine Stewardship Council), 100% of banana come from fair trade market, 100% of eggs are free range which warrants a better quality than battery farmed eggs and more than 45% of food locally produced.
Schools in Bristol have joined the UK national programme "Food for Life Partnership" to transform their food culture. This programme develops a holistic approach with a 3 level award system to encourage activities in all aspects of food systems. Following five years of full grant funding, the programme is now being commissioned by Local Authorities to address health and wellbeing priorities in their areas.
If the city has played the green procurement card to increase food sustainability, the food project has really expanded with the launch of the City Food Policy Council.

The great adventure of Bristol Food Policy Council (Bristol FPC)

The founding publication "Who feeds Bristol? Towards a resilient food plan." (8) drew a picture of food system, from cradle to grave that prepared the ground for thinking new food strategies for the city. In particular this research highlighted a model for Bristol food system based on community needs in terms of 1- Land use and food supply, 2- Food business and 3- Staple food. This research also mapped a series of actions in a plan designed to build circular economy based on a life-cycled food system, in which end-of-life (managing waste) is reconnected to food production, distribution,

The main work areas are listed below:
- Support community food enterprise models
- Transform Bristol's food culture
- Safeguard diversity of food retail
- Safeguard land for food
- Increase urban food production and distribution
- Redistribute recycle and compost food waste
- Protect key infrastructure for local food supply
- Increase markets for local food producers.

In the beginning of its activity Bristol FPC has been able to summarize and simplify these work areas on a very synthetic and simple message on Good Food being "good for people, good for places and good for the planet", in order to raise awareness and consensus among all the population. Indeed Bristol FPC invites all citizens, either individuals or businesses to sign the "Bristol Good Food Charter".
In 2013 all the work areas were re-elaborated into an action plan: "A Good Food plan for Bristol": "The good food plan advocates a 'food systems planning' approach for Bristol in order to build a food culture for the city that has the health of people and planet at its heart." (Source: Bristol FPC).

Many actions running in the city were already underway prior to the formation of the Bristol FPC and were brought forward for endorsement, taking place and making a renewed sense in an overall picture.
Indeed there are not specific budget lines to fund sustainable food projects and activities. National funding such as National Big Lottery's Local Food Funds supported three projects in Bristol. Many of the projects are light and financially autonomous. Many local people are engaged in supporting sustainable food systems at different levels: as public sector staff, community groups or individuals. They are all enrolled by Bristol FPC, or the network of food professionals Bristol Food Network, or at the moment the task force Bristol Green Capital, created to manage all the events related to the award "2015 European Green Capital".
Actions cover issues as diverse as:
- community food growing with urban agriculture projects run by charities, community organisations, local groups and social enterprises on land owned by Bristol City Council
- the redistribution of food destined to landfill and still edible by a local branch of a national charity specialized in redistributing surplus food
- empowering people to make better use of food, in one of the poorest neighbourhood of Bristol.
- campaigning to change the food culture.
- etc.

Bristol FPC is also working with Public Health Bristol on two specific issues: the strong correlation between health and food (9).

More recently it has got into urban food governance issues with a report based on interviews made to Bristol City Council staff (10). This report is a step forward and a useful contribution to highlight how city food policies can provide a platform for action that exemplify very straightforwardly to all citizens how the cities daily work for fundamental issues regarding their wellness and quality of life.
In particular it underlines how useful is a clear message, such as been the Good Food Charter, in order to effectively convince, not only citizens but also City Councillors, who have not been educated to understand the connections of food with the usual priorities of urban planners.

The role the Bristol City Council wants to give to itself is more to be a "catalyst" and "enabler" than a director. However City Councillors also recognize the importance to establish a leadership and to create internal mechanisms to coordinate all food related activities that can affect so many different sectors and functions in order to raise efficiency.
"The food system can be influenced but not controlled. The Council needs to act as a catalyst and enabler, creating an environment that supports small innovators (whether embedded in a community or independent entrepreneurs) in a wide variety of ways. The Council can strengthen its influence though a number of supportive actions including permissions, co-ordination, shaping projects and providing access to data, land or knowledge for third party projects."

Bibliography:

(8) Joy Carey, (2011), Who feeds Bristol? Towards a resilient food plan. http://bristolfoodpolicycouncil.org/wp-content/uploads/2012/10/Who-Feeds-Bristolreport. pdf

(9) Christina Maslen, Angela Raffle, Steve Marriott, Nick Smith, (2013), Food poverty - What Does the Evidence Tell Us?, "Food and planning developmental review", Bristol City Council. http://bristolfoodpolicycouncil.org/wp-content/uploads/2013/08/Food- Poverty-Report-July-2013-for-publication.pdf

(10) Food and planning developmental review. A report based on interviews with Bristol City Council staff about their work on food, May 2014. http://bristolfoodpolicycouncil.org/wp-content/uploads/2014/07/WHO-Food-and-

Case Study number 3

CITY FOOD POLICIES

FoodWorks: Innovative urban food programs in New York City

Author: Isabelle Lacourt
With the acknowledgement of Kim Kessler, Policy and Special Programs Director, Resnick Program for Food Law and Policy, UCLA School of Law.

City	**New York**
Country	**USA**
Population: city area	**8.4 millions**
Surface area	**1.214 sq. km** of which 784 sq. km of land
Green areas	**27%** of surface public parks, natural reserve, recreational and sport areas etc.

NY city has been leader in engaging innovative and remarkable urban food programs for many years under the impulse of Mayor Bloomberg. Elected from 2002 to 2013, he gave a strong importance to food issues, starting from the problems related to obesity epidemic up to the construction on a vision that embraces the whole food system in a Life Cycle Thinking approach, turned into the implementation of the bases for a comprehensive Food Metrics system. Besides this work a whole range of local laws and communication campaigns have framed a cultural change that turn healthy food into an essential and transversal element in the life of all New Yorkers.

Since 2007, the Mayor's office of Food Policy was established and has coordinated NY Food Policies. Today the question of a NY Food Policy Council is raised by several experts. Indeed, Food policy councils are a subject of great interest in the USA, especially during recent years. There is a growing desire on the part of citizens to be part of the policy formation process. The Community Food Security Coalition conducted a survey that highlighted the increase of FPCs in North America, from 111 in 2010 to 193 in May 2012. Indeed, continuity should be given to this office independently from the mayor's degree of sensitivity to food issues: moreover it should be enlarged to citizen and stakeholder inputs to generate more innovation and synergy.

A densely populated city merged in a grain-growing region

New York City (NYC) is the most-populous city in the United States, with an average population density of 10.000 inhabitants per km². Not only, it also welcomes 52 million tourists on an annual basis and half a million people commute into the city every day.
Throughout its history, the city has been a major port of entry for immigrants into the United States. Today, approximately 37% of the city's population is foreign born. There is a very high ethnical diversity, although three communities, Afro-American, Jewish and Puerto Rican are dominant in the city.

There is a high degree of income disparity among the population. NYC has the highest density of millionaires, whereas some boroughs of the city are very poor. As many other cities in the USA, it faces high levels of obesity among both adults and children. Over the years, economic pressures have tied obesity with hunger, both conditions that affect disproportionately poor populations. New York is well known to be a global hub of international business and commerce and one of three "command centers" for the world economy (along with London and Tokyo). Many major corporations are headquartered in New York City. High technology and biotechnology sectors are well developed, such as is the advertising industry. Other important sectors also include research, nonprofit institution and universities. The food-processing industry is the most stable major manufacturing sector in the city. Food making is a $5 billion industry that employs more than 19.000 residents. The city is embedded in a larger metropolitan area, one of the most populous urban agglomerations in the world, with more than 22 million inhabitants living in an area covering 34.490km².

NYC is part of the New York State (NYS) which has a rich agricultural heritage. Main productions are dairy farming, cereals (corn, soybean, wheat), field vegetables and potatoes, fruit trees. NYS statistics indicates a farm labour force of about 35.000 people, with an average age of the principal operator of 57. For 90 years, an independent association: the Regional Plan Association has been working to improve the New York metropolitan region's economic health, environmental sustainability and quality of life through research, planning and advocacy. In particular it tackles land-use planning related topics such as Community design, economic development, energy, environment, housing, transportation, etc.
NYS has a long tradition with food policies connecting agriculture and communities. In 1984, Governor Mario Cuomo launched the first New York State Food Policy Council, on Food and Nutrition policy. That Council included the leadership of seven state agencies, including Health, Education, Agriculture, Social Services departments. It also included a non-governmental advisory committee representing agriculture, nutrition, food production and consumer interests. In 1987, spurred by the Food Policy Council, the State adopted a Five Year Food and Nutrition Plan, linking an adequate food producing system in NYS with healthy food access to all the population.
The council ended after Governor's term. A second council was created in 2007 (see http://www.nyscfp.org/). Recently, a "Report and Recommendations by the Workgroup on Food Procurement - Guidelines to the: New York State Council on Food Policy" was released (2012). In 2013, the NYS CFP also conducted a survey on local food policy councils and organizations in New York State that focus on anti-hunger, farm, nutrition and other food system related issues. The NYSCFP has also created a Local Food Policy Workgroup to make synergies between government and grassroots efforts. In parallel, it is also supporting local food supply chains, giving value to local agriculture production.
Besides farmers' markets reinforcement to improve fresh food access to the State population, it has launched touristic promotion projects. Few stores have been open in strategic spots such as airports, highways to sell local food productions such as wine, spirits, cider, beer, maple syrup, cheese under the brand "Taste NY".

To go further:

New York City Food Policy Center's website : http://nycfoodpolicy.org/

NYC Food Policy: 2013 Food Metrics report http://www.nyc.gov/html/nycfood/downloads/pdf/ll52-food-metrics-report-2013.pdf

NYC Food Policy: 2014 Food Metrics report Available on http://www.nyc.gov/html/nycfood/downloads/pdf/2014-food-metrics-report.pdf

FoodWorks. A vision to improve NYC's Food System. http://council.nyc.gov/downloads/pdf/foodworks_fullreport_11_22_10.pdf

From the fight against hunger and obesity to a long term vision to improve NYC's Food System

Since the 1970s, the dramatic increase of obesity rate in both adult and children population has been a main food challenge faced by the city. The population of obese and overweight people reached 53% in 2002, and 56% in 2012 despite 10 years of active commitment from NYS and NYC. Over this 10 year period, it became clear that obesity challenge is intertwined with hunger, both correlated with poverty. Indeed according to a survey conducted by the Food Bank, 32% of the population had difficulty affording basic food in 2012, against 25% in 2002. It must be said that this percentage increased up to 48% at the peak of recession during last economic crisis, highlighting how much food security is critical for citizens' welfare.

Three initial priorities to contrast hunger and obesity.

Improving Access to Food Support Food Policies started to develop under Mayor Bloomberg administration in the early 2000s with the improvement of Supplemental Nutrition Assistance Program (SNAP, formerly called Food Stamps), a subsidy system for low income citizens. In 2002, 10% of the city's population received SNAPs benefits. In 2013, up to 22,5% of NYC population is now concerned by this program. Since 2002 many improvements have been done, either by NYS and NYC to increase the number of SNAPs recipients, reducing bureaucracy procedures (online applications in 2004, longer SNAP re-certifications in 2008), easing access to information (call centers open in 2008). The city also made efforts to increase SNAPs participation by doing a large scale data match to identify potential recipients not receiving yet food benefits, followed by outreach to those identified.

Improving retail access to healthy food The effort was not only made to improve food access in terms of quantity but also in terms of quality, by providing healthy food to lower-income populations.
In 2005, "Health Bucks" were introduced as pilot project in South Bronx area. These paper vouchers, worth $2 each, were developed and distributed by NYC Health Department District Public Health Offices to allow recipients to purchase fresh fruits and vegetables. As a long term farmers' market incentive program, they were extended in 2006 to other areas (Brooklyn and Harlem). They have been linked to a pilot electronic payment model, today widely used (11), by which the New York State Office of Temporary and Disability Assistance (OTDA) delivers cash and Supplemental Nutrition Assistance Program (SNAP) benefits to New York State's recipient population.
In 2006, the first Shops Health NYC, originally named Healthy Bodegas, were launched to contrast healthy food deserts in the city by increase nutritional offerings in at-risk neighborhoods. The project was implemented in different steps with the help of successive campaigns such as:

-"**Moooove to 1% Milk**". Participating bodegas agreed to carry more 1% fat milk, display posters promoting low-fat milk and distribute health information to customers. The campaign started with 15 bodegas and expanded to more than 1000.

-"**Move to Fresh Fruits and Vegetables**": the Health Department worked with 520 bodegas in Harlem, the South Bronx and North and Central Brooklyn to increase the availability, quality and variety of fresh fruits and vegetables.

- "**Star bodegas**". In 2008, the Health Department built on lessons from the 1% fat milk campaign and the fruits and vegetables campaign to launch the Star Bodegas program. The program works with select bodegas –star bodegas – to offer and promote a range of nutritious foods, such as fresh fruits and vegetables, low-fat milk, low-calorie drinks, whole grain bread, low-sodium canned vegetables and soup, and unsweetened canned fruit or fruit canned in its own juice. Star bodegas are also encouraged to offer healthy breakfasts and lunches including fresh fruit and water or low-fat milk, as well as healthier snacks, such as unsalted nuts and low-fat yogurt.
than other produce.

Still in 2008, the legislation for a new class mobile produce vendor permits was adopted : "Green Carts" offer fresh produce in NYC neighbourhoods with limited access to healthy foods in some specific areas in Bronx, Brooklyn, Manhattan, Queens and Staten Island. This measure reinforces the dispositive to open healthy food shops in areas with limited access to fresh fruits and vegetables (12). They are compatible with the municipal electronic payment system.

Increasing the nutrition content of food served by the city The city government has also worked over the nutritional quality of public food service. In 2008, it established standards in order to limit the use of salt and calories and to require minimum servings of fruit and vegetables in all meals served in schools, city government cafeterias, elder care and childcare facilities, city jails and prisons (over 2,5 million meals served daily). Such standards were extended to beverage vending machines in 2009 and to all food vending machine contracted by the city in 2011.

The City Health Code and Rules changed to require chain restaurant to post calorie information on menus. NYC intensified over the years its campaigns against obesity raising a great public attention; however it did not get a full consensus among the population and food companies. In 2012, organizations such as American Beverage Association, Teamsters, National Restaurant Association, etc. engaged a lawsuit to contrast the size reduction imposed by the NYC Board of Health on the containers of sugar-sweetened beverages. The city is now appealing against the decision of the judge who has ruled such plan invalid in first instance.

The Mayor's Office of Food Policy (MOFP)

This office was established in 2006 and leaded by a Food Policy Coordinator, reporting to the Deputy Mayor for Health and Human Services and collaborating with advocates and service providers. It also convenes the Food Policy Task Force, comprised of representatives from across City agencies and the City Council.

MOFP has been receiving funding from the City's Center for Economic Opportunity (CEO): CEO develops and implements evidenced-based programs aimed at poverty reduction. CEO's support of food access and economic opportunity programs includes the Health Department's Shop Healthy initiative (formerly the Healthy Bodegas program) and the Food Handlers' Certification Program (food safety issue).
It has also been working to create a broader food policy umbrella for existing and new programs, with the aim to oversee the City's effort on improving the sustainability of its food system, reducing programmatic overlap, fostering interagency communication, engaging stakeholders, and strengthening public-private partnerships.

NYC has released its strategy for sustainability since 2007: PlaNYC (www.nyc.gov/planyc). In addition, the Mayor’s Office of Long-Term Planning and Sustainability (OLTPS) was established since 2008 to coordinate with all City agencies to develop an efficient urban environmental strategy. Therefore several "PlaNYC Food-Related initiatives" have started to be mapped.

In parallel with the main MOFP’s achievements, the Office of the City Council Speaker, at that time Chris Quinn, produced a report "Food Works : A vision to improve NYC's Food System”, first published in 2010 and updated in 2013.

> “This FoodWorks plan explores some of the ways in which the many pieces of our complex food system are interconnected, sets goals to help us make better choices, and presents a blueprint for some initial steps, both large and small, that can make the system stronger and more sustainable for generations to come.”

The first report gives an update of all NYC food projects already running and an overall picture of food insecurity causes. As a roadmap, it lists all opportunities raised by a more sustainable food system based on 1- the availability of healthy affordable food for all citizens; 2- the support to local economy through the development of a regional food supply chain that contributes to mitigate environmental impacts. It follows a methodology of action that considers five pillars of food systems within a Life Cycle Thinking approach: agricultural production, processing, distribution, consumption and post consumption. For each of those it outlines long term goals, related strategies to reach such objectives and specific actions.

Although it does not constitute a binding policy, it has been an important milestone because health concerns, initially at the origin of actions to improve food consumption in NYC, have been starting to be articulated and integrated with environmental concerns.
The second report presents all achievements, recommends further strategies for all 5 pillars and introduces a food metrics system formalized in 2011 by the Food Metrics Act. Indeed, 19 indicators were identified by October 2012, and the conclusion of the second report of Food Worksis asking for the improvement of such metrics system as a process to develop further the NYC's Food System.

Food metrics: to assess leverage actions' efficiency.

Reporting on NYC anti-obesity efforts

To end hunger with a food distribution system based on charity is a cost for the whole society. To end it with healthy food costs even more. Same is to create a culture of change. Benefits of such strategies can only be seen in a long term period. Obesity is ever a trickier challenge. Indeed some people argue that food choice is a personal matter.

Its strong efforts to contrast obesity, in particular among children, place NYC among the few cities reporting childhood obesity decline within the last years. Between school years 2006/2007 and 2009/2010 obesity rate was reduced from 21,5% to 20,5%, leading to an obesity decline of 5,5% (13). Making healthy food available in schools and communities were the two main leverages. To give an idea about the work achieved, and the necessary investment, these are some of the actions described in the Interim Progress Report on the New York Obesity Task Force (14):

- 125 $2500 grants awarded in 2012-2013 to develop wellness councils and activities in schools
- 789 water jets in schools to reduce soda consumption
- 350 school garden grants
- 1379 salad bars in school restaurants
- 3482 teachers of elementary schools trained to do proper physical activities courses
- 300.000 visitors to the free physical activity programs in City parks
- sake walking corridors close to schools

These actions are summed to those addressed to the whole population to encourage healthy eating, and to promote physical activity. However despite all these efforts, over the period 2002 – 2012 obesity among adult population increased from 18 to 24%. These figures show how expensive it is, on a long term basis to get only the hope to reverse the trend.

But the increasing awareness about the "hidden" costs either on environment or on health of such global food system has been a strong leverage to induce more and more decision makers to change overall vision on food and implement more sustainable food systems during last decades.
For instance, the Bloomberg administration was very active to frame this issue by switching it from an individual concern to a collective one, highlighting in particular obesity fallouts over all city taxpayers, reaching 4 billion dollars, to cover part of health expenses.

The role of public plate.

It is impossible today to measure those hidden costs with the same immediacy and accuracy than it is for the cash flows. Still a strong effort needs to be done to develop suitable metrics to report as accurately as possible on the effort to improve food systems. To create a Metrics system is one of the major challenges that are faced today by those who want to justify public investment in sustainability. NYC Food metrics system is based on 6 issue areas among which City Food Purchasing and Food Service.

NYC highlights the role of public plate as a lever (15), not only to improve health but also to support local and regional agriculture and food producers and to create stable jobs.
For instance the department of education, whose annual budget is over 420 million dollars, is the second institutional purchaser in the USA, just after the US department of Defense.
NYC serves approximately 260 million meals and snacks per year, in schools, senior centers, homeless shelters, child care centers, after schools programs, correctional facilities and public hospitals.

In 5 years, from 2008 to 2013, due to a very strong effort from all municipal agencies concerned, 89% of these meals have been complying with the Nutrition Standards established by the city, aiming a reduced use of sugar and fat and an increase of fruit and vegetables. In addition to promoting healthy eating patterns, a set of guidelines have been added in 2012 to the public procurement law LL50 of 2011 to increase seasonal and local food provision.

Financial constraints limit the City's ability to achieve food security and healthy food objectives. As the number of meals being served is enormous, even a single penny per serving in additional cost can be prohibitive.
Amounts over $100.000 may involve Competitive Sealed Bids. City agencies are required to take the lowest bid from a reliable and responsive bidder. Smaller agencies that contract with the City may purchase directly from wholesale or even retail vendors. As soon as spring 2013, local preference was acknowledged in food bids solicitations.
The table 1 highlights the budget of public food service to purchase local food. In 2013, the overall budget of agencies Dept. of Correction (DOC) + Administration for Child Services (ACS) + Dept. of Education (DOE) reached the amount of 25.000.000$. Only DOE has spent 0,14$ to buy local/seasonal food, for each of the 172.000.000 meals and snack served.

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Table 1: Amount of local food purchased by different City Agencies in 2013, in the city of New York.

local food	DOC: Dept. of Correction	ACS : Administration for Child Services	DOE: Dept. of Education
dairy	250.000$	-	-
fresh fruit and vegetables	576.000$		20.800.000$
produce			3.800.000$

These figures highlight the economic leverage of public procurement. By comparison, the Health Bucks program which gives a free 2$ coupon to buy healthy food in 2011, led to an amount of sales of fresh food in farmers' market of 973.621$. Indeed instead of 2$ given in pure gratuity, as in the case of Health bucks the public agencies shift a part of their budget to a specific range of suppliers.
It is clear of course that although these different systems reach specific and synergic objectives and are all necessary for different reasons, however, in the case of public procurement, the economic strength of large buyers can be used to build up sustainable local food systems.

"Increasing enrollment in the NYC School Lunch Program by 15% would create 883 new union jobs." (Source The Public Plate in NYC. A guide to Institutional meals) , thus adding to the City's tax base.

Sourcing from nearby farms also keeps the money in the region, and helps farms remain in business. Participation in federally funded meal programs draws in federal dollars to circulate in the NYC economy. However, the conflict between budget constraints and stimulation of the local economy arises every time a distant supplier offers a cheaper price than a nearby source.
Institutional meals participate to the consolidation of wholesale distribution services initially designed to deliver local fresh food to grocery stores, bodegas, restaurants, caterers etc. According to Greenmarket Co:

> " In the beginning, the team anticipated that restaurants and specialty retailers would drive sales, but increasingly much of their business is derived from sales to institutions (this year institutional sales are expected to surpass orders to restaurants). This shift can be attributed to the outreach Greenmarket Co. engages in over the winter months to promote the program, the high volume of food required by institutions, in addition to the consistency of their ordering. Public and private institutional clients include eight DFTA-funded senior centers, soup kitchens, food pantries and other nutrition assistance programs. In all, since launching the program in 2012, Greenmarket Co. has distributed more than 115,000 pounds of food to 19 institutions – purchases that account for more than $70,000 in income for regional farmers" (Source The Public Plate in NYC. A guide to Institutional meals).

Besides food procurement other investments are necessary to allow that public plates are filled with healthy and good food. Among the main projects:

- Food delivery is another strong challenge to improve the service. Most NYC schools have only enough storage space for a few days food; they require delivery 2-4 times a week for basic items, and daily for bread and milk. While the DOE is able to negotiate very low prices for the food items it buys in large quantity, much of the saving is eaten up by "conveyance charges", charges that vendors add to compensate for the time or effort needed to deliver food to the site. Therefore to increase food storage would allow to optimize food delivery and by consequence to reduce environmental impacts related transport.
- The city is also investing to improve kitchen equipment to facilitate the compliance of Institutional meals with Food Standards. For instance salad bars have become a popular strategy for increasing fruit and vegetable consumption in schools, but they require very specific equipment in order to meet health and food safety regulations. Since 2004, the City has installed more than 1.300 salad bars in its schools; it is on track to offer a salad bar in every school by 2015.
- About the question of food waste, the use of standardized recipes and many pre-cut products reduces on-site waste. Plate waste is not returned to the kitchens, but food service administrators watch which items are not being consumed to the degree they should be and make menu suggestions in light of these observations. A recent 30% reduction of the amount of hot cereal available is an example of such a change.

Bibliography:

(11) Sabrina Baronberg, Lillian Dunn, Cathy Nonas, Rachel Dannefer, Rachel Sacks, (2013), The Impact of New York City's Health Bucks Program on Electronic Benefit Transfer Spending at Farmers Markets, 2006–2009, "Preventing Chronic Diseases", 2013; 10:130113. http://dx.doi.org/10.5888/pcd10.130113 External Web Site Icon

(12) Ester Fuchs, Sarah M. Holloway, Kimberley Bayer, Alexandra Feathers, (2014), Innovative Partnership for Public Health: An Evaluation of the New York City Green Cart Initiative to Expand Access to Healthy Produce in Low-Income Neighborhoods, p. 9, Columbia University School of International and Public Affairs Case Study Series in Global Public Policy: 2014, Volume 2, Case 2. Columbia SIPA School of International and Public Affair. https://sipa.columbia.edu/system/files/GreenCarts_Final_June16.pdf

(13) Declining childhood obesity rates – where are we seeing the most progress?, (2012), "Health Policy Snapshot Childhood Obesity", Issue Brief; Robert Wood Johnson Foundation. http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2012/rwjf401163.

(14) Reversing the Epidemic: The New York City Obesity Task Force Plan to Prevent and Control Obesity, May 31, 2012. http://www.nyc.gov/html/om/pdf/2012/otf_report.pdf

(15) The Public Plate Report in New York City. A Guide to Institutional Meals. New York City Food Policy Center at Hunter College, 2014.

Case Study number 4

CITY FOOD POLICIES

Towards a sustainable Public Food Service in Copenhagen using the lever of education and training.

Author: Lenny Martinez
With the collaboration of Anya Hultberg, Organic Consultant, Københavns Madhus (Copenhagen House of Food)

City	Copenhagen
Country	Denmark
Population: city area	541.989
Population: metropolitan area	1,95 millions
Surface area	74,4 sq. km
Green areas	22,6 sq. km

The original contribution of the City of Copenhagen is to demonstrate how it is possible to predispose a leverage effect of public food service to improve food consumption among the population, with a specific focus on the children and teenagers.
By contrast with other cities that plan to reinforce sustainable food production, Copenhagen is focusing on food consumption and foresees the role of Public Food service in food education.
With an annual investment below 2% of the total food expenses, paid in over 10 years and including a permanent structure, the city has created an innovative training resource to empower municipal staff, starting from cooks, to be able to prepare high quality meals with organic ingredients, without increasing the price. Indeed the city has chosen to invest more in human resources and know-how, by setting people at the centre of economy.
The small size and high number of public kitchens is certainly an important factor to explain the high and rapid increase of organic food served in the public canteens managed by the city but it is interesting to see that Copenhagen, by achieving its ambitious target on organic food consumption, is now looking beyond. Københavns Madhus, (Copenhagen's house of food) is now ready to disseminate its method, by working for other structures either private or public, in and out of Copenhagen. The procurement office is looking for a more precise definition of sustainable food to
be used within public procurement tenders (sustainable is not only organic), opening new horizons by getting more diversity, quality and local food served, within the framework of the EU procurement regulations.

A rural-based gastronomy and a strong commitment to develop organic farming in Denmark

Denmark has a long history of exporting agricultural products of the very highest quality: Danish farmers produce an amount of food sufficient to supply 15 million people every year - three times the Danish population. However, only recently the country has become known internationally for its gastronomy. Recent trends, the epicentre of which is based in Copenhagen, have stimulated people's interest in a cuisine still rooted in the farmer's traditions, governed by the need for nutrition and the use of products available from nature. Potatoes, rye bread and salted meat are at the centre of most meals.

Organic production was given priority by national government for more than 25 years. Denmark has been the first country in the world to establish, since 1987, governmental rules for organic production as well as official inspections of organic foodstuffs and producers. Today, 7% of agriculture production is organic and Denmark imports around 40% of organic food for domestic consumption (see more). Basic foods like oatmeal, milk and eggs remain the most popular organic products. Thus, 36 % of all oatmeal, 35 % of all milk and 26 % of all eggs sold in Denmark are organic. According to the latest statistics from the Research Institute of Organic Agriculture (FiBL), Danish consumers purchased organic products averaging a value of 142 € *per capita* in 2010, ranking Denmark second in the world, after Switzerland (see more).

According to a research published in 2012, the sales of organics among Danish canteens, restaurants and institutions doubled within the last three years. as indicated by the latest reports of the 15 largest food service companies in Denmark, and Økosalg og Oplysning, an association of Danish organic producers with subsidy by the EU and the Danish Ministry of Agriculture. Therefore, despite the financial crisis, the organic products segment is a growing market, mainly due to public food service. The sales of organics among catering centres in Denmark reached almost 134 million euros, while the overall sales of organics doubled within three years, having raised from 61.1 million euros in 2009 to 123 million euros in 2012. The research also indicates that organics are especially popular among canteens and public institutions. In this way, organic sales among catering centres are split up as follows: 32 % canteens, 33 % public institutions, 16 % restaurants and hotels and 20 % other consumers.

The authorities support the organic sector by purchasing organic products for public sector institutions such as schools. In 2009 the Danish Ministry of Food, Agriculture and Fisheries created an Organic Eating Label for catering awarding three categories according to the percentage of organic food: bronze, (30-60% organic ingredients); silver (60-90% organic ingredients) and gold (90-100% organic ingredients); and restaurants serving at least 30% 'organic' raw materials can use the Danish mark of inspection for organic products, a characteristic red `ø´ symbol indicating significant amount of organic food. In January 2013, 343 catering establishments carry this organic food logo in Denmark. So far, the list of locations with the logo is dominated by canteens (32 %) and institutions such as hospitals, nursing homes, kinder gardens and schools (33 %), followed by restaurants and hotels (16 %). 234 establishments have been awarded the logo in bronze (30-60% of the food served is organic); 68 have the silver logo (60-90% organic food), and 41 display the gold logo (90-100 % organic food) (see more) .

To go further:

-Dogme 2000: A manual on a municipal environmental cooperation in progress. This manual is the result of the work in the Dogme Life project 25 October 2007 (www.dogme2000.dk)

- Eco Metropolis Plan: our vision for Copenhagen, 2015 http://www.proyectomilenio.org/documents/10156/52626/Copenhaguen+2015+EcoMetropolis.pdf

- European Green Capital award http://ec.europa.eu/environment/europeangreencapital/winning-cities/2014-copenhagen/

- Web site of the Copenhagen House of Food http://en.kbhmadhus.dk/servicenavigation/about-us/about-the-copenhagen-house-of-food

- "The Copenhagen organic project, to foster sustainability into public food service." https://www.youtube.com/watch?v=3UB-U0S_3A4

The Copenhagen strategy for urban resilience and sustainable development: a food policy rooted in 'Eco-metropolis – Our vision for Copenhagen 2015'

Copenhagen strategy is based on 'Eco-metropolis – Our vision for Copenhagen 2015' decided by a unanimous Copenhagen City Council in November 2007. In concrete terms, the city is member of DOGME 2000 a Danish network of cities which is enlarging to a larger Baltic area. These cities with a green profile collaborate on sustainable urban development, on the basis of the Aalborg commitments, by sharing good practices. Eco-metropolis vision is based on four pillars : World's best city for cycles, carbon neutral, green and blue, capital city, clean and healthy capital city. This strategy, as well as the consistent environmental standards achieved, was awarded in 2014 the European Green Capital Award.

Despite food policy is not explicitly mentioned, food-related environmental indicators fit into a variety of current municipal visions such as Copenhagen Eco-Metropolis 2015 and the Copenhagen 2025 Climate Plan. Copenhagen's vision is to become an ECO-Metropolis by 2015. The goal for organic conversion of public kitchens is a key part of this vision. Eco Metropolis 2015 vision started in 2007 with such objectives:

- 50% bike to work (currently 35%)
- CO_2 emissions lowered 20% compared to 2005, (currently reduced 24%)
- Clean air for citizens
- 90% of citizens should be able to walk to a park or sea-swimming pool within 15 minutes- (currently 60%-70%)
- 20% organic private consumption currently 16% (7% nationwide)
- 90% organic public consumption (currently 74, 5%).

According to the national commitment to support organic agriculture, two main objectives were identified within the mainstay "Clean and healthy big city"

1. 20% organic food in the city's food consumption
2. the city leads the way with at least 90% organic food in its institutions. For instance, the project "Copenhagen Healthy School Meals", initiated in 2002 as part of Dogme 2000, was inspired by experimental programs ran at the beginning of Nineties in others small municipalities around the capital. It is based on environmental concerns: to reduce pesticides risk of drinking water and on nutritional requirements to encourage children to have a real meal at school instead of sandwiches.

Meeting the objective of 90% organic food in public food services without increasing the cost of the meal.

To shift from conventional to organic food and meet such an ambitious quantitative objective, the city chose not to implement a permanent increase in the budget devoted to food. Instead of paying forever the cost of the so-called "substitution" due to the price gap between organic and conventional meals ingredients, the city preferred to invest in a "tool" to facilitate a process of conversionwhich has required a deep change in the meal preparation and consumption and a complete reorganisation in the existing practices of food production and purchasing. Indeed, The organic goal in Copenhagen (90% for 2015) will require added funds, since the central kitchen for elderly homes is already thoroughly rationalized. Most kinder gardens have already successfully met these objectives. They were among the first public institutions to go through the "organic process" at the beginning of the 21st century. The city of Copenhagen estimates that such a conversion process has taken 10 years and cost 7,1 million €, included the launch of a permanent structure: the Københavns Madhus (Copenhagen House of Food), whereas the overall food budget of a single year is 40 million €. Now that the investment is done, the city is able to provide a higher quality service without increasing food budget.

The Københavns Madhus: a method summarised in ten basic principles to change public meals system

Københavns Madhus is an independent, non-commercial foundation established by the City of Copenhagen in 2007. It inherited the "Copenhagen Healthy School Meals" (see above) and has been working over the 900 public kitchens preparing meals for the city public food services in kindergartens, schools, social institutions, elderly homes and staff restaurants,

Therefore, the Danish Minister for Food, Agriculture and Fisheries, Mette Gjerskov, has presented a new programme, aiming to increase the use of organic ingredients in the entire public sector in Denmark by 2020, based on the organic success of Copenhagen and other, smaller, municipalities in the vicinity.

> We are a vehicle for change, facilitating projects, providing consultancy, courses, supplementary training, communicating and much more, all in the area of public meals. We are approximately 35 employees - chefs, food specialists, generalists, teachers, project managers, communicators, ethnologists, designers etc. We have many years of experience in organic conversion of public kitchens, and most of us spend a considerable amount of our time, not behind our desks, but facilitating the process towards better public food, as agents of change on the kitchen floors of Copenhagen municipality."
> (Source: Web site of the Copenhagen House of Food - Københavns Madhus)

Kitchen Lift", a tool for change in kitchens

Table 1: a network of 900 kitchens in the city of Copenhagen

Kitchen size	small	medium	large
Number of meals prepared per day	100 - 200	500	3000 partially prepared meals
Description of services	Kindergarten, day care facilities for disabled and mentally ill persons	Elderly home, school canteens, city hall restaurant	Elderly home, school canteens, home care
Number of municipal kitchens	≈ 800	75	2
percentage of organic food per meal	90 %	60 - 70%	75% (school meals) - 22% (elderly meals)
Number of suppliers	1	5	>5

The table 1 displays the diversity and the high number of kitchen managed by the city. A quality assessment programme has been launched in 2007 Most kinder gardens have already successfully met these objectives of the organic goal in Copenhagen (90% for 2015). They were among the first public institutions to go through the "organic process" (16, 17)
It took two years to identify potential areas of meals' improvement in food preparation, ingredient's quality, meal environment, nutritional value according to target groups and good working conditions. Although only very few institutions were able to meet the maximum of requirements at the very start, a general assessment of public food service quality could be made. Institutions with excellent rating received diplomas within a yearly official celebration taking place in the City Hall.

This program allowed the Københavns Madhus to develop a method suitable to produce a meal with 90% organic food without increasing the cost respect to a conventional meal. Such method is widely applied, excepted in the two largest kitchen producing 3000 meals per day, which serve "only" 60 to 70% organic meal. The method is mainly based on buying seasonal food and preparing meal courses from scratch; a particular attention is also paid to food waste and leftovers.
Ten principles have been defined. The staff working in Københavns Madhus are fully aware that the true potential of the methodology is to open wider perspectives of deep change and progress that go far beyond organic food quantitative objectives for public food service.

The 10 basic Principles of Københavns Madhus

1. Less meat and different meat – use the whole animal, also the cheap cuts
2. More vegetables – greens in season - diversity
3. More potatoes – better potatoes
4. Fruit in season - fruit alone is not enough
5. More or different use of bread and grains
6. Beware of the sweet and expensive
7. Composition of the menus - difference between every day and feast
8. Old housekeeping virtues - Rational kitchen operation (less waste)
9. Critical use of full-and semi-manufactures, more ingredients
10. Find the weak point, one or more of the above

Urban agriculture, still in infancy

By contrast with the Public Food Service project in which the municipality adopted a clear action plan with specific infrastructure and methodology, the City of Copenhagen is unsure about urban agriculture relevance for its own food security because of the low potential regard to food quantities and also because of the level of pollution which can interfere with the quality of the food. A standard law called the Jordforureningsloven, or Soil Contamination Act (§8 and §72b), is used to regulate the environmental and human health aspect of the practice, as a precautionary principle: according to this law, all soil in Copenhagen is contaminated to a certain degree, and people in charge with urban agriculture project must apply the Act by cleaning the soil, laying asphalt or gravel, but also using raised beds, gardening on rooftops or growing in soilless mediums.

However, beyond food production, a positive role of urban agriculture is foreseen, as a catalyst of social integration and environmental educational. The Copenhagen School Garden Association has played a historical role in shaping political support for urban agriculture since the beginning of the 1900s. The school gardens are well-integrated into school curriculums and provide experiential learning for children. The municipality chose to use a “demand driven” approach according to the will of citizens, providing support for projects along with affiliated partners such as the Local Agenda 21 Centres, Local Committees and Copenhagen City and Port Development.

Educating and empowering future generations

Although public food service improvement concerns indistinctly all eaters, from children at schools, to adults in staff restaurants and also elderly people living in nursing or retirement home managed by the city, school meals represent a specific challenge to create a framework for healthy decisions and food habits, even later in life.

Traditionally, school meals are not part of Danish culture: children were mainly used to eat sandwiches and teenagers above 14 are allowed to leave the school, and often chose to eat nearby the school, in a commercial restaurant. At the beginning of the project in the early 2000, very few schools were offering warm meals and have a proper canteen. Even if more schools now have a canteen, many children still bring from home a lunch box; only 20 to 25 % of the pupils are buying the organic school meals proposed daily in the municipal schools.

Parents can order meals until 10am using a website where they also find information about school meals, including organic ingredients for instance. Meals are partially prepared in one of the two central kitchens, transported overnight in the schools where school staff heat them and prepare basic complements such as rice, pasta etc. To cope with the lack of infrastructures, it is not unusual that meals are served in the classrooms and that elder pupils themselves bring the food to the youngest.

Eat-Cuisine: accommodation to context and ambition of food education

EAT program started in 2009, to develop an enjoyable, healthy food culture in schools, able to compete with the fast food of the streets and to give the students a sense of satisfaction to the teenagers.

Although EAT meals contain 75% of organic products, food taste is the key issue, to attract the students, whereas parents appreciate that their children receive a balanced meal.

32 schools have access to readymade EAT menus offering the choice between two different hot meals and one sandwich every day (all well nutritionally balanced for children). Meals are cooked every day, by specifically trained staff, from scratch, with seasonal products in one of the two central kitchens and delivered in the schools. The program has become a success story in Copenhagen and the House of Food plans to expand the programme to others municipalities.

Food schools

A new model of school organisation has been experimented in seven schools, which focus on food and meals. The model goes beyond introducing a kitchen and a restaurant. The students are involved in the whole process from menu planning and production to the presentation of the actual meal. The schools are daily producing meals in their own kitchens and have food, meal culture as a central part of their curriculum. The menus are prepared by the chef of the kitchen and validated by the municipality also according to nutritional value. They are used as "laboratories" testing new ideas which can be replicated in other schools in the city and at day-care centres. The next step is to increase the number of food schools, and due to the success the city has committed that any new school built in Copenhagen would join such program.

Bibliography:

(16) Bent Egberg Mikkelsen, (2008), Public food systems strategies to protect environment, soil and groundwater – the case of organic food in Copenhagen, Summary of paper to the “Agua y Alimento Sostenible”, Seminar 4th of July 2008, Expo zaragoza 2008.

(17) Bent Egberg Mikkelsen, T.D. Olsen, (2009), Organic foods in Danish municipal school food systems – a multi stakeholder analysis of available evidence on constraints and perspectives, Aalborg University http://orgprints.org/16550/1/16550.pdf

Public Food Service: a kitchen in Copenhagen. © Risteco
www.youtube.com/watch?v=3UB-U0S_3A4

Case Study number 5

CITY FOOD POLICIES

Paris Improving food system sustainability through the supply chain challenge.

Authors: Lenny Martinez, Isabelle Lacourt
With the collaboration of Lise Dano, Head of the ecodevelopment division of the Agency of Urban Ecology of the City of Paris.

City	Paris
Country	France
Population: city area	2,27 millions
Population: metropolitan area	6,7 millions
Surface area	105,4 sq. km
Green areas	23,14 sq. km

Since 2007, the City of Paris has engaged a deep reflexion on its environmental impacts, looking first of all at the greenhouse gas emissions and scanning all activities likely to be improved. For that, it has created a specific agency with a double role, to provide an environmental showcase for the population and to implement the environmental action plan. In one hand, the city gets involved with the population and the civil society to trigger and support the blooming of small projects through the network "*Acteurs du Paris Durable*". In the other hand, it develops a series of action plans, to lower greenhouse gas emissions, reduce waste, foster biodiversity, encourage organic agriculture in surrounding agricultural areas and introduce organic and labelled food in Public Food Service.

The city of Paris aims to reduce the cost increase due to organic food. However, since it is not directly involved in meal preparation which is entrusted to the different boroughs of the city, it is investing efforts to plan the implementation of framework tools that allow to optimize logistics and improve the offer and availability of sustainable food (local, organic and quality labelled food) for the public food service.

In the largest French city, the leverage power of Public Food service appears very clearly, as well as its capacity to drive the market due to the enormous quantity of food simultaneously needed.

A densely populated city merged in a grain-growing region

Paris is the administrative capital and most populous city of France. Situated on the Seine River, in the north of the country, it is at the heart of the Île-de-France “Capital” region. With a cosmopolitan population of 2.268.265 inhabitants, this densely populated city is surrounded by a metropolitan area that is one of the largest population centres in Europe. Since 1860, the city is divided in 20 boroughs or arrondissements. Offices and administration buildings are concentrated in the western and central areas, whereas the city's population is densest in the northern and eastern boroughs (up to 42.138 inhabitants per sq. km in the 11th arrondissement). The city is one of the most popular tourist destinations. International capital of style, luxury and arts, it is also the main business centre in France.

Few insights on agricultural production and food consumption

The region Île-de-France counts around 12 million inhabitants and represents 19% of the total French population. By comparison, the « Great London » gathers “only” 13% of the national population. 19,8% of total food expenses are made to eat at home (except alcoholic drinks) and 26,7% of total food expenses, to eat out of home. Indeed out of home food consumption is also increased because of the 40 million tourists that come to visit this place every year. Despite this “Capital” region can be characterized by a strong urban influence, 48% of the regional area is covered by farms producing mainly cereals and represents 1% of the total number of farms in France. It imports and exports agricultural and food products, with a negative overall balance of 1,300 and 3,800 million euros respectively.
The Île-de-France food industry is generally disconnected from the local agriculture. The most important food processing industries are bakery and pastry, meat, beverage and dairy industries and they do not use necessarily raw materials locally produced which are mainly exported in other regions where the demand is higher. Food industry is rather fragmented all over the territory, which increase the cost of logistics as well as does frequently congested traffic that makes particularly difficult to supply goods in the city of Paris.

Organic food supply chains in Île-de-France

Between 1998 and 2007, the number of organic producers in region Île-de-France multiplied by 2.6 and the productive areas by 6. In 2011, 1.4% of agricultural lands were used to produce organic food against 3.5% at national level. To support existing organic farms and foster conversion to organic farming, this territory has implemented specific plan to develop organic agriculture (PARC-Bio) to raise awareness among farmers, foster conversions and new organic farms, to provide technical and administrative support and to organize supply chains. In parallel, it also gives funding support directly to organic farmers.
The biggest production is cereals, just as for the conventional farming. Actually fruit and vegetable production is booming. Dairy and meat productions are quite limited.
As the demand is bigger than the offer, producers often prefer to sell their products to the highest or easiest bidder, which is not generally the public food service but other markets such as the wholesale market: Rungis or directly to the consumer through box schemes.

To go further:

- http://www.acteursduparisdurable.fr/

- Synthèse Plan de développement de l’alimentation biologique dans les restaurants collectifs municipaux et départementaux, Ville de Paris, Février 2010

- Synthèse Direction de la Propreté et de l’Eau, Mairie de Paris, février 2012. Programme local de prévention des déchets de Paris

- Synthèse « Politique de l’offre alimentaire en Île-de-France » Diagnostic 2012, publication en mars 2013

- Le Paris d’une alimentation durable dans la restauration collective, Edition 2012

- Presentation of “La ferme de Paris”, dedicated to sustainable food production: http://equipement.paris.fr/ferme-de-paris-6597

- Vers une restauration collective durable en Europe : le cas de Paris. https://www.youtube.com/watch?v=3UB-U0S_3A4

The Agency of Urban Ecology: a tool to implement sustainability

The Agency of Urban Ecology (l'Agence d'Écologie Urbaine)

The city of Paris has created the "Agency of Urban Ecology" to anticipate changes in the environmental management of the territory on many aspects: climate, biodiversity, noise prevention, etc. This agency is divided in several departments working on different urban environmental plans and projects. The Eco-development department is in charge of sustainable food projects and plans.
Besides the agency, a Committee of orientation involving authoritative experts in environment, sustainable development and behaviour change validates the methodologies of work. The project "Acteurs du Paris durable"
gathers numerous local associations, institutions companies, bloggers and specialized media to disseminate good practices and extend the network.
The Agency has a network of five different poles for the dissemination to the population: the house of the air, the farm of Paris, the house Paris-Nature, the house of gardening and the house of the Players of Sustainable Paris.

The Climate Plan

Within the Climate Plan, adopted in 2007, the city of Paris has set a quantified objective to reduce its greenhouse gases emissions by 75% in 2050, respect to the level of 2004. This action plan encompasses numerous areas such as mobility, housing, urbanism, resources' management, waste management and food. The expected interim targets for 2020 aim at a 30% reduction with a major use of renewable energies, as well as energy savings with the municipal fleet and street lighting. This Climate Plan has also set the target of **+15%** of organic and/or local food in 2008, **+20%** in 2010 and **+30%** in 2014).

A local program for waste prevention

This program was launched in 2012 to reduce the quantity of household and similar waste by 7% in five years, corresponding to a saving of 69 thousand tons of waste that are not transported to the municipal landfill. Such objective also includes reducing food waste and fostering composting.

The Biodiversity Plan of Paris

It was adopted in 2011, after participatory workshops that generated about one hundred proposals. It is the result of a cooperation that, throughout its development, has brought together experts, citizens and elected officials. It links this environmental objective to the dual requirement of democracy: citizen participation and social justice. It is based on a White Book (18).
Three major axes were defined:
1- to connect the green areas in the city with the larger natural spaces in the region, thanks to habitat and wildlife corridors;
2- to integrate the living environment into all domains of municipal action;
3- to create an observatory for local biodiversity.

A development plan for sustainable Food in Public Food Services

This plan was elaborated in 2009 and launched in the beginning of 2010 in public food services managed by the municipality (school canteens, elderly houses, administration restaurant…) to reduce the environmental impacts of Public Food Services and improve the quality of meals for everyone. It has been developed and is managed by the Agency of Urban Ecology in collaboration with public food service managers. All the implementing operational services meet within a technical follow-up committee. The action plan relies on a network of several correspondents moderated by the Agency of Urban Ecology.
Three lines of work have been identified:
1- Strengthening demand and giving support to the buyers
2- Structuring the organic food supply chain in Ile-de-France;
3- Training and communication.

Therefore the plan provides the development of tools, such as guideline, training and meetings, for instance, to enable buyers to purchase sustainable food. At longer term, it will lead to the implementation of rationalisation process such as systems for centralised purchasing, logistics' optimization, and carbon footprint measurement. For the supply side, the plan indicates the support to agricultural development projects that increase organic agriculture, especially in areas close to

to agricultural development projects that increase organic agriculture, especially in areas close to catchments that provide drinking water.
This action involves the municipal company: Eau de Paris which manages water supply in the city.
The city also launched an action plan against food waste in the canteens, starting with a diagnostic in 12 schools of five boroughs.

The objectives integrate those already presented in the Climate Plan (up to 15% of organic and/or local food in 2008, up to 20% in 2010 and up to 30% in 2014), confirmed by the roadmap of the Mayor: up to 30% sustainable food (organic and/or local and/or labelled food) in public Food Service within 2014, although such target is very ambitious, as such food products are currently insufficiently available. In practice, the target of 20% of sustainable was reached in 2012.

The carbon foot print (Etude bilan carbone) of Public Food Service

A carbon footprint study was made on three kindergartens and three primary schools selected in 11th , 14th and 17th arrondissements . Among the parameters taken into account: agriculture, food processing, and transport from production place to kitchen and storage, including cold storage, energy consumption in the kitchen, transport of meals between the kitchen and the restaurant, waste management, and other operating equipment. The study indicates that 80 to 90% of greenhouse gas emissions (GHG) are induced during food production and processing, prior to meal preparation. The other GHG are produced by packaging (3 to 8%), transport (3 to 5%), food industrial processing (1 to 3%), energy consumption in the kitchen (1 to 3%) and refrigerants (1 to 3%). The other impacts (use of cleaning products, waste management, transport between the kitchen and the restaurant) count for less than 1% of total GHG.
In terms of recommendations, the study evidences that if a vegetarian meal is introduced once a week (no fish, meat or eggs) and if ruminant meat is only served once a week, then it could be possible to reduce GHG of 30% for the whole public food service of the city (meeting therefore the target of the Climate plan).
A simulation tool was developed in 2012 to help the staff to create balanced menus that minimize greenhouse gas emissions, but not only: among the criteria tested, there are also seasonality, organic vs. conventional farming, geographical origin, and packaging. Such tool is essentially used to increase awareness. It has been recently published on internet on the website of Acteurs du Paris durable.

Work in progress projects

The ambitious targets set for 2020 to serve 50% of sustainable food (organic or with fair trade or quality labels) have lead the city of Paris to widen the reflexion to the consolidation of the food supply chain starting from the production of organic food, the facilitation of purchasing processes and the optimization of the last mile logistics which is a crucial issue for the city. Indeed the gradual move of logistics platforms towards the inner and outer suburbs are resulting in the increase of the number of vehicles transporting goods, with negative impacts on traffic and environment.

The mobility plan: All municipal transport activities including commuting, staff traveling habits, deliveries of supplies have been evaluated. A survey done in 2011 allowed to better understand freight Transport and delivery practices, to evaluate volumes, frequencies, vehicles, according to the kind and the value of goods, (perishable, dangerous, etc.), the way of delivering (outsourcing or for own account), the urgency or any other procurement rules.
In the case of public food service related transport, the following recommendations for improvement have been proposed: to shorten delivery times (24 hours) to warrant food freshness, to use vehicles with the latest Euro standard implemented, to optimize delivery itineraries, to deliver goods during off-peak hours, to reduce packaging, using bulk supplies, to encourage packaging recycling by suppliers.
The construction of a city food hub to allow suppliers to deliver goods in a single place and a uniform computer system to optimize the last mile delivery in the different kitchen city are under study despite they entail a major investment.

A central purchasing office: an in-house study is made to implement a central purchasing office that would allow all the different boroughs of the city to streamline orders while remaining accessible for small producers.

The lever of Public Food Service in Île de France:

Public Food Service in Region “Île de France”: very large volumes

More than 1/3 of the total number of meals prepared for public food service in France is served in the region Île de France or in one of the 5 neighbouring regions: Picardie, Champagne-Ardenne, Bourgogne, Centre, Haute-Normandie (respectively 22% in region Île de France, 14% in neighbouring regions).
The city of Paris on its own represents 1%, with 29 million of meals served every year, from which 22.7 million meals for school catering, with a corresponding annual budget that exceed 50 million euros. School canteens in Paris are managed by specific bodies called “caisses des écoles”, which were created in 1867, in all 20 arrondissements to foster and enable school attendance, awarding diligent pupils and supporting poor families. Today they have become local public institutions; they are chaired by the mayors of each arrondissement and managed by a specific committee that includes official and elected members. Each "caisse des écoles" elaborates menus and manage food production and distribution, according to its own organisational system, in all public pre-schools and primary schools, in play centres and also in few secondary schools and technical high schools, whereas the city of Paris is in charge of the construction and upgrading works of the infrastructures (kitchen and restaurants).
Therefore school canteens management in the whole city of Paris is characterized by the diversity of buyers, structures and strategies that are implemented. In the case of school catering, half of the meals are prepared in the 35 central kitchens within the city. The other half is prepared inside the schools.

Table 1: The complexity of school canteens management in the city of Paris.

Number of schools	**660** pre-schools and primary schools, **43** secondary schools managed by the "caisses des écoles" **13** technical high schools managed by the "caisses des écoles"
Number of children	**200000**
Number of meals served every day at school	**116000**
Staff	**3000**
The management of the service by the 20 "Caisses des écoles"	**12** have in-house public service with several suppliers, selected according to public procurement procedures, **2** have in-house public service and a single supplier **4** have chosen contract catering food service, **2** have a mixed system where only a part of the school canteens are conceded to a catering company.
Number of kitchen inside the schools	**165**
Number of central kitchens	**35** (for school catering)

The implementation of sustainable food plan is diversified according to all the different management systems for the school canteens. The city of Paris give subsidies in function of the number of meals served by the "Caisse des écoles" and also according to the specificities of the different services implemented, such as the quantity of organic food. In 2012, the amount of sustainable food served in all municipal restaurants, mainly organic, reached 22% on average, with a peak of 37% in kindergartens.

Table 2 shows the yearly cost of the Plan for Sustainable Food implemented for the Public Food service in the city of Paris (data collected in 2013, source Risteco)

Table 2: Yearly cost of the Plan for Sustainable Food implemented for the Public Food service in the city of Paris.

Project design	**100000 €**
Accompanying measures	**about 40.000 €**
Communication	**2000 €**
Staff	**1,5**

Managing the additional yearly cost of sustainable food (organic or labelled)

The price of organic food is generally 2 to 2,5 times more expensive of equivalent non-organic products. A study was made to assess the cost increase for organic meal: + 20 to 30% (on average +23%, corresponding in this case to an increase of +0.39 € per meal, according to the agency in charge of the analysis within the Plan of action of the City of Paris). This extra cost can reach +200% for a special event meal or it can be lowered to +16% with suitable accompanying measures (increase of vegetarian meals, reduction of food wastage, optimization of logistics, reduction of meal quantities, substitution of expensive ingredients). The procurement practices are different according to the fact that the "Caisse des écoles" manage directly or indirectly the food service. In the second hypothesis, where catering companies manage menus, buy food and prepare the meal, they also cope with the cost increase of organic food.

Introducing organic and local food

The three main bottlenecks to introduce organic food are the higher price, the lack of suppliers and the difficulties to meet the requirement of public food service buyers in terms of deadline compliance. This is particularly true in case of local organic food.

A deep reflexion concerns the necessity to rethink food supply in the region Île de France (19). Food quantities produced in the region Ile de France are sufficient in the case of bread, but not for the vegetables, the meat and dairy productions. Therefore local supply means that fresh vegetables and meat are produced in the neighbouring regions of Bourgogne and Centre. Dairy products come from Bretagne and Basse Normandie that also provide fresh vegetable as well.

Solidarity with people in need.

In front of the steady increase to satisfy food aid needs, the city of Paris opened five "solidarity" restaurants in September 2010. They are managed by the Centre of Social Action of the City of Paris (CASVP). They are open at midday to serve meals to elderly people (Emerald restaurants) and in the evening they welcome single people and also families in a precarious situation (up to 250 persons) from 6pm to 8pm. The municipal staff is in charge of meal preparation. Besides the social benefits the project, it also allows a better use of the emerald restaurants that are normally used only for lunch time.
They are located in the following arrondissements: 5th, 8th, 10th, 14th and 20th. They serve more than 1000 meals per day. Before the opening of these evening restaurants the meals were served in the street. The city is collaborating with several associations (up to 40) to find the users for this service. The overall annual budget of food aid is 6,3 million of euro.

Bibliography:

(18) Le livre blanc de la biodiversité à Paris – Première étape de la construction du plan d'action pour préserver et développer la biodiversité à Paris (2010), p. 80, http://labs.paris.fr/commun/pdf/Livre_blanc_bivodiv_ok.pdf

(19) Sabine Bognon, Sabine Barles, (2012), Nourrir les villes du 21ème siècle: De nouvelles proximités alimentaires, Programme PIREN-Seine, rapport d'activité 2011, Paris, UMR CNRS 7619 Sisyphe, http://www.sisyphe.upmc.fr/piren/?q=webfm_send/1036

Case Study number 6

CITY FOOD POLICIES

Rome When school canteens become the biggest organic restaurant of the whole country.

Authors: Elena Messina, Luca Bossi
With the collaboration of Giuseppe Tripaldi, biologist and sustainable development expert and Aurora Cavallo, CURSA (Consorzio Universitario per la Ricerca Socio-economica e per l'Ambiente) Ecology of the City of Paris.

City	Rome
Country	Italy
Population: city area	2,9 millions
Surface area	1.287 sq. km
agricultural areas	517 sq. km

Despite a strong urbanization pressure caused a reduction of 42% of the utilised agricultural area (UAA) between 1990 and 2000, this trend was reverted back between 2000 and 2010, with an increase of the UAA of 14%. This positive trend is specific to the city of Rome, because during the same period, the UAA in the whole province of Rome dropped by 9%.

The remarkable effort of the city of Rome to improve school meals has certainly been a powerful driver to inspire and spin the civil society to engage in successful urban agriculture projects. Thus it would be very useful to assess more precisely what have been the fallouts of the municipality's calls for tender for school food services to foster local food supply chains and what will be the eventual consequences of the trend of backsliding witnessed since the last call for tenders for public Food Service.

Furthermore, this case history shows that it is possible to get large-scale results, by working steadily on specific axes despite there is not yet a comprehensive framework for city food policy. In such a case, Public Food Services on one hand and urban agriculture/local food production on the other hand, appear as two relevant areas of work to combine municipal and civil society efforts. Therefore, the case of Rome shows the importance of both politic and individual commitments to make changes that would seem impossible at a first glance. But it also shows how fragile can be even the best achievements, if long term food policies are not set up to frame the steps and results within a clear-cut line of action beyond electoral uncertainties.

A vivid Roman Agriculture ecosystem

Rome is the capital city of Italy, with 2,9 million residents in 1.285,3 km2; it is also the country's largest and most populated city, ranking fourth in the European Union. Its urban area extends beyond the administrative city limits, with a total amount of population around 3,8 million. Vatican City is just to the north of the city centre of Rome, an independent State within Rome boundaries, representing an example of a State within a city.

The municipality of Rome has a certain degree of autonomy, as a result of its demographic and economic weight and of its specific institutional arrangement, as being the Italian capital. It covers an area comparable to the entire provinces of Milan and Naples, also including considerable areas of abandoned marshland and places even suitable for agriculture and urban development.
Rome is made up by densely populated suburbs in alternation with green areas and important archaeological sites, which are not usable for urban agriculture.
A tradition of strong links between urban population and local agriculture characterized Rome throughout the various historical ages, until the last decades, when the industrialized long food chain has become dominant.
Nowadays, the relations between Rome and its surrounding countryside can be better understood with reference to the spatial distribution of the urban suburbs and settlements.

Among the peculiarities of the area it is worth mentioning:

- the presence of large green areas inside the city, close to the city centre, making the city as very different from classic compact urban settlements, characterizing a copious number of other large European cities;
- a relevant peri-urban historical heritage and environmental richness, with reference to agricultural land, urban and archaeological parks and protected areas, surely linked to the interest of the building sector having and often showing strong economic power and political role (see more).

Regarding the population, according to the latest statistics conducted by ISTAT approximately 9,5% of the population consists of foreigners, half of it with European origins (Romanian, Polish, Ukrainian, and Albanian) and the other half mainly Filipinos, Bangladeshis, and Chinese.
Tourism is considered to be an effective policy for urban development and for re-launching areas after industrial and post-industrial decline. Rome is indeed one of the most famous destinations worldwide, because of the high concentration of history and cultures combined with expositions, conferences and business (20). Tourism can actively contribute to the improvement of economic and social conditions of the citizenship, but it may also provoke an increase of the environmental stresses, with specific reference to the city food system, including waste management. Thus, public policies are supposed to be able to balance these two opposite trends.

Across the spectrum of Roman sustainable food projects

Despite a strong urbanization pressure caused a reduction of 42% of the utilised agricultural area (UAA) between 1990 and 2000, this trend was reverted back between 2000 and 2010, with an increase of the UAA of 14%. This positive trend is specific to the city of Rome, because during the same period, the UAA in the whole province of Rome dropped by 9% (21).

To go further:

- INEA, Italian Agriculture 2008 – A bridge version of the “Annuario dell’agricoltura Italiana, Vol. LXII, Edizioni Scientifiche Italiane, 2008.

- Roma Capitale – U.O. Promozione Agricoltura:Censimento degli orti spontanei nel territorio del Comune di Roma dentro il G.R.A., 2006.

- Supurb Food. Sustainable urban and peri-urban food provision, Rome City Region Report, http://www.supurbfood.eu/city-regions/metropolitan-area-rome-italy/.

- Sustainable Food procurement for school in Rome, http://ec.europa.eu/environment/gpp/pdf/news_alert/Issue14_Case_Study34_Rome_food.pdf.

Researchers from the Italian Institute of Agriculture Economics (INEA) have developed a methodology for mapping all the cultivated fields in the city by photo interpretation and by exploiting the features of the most used web-mapping services, a kind of spatial database concerning urban agriculture in the city of Rome1. The current version of the database covers a total surface of about 35.000 hectares with a total farmed area of about 400 hectares. The geo-referenced database was realized by interpreting the high resolution images of Google Earth for the year 2007 and 2013, with the aim to allow further analysis on the temporal evolution of the initiative.

Rome is characterized by different forms of urban and peri-urban agriculture, as well as various forms of social agriculture, involving persons with disabilities, refugees, etc. Moreover, the urban area of Rome is characterized by forms of urban agriculture such as small scale semi-subsistence farming usually performed by single households and neighbourhood-based initiatives of collective gardening, mainly aiming at social or recreational purposes.

These initiatives may be grouped in three main typologies, which are represented by:

- small scale semi-subsistence farming and pastoral activities, performed by farmers;
- single households both in small plots of land (along the riverbanks or in other marginal areas) or in large agricultural areas;
- professional farming, mainly in suburban areas, usually led by group of farmers often inspired by social and political movements, mainly aiming to enhance the quality of life and with cultural and recreational purposes (21).

With specific regard to the issues of multifunctional use of land, various interesting activities have been and are still taking place within the borders of the Municipality, and innovative practices are being tested in the effort to find new useful ways for managing farm-based activities closely to the urban centre (22). It is important to underline that professional farming is practiced in various suburban green areas, and many others have a potential for it, even if, as stated, such areas are used to receive a continuous strong pressure from the building sector for the further edification of new suburbs. In various cases farming activities themselves play a role of strongholds for the preservation of the green areas, often because of their environmental and historical values.

In Italy, and so in Rome, local food networks and activities are mostly represented by local farmers-driven initiative and the consumers involvement is often lacking.

The cooperative Agricoltura Nuova is one of the most relevant and well-established initiatives of professional farming in Rome because of the wide range of the activities that it covers and also because it represents a relevant experience for using agriculture and food as a tool for building new forms of social cohesion. On 100 plots, 25 were given to an environmental association to create a green area preserved by urbanization; a social cooperative received part of the land for their pet-therapy activities for disable people and weak communities.

The project Orti Solidali – solidarity garden project – started in 2009, aiming to create a more sustainable way of food consumption, as the slogan clearly evidenced: “We do not sell vegetables, we grow up your garden”. The project's main attempt is to create a closer relation among consumers and producers, acting as a tool to take benefit of the current food climate, in order to encourage a more sustainable production with greater accountability to consumers and with fair returns for producers. Often, farm workers involved in the project are young refugees; this aspect clearly underlines a usage of the land as a tool for social inclusion. Each garden plot is allocated to a family or an individual, who is supposed to pay an annual subscription and receives a fixed amount of vegetables, every week. The yearly subscription is supposed to cover direct costs of the initiative (mainly seeds and tools) and the workers’ yearly salary in order to represent a self-financed activity (23).

Moreover, other famous UA projects with social and economic innovative features are known as Casale Vecchio (Old Farmhouse), Campagna Amica (Friendly Countryside) and Città dell’Altra Economia (City for a Different Economy).
- Casale Vecchio is an organic and also biodynamic farm settled in the countryside in the north of the city. The principal activity is represented by the horticulture, which is able to produce more than 30 different varieties of fruit and vegetables grown through biodynamic method. Other activities also include grazing, bee keeping, fruit trees and olive trees, about 250 egg laying chickens and some horses.

The farm was founded in 2006 by a group of families which became also owners of some hectares and was supposed to decide how to use them, according to the regulation of the Regional Park where the site was located. Their social beliefs led to the establishment of a farm aiming to become an inclusive tool for both socially disadvantaged and disabled people.

- Campagna Amica (Friendly Countryside) is a Foundation promoted since 2008 by Coldiretti a main Italian farmers' organization, which usually promotes Italian agriculture through a range of initiatives focused on direct selling, rural tourism, land multifunctionality and ecological sustainability. It has created a network of Farmers' Markets all over Italy, currently more than 700, between private actors promoting initiatives dedicated to short chains and local food.

- Città dell'Altra Economia (City for a Different economy) is a place, promoted by the City of Rome, where the positive effects of different/ alternative kinds of economic initiatives are shown; in this place the most of these initiatives, mainly supported by Cooperatives Association, are linked to food chain and food policy.

Since 2009, the city of Rome saw the rising of urban gardens and allotments experiences, in which part of land are divided into smaller plots, farmed by group of pro-active citizens. Urban gardens may provide a range of services to the population basically leisure time, social and cultural activities, care of the territory, social cooperation and cohesion. The main beneficiaries are supposed to be the persons directly engaged in the activity, but there are also initiatives open to a wider usage such as special events.
These experiences shows the general care for the local public spaces that urban gardens provide and that the Municipality hardly affords, even if often politically sustains, mainly because of some budget inefficiencies that it has to face with.

The School Food Revolution

Regarding the public food service, one of the most important projects deserving to be presented is known as the Quality Revolution, concerned with school canteen service.

Almost 92% of the schools prepare their own meals on site in 645 different schools (for three up to fourteen year olds) and 180 kindergartens for the children up to three years of age. When children enter high school at 14 years of age, they begin their school day quite early and are not supposed to have lunch at school, since they use to return back home for lunch as for the rest of their day.
Nowadays, school meals represent 40% of public catering in Rome; they offer approximately 140.000 meals each day plus a mid-morning snack for all children (reaching a total amount of 150 tons of food per day, which are 190 day per year); of the total meals served, 4.000 are based on special recipes for medical, ethical or religious reasons.
The "Quality Revolution" project tried to use only organic food in school canteens; according to gathered data, it seemed to be a really complex project to be set up. In the last decade the concept of quality has been widely used to describe the dynamics that have been shaping the system of food and agriculture. The relationship between food safety and quality is discussed in the context of research on consumer risk perception, as a central issues in today's food economics, though many research questions remain to be addressed, (24). In order to understand the nature and implications of the relationship between quality and policy in the public food service sector, in Rome, it is fundamental to start from the analysis that Roberta Sonnino and Kevin Morgan produced in 2008 (25) and concerning the School Food Revolution started 10 years before. The survey shows that procurement policies such as those implemented in Rome share the willingness to create an 'economy of quality' able to deliver the economic, environmental, and social benefits of sustainable development.

When the Law 488/99, providing an incentive to the use of organic food in school restoration, was issued, Rome was governed by a Centre-Left administration and the Mayor, at this time, Francesco Rutelli, was interested in promoting organic within catering service in schools (25). This Finance Law explicitly promoted the link between organic and local food in public sector catering. Indeed, Rome has employed an incremental approach to designing its food and catering tenders and its food service, to gradually make these more sustainable and innovative, since 2001.

The strategy involved representatives from the organic certification bodies, to identify those products able to sustain the impact of Rome's public food service massive demand. Moreover, nutritionists indicated that fruit and vegetables needed to be prioritized as most beneficial food for pupils' health (26).
Accordingly, a new Roman food service model arose, based on the idea that food security and quality were linked to the meal, which needed to be considered as an educational experience as the enhancement of children's health and safety started to be as the paramount and fundamental goal of its school food revolution. As a consequence of this re-focussing, organic and 'bio-dedicated' products have been prioritized because of the absence of pesticide residues (25), thus being much more beneficial for pupils' health.
Considered the large market involved, contracted companies requested and obtained a dialogue with the Municipality authorities, in order to produce a shared willingness and direction (26). The Central Department of Education actively promoted and monitored the new initiative, also by performing autonomous inspections through its dieticians. Contractual change with the food companies and proactive monitoring to verify compliance clearly represented Rome's radical change.

In 2004- 2007, Rome public food service actively increased the organic ingredients in school meals from approximately 10% up to 70%, an important result that made of Rome's school canteens the biggest buyer of organic food at national level. Moreover the city's approach enhanced the market in terms of sustainability and quality and companies are now aware that they face a public administration which requires strict compliance in order to continuously improve their own performance. During this period, school menus changed every week and no course was supposed to be served to children more than once a month. Moreover, the range of organic food expanded beyond fruits and vegetables to include olive oil, canned tomatoes, cheese, bread, baked products, cereals and legumes, pasta, rice, flour and eggs. Frozen fish fillets replaced processed fish products, also, and fair trade chocolate and bananas were introduced. In parallel, according to the strong environmental impacts of meat production, in particular water consumption, meat has been served in Roman schools for a maximum of twice a week. It has been estimated that this reduced consumption of meat has contributed to save 5.783 m^3 of water consumption on a yearly basis.

The most innovative call for tender concerning organic food distribution within school canteen service covers the period September 2007 – June 2012 and has a base value of approximately €355 million. In particular this call for tender used the criterion of guaranteed freshness for some of the vegetable and fruits: no more than three days between harvest and consumption, with the intent to combine food quality and local production.
Coherently with school meals achievements, no vending machine stocked with food and beverages is allowed in Roman schools; moreover instead of allowing children to bring (junk) food into school from home or from anywhere else into school, a mid-morning snack is offered by the school canteen service.

Bibliography:

(20) Armando Montanari, Barbara Staniscia, (2010), Rome: a difficult path between tourist pressure and sustainable development, Rivista di Scienze del Turismo – 2/2010, pp. 301- 316, http://www.ledonline.it/Rivista-Scienze-Turismo/

(21) Emanuele Blasi, Aurora Cavallo, Paolo Gramiccia, Davide Marino, Romina Polverini, (2013), Sistema Agricolo Roma. Panorama sull'agricoltura nella campagna Romana, Agra Editrice, Roma 2013.

(22) Alessandra Olivi, (2012), Oltre il parco e l'orto urbano. Spazio pubblico in movimento e nuovi immaginari urbani, "Sociologia Urbana e Rurale", n. 98. Franco Angeli. (23) Brunella Pinto, Andrea Pasqualotto, Les Levidow, (2010), Community Supported Urban Agriculture, The Orti Soldali project in Rome, "Urban Agriculture magazine", (24); www.ruaf.org

(24) Klus G. Grunert, (2005), Food quality and safety: consumers' perception and demand, "European Review of Agricultural Economics", v. 32, Issue 3, pp. 369-391.

(25) Kevin Morgan, Roberta Sonnino, (2008), The School food devolution. Public Food and the challenge of Sustainable Development, Earthscan, London, p. 76.

(26) Roberta Sonnino, (2009), Quality food, public procurement and sustainable development: the school meal revolution in Rome, "Environmental and Planning", A 41 (2), pp. 425-440.

Case Study number 7

CITY FOOD POLICIES

Rennes' food policy: A local partnership focusing on local farming to reconcile the city with rural areas.

Author: Isabelle Lacourt

City	Rennes
Country	France
Population: city area	210.000
Population: metropolitan area	626.000
Surface area (metropolitan area)	67 sq. km
Surface area (Rennes)	52 sq. km
Green areas (metropolitan area)	8,1 sq. km

Rennes Metropole offers a successfully completed example of responsible and coherent urban planning policy, built over 40 years of political and territorial involvement. In particular, it was effective to organize a "win-win" dialogue between farmers and territorial decision makers, and innovative by choosing to implement a new model of urban expansion, the "archipelago city", aiming to preserve functional agricultural territories connected together and surrounding well delimitated urban nuclei.

Among the strengths of the food project, there is a deep knowledge and strong sensibility about the local food consumption and the development of direct sales systems. Very interesting is the capacity to use research resources, in particular students, to help to the construction of a strategy for the future of local food systems. Not only it integrates more deeply territorial projects in the core of academic institutions, but it also insures the enlargement of the actual vision to new challenges with the perspective to provide innovative basis for further reflection to elected representative in order to reinforce and integrate the current development policy.

To reinforce high quality local food supply chain, attractive for consumers, still today too marginal, the pioneering PLA could evolve to integrate all the food life cycle, in particular to enlarge the observatory and the various diagnostics to food industry, in particular artisanal food sector, including caterers and restaurants.

Setting the scene for the municipal project

Rennes, 10th largest French city, has developed for more than 30 years a vision of its future development as a metropolis, including neighbouring towns and villages. In the past years, the city has seen the highest demographic growth at national level. The metropolitan area also called “Grand Rennes” (415.000 inhabitants) stretches out around the central city and is separated from the rest of the district by a green belt to preserve rural identity of the suburban towns and villages. Indeed, vast farmlands have been maintained in a fertile area, along with numerous natural sites, notably along the rivers, thus connected with downtown by the mean of public transport and road network compatible with environmentally friendly means such as cycling.

This very dynamic student city (around 60.000 students) and pole of research and technology (agronomy and food industry, electronics, fine chemicals, health and environment) is also a not-to-be-missed tourist destination because of its historical heritage and vivid cultural activities. Agriculture and food industry are the two pillars of primary industry. Car production (today in crisis) has been developed in the past years, as well as telecommunications and IT services.

With respect to the development of agricultural strategy, Rennes metropole is closely tied to an even larger territorial entity called Pays de Rennes and made of 5 different communities members including 140 distinct municipalities. Pays de Rennes's agriculture is strongly oriented towards dairy cattle farming, but also pig and poultry farming (respectively 20 and 6.7%). Agricultural prairies, that occupied half of farm lands in the Eighties, have been gradually replaced by crops such as cereals and corn. Hedged farmlands (typical "bocage" landscape) are relatively preserved as an identity of this agricultural territory. Wooded areas are relatively small, except in the area of Pays de Liffré, and large forests are restricted to the mountainous massif of Marches de Bretagne.
Today Rennes metropole agricultural production represents 53% of the total area, including 665 farms (half less than in 2000) and 880 farm head and co-head. Agriculture is an important economic lever all over Pays de Rennes, with 1.400 farms and nearly 10.000 induced jobs, including 3,200 direct agriculture jobs, 3.000 jobs in agro-food companies, 2.000 jobs in services related to agriculture and 2.000 jobs in agronomy research and teaching.
Between 1999 and 2007, no less than 3.300 hectares were used on the territory, (on average 367 hectares per year), of which 39.5 % for housing, 41,5 % for activities and 18,9 % for community facilities. Such urbanization has taken place on a great extent over farmlands. As it also occurred at national level, the number of farms has dropped off due to farm assembly and enlargement, (- 40 %). As a consequence, the dimensions of farms and livestock have increased, whereas the number of employees (mainly family workers) has been reduced (-36%) and workforce is aging (40% of farmers are more than 50 years old).

The willingness to consider agriculture as a key element of Rennes metropole urban policies has raised 40 years ago from the awareness of serious threats to farmlands: surfaces to be urbanized were appointed without any consultations and agriculture was forced into residual spaces. Land shortage has highlighted the necessity of a comprehensive strategy leading to a local partnership to reconcile the expansion of the city with farming activities.

To go further:

Rennes: Le programme Local de l'Agriculture : http://www.paysderennes.fr/Le-Programme-Local-de-l.html

Agenda 21 Rennes Métropole : http://metropole.rennes.fr/politiques-publiques/elus-institution-citoyennete/l-agenda-21/

Rennes métropole - Un partenariat local pour concilier Ville et Agriculture. p13-18 in : Atténuer les émissions de gaz à effet de serres du secteur agricole en France. Recueil d'expériences territoriales. Available at: http://www.rac-f.org/IMG/pdf/AGRO-FICHES1-7-2.pdf

« Rennes : Les Métamorphoses de la Ville Archipel » Article de Dominique Pialot - juin 2013, Grand reportage. http://www.alliantis.store-factory.com/media/130919_Reportage_Rennes_Ville%20durable.pdf

Observatoire de l’ agriculture périurbaine du Pays de Rennes http://www.rac-f.org/IMG/pdf/AGRO-FICHES1-7-2.pdf

Starting point and milestones

Building-up governance tools.

Rennes' first Development Plan was introduced in 1974 (Schéma directeur d'Aménagement et d'Urbanisme). Such approach is considered as a pioneer of the French "territorial coherence scheme" so-called SCoT (Schéma de Cohérence Territoriale). Indeed SCoT is a planning document which aim is to ensure consistency between all different policies dealing with urban planning, such as housing, mobility, commercial building and equipment etc. Established by the law SRU (relative to solidarity and urban renewal) in 2000, it was reinforced by the law Grenelle II in 2010, including specifically the necessity to preserve farmlands and forests and to reduce greenhouse gas emissions.

In 1983, this first Development Plan was revised and for the first time clearly focused on polycentric urban development, proposing the preservation of greenbelts, rather than a linear urban sprawling. Indeed, the original feature in Rennes metropole's territorial approach is to consider itself as an "archipelago" city in which urban centres are considered as "islands" surrounded by "oceans" of nature and farmlands, needed to be preserved as much as possible. In such a territorial development scheme urban centres increase their densification and networking rather than concentric linear expansion and thus coexist with natural and agricultural areas.

In 1994, a new revision leaded to the definition of a landscaping plan, to maintain a balance between urban and rural areas to allow both preservation of local agriculture and urban population growth.

In 2004, Rennes metropole began to draw up its Agenda 21 and signed the Aalborg charter, charter of European cities and towns towards sustainability. Rennes Metropole Agenda 21 includes a strategic plan divided in two main areas: land-use planning and an urban and social programme. It also fosters the involvement of local stakeholders and relies on a sophisticated system of indicators for monitoring and managing the sustainable development strategy.

In 2006, the CODESPAR, local development council (Conseil local de développement) launched a working group on the future of agriculture in the Pays de Rennes, to prepare the first SCoT document, which was adopted in 2007, giving clear priority to the development of the "archipelago city".

Besides the PLH, Local Housing Plan (programme local d'habitat), which gives guidelines for the needs of Rennes metropole in terms of urbanization, in 2007, a partnership was also established under the name of Local Agricultural Plan (PLA – programme local d'agriculture), between the main territorial authorities : Rennes metropole and pays de Rennes, the chamber of Agriculture, public service body, interface between public authorities and farmers and also the SAFER, French public body in charge of the planning for rural areas. The PLA is a space of exchanges and projects between farmer representatives and elected local authorities, to understand better the challenges and needs for the maintenance and future growth of agriculture in front of urban development of Rennes metropole.

In 2008, the Chamber of Agriculture of Brittany produced a territorial assessment on agriculture and forestry sector's energy consumption and greenhouse gas emissions (ClimAgri®). In 2009, an inventory of all greenhouse gas emissions for the territory of Rennes was made in order to prepare a Territorial Climate Energy Plan (PCET - Plan Climat Energie Territorial), successively adopted in 2010.

The Local Agricultural Plan (PLA).

> "Elected representatives and farmers share a common interest to work together on an attractive and favourable frame for the economic viability of agriculture in the territory of "Pays de Rennes". They must design together local policies that enable to consider all dimensions of agriculture in order to warrant a long term visibility." (Extract from PLA, 2008)

PLA's different activities are planned and funded by Rennes metropole and the Chamber of Agriculture, according to the level of involvement of their respective staff. First action has been to provide a comprehensive view of the evolving situation of local agriculture. A 50 pages document (27) was published and presented during a discussion evening in 2011.

It describes the territory, the typology of farms and the work forces, and the typology of productions.

To explain urbanization choices and to gather the views of farmers, in order to help decision-making process in a transparent way, the PLA also leaded to the creation of a methodology for farm assessment (diagnostic agricole). This work is carried out by Rennes Metropole and the Chamber of Agriculture.

The exchange of agricultural parcels is another issue, to manage the reduction of the number of farmers and the enlargement of agricultural holdings, for two reasons mainly: to reduce induced costs and also inconvenience due to the move of tractors or animals on the roads. The Chamber of Agriculture has published a guide book to inform farmers about several legal win-win possibilities already existing. Several cities are also mapping local farmlands to highlight the possibilities. In 2013-2014, Rennes Metropole co-funded with the Chamber of Agriculture (respectively 80 and 20%), the production of an atlas of agricultural parcels for the whole metropolis.

The PCET: Territorial Climate Energy Plan

Both the city and Rennes metropole have made a climate energy plan, in order to translate the will to reduce Greenhouse Gas (GHG) emissions into concrete actions and commitments. In particular, they focus on the reduction energy consumption of public facilities, but also to bring public policy forward and to mobilize all territorial actors. They are complementary according to the specific competences of both territorial bodies.
At the level of Rennes metropole seven categories of activities have been compared on the basis of their GHG emissions: Industry (9%), Agriculture (11%), Services (17%), Housing (22%), freight transport (11%), people mobility (28%) and waste (2%).
In 2011, the city of Rennes got the European energy award® (label Cit'ergie), for its involvement in city-owned buildings and street lighting energy performances, measures to increase the use of bikes, car-pooling etc. Such label "supports municipalities willing to contribute to sustainable energy policy and urban development through the rational use of energy and increased use of renewable energies"

GHG emissions and agriculture.

As dairy cattle are the main production of Agriculture in Rennes metropole area, the question of GHG emission is tightly linked with local farming. However the metropolis does not to interfere bringing forward specific methods of farming, considering it is out of its range of competencies. Indeed all farmers indiscriminately are called to collaborate within the Local Agricultural Plan.
Nevertheless the debate about intensification or extension of bovine milk production is widely open and the ClimAgri assessment is widely used to better understand the impact of beef livestock on GHG emissions. In particular deeper studies have demonstrated that the kind of concentrated food, as well as the genetic diversity of races can influence the methane production, whereas, if intensification allows a diminution of methane locally, where animals are living, it induces a greater level of other GHG emissions due to the production of all other inputs such as specific food, antibiotics, pesticides etc. Among the PLA stakeholders, groups of farmers are actively working to define low inputs milk production systems, environment-friendly and also economically viable (see more).

Towards a sustainable Food System.

If Rennes Metropole has today widely accepted the idea that a long-lasting urban development is correlated with a long-term survival of local agriculture and has worked for forty years on a model that enable harmoniously spatial distribution between rural and urban spaces according to the concept of archipelago city, its vision still does not embrace with equal intensity of intent the whole food system also including food transformation, logistics, distribution, consumption up to waste management.

Among the five objectives identified by Rennes Metropole in the PCET to reduce structurally GHG emissions, food systems are not clearly mentioned: the effort is mainly made on energy consumption through heating systems and "soft" modes of transport. (1- to mobilize inhabitants and local actors, 2- to improve thermic performances of entire public building stock, 3- to achieve work-saving energy in multiple dwellings, 4- to develop renewable energy based heating systems and networks, 5-to promote

environmental-friendly people mobility.)

Although no overall action plan has been yet designed for the PLA, some of the activities are devoted to implement a more sustainable food supply chain. For instance, to reinforce the link between farmers and citizens is one of such area of work. In 2007, a six month study allowed to assess the potential demand/ supply for local food. Since then, several systems have been reinforced or implemented to increase direct selling of local food. They are periodically monitored and evaluated.
- Open-air peri-urban markets. On 20 markets, 13 have been created since 1990. An attention is paid to match the respective sizes of markets and the cities. Also direct selling by producers has been encouraged as well as innovative work schedule, to enable larger attendance from the public.
- Open air market in Rennes. The city welcomes no less than 14 markets. A study has shown that city centre is more attractive to direct selling by producers.
- Sales outlets managed by food producers These innovative systems allow farmers and artisanal food producers to manage shops where they sell their production directly to the consumers. Few selling points opened respectively in 1992 and 2001. There is still room for more projects as the demand is bigger than the offer; however these projects require high level of professionalism. Webshops are also arising in different places, as well as vending machines for raw milk.
- AMAPs (associations supporting small farming), organize weekly distribution of food products (mainly fruits, vegetables, meat and dairies...) remain a pillar of local food distribution with about 20 of such groups (AMAP and similar) in Pays de Rennes in 2012.
- direct selling in the farms. In most of the cases this system induces very local costumers (75%). It has known a recent development (+60% in less than 5 years) and concerns about 8000 clients.

An economic analysis updated in 2009 indicated that such systems still remain marginal within total food consumption (see table 1).

Table 1: Alternative food Systems' economic data in Rennes Metropole

Typology	sales value in millions €	jobs number
Open-air markets	4,5 to 10	110 - 230
Collective selling points	2,7	60
Direct selling in farms	1,2 to 1,6	15 - 30
AMAP (food baskets)	0,5	8
Public Food Service	0,2 to 0,3	5
Other	2,9 to 5	65 - 110
Total	12 to 20	263 - 445

Two main lines of reflection have been identified to reinforce sustainable food systems: 1-to use the lever of public food services, 2- to inquire more deeply on the food self sufficiency of the territory.

The lever of Public Food Service

As appear in the study performed in 2009, public food service is a minority stake compared to other consumers of local food products. In 2011, five workshops were organized to allow exchanges and increase awareness on the possible leverage role of Public Food Service to reinforce Sustainable Food Systems. They focused on the consumption of organic food in public school canteens and allowed to present the results of survey about organic food consumption, but also about the challenges of introducing organic food in the menus, the importance of nutritional and environmental aspects and public food procurement rules. Exchanges and discussions also took place between the staff of canteens, in particular cooks, to face all the constraints raised by the use of organic food to prepare meals in particular according to budget lines and kitchen organisation.

The project "Rennes Villes Vivrière" (Subsistence Food City)

This project (28) consists in an investigative work that was assigned to two successive classes of students from the School of Agronomy of Rennes, specializing in "Sustainable Agriculture and Territorial Development". Three main questions are at the origin of this idea: What are the barriers for local food consumption? How productive can be urban agriculture? How should evolve agriculture in a context of economical/ environmental/social crisis?
The objective of the first year of work was to present prospective scenario on food and farm models and to determine the necessary surface to feed the population with local food.
The objective of the second year was to draw up a logistics model and to assess the impact on employment of the different food consumption models.

The study has highlighted the difference of surfaces needed by the population to produce food, by comparing to the actual food production (scénario tendanciel) and consumption model with an "autonomy" scenario (scénario d'autonomie) in which :

- urban agriculture is developed by citizens in their own garden but also by the municipality on urban green spaces and roofs.
- people reduce their calories intakes by replacing a part of meat by vegetable consumption.

The study also produced cartography of Rennes metropole taking into account the following typologies of areas in the horizon 2020: urban highly-dense population (Rennes city), peri-urban area with dense population, rural areas with medium-dense population, rural areas with low-dense population, in order to create a logistics scheme for these different consumption basins. Moreover it also attempted to estimate induced employment, still in reference to both scenarios (tendanciel and autonomie). It also included surveys to evaluate the possibility for the population to shift the consumption model from the actual scenario to the "autonomy" scenario. In conclusion, this study identifies several avenues for future research that seeks to mainstream new environmental and social aspects in the current vision of urban and peri-urban agriculture, including food access to disadvantaged groups, architectural innovation, benchmarking etc.

Bibliography:

(27) Observatoire de l' agriculture périurbaine du Pays de Rennes, (2001), (1), AUDIAR (www.audiar.org), http://www.rac-f.org/IMG/pdf/AGRO-FICHES1-7-2.pdf

(28) Vincent Arcusa, Claire Besson, Cyril Bigot, Valentine Bossu, Uwe Grewer, Maylis Joanicot, Marion Mazodier, Emmanuel Mensah, Julia Mwanza, Julia Schindler, Matthieu Pernis, Cyrielle Rault, Adriana Santos, Samy Tumwesigye, Agathe Vassy, Matheus zanella, (2010-2011), Rennes Métropole, Ville vivrière Ingeneer thesis, http://www.dijon-ecolo.fr/doc-telechargeable/agriculture/Rennes-ville-vivriere.pdf
http://nycfoodpolicy.org/publications/research/

Case Study number 8

CITY FOOD POLICIES

"Organic Metropolis Nuremberg" : Increasing organic and local food production.

Author: Lenny Martinez
With the collaboration of Werner Ebert, project manager of "Organic Metropolis", Nuremberg environment department.

City	Nuremberg
Country	Germany
Population: city area	502.828
Population: metropolitan area	3,5 millions
Surface area	186,38 sq. km
Green areas (forest + leisure)	41,7 sq. km
Agricultural areas	43,6 sq. km

The city of Nuremberg has a long and steady concern for environmental questions, especially waste management and energy efficiency. For long, food has not been perceived as a priority; only in the last few years a specific food division has been created within the environmental department of the city.
The main food concern is about the increase of organic and local food production, with the project "Organic Metropolis Nuremberg" in relation with the regional agriculture development. In the city itself agricultural and horticultural areas account for 16.3%.
The city has developed a strong and pragmatic action to support local food producers, mainly by stimulating the demand. It is able to get a strong focus on the local area and local products while in parallel, it is opening itself to international cooperation.
Therefore, it is using the large shop front to the world provided every year by the Biofach international event to stimulate local urban organic/local markets on a regular basis. Nuremberg was also the first German city to join the international association "Città del Bio" with the aim to increase networking in the organic product sector.
As a positive result, the amount of regional food served in the public food service is very high respect to the European average situation, despite low budget, for instance in the hospital, but also in nursing home.
Nuremberg is also nurturing a vivid cooperation with civil society and the population is involved in a rich calendar of events. Young generations, not only children but also students, are clearly perceived a one of the main target for campaign and events.

Nuremberg: a city located in a region with a strong tradition of agriculture and food production.

Nuremberg is the second-largest Bavarian city, and fourteenth largest municipality in Germany. The city is the center of the Nuremberg Metropolitan Region (NMR) which comprises 33 cities and districts, and is home to 3.5 million inhabitants. NMR is one of Germany's ten largest economic regions.
Bavaria is the largest food producer and agricultural region of Germany and agricultural production is to a very great extent in the hands of small farmers, specialized above all on livestock farming, corn and milk production. Knoblauchslandarea in the northern part of Nuremberg provides fruit and vegetables grown in horticulture whereas in the metropolitan area, farmers mostly produce potatoes, grains, and livestock, intended largely for export to others parts of Germany and also in Europe. The Bundesland of Bavaria has also the largest number of organic farms of all German states. The region has set up the Bayern organic region 2020, which aims to raise the amount of organic agriculture from 6% to 10% in 2020. This target is already met in the metropolitan area of Nuremberg where the number of organic farmers has reached % since 2012.

According to an OECD Rural Policy Review (29), “The NMR is a robust rural-urban partnership model. It has clear objectives and is working within supportive environment, with a strong sense of the need for rural-urban collaboration”. Among the main projects developed by the NMR, “Original Regional – made in the Nuremberg Metropolitan Region”, whose objectives are to foster local economic development, preserve employment and purchasing power in the region, safeguard the cultural landscape and contribute to climate protection. The city of Nuremberg is the heart of the economic, social and cultural life of NMR. It has a remarkably extended green area; according to the Statistical Almanac for Nuremberg 2008, 23% of city areas are used for agriculture (this farmland not being owned by the city); 17% of city areas are covered by forests and 5% by leisure areas (public parks, playgrounds and gardens).

A city with a longstanding and deep concern for environmental issues develops a food policy concentrated on the development of a regional organic sector through Organic Metropolis Nuremberg.

In 1989, the Environmental Department was created and marked the beginning of a steady sustainability process. Nuremberg's “Agenda 21” was launched in 1997.
In the first few years, Nuremberg Environmental Department was mainly involved to work on policies related to waste management. As soon as 2001, no municipal waste was tipped anymore on landfill sites, thanks to an integrated plan including household waste sorting, separate collection of recyclable /reusable waste, and an up-to-date incinerator plant, also incorporating energy recovery. The energy generated by the incineration is used for power generation and district heating and largely contribute to the municipal reduction of CO_2 emissions.
Later, the Environment Department has become responsible for all environmental and health issues. It now includes the Environmental Office, the Public Health Department, the municipality-owned waste management company, the water supply and treatment company and an environmental assessment company.

To go further:

BioMetropole Nürnberg – Bericht 2012 und Ausblick, Environmental Department of Nuremberg, in German, http://www.nuernberg.de/imperia/md/biomodellstadt/dokumente/bericht_biometropole_2012.pdf

Final Application Nuremberg, Green Capital City, 2012/ 2013
http://www.nuernberg.de/imperia/md/umweltreferat/dokumente/2010_05_28_final_application_us.pdf

. Since 2000, Nuremberg has been a member of the Climate Alliance of European Cities, the largest European city network for climate protection. CO2 emissions dropped by 29,4% between 1990 and 2008. Among the measures taken to reduce CO2 emissions, the reinforcement of public transport system, the investment in renewable energy sources (hydroelectric power, photovoltaic energy, installed on private and municipal buildings), the generation of district heating and electricity in a cogeneration system, refurbishment of buildings and for new constructions, energy efficient landscape planning. The Municipal Energy Management (KEM) monitors energy consumption of all municipal buildings where between CO2 emissions were reduced by 50% between 2000 and 2007.

. In 2006, Nuremberg City Council adopted the current land development plan with integrated landscape plan. This legally ensured planning reliability for all municipal green areas. The campaign "Green for the Southern Districts"(Grün in die Südstadt) was initiated as the main outcome of the first Conference for the Future, held in 2000, as a co-operative partnership between private and public institutions. As a further result of this conference, committed citizens established the volunteer project group "Green Ribbons" (Grüne Bänder). This project group, together with representatives from the Town Planning Department, developed a concept for green and free areas for the entire southern part of Nuremberg. This served as the basis for the Town Planning Department.

. Since 2008, the biotope mapping for the City of Nuremberg, comprising 784 digitalised biotopes and a total of 2.455 individual areas, has been an important data pool for all environmental purposes.

. In 2010 the City of Nuremberg joined the declaration "Municipalities for Biological Diversity" and established a local alliance for biodiversity, including nature protection associations, universities and the city. It has relied on national guidelines about organic agriculture launched by the Green Minister of Consumer Protection, Food and Agriculture, at the beginning of the twentieth century, to initiate the Organic Metropolis Nuremberg run by the Environmental Department. This project aims to support the production and consumption of organically grown food by strengthening the demand for organic food; showing the excellent quality of organic products and to raise the awareness about them; enhancing the perception and acceptance by politicians, associations and consumers. Others institutions are focused more in regional products. The Municipality tries to support both: regional and organic products. The organic Metropolis Nuremberg is led by the environmental Department but they work in a close relationship with others departments (school department, social department for the kinder gardens, economic department who runs the market activities). Located in the most important agricultural region of Germany, also leader in organic farming, Nuremberg is aware of the importance to foster the demand for organic food and products in order to promote efficiently organic agriculture. The main action plan is based on the conversion from conventional to organic farming within metropolitan area, and on the promotion of projects in cooperation with local private food sector to organise marketing events. Investments are mainly made to promote events where local and organic farmers and food producers can sell their products such as farmer's markets.

. In 2003, Nuremberg City Council unanimously decided that "the City of Nuremberg should set itself the goal of increasing the use of both organic products and regional products. Objectives for 2014 were 10 % of agricultural area used for organic food, 25 % of organic products and regional products for all municipal institutions, events, specialist markets, but in particular 50% in schools and day care centres, at receptions and at the City of Nuremberg's farmers' markets. The main method of promoting organic agriculture is fostering the demand for organic food and products. Indeed, the city works in close relation with the private sector and Biofach has been the cornerstone of such a strategy since 20 years. A staff of three people is employed by the Environmental Department to work specifically on OMN project, mainly to get in relation with organic food producers and to organize events. Regular round table discussions involve all organic food stakeholders such as consumers organizations, caterers, public and official organization, tenders, citizens, producers, farmers organizations).

Therefore a peculiarity of the food project developed by the city of Nuremberg certainly is the high level of activities directly funded by private sponsors such as local organic food companies.

More generally within the NMR, given budget constraints, projects must be developed in co-operation with the business sector and the will of private sector to co-finance a project is positively interpreted.

For instance, since 2012 the city, together with national and local organizations has been promoting a biodiversity project build up a local cereal sector based on old wheat varieties such as einkorn, emmer or champagne rye to support regional economy and make a valuable contribution to biodiversity.

Biofach: the most important organic fair at an international level

This major event gives a comprehensive overview of the whole range of products from the global organic sector (food but also others organic products such as textiles, technology and equipment, etc.) The city is involved as one of the partners organising this fair. The Environmental Department promotes the city and the region, and increases networking in the organic product sector. Many events are also organized to involve a larger public as the Biofach fair is only open to organic sector professionals. In 2012, more than 40 thousands visitors from 130 countries met 2500 exhibitors.

The international network of Città del Bio.

As the first German city, Nuremberg also joined the international association “Città del Bio”, thus promoting activities on international cooperation. The objective of this involvement is increasing networking in the organic product sector.
Città del bio not only aims to promote organic farming as a valuable agronomic technique but also as a vector to promote organic food as a good lifestyle. On the occasion of the BioFach 2010 trade fair, a joint marketing campaign was organised entitled "Nürnberg: Where organic people meet".

A rich trade events calendar for organic sector.

In addition to Biofach, many events are also organized along the year. The "Bio Experience" on the Main Market Square is a yearly popular event, giving a wider public (up to 40.000 visitors) the opportunity to know more about certified organic food and also about related municipal best practices. About 100 exhibitors run an extensive cultural program, as well as a special program for children and young people. On the occasion of the Biofach 2010, a joint marketing campaign was organised in order to give increased publicity to the economic importance of the organic product sector in the city and in the region. Only the Bio experience is restricted to organic products. Other events include cooperation with other sectors of sustainable consumption such as the Market for Eco Design "Summer Kiosk" in Rosenaupark, orChristmas market "Winter Kiosk –Market for Sustainable Presents". In 2012, the Christmas market hosted 72 stands whose one third was organic whereas this percentage is 14% on the weekly market in the main place.

Citizens’ education and empowerment

The dynamism of civil society shows the impact of the promotion activity organized within the project Organic Metropolis Nuremberg.

The national association Bio verbrauchergathers consumers interested by organic products, by giving advices to consumers also in schools or in kinder gardens (what’s good to buy and where). They participate to the event Bio experience. They publish a newsletter, participate in internet actions etc. They also have a lobby activity with politicians at the EU level.

Blue pingu.de is a regional network of people, most of them aged between 20-45 years, which promotes concepts at a regional level. The slogan is to do the first step, with the idea that it is possible to make changes only step by step in the right direction, starting at individual level. The first project was a guide for consumers. They also organize the event "Biofach meet Nuremberg" in order to extend the impact of this professional fair to a wider public. At this occasion they organize debates. They also promote activities such as urban gardening, small fairs, campaigns about sustainability, etc.

Using the lever of Public Food Service.

Schools canteens and kindergartens.

Only recently, the lengthening of the school day has led to a provision of school meals in Germany and the service is contracted to private catering companies, usually at the lowest price. Only 34 schools serve warm meals. The municipality has no direct influence on meal preparation processes: indeed the city does not manage directly the school canteens; they are run by private compagnies. They use call for tenders to set up a percentage of organic food in the school meals. In 2003, the City Council unanimously decided to increase the use of both organic products and regional products. among the objectives for 2014: 25 % of organic products and regional products for all municipal institutions, events and 50% in schools and day care centres, receptions and in farmers' markets. This decision was renewed in 2008.
Actually, the average amount of organic food served in the schools is 18% with important variations between 10% and 80%. Two schools serve 100% organic food.
Besides school meals, Nuremberg was the second city in Germany after Berlin to participate to the project "Organic Lunch Box Drive" between 2005 and 2009. Children received reusable boxes made from recycle plastic containing organic snacks. The sponsors pay to be marked the top of the box and, in the case of Nuremberg, local organic producer gave products for free.

Vocational schools

In the context of their training, students of the Academy for Home Economics run their own school canteen independently. Every day, 60 meals are served to students and teaching staff.

Since November 2009, there has been a 100% organic menu twice a week, at no extra charge. It was the first certified organic school canteen at a national level, awarded several times.

Hospital and nursing homes:

The main hospital of Nuremberg serves 3.000 meals every day to patients and staff. German hospitals are funded by the state and food budget is low (3 euros by day, for all meals). The city of Nuremberg manages one large hospital, and meets fewer difficulties to introduce local food (up to 30%) than organic food (less than 10%). In order to increase this share, further networking with regional organic farmers is planned. In smaller structures such as nursing homes, 700 meals are served everyday using 10% organic and 60% regional food.

Municipal staff restaurants.

The 275 meals served every day are prepared with 47% regional and 10% organic food.

Catering for special events.

They represent about 3000 meals per year. The various organisers can make legal stipulations and/or safeguard that organic food products are served. 33% regional food and 5% organic food are served.

Bibliography:

(29) Rural-Urban Partnerships: An integrated Approach to Economic Development, (2013), OECD Publishing, Chapter 11, Germany:Nuremberg Metropolitan Region. http://dx.doi.org/10.1787/9789264204812-en

Case Study number 9

CITY FOOD POLICIES

Saragossa A city developing a sustainable vision between tradition and innovation.

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City	Saragossa
Country	Spain
Population: city area	701.090
Surface area	1.062,64 sq. km
Green areas	847 sq. km

Saragossa represents a good example of the willingness to improve the resilience and quality of life for its citizens. The projects are copious and relevant, working through local expertise for local needs.

Among the greatest assets of the city, there is a deep commitment for environmental concerns, traduced by the will to use the local Agenda 21 as a strategic tool to design the future of the city. Saragossa has also developed the capacity to combine past, present and future, being able for instance, to focus on the future by developing an efficient mobility system and in the same time to give value to old traditions. It is also aware about the inter-twined destinies of urban and surrounding rural areas. Therefore, the city is developing a very rich and interesting vision able to generate fair and balanced innovation within a common-sense approach.

This has resulted in an ambitious and efficient program for water management and biodiversity preservation, which has been successfully related to local food consumption programs, thanks to the coordination of the efforts between the municipality and authoritative and influential associations. Education and practice are two important pillars of the food strategy. Both are made concrete through actions related to urban agriculture and also to school gardening. The resulting relationship among food habits, food education and responsible agriculture can be seen as a strategic asset to plan public food policies.

A forward-looking city with a rich historical and cultural heritage

Saragossa is a clean, safe and cosmopolitan city, the capital city of the Saragossa province and of the autonomous community of Aragon, in Spain, a decentralised sovereign state with three local levels of government: 17 autonomous communities (comunidades autonomas), 50 provinces (provincias) and 8.069 municipalities.

In Saragossa is concentrated more than 50 per cent of the Aragonese population. This historical city was founded in 24 B.C. by the Romans on the banks of the Ebro, on the site of an ancient Celtiberic (iber mixed with celtic people) town. Since then, it has been inhabited by many different civilizations: Iberians, Romans, Goths, Francs, Berbers, and Arabs until the Aragonese conquered the city in 1118.

Since the 1970s the economy and population has grown rapidly in the city; this growth is predicted to continue and the population is anticipated to reach one million shortly after 2020. The main economic activities are the services (62,5%), followed by freelance activities (18,1%), building industry (12%), manufacturing (7,2%) and farming (0,2%). Indeed, despite a decline in the outlying rural economy, Saragossa has continued to grow.

The city's economy benefited from car industries and also railway engines etc. Projects like the Expo 2008, the official World's Fair have also contributed to the dynamism of this city which is also one of the oldest universities in Spain and a major research and development centre. Located at the intersection of Madrid-Barcelona and Bilbao-Valencia arteries, it is also an important logistics node (railway and airport) for travellers. Considered the semi-arid climate and average rainfall of less than 400mm per year, Saragossa is heavily reliant on the Ebro for its water supplies.

The City has applied to become the European Green Capital in 2016. As a result, the city has adopted a set of specific strategies for climate change, water consumption and waste policies, local transport, urban agriculture and food waste reduction which are strongly linked to the European strategic plan Agenda 21.

A local Agenda 21 embedding an efficient policy for water management and biodiversity

Towards a local Agenda 21

EBROPOLIS, the Association for the Strategic Development of Saragossa, was set up in 1994 by the municipality, the Province, the chamber of commerce, the federation of neighbourhood associations, the university, the confederation of contractors and the confederation of SME's, etc. Its role is to develop a vision and a strategic Plan for the city and the urban district. It affiliates more than 80 companies (including the main national company supplying gas), banks, local authorities, associations, etc., asked to pay a fee to be part of the membership and to invest in some of the projects. A plan of action was delivered in 1998 based on consensus-achieving proposals, divided in five categories: infrastructures, training and human resources, economic structure, environment and quality of life, 14 concrete goals linked to sub-goals along with levels of performance to be reached for each one.

To go further

European Green Capital Award 2016, Zaragoza, http:// www.zaragoza.es/contenidos/medioambiente/ZGZVERDEEN/9Wastewatermanagement.pdf

European Green Capital, Expert Panel – Technical Assessment Repotr, Zaragoza, https://www.zaragoza.es/contenidos/medioambiente/ZGZVERDEEN/EGCA_2016_Technical_Assessment_Report_Zaragoza_F01.pdf.

Mensa civica: http://mensacivica.com/project/mas-alimentos-ecologicos-y-menos-panga-en-los-comedores-escolares.

Life Zaragoza Natural, Creación, gestión y promoción de la Infraestructura Verde de Zaragoza LIFE12 ENV/ES/000567, http://ec.europa.eu/environment/life/project/Projects/index.cfmfuseaction=search.dspPage&n_proj_id=4627.0.

Zaragoza Ayuntamento public website, http:// www.zaragoza.es/ciudad/medioambiente/

In 2000, the Saragossa city council signed the Charter of Aalborg and the Declaration of Hanover. The following year, it validated a document marking the start of the local Agenda 21 process, confirming thereby the Action Plan embracing sustainable development, town-specific indicators and the development of common European indicators, the principle of citizen participation and in particular, the Permanent Office and Functional Commission for its implementation.

Urban planning and land use.

Within the Urban Planning Agreements, the City of Saragossa has allowed local companies to move from the city centre to new industrial areas. The program Esto no es un solar (This is not a vacant lot) highlights the key role of the city to contrast unemployment, segregation and poverty. Starting in 2009, it aimed to promote the rehabilitation and residential development of 70 districts, according to social (job creation) and environmental parameters.

Mobility.

The most significant initiative developed by the City, is related to the new tram line connecting suburbs to the city centre. This solution, started in 2005, meant a reduction of the car traffic intensity by 14.5%, and even 28.3% in 2012, even if the car is still the most used mode. Furthermore the bicycle infrastructure was set in recent years together with a relatively large and popular bike-sharing system and the extension of 30 km/h streets for cars; this initiative has visibly produced a spread increase in bicycling. Eventually, among the possible developments of these kinds of initiatives, a gradual shift to achieve 80% hybrid and electric buses by 2020 is planned to start in 2015.

Water management.

Following a prolonged drought in the early 1990s, water management in Saragossa was considered as inadequate to satisfy the needs of the developing economy a growing population. As a result, the municipality redefined its approach to water supply, shifting from a policy of continued exploitation of limited resources to one where priority was instead given to demand reduction solutions.
Water consumption and water waste are now a main pillar of sustainability policies, linked to the Agenda 21 Global programme which had also produced a set of relevant indicators in order to monitor and continuously control the progress trend within different strategic initiatives.
The City of Saragossa represents an exemplary case of overall water consumption reduction, in Europe, by promoting a set of strategic actions concerned with water management and waste water treatment. Involving large-scale consumers, educational institutions, political decision makers and the general public as a whole, the programme was implemented through the four phases, starting in 1990s and concluding in 2008:

- phase 1: 'Small steps, big solutions' – A widespread awareness-raising campaign to reduce water consumption concerned with homes, public buildings and commercial activity and aiming to produce a behavioural change in water usage;
- phase 2: '50 good practices' – The implementation and then the dissemination, of 50 examples of water efficient technologies and practices with references to parks, gardens, public buildings;
- phase 3: 'School for efficient water use' – The dissemination of good practices guidebooks describing the good water saving practices identified in Phase 2 of the programme;
- phase 4: '100.000 commitments' – The invitation of citizens and businesses to make online public commitments to save water with the aim of recording 100.000 such commitments in time for the International Expo "Water and Sustainable Development" which opened in Saragossa in June 2008 (30).

As shown, coordinated by the newly established Saragossa Water Commission, the strategy actively included a comprehensive stakeholder engagement programme and a reform of the billing system in order to achieve European Commission requests concerning water saving targets. Fourteen years later the city really reduced its overall consumption by almost 30% and is now known throughout the world as a leader in the field of water conservation.

According to recovered data the water consumption seemed to be reduced from 135,54 litres per person per day (in 2000) to 99.86 litres per person per day in 2012. Overall, Saragossa's water consumption per capita figures and trends are impressive and among the lowest in Europe. This situation is surely due to the interesting pricing structure for water consumption which is

used in order to encourage an efficient as widespread usage of water. For example, householders that achieve a 10% reduction in water consumption also receive a 10% reduction on their water bill, as those consuming excessive amounts may pay almost five times at much in the higher tiers (see European Green Capital, Expert Panel – Technical Assessment Report, Zaragoza).

Moreover, wastewater reduction has been importantly improved in the past period throughout specific measures such as the Plan for Improving its Water Infrastructures, funded by the FEDER 2007-2013 Operational Programme of Cohesion Funds. The Plan was made up of a copious number of initiatives to fully implement wastewater treatment and re-organize rainwater management. Overall, Saragossa's strategic plan to reduce water waste and consumption, rather than produce an increase of the supply to meet demand in order to solve the problem of the water scarcity tried to promote a better managing of the water consumption usage and re-usage. In fact, the water reuse initiatives are also good and crucial to future reduce the dependence on freshwater. Moreover, bettering the water usage may be strongly linked with the promotion of a new form of sustainable agriculture considered as vital objective for all.

Urban Agriculture to maintain biodiversity

For more than 20 years, the City has been carrying out an active reforesting planning 1632,5 ha of new forest areas, contributing in a direct way to the climate change mitigation, land conservation and the enhancement of water resources consumption, thus, improving the quality of life of its citizens. 41% of the territory is devoted to farming and other 46% are covered by forest and natural vegetation.

A widespread set of activities concerned with Urban Agriculture has been promoted by the Municipality. La Huerta Del Abuelo Rosel ("The Garden of Grandfather Rosel") is a flagship project: a 600 square metres area downtown, in the middle of high buildings and busy streets, has been destined to become a productive open urban space, managed by people living nearby.

The three years project Huertas Life km 0 (Garden Life km 0) was launched in 2013 with different objectives, including the promotion of the agricultural sector and food security as well as social integration, empowerment and education of the citizens. The project highlights all traditional cultures related to the territory and allows to provide healthy and fresh local food with a leitmotif: "productos nuestros, productos Km0" (Our products, products zero km). An important collateral benefit of reinforcing urban, peri-urban agriculture and forestry is counteracting the loss of biodiversity and the maintenance of ecosystems. The overall project of the city gives particular significance the farmers' market Muestra Agroecológica(Agro-ecology Exposition) both a place to buy fresh, local and organic certificated foods and also to meet local producers and have the opportunity to discuss, discover and share competencies, experience and knowledge.

The conservation of different landscapes, also co-existing with human activity has produced results over the last years. Among 40% of the land area of the municipality is significant in terms of biodiversity. This includes 24.651 hectares of Special Areas of Conservation (SAC) under the Habitats Directive, and 11.358 hectares of Special Protection Areas (SPA) under the Birds Directive. It also includes 167 natural protected areas under national law. Priority habitats cover 23.542 hectares. More than 1.312 species of flora and 402 species of fauna have been identified and recorded.

The commitment of the City can be represented by three main issues:

- agroeconomy, health and environment: the promotion of local, fresh and organic foods in school canteens;
- social issues and access to food for everyone: during the summer of 2014, thanks to the effort of the Municipality and the financial sustain of the Ministry of Health and Social Services, five school canteens in Saragossa kept open to offer lunch to around 3.000 pupils whose families suffer of straightened circumstances;
- intercultural education and migrants job opportunities: El alimento que nos une (The food that join together) is a Mensa Civica's project committed to the promotion of intercultural food traditions, recipes and habits in public canteens, in order to foster social inclusion and migrant's occupation.

The lever of education to stimulate awareness and new behaviors

Starting from the projects developed on urban and peri-urban gardens, the City of Saragossa has promoted different initiatives to improve the local food system, with particular attention to the public food service that represents a long term strategic field for Saragossa's environmental and food policies.

The first project started in 1983, to introduce gardening at school. The initial aim of the municipality was to reconnect the different generations living in the city, highlighting how most of the inhabitants have rural origins. Today, school gardens represent a network of more than 8.500 pupils, 90 schools and gardens, managed both by the Municipality and the schools. They offer activities that are integral part of education programs. Schools are in charge of the maintenance of the garden and the educational activities including classes and workshops about the relevance of ecological farming, sustainable consumption of resources, including water resources, the relationship between food and health, where participants can share experience, knowledge and innovative proposals.
An award has been created: Premio Huertos Escolares Ecologicos (Ecological School Gardens Prize), to reward the best projects committed to the promotion of public awareness about ecological food and agriculture's future.

Numerous actors are involved in the whole process, such as public and private institutions, collective actors, NGOs and private citizens. More precisely, the list of stakeholders includes the University and schools of Saragossa, Slow Food and the Mensa Civica (Civic Canteen) project, the Unión de Agricultores y Ganaderos de Aragón (UAGA-COAG, the Farmers and Stockbreeders' Union), the Centro de Estudios Rurales y de Agricultura Internacional (CERAI, Center for International agriculture and Rural studies), the Comité Aragonés de Agricultura Ecológica (CAAE, Aragon's Committee for Ecological Agriculture), the Cientro de investigación de recursos y consumes energéticos (CIRCE, Research Center on Energy Resources and Consumption), catering agencies, local producers, buyers and farmers.

For instance, Slow Food and Mensa Civica contributed to the rising of awareness and commitment on food system issues with educational programs and classes about food and nutrition culture. The program was part of a wider effort to develop consciousness and activities about the importance of local, organic and traditional foods. Many of the Slow Food projects find in Saragossa a particular significance due to the concrete commitment of the city to preserve biodiversity or water resources, such as Arca del Gusto (Ark of Taste) a project aiming to identify, catalogue and protect traditional, local and small scale food species and products which are in risk of extinction; Baluarte (Bastion), which aimed to preserve traditional ways of food production, to improve specific markets and educate buyers and consumers; the project started in 2000 and today count 1.600 producers and 350 labeled products from 59 Countries.

In 2003, both initiatives to promote urban farming and school gardens converged to lead to the public commitment for the definition of new criteria of sustainability for city food services. The University of Saragossa took a part into the Campus Sostenibles (Sustainable Campuses) project, a network involving Spanish University Districts enhancing the creation of a system of pilot canteens in at least one Campus per District. The purpose of the project has been to promote the importance of a change in everyday food lifestyles.

Bibliography:

(30) Ralph Philip, (2011), Reducing water demand and establishing a water saving culture in the city of Zaragoza, SWITCH Training Kit, CASE STUDY, zaragoza, Spain, http://www.switchtraining.eu/fileadmin/template/projects/switch_training/files/Case_stu dies/zaragoza_Case_study_preview.pdf

Case Study number 10

CITY FOOD POLICIES

Brussels a city-region which bets on urban agriculture to stimulate sustainable food-based local economy

Author: Isabelle Lacourt

City	Brussels
Country	Belgium
Population: City of Brussels	166.497
Population: Brussels-Capital Region	1.13 millions
Surface area: City of Brussels	32,6 sq. km
Surface area Brussels-Capital Region	161,4 sq. km
Green areas	80 sq. km

Brussels' priority in implementing sustainable food systems is to reinforce economy in order to create local employment.

To do so, many projects either top down or bottom up are launched in the same moment, all framed into an action plan run by the Alliance Employment-Environment, under the control of the regional government, in line with a dynamic that recall the philosophy of Living Labs, relying on co-creation activities that engage various stakeholders to foster innovation.

Moreover, Brussels-Capital Region has commissioned a study to identify the potential resource of jobs, all relevant sectors of activities and the profile of such job recipients. That's how urban agriculture has been identified as a promising area of activity still to be implemented.

Among lessons that can be learnt, Brussels-Capital Region has built in the last 10 years a territorial vision in which sustainable food has taken more and more importance. Brussels has demonstrated a strong capacity to use efficiently European money to support the development of its food policy. As a city-region, it has been pragmatic enough to mobilize the European regional development fund to foster economic and social cohesion policy, to facilitate cross-border cooperation and promote the realisation of local and regional projects and the URBACT programme, which is designed to help cities to exchange and learn around urban policies.

A multi-faceted city-region

The City of Brussels is the largest of the 19 municipalities of Brussels-Capital Region. National Belgian institutions are located not only in the City of Brussels, but also in most of the other 18 municipalities. Therefore, the entire Brussels-Capital Region and not only the City of Brussels serves as a capital. This densely populated area of 1,1 million of people is located in a larger metropolitan area of 2,5 million inhabitants.
At institutional level, Brussels-Capital Region is one of the three regions of Belgium, with Wallonia and Flemish Region. Members of federal French Community and Flemish Community exercise their jurisdiction on the territory of the region. On the other hand, regional parliamentarians can be either members of the Brussels Parliament, members of the Assembly of the Common Community Commission, members of the Assembly of the French Community Commission, members of the Parliament of the French Community of Belgium and "community senators" in the Belgian Senate.
The regional parliament can enact ordinances which have equal status as a national legislative act. The 19 municipalities of the Brussels-Capital Region are other political subdivisions with individual responsibilities for the handling of local level duties, such as law enforcement and the upkeep of schools and roads within its borders. Municipal administration is also conducted by a mayor, a council, and an executive. A lot of controversy exists concerning the division of 19 municipalities for a highly urbanized region which is considered as one city by most people.

Brussels also serves as a "de facto" capital of the European Union, which has contributed significantly to the importance of Brussels as an international centre. It hosts the major political institutions such as the European Commission, occupying 865,000 m^2 within the "European Quarter" in the east of the city, and the Council of the European Union. Serving as the centre of administration for Europe, Brussels' economy is largely service-oriented. It is dominated by regional and world headquarters of multinationals, by European institutions, by various administrations, and by related services.
The population of Brussels is younger than the national average. Brussels has a large concentration of immigrants, mainly from Turkey, Morocco, Democratic Republic of the Congo, Rwanda, Burundi etc.
Middle and high revenues classes tend to go to live out of Brussels' urban area and 360.000 people commute everyday into the capital. The gap between high and low incomes tends to be wider than in the rest of the country. Brussels-Capital Region has the highest unemployment rate at national level. In 2011, it reached 16,5 % against 10,3 % in Wallonia and 5 % in the Flemish region.

Although the number of farms has been reduced of 63% between 1980 and 2010, food production is still an important sector of exportation for the country. Organic farming represents 4.6% of the whole cultivated areas at national level and 2% in Brussels-Capital Region. In the Brussels-Capital region, according to 2010 statistics data, there were 21 farms, whose 7 breeding farms, generally dairy and poultry farms, on a total of 268 ha of workable agricultural land. Cultures are mainly cereals (97 ha), grassland (94 ha) fodder (36 ha), potato (22 ha), and vegetables (15 ha). There are also four pedagogical farms and an urban agro-ecological farm on the territory. Most of the potential green belt available for Brussels-Capital region is located in Wallonia or Flemish region.

Belgian cuisine is a major tourist attraction in Brussels. It is characterised by the combination of French cuisine with the more hearty Flemish fare. The city is also famous for chocolate and pralines manufacturers. The gastronomic offer includes approximately 1.800 restaurants, and a number of high quality bars. In addition to the traditional restaurants, there are a large number of cafés, bistros, and the usual range of international fast food chains. Brasseries offering a large number of beers and typical national dishes are widespread. Traditional fresh, hot, waffles are sold on the street as well as deep-fried food in the "friteries".

Starting point and milestones

Both the City of Brussels and Brussels-Capital Region are involved in food-related projects and policies.

The City of Brussels.

To foster its involvement in sustainable development, the City of Brussels adopted in 1995 the Aalborg charter. Since 2005, it has actively worked on a local Agenda 21 that has been officially launched in 2008 with 86 actions implemented according to 14 objectives.
In 2009, the city and its Public Center of Social Action signed the "Aalborg Commitments" .

In 2010, the local Agenda 21 has been restructured in five main objectives, 22 area of intervention and 154 actions.
Food-related issues of the Agenda 21 are concentrated in the fourth objective: social cohesion and extended solidarity. They mainly aim to promote education for healthier food at school. Since 2005, a committee gathers representatives of production sector, of education services, experts (dieticians, nutritionists, dentists) meet two or three time per year to produce guidelines for more efficient actions in schools.

Agenda 21 is coordinated with the Local Development Plan of the city. It is also coherent with the 2012-2018 legislative program, in which the City of Brussels identified four main issues related to:

- Economic and social dynamism
- Services for well-being
- Respect and conviviality in a secure city
- Governance.

Indeed the City of Brussels intends to intensify its efforts to improve the quality of life of the citizens by focusing on social and economic issues in collaboration with the Public Center of Social Action (CPAS: Centre Public d'Action Sociale) and all para-municipal associations.

Food-related issues are mentioned in the second pillar, through the improvement of food quality in kindergartens' meals, educational programs on healthy food at school and in recreational centres for children and teenagers. Within the fourth pillar, under the generic "Brussels, sustainable city", food-related issues are also indirectly concerned by actions to reduce waste production, to increase food waste recycling by composting and also to foster tap water consumption in administration building, schools, sport stadiums, etc.

Brussels-Capital Region.

The Government Agreement (2009-2014)

Sustainable food is a core issue of the Brussels-Capital Region, clearly identified in the Government Agreement (Accord du Gouvernement) 2009 - 2014 that underline “the Government will aim to make Brussels an example in terms of sustainable food. (...) To do so it will implement a strategic Plan to develop sustainable food and urban agriculture in Brussels." Two different lines of actions have been identified. The minister of environment of Brussels-Capital Region, Evelyne Huytebroeck has started a program of transition towards a sustainable food system. Interestingly, a synergy has been identified between this program and a "New Deal" called Sustainable Urban Growth Pact, (Pacte de Croissance Urbaine Durable), that aims to create quality jobs.

The program of transition towards a sustainable Food System.

This program mainly aims to support sustainable food consumption to meet both public health and environment concerns. By increasing both collective and individual demand for sustainable food it will be possible to implement sustainable food supply chain.
Brussels Environment is the environment and energy administration of the Brussels Capital region in charge of the implementation of such program. It has launched several European projects in order to fund activities to support the program of transition towards a sustainable Food System.
The Food transition process follows several objectives, starting from the structuring of a local food supply chain embracing all activities, from production to consumption, up to waste management, including processing, distribution. Socio-economic aspects including the possibility for small companies to be part of this local market in one hand and the affordability of the so-called sustainable food in the other hand are also taken in consideration, as well as the exemplarity of public food services.

To go further:

Alliance emploi environnement : http://www.aee-rbc.be

Portal Brussels region: http://be.brussels

Accord de gouvernement 2009-2014 available at: http://be.brussels/files-fr/a-propos-de-la-region/competences-regionales/accord-de-gouvernement-2009-2014-rbc

Portal city of Brussels : http://www.bruxelles.be

Agenda 21 : http://www.brussels.be/artdet.cfm/8519

Brussels Environment (http://www.bruxellesenvironnement.be/)

The Green Cook project - Towards a global sustainable food management (2010-2014)

This project carried out by Brussels Environment, in partnership with several other partners from Belgium meets either the objectives of the fourth waste plan and those of the Program of Action for a Sustainable Food in Brussels-Capital Region. "GreenCook is aimed at reducing food wastage and to make the North-West Europe a model of sustainable food management, by in-depth work on the consumer / food relationship thanks to a multisectoral partnership." It has lead to several campaigns and guidelines to prevent food waste.

The URBACT project "Sustainable food in urban Communities" (2012-2015)

Brussels Environment (Institut Bruxellois pour le Gestion de l'Environnement), is the lead partner institution of this project, jointly financed by the European Union (European Regional Development Fund) and the Member States. URBACT is, in a general way, a European exchange and learning programme promoting sustainable urban development that allows different European cities to share good practices and experiences and to develop pragmatic solutions. The thematic network "Sustainable Food in Urban Communities" involves ten European cities (whose Bristol) and focus on developing low-carbon and resource-efficient urban food systems.
Besides the international meetings between all partners, a Local Support Group has been created to gather all inputs from the various initiatives presented by the different partners and to disseminate a new culture of food to the citizens and to develop concrete activities, according to low-carbon and resource-efficient urban food systems. This project in particular has allowed to give a general overview of all the initiatives taking place in Brussels, according to three pillars: growing, delivering and enjoying. The program of transition towards a sustainable Food System has faced the difficult challenge to give a precise and exhaustive description of what is sustainable food. Brussels-Capital region relies on the Federal Council for Sustainable Development (Conseil Fédéral du Développement Durable), FRDO-CFDD, an authoritative council that advises the Belgian federal government on federal policy on sustainable development and also, for a pragmatic understanding and vision, on the RABAD (Réseau des Acteurs Bruxellois pour l'Alimentation Durable), a network of 42 local stakeholders, working around sustainable food issues, including ONG, restaurants, sector organizations, distributors and shops, consultants etc.

The Sustainable Urban Growth Pact and the Alliance Employment-Environment: to use environmental challenges as a leverage to create jobs

High unemployment level is a critical factor in the Brussels area. In such context the Alliance Employment-Environment (AEE)'s plan is based on the premise that

> "environmental challenges are an essential resource of jobs and economic development for companies that will be able to quickly adapt or innovate in sectors related to environmental issues."

Indeed the AEE was been launched in 2010, to explore the use of sustainable development as a lever of competitiveness. It has worked, since the beginning, to create conditions for stakeholders to commit, either collectively or individually, to foster environmental related business and create high quality jobs. As a result, public and private actors, including no profit associations have agreed to collaborate: firstly they have evaluated priority areas and limiting factors. Four axes have been successively highlighted: in 2010 "sustainable construction", in 2012 "water management", in 2013 "waste management" and "sustainable food". By accompanying the food transition process, the AEE gets results in terms of partnerships, training and development of new skills and job creation.

The European operational program FEDER for the implementation of the European Regional Development Fund

This program "Objective 2013, Let's invest together in urban development", covering the period 2007-2013, already aimed to create economic activity and employment according to a model of sustainable urban development.The next one, approved in April 2014 by the Government of the Brussels-Capital region, for the 2014-2020 programming period is a continuation and indicate the sustainable food sector as one of the five priority sectors identified to be funded and developed. This program will consider actions to support sustainable food supply chain in Brussels. According to the very small food production in Brussels-Capital Region, FEDER will be coordinated with other funding systems to implement actions in the neighbouring Wallonia and Flemish region. It will also network the different projects developed according to the AEE sustainable food axis.

Turning the city into a Living Lab dedicated to food sustainability.

The lever of Public Food Service: to provide healthy meals and to educate children

270.000 meals are served every day in canteens in Brussels. In terms of Public Food Service the efforts mainly concentrate on awareness raising campaigns. All schools (about 6000 pupils) were involved in 2011-2012 and 2012-2013 in different education programs. Among the issues treated: seasonal food consumption, food waste reductions etc.
A great effort is also made on meal affordability. In 2012/2013 meal prices ranged from gratuity up to 2,39€ in kindergartens, 2,51€ in primary schools, 2,65€ in secondary schools, whereas adults paid 2,79€ for a whole meal. School meals aim to cover 40% of children nutritional needs.
Half of the meals are prepared by a private company. Another important actor is "Les cuisines Bruxelloises", an association in charge of public Food service managed by the City of Brussels and four other municipalities. The catering activity of the association is divided in two sectors: health (hospitals and elderly homes) and childhood and out-of-home (schools, kindergartens, administration restaurants, and sporadic events on demand). 268 full-time-equivalent employees, including 30 persons in professional rehabilitation are working to serve, on a daily basis, 6000 lunches in schools, administrative restaurants and 1500 and 950 breakfasts, lunches and dinners, respectively in hospitals and for elderly people.

Food safety is a high concern and the municipality has chosen to invest in "Cook and Chill" technique to prepare meals. Today 3300 school meals are prepared in newly equipped kitchens thank to a 1.126.000€ that allows to improve quality level and also to propose three different menus everyday: regular, without pork meat and vegetarian. Organic food is also occasionally served. The City of Brussels also removed all vending machine selling snacks and soda in the school, replacing them by alternative healthier solutions.

Brussels-Capital region transformed in a laboratory to experiment innovations in Sustainable Food Systems

No less than 50 different projects are currently running on the thematic of food sustainable systems, within the Alliance Employment-Environment action plan responding to different strategic objectives presented in table 1 or classified according to their sector of activity as shown in table 2. Indeed Brussels-Capital Region is transformed in a huge open-air laboratory that fosters innovation. All projects are detailed in in the AEE Report of activity 2010-2014. Most of them have been already funded on 2013 or 2014 budget.
Projects have different ambitions, from very large such as "Identify all different existing and potential synergies on the issue of sustainable food systems on the territory of Brussels-Capital region." to very specific "create a hub to collection, transformation and repackaging of unsold food on the site of Mabru" (source AEE)".

Table 1: Amount of local food purchased by different City Agencies in 2013, in the city of New York.

Strategic objectives	Number of projects
To know, to plan to monitor food systems	6
To stimulate research and innovation	4
To reinforce and structure food supply chains	11
To foster business incubators	17
To foster empowerment	12
Total	50

Table 2: Axis "Sustainable food" of AEE action plan: number of projects according to sector of activity in Brussels-Capital Region

Sector of activity	Number of projects
Urban agriculture	9
Transformation	5
Distribution - logistics	9
Consumption	11
Transversal	16
total	50

To run such an action plan, AEE proposes a system of governance that allows all stakeholders to participate and collaborate all along collective preparation phase up to action implementation. All public and private bodies involved in learning and training at any level are also involved in the process, at least to be informed and aware about the state of progress, in order to adapt their own educational programs. Research bodies are also potentially involved where innovation needs to be supported by experimentations. A total of 107 structures are actively involved in this process. A third of them, for instance "Bruxelles Environment", are directly managing one or more projects.

To create a sustainable Food Supply Chain that generates good quality employment.

Brussels Environment has ordered a study about the job potential for the territory of Brussels brought by the implementation of sustainable food systems. A thorough analysis has been necessary to determine what could be a transition from actual food systems towards sustainable food systems. Indeed, if it is clear that globalised agro-industrial systems are not sustainable, it is difficult to model the evolution of a diverse set of alternative food systems, because they are now a minority developing in a market niche. Even if alternative food systems can be more resilient in a moment of crisis, it is difficult to imagine what influence will have a greater degree of professionalism or a change of scale when they will grow and enter in a competition mechanism. It might become difficult to evaluate the real state of sustainability of all these different businesses. Therefore the pragmatic approach of RABAD: to promote life cycle approach to measure environmental impacts, use of fresh, local, seasonal food, fair trade, support of local small producers and suppliers, foster sustainable food awareness raising, can be very useful although not completely exhaustive.

The table 3 indicates the number of jobs that actually arise from sustainable food systems, compared to the potential number if such sustainable food systems are further developed. Today Sustainable Food Systems ensure 2.500 jobs, of which about 1.000 in food distribution. A specialized branch is also developing in the HoReCa (HOtel, REstaurants, CAtering) sector, as well as take away and food processing. Interestingly this niche seems no to be affected by the recent economic crisis. Moreover it gives jobs to low qualified young people, a category particularly vulnerable. Future prospects highlight urban agriculture as the most promising source of employment that could derive from the development of sustainable food systems. Indeed this sector is still in infancy on the territory. Despite gardening activity is quite popular in Brussels, (19% of people have a vegetable spot), and only 0,79% of public green spaces are used as vegetable gardens. Brussels environment has already launched a program to allocate vegetable plots in parks, available for households. 190 have been attributed and 170 people are on a waiting list.

Table 3: Sustainable food systems as a source of employment in Brussels-Capital Region.

Food system value chain	Actual jobs generated by sustainable food systems	Potential of jobs generated by the development of sustainable food systems.
Food production	28	1407 to 4072
Food processing	500-650	90 to 150
Food distribution	1150-1950	785-851
Food take away	390-480	215
Restaurants and hotels (HORECA sector)	360	180
waste management	5	190
Training	70	37-68
Research / Consulting	2	20
Total	2505 - 3 545	2924-5746

Source : Système d'alimentation durable. Potentiel d'emplois en Région de Bruxelles-Capitale Rapport final de la recherche réalisée pour le compte de l'Institut Bruxellois pour le Gestion de l'Environnement (31).

But this is not sufficient to launch a proper production that could flow into sustainable food systems. Studies to verify business model viability for urban agriculture in northern countries show good possibilities to develop viable systems based on the complementarity between urban and peri-urban agriculture. Therefore such urban agriculture programs need to be developed in synergy with neighbouring rural areas. Moreover, pros and cons co-exist. If in one side, it is expected that the development of alternative food production systems based on the reinforcement of urban and peri-urban agriculture will induce the development of a coherent distribution system based on local supply, that minimize transport environmental impact, on the other side, there is a sound concern about air and soil pollution affecting the quality of urban food production. Therefore prevention measures have to be taken before launching urban agriculture activities for large scale human consumption.

Bibliography:

(31) Magali Verdonck, Michèle Taysmans, Gauthier Chapelle, Gaëtan Dartevelle, Caroline zaoui, (2012, revised in 2014), Système d'alimentation durable. Potentiel d'emplois en Région de Bruxelles-Capitale, Rapport final de la recherche réalisée pour le compte de l'Institut Bruxellois pour le Gestion de l'Environnement Professeur Magali Verdonck et Index Michèle Taymans du Centre d'études régionales bruxelloises - Facultés Universitaires Saint-Louis, Gauthier Chapelle, Gaëtan Dartevelle et Caroline zaoui de Greenloop.

Case Study number 11

CITY FOOD POLICIES

Geneva using territorial marketing to increase food self sufficiency and local food consumption.

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City	Geneva
Country	Switzerland
Population: city area	193.500
Population: canton area	470.512
Surface area (city/canton)	10,54 sq. km
Green areas - leisure (city)	3,10 sq. km
Surface area (canton)	282 sq. km

Among the lessons that can be learned from the Geneva case study:

- **Territorial food marketing based on the implementation of territorial certification has enabled the promotion of local agriculture with the objective to increase food self-sufficiency. In such a context, public food service is a good lever to create a stable market with meaningful opportunities for producers.**
- **It has been of great help to extend territorial certification also to the restaurants in order to enable public buyers to overcome procurement restrictions about the indication of geographical origin of food products.**
- **Many years are necessary to get results; in particular, a strong effort is need to insure local production diversification. On the other hand, staff ability to buy and use local products greatly depends on staff personal commitments and skills.**
- **Public Food service in Geneva is characterized by the strong involvement of civil society in the management and a century-old and still vivid perception of the social role of school meal distribution, as a tool for food justice.**

Food self-sufficiency in the Canton of Geneva: an important politic issue

The following declarations made by Michèle Kunzler, former State Counsellor, responsible for the Department of the Interior, of the Mobility and of the Environment illustrates the political vision of the Canton of Geneva, and the will to support local farming.

> "The various food scandals of recent months have highlighted a number of abuses from food industry: the increasing distances over which products are moved as well as the number of borders and processing steps leading up before to arrive on our plates. Once again, such events allow the consumers to measure how much food traceability is important."

> "Tomorrow, the world population growth and the change of diet in Emerging countries, the increasing use of agro-fuels and the climate change will enhance food demand. In such a context, to consume mainly imported products is neither a lasting solution, neither a choice of sustainable development. Local agriculture in the France-Vaud-Geneva region must be encouraged and valued."

The Swiss Confederation is a federal parliamentary republic bringing together 26 cantons, each one having its own constitution, its own parliament, government and courts. Switzerland has one of the best environmental records among nations in the developed world. Both confederation and cantons work together to implement sustainable development, thanks to a comprehensive series of laws that define a prescriptive environmental policy. In particular, several cantons develop labels or initiatives in order to support local agriculture.

The overall degree of food self-sufficiency in the territory of Geneva (32) 20% or 15% if one considers quantities of food or caloric needs respectively. Available agricultural areas represent about 220 m² per person in the Canton of Geneva. Geneva is the most populated city and does not have any farmland. Less than 1% of the population employed by the agricultural sector. The 450 family farms within the Canton mainly produce crops such as cereals, oilseeds, vineyards, fruits, market gardens etc.

All started with a local label to promote agriculture

In 2004, the Canton of Geneva launched a label called « Genève Région – Terre Avenir », in order to promote local food production and consumption. This project is a response to a precise political will and an overall reflection on food sovereignty over the territory. The law « M2 05 », which came into force in 2005, is based on the federal law on agriculture of 1998. It aims to foster local agriculture within the Canton of Geneva. 1,6 million € are used every year to manage and promote a regional brand. Genève Région-Terre Avenir GRTA (Geneva Region Land Future), a guarantee mark created and owned by the Canton of Geneva since 2004.

GRTA is based on four main principles: good, local, transparent and fair. Precise specifications impose the following rules:

- to produce and transform food according to integrated or organic agriculture,
- to respect applicable collective employment agreements,
- within a geographical perimeter within the canton of Geneva and neighbouring areas (zones franches).
- GRTA labeled food is GMO free and contains at least 90% local ingredients.

A technical commission decides which ingredients should be imported according to the fact that they cannot be produced in the territory of the Canton of Geneva or according to punctual climate conditions that might prevent their production in specific periods of the year. Specific controls are carried out during production process by an independent body.

The number of companies certified with GRTA label has increased since its launch, from 75 in 2004 to 345 in 2013. The notoriety of the brand has increased from 25% in 2006 up to 40% in 2013. GRTA producers are diversified (cereals, oilseeds, garden markets, grape-growing, arboriculture, horticulture, beekeeping), but also cattle, sheep, goats, horses, pigs, bisons and poultry producers, bakers, butchers, etc. There is a variety of distribution outlets: consumers can buy GRTA food products in supermarkets, wholesalers, directly in the farm, in markets etc.

To use public procurement to increase local food production

On the territory of the Canton of Geneva, public food service represents 13 millions of meals per year that are divided into several categories as shown in the figure 1. This calculation is very complex: six different directions and 45 municipalities are involved within the canton. The City of Geneva is in charge of school and nursery catering but it does not manage directly this service.

Table 1: Public food service in the Canton of Geneva: meal distribution according to the typology of service.

The Canton of Geneva	% of meals served per year
Hospitals	33
Elderly homes	25
Nurseries	9
Primary schools	15
Second. schools	3
Universities	3
Jails	4
Institutions for disabled persons	5
Other services	6

GRTA labelled products are used in many other public restaurants in the Canton of Geneva. At the end of 2013, 75 restaurants serving more than five million meals per year, either public and private, have got themselves the GRTA certification and committed to propose two or three GRTA labelled products in their menus every day. The DIME (Department of Interior, Mobility and Environment) has made a survey to quantify GRTA products consumption in school canteens. The survey was made from may 2011 to june 2012, including 16 nurseries (Espaces de Vie Enfantine) and 11 school canteens. Based on the results of this survey, public food service on the territory of the Canton of Geneva represents a potential market of about 1,4 million € (+/- 20%) for GRTA products. More than 120 different products were used during the study. In particular, the survey has highlighted how influent is the extent chefs feel involved and their effort and commitment to use more or less diversified food products.

The school catering in the Canton of Geneva: a civil society joint working service based on a century-old commitment for food justice.

School catering service was implemented a hundred years ago in Geneva, to support low-income population. Volunteers have been preparing lunches to children, whereas schoolteachers were bargaining their meal in exchange of pupils' supervision during lunchtime.

Today, few school kitchens created at the end of the nineteenth century still work today in a very similar way, meals being served to children by volunteers according to weekly rotations. Only 8 school restaurants out of 45 are managed by volunteer commissioners. In this case, chefs, kitchen aids, dishwashers and cleaners are employees. Since 20 years, additional school restaurants are implemented each year to cope with an increasing number of children and the municipalities of the Canton of Geneva have been delegating meal-serving inside the restaurants to an organization in charge of extra-curricular activities. Municipalities provide facilities and gives subsidies to cover part of the cost of the meals, including specific funding to buy GRTA food products (see more).

In the city of Geneva, out of 4.000 children registered in the nursery, only 50% are eating school meals and out of 11.000 children registered in the primary schools, only 4.700 take their meal at school. School catering is employing 100 staff, including 13 chefs and more than 450 volunteers.

«Croquons local» (Crunch local) in school catering and « la petite enfance croque local » (Early childhood crunch local): two pilot projects of the City of Geneva.

Since 2003, the city council has launched pilot projects to introduce organic food in school catering, starting with the bread and extending this experimentation to other organic food between May 2004 and June 2006.

Noting that a lot of organic food was imported and in front of a lukewarm reception, the municipality has decided to promote local food instead of organic food.

The "Crunch local" program in school catering matches the Aalborg goals adopted by the city of Geneva in 2010, in order to turn principles into concrete actions, and in particular it fits into the 10th objective "local economy" among the 13 priorities of the strategic plan for sustainable development implemented during the period 2011-2014 (see more). In 2010, a first experiment showed that a menu exclusively made with GRTA products, in addition to educational actions, lead to a further cost of 0.80€ per meal. Since May 2011, the city gives a support to school restaurants which propose a GRTA meal ingredient every day and a GRTA menu every month. In 2012, the annual budget devoted to the tenth objective "local economy" reached 145.000 Swiss francs , mainly to pay the extra cost of GRTA products and awareness raising initiatives within school catering.

The need to adapt public call for tenders to purchase GRTA food products in public food service.

In 2012, new specifications have been made by the general direction of agriculture in order to enable private and public catering managers willing to use the GRTA brand and foster local food purchasing procurement. They complement the general regulation of the GRTA certification. They frame the information, the supplying and the consumption of food with the GRTA label for restaurants that become active in the promotion and valorization of GRTA food as the other GRTA producers. Indeed if restaurants get themselves the GRTA certification, public buyers must follow the guidelines and serve GRTA labeled food and menu according to a frequency established by the owner of the label. Therefore, public buyers get out of the logic of the lowest price as they commit to respect the philosophy of the GRTA label of warranty, including food traceability.

Among the main requirements: GRTA food products must be clearly identified on the menu or on the buffet table; at least 3 GRTA food products are proposed on a daily basis; in case of single menu and if there is no buffet at least two GRTA food products are served every day; the collective agreement for hotel and catering is respected; waste is sorted and recycled. The certification is valid for one year and is tacitly renewed unless withdrawal by a decision of the technical commission of the GRTA label.

A good success of GRTA label in school restaurants

The GRTA Label has met a wide acceptance from the associations of school canteens and from school catering chefs. In 2011, 70% of the schools and nurseries managed by the city were proposing a GRTA menu once a month and at least one GRTA product every day. In 2012, the percentages increased respectively to 83 and 95%. However, the data collected do not allow to assess the diversity of GRTA products served. Moreover, the creativity of chefs is strongly influencing the way GRTA are used.

For local producers, school catering is a good lever to sell their products, indeed, despite holidays, allowing a regular and steady income. However, this project is challenged by the necessity to organize small producers to enable them to fulfill school catering orders. It is also necessary to develop further the local production of pre-prepared vegetables, including fresh-cut packaged salads and frozen vegetables for school catering, in order to overcome constraints due to a seasonal offer concentrated between April and September and also to the lack of choice for some products such as fruits, dairies, starchy food, potatoes, etc.

The study made by the DIME highlights several areas of work to strengthen the project:

- To develop specific training for chefs
- To increase awareness of buyers and decision makers
- To introduce a clause regarding a minimum threshold for local products in the call for tenders for public procurement (food purchasing) and in the concession contracts awarded for the management of public catering service.
- To increase awareness of children
- To improve the visibility of GRTA products (more traceability)
- To increase the number and diversity of GRTA products served everyday
- To increase the number of collective restaurants with a GRTA certification in the city of Geneva
- To support farming, small producers' networking, foster investment to develop a GRTA offer suitable for public food service.

The implementation of a centralized and common procurement policy has become a priority. The Canton of Geneva has opted for a virtual platform that will contribute to the regional development plan by boosting local economy and enabling the match between supply and demand. It should establish a direct connection between producers and restaurants; by easing the work of purchasing managers, it should therefore increase the visibility of small producers. It covers the possibility for contracts between GRTA certified farms and close by restaurants. Moreover, by targeting production sites well adapted to the use of small volumes, it should also enable their access to the market of public food service that is usually out of reach.

Bibliography:

(32) Le métabolisme agricole de l'agglomération franco-valdo-genevoise, (2010), Direction générale de l'agriculture. http://etat.geneve.ch/dt/SilverpeasWebFileServer/Plaquette_METABOLISME.pdf ComponentId=kmelia187&SourceFile=1286871454564.pdf&MimeType=application/pdf&Directory=Attachment/Images/

To go further:

Programme Genève, Ville Durable. Available on http://www.ville-geneve.ch/themes/developpement-durable-energie/geneve-ville-durable/geneve-ville-durable/

Geneve Region Terre Avenir Règlement général 9 octobre 2009, available on http://www.geneveterroir.ch/fr/content/documents-reglements

- Vers une restauration collective durable en Europe : le cas de Genève." available on: https://www.youtube.com/watch?v=qJ4uJj6GpPg

Case Study number 12

CITY FOOD POLICIES

Turin, the Italian Detroit for a new culture of food.

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City	Turin
Country	Italy
Population: city area	901.556
City: Surface area	130,34 sq. km
City: Green areas	19,05 sq. km
Population: metropolitan area (former province of Turin including 315 towns)	2,2 millions
Metropolitan area: surface area	6800 sq. km
metropolitan area: agricultural area (mountains 55%, plain: 30%, hills: 15%)	5907 sq. km

The city of Turin can rely on the excellent quality of its surrounding regional agricultural production, worthy of recognition worldwide. Therefore, it has understood the potential to use food for urban marketing and promotion strategy, looking to become a capital of high quality food like other transalpine neighboring cities such as Lyon or Dijon, in France.

At a strategic level, in line with its long-standing industrial tradition, the city still prefers to project itself into the vision of the Smart Cities: "a city that, while respecting the environment, must be able to produce high technology, reduce energy consumption in buildings, promote clean transport and generally improve the quality of life of its inhabitants in the name of the low carbon dioxide emissions." Within such a prospect, food issues are still ongoing due to the numerous projects that are part of the Smart City approach either at local or European level.

Historically, the City of Turin has been long involved to prevent discrimination. Therefore, the city also gives importance to the social and cultural aspects of food with a long-standing commitment to the promotion of a new food culture that integrates the different communities, by making a smart use of food diversity.

An industrial city undergoing transition to a new personality

The City of Turin represents one of modern Europe's most impressive stories of urban transformation. Situated in the Piedmont region in the north-west of the country, Turin is Italy's fourth largest city (33).
After the lowering of the population due to the industrial crisis, in the last ten years, the city of Turin has seen a demographic growth, reaching a peak of 901.556 inhabitants, where 140.138 of foreign nationalities. Among the nationalities mainly residing in Turin there are Romanians (55.333), Moroccans (19.892), Peruvians (9.390), Chinese (7.128), Albanians (6.093), Moldovans (4.860), Egyptians (4.779), Nigerians (4.277), and Filipinos (3.752). If we consider the metropolitan area, the total amount of the population may reach 1.700.000 people.
The history of Turin's recent economic development is as directly as inextricably linked to the automotive sector (in particular the known Fiat Corporation). In 1911, the sector employed about a third of the city's total manufacturing workforce and in the late 1960s, the company Fiat produced almost the 95% of all Italian cars, becoming later such a dominant force in the city that Turin was the model of a "one company town".
A combination of the 1973 global oil shock, overseas competition, inflation, caused the automobile sector to collapse, and with it the rest of the Turin's economy as Turin plunged into crisis. As a result of this new situation, strong mayoral leadership during the 1990s, through the launch of its first Strategic Plan in 2000 and the hosting of the Winter Olympic Games in 2006, tried to transform Turin into a thriving modern metropolis built around science, culture, creativity, design and technology. In particular, the Strategic Plan involved institutions, political representatives, the economic world and society as a whole in a project to redefine the city's identity, pinpointed a shared vision of social and economic development and suggesting a vision for the future.
During the period between 2008 and 2010 Turin hosted the XXIII World Congress of Architecture, the Turin Film Festival, the Euroscience Open Forum, the European Book Fair, the international arts fair "Artissima", as well as the slow food fair "Terra Madre". Such international positioning has been viewed as an important recovery device for Turin, particularly as an answer versus crisis. However, despite delivering a package of creative and practical responses to the acute negative impacts of the downturn during late 2008 and throughout 2009, Turin's future remains uncertain.
Amongst other factors, the city's dialogue with higher-tiers of government to facilitate the delivery of much needed infrastructural improvements to support the implementation of the city's new economic development strategy have been enhanced.

Former Italy's first capital, Turin is recognised as a capital of taste due to its local gastronomy, characterized by sobriety and refinement. Downtown, numerous elegant restaurants and historical cafés along the streets and squares propose local recipes made of aperitifs based on vermouth and grissini (a speciality of bread sticks), typical dishes such as "bagna caôda", agnolotti, mixed fries, cheeses, zabaglione, gianduiotto (speciality of chocolate) and bicerin (traditional beverage made with coffee). Indeed the industrialised Turin is located in a farming region. Piedmont agriculture can be divided into different sectors: commodities, characterized by poorly differentiated, intensive production, mostly cattle and cereals, localized in the plain; regional productions, produced and consumed locally, (mostly fresh vegetables), specialities, highly territorialized productions, often subject to certifications of quality (wine, meat, truffles, cheese) and finally marginal productions, located in the mountain areas. Indeed, in the last years, Piedmont has been recognized as one of the most "quality oriented" territory of food within the Italian context.

To go further:

Province of Turin:
http://www.provincia.torino.gov.it/speciali/2013/actt/dwd/def/4_C4.pdf .
http://www.provincia.torino.gov.it/europa/europa/progetti_europa/prog_agricoltura/ACTT.
http://www.provincia.torino.gov.it/speciali/2013/actt/atti.htm.
http://www.comune.torino.it/regolamenti/363/363.htm.

Slow Food:
http://www.slowfood.com/international/7/history

Torino Internazionale (n.d.), The Plan The Association Activities Prospects
http://siteresources.worldbank.org/INTMNAREGTOPURBDEV/Resources/

Starting point and milestones

As described above, by the early 1990s Turin was in crisis as the level of unemployment had risen to nearly 13% (33). Three critical strategic projects were developed in order to transform Turin's economic situation:

- The 1995 Urban Plan, for the re-configuration of the fragmented industrial city which had developed around the Fiat factories;
- The 2000 Strategic Plan, a set of integrated and coherent documents and actions that sets collaboratively-determined objectives relating to the future of a city's economy to be implemented by 2011.
- The 2006 2nd Strategic Plan, to monitor and improve previous actions and to encourage public participation.
-

While the 1995 Urban Plan was concerned with the railway lines improvement, the re-use of industrial brownfield and the environmental re-qualification, the first and the second Strategic Plans referred to a broad set of differing methods. The good practices promoted by the Plans were mainly represented by the enhancement of Turin as a city of tourism and culture and the promotion of mega-events, such as the Olympic Winter Games, during 2006, through which the City saw $ 1.02 billion investment into the city's infrastructure platform (34). The strategic plan also underlined the necessity to promote the use of local resources in order to promote sustainability. The local resources have to be acknowledged by the local actors; otherwise, they do not exist and cannot be inserted in the valorisation circuit.
Moreover, the City of Turin is prospecting to become a "smart city" according to the European initiative Smart Cities & Communities. The Turin Smart City project is in continuity with the approval of TAPE – Turin Action Plan for Energy, a program to reduce CO2 emissions by 40% by 2020. The plan is one of the actions required by the participation of the city to the Covenant of Mayors, an initiative of the European Commission, signed by the City in 2009. The Smart city program lead to a series of local, national and European projects all fitting with the definition of smart cities.

After the first and the second strategic plan, a third one is currently being drawn up. In this new plan, food has a specific role, as a focal issue to promote the city in relation with the whole region. In a territorial branding approach, the city communicates its specificity and local excellence as an embodiment of being the Capital of food.

In the last few years, the development of urban agricultural and urban food planning systems has been increasing (35). In Turin, Urban Agriculture is the object of a widespread set of policies and practices carried on by institutional, non-institutional and research entities, ranging from the urban to the environmental policies.
Through the initiatives of local authorities, research organisations and urban producers, the design of an adequate urban agriculture and new food policies are rising. The Strategic Plans have launched various environmentally-friendly initiative, in order to enhance the quality of life in the city, such as increasing pedestrianisation and cycle lanes, reducing road-level parking, the planning for metro and the urban planning named UPA (Urban and Peri-urban Agricultural areas) for new urban developments. Among them, experiences such as MiraOrti and TOCC (Turin – City to Grow) and the European programmes named Four Cities for Development and Rururbal led, three years ago, to the creation of the first European Agreement for Food and Local Governance. These projects aim to increase the potential of synergy among city, enabling the diffusion of an Agri-Culture within the urban community. Moreover, these initiatives enhanced the food autonomy of citizens, and make and re-make available big green areas, abandoned because of the post-industrialization, whose maintenance is not depending on the public funding, solely.

A unifying frame, representing a coherent institutional context able to define a precise set of integrated actions concerning food sustainability could be implemented, starting from the achievements of the following urban projects:

- "Torino SMILE" (Smart Mobility, Inclusion, Life&Health, Energy), represents an ambitious project concerned with the issue of the Smart City and which is directly linked with the themes of food and sustainability ;
- "Torino Capitale del Cibo" (Turin Capital of Food) organized by the association Torino Strategica, aiming to build the Third Strategic plan named Turin Metropoli 2025. The plan's purpose is concerned with the production of a local responsible environmental development and strongly related with food policies – economic, political, social and cultural.

The project's ambitious vision is to inspire national and international policies ;

- the project "FOOD START LAB", starting in autumn 2014 aiming to produce a first draft of the "food agenda" for the implementation of a concrete "food strategy" within the metropolitan area of Torino (ex Torino's Province).

Possible leverages for a future Sustainable Food Policy.

The Slow Food Tribe celebrates good, clean and fair food

Even if the issue of the food sustainability cannot be considered as a key-point of the Turin strategic planning, it gained a momentum in Turin's renaissance during and after the crisis period and it is personified by the Slow Food movement, born in Piedmont in the 1980s. Initiated by the charismatic Carlo Petrini, together with a group of activists, Slow Food has aimed, since the beginning, to defend regional traditions, good food and gastronomic pleasure, first in Italy, then at international level. In over two decades of history, the movement has evolved to embrace a comprehensive approach to food able to recognize the strong connections among planet, people, politics and culture. Today Slow Food represents a global movement involving thousands of projects and millions of people in 160 countries.

In 1996, the city of Turin hosted the first Salone del Gusto organized by Slow food, which has become in a few years one of the main events worldwide to speak about good food and gastronomy. Together with the appointment of Terra Madre, the Salone goes on to become a biennial event and one of the most important international event dedicated to artisanal, sustainable food and the small-scale producers that safeguard local traditions and high quality products.

Closely related to Slow Food message, a new concept of supermarket, entirely dedicated to artisanal and high quality food, was created in Turin. Indeed this food market is also a cooking school and hosts several restaurants. In a few years, it has become a very popular place in the city and has been also introduced in several other Italian cities and also in different countries.

A city surrounded by a territory with a high potential.

In 2002, to promote the local food marketing, the Province of Turin presented the strategic plan called "Paniere dei prodotti tipici" (local and typical food basket). This project aims to identify, certify and promote local and typical food products, according to a technical, scientific and historian analysis, in order to provide a list of artisanal foods produced from locals raw materials, in order to support local communities' development. After a decade, the "Paniere" promotes 32 local products registered labels related to producers associations (one for each selected product). The network involves more than 1.000 local producers; 70 restaurants; 30 shops and participate to more than 50 professional fairs and exhibitions per year, to promote the whole project. It generates about 20 millions € of total income from products selling.

Different experiences of alternative food systems (AFSs) are taking place in the Province of Turin : 80 farmers market, 1.000 farms involved in direct selling and 106 box schemes, largely based in Turin. The Province of Turin is one of the territorial poles of the European project "Rururbal" (2010-2011), funded by the programme "Territorial Cooperation Objective - MED 2007-2013" to exchange best practices and develop common strategies to support short Food Supply Chains within a comprehensive territorial planning. Among the pilot actions of the project, the organisation of a farmers' market in Porta Palazzo, the largest open air market in Europe welcoming every Saturday around 100.000 visitors and the "charter for territorial and food governance".

In the meantime, the priorities have evolved towards a better enforcement of producers associations, through the building a more structured commercial network and system for technical assistance, a reinforcement of the control of guidelines and standards by all stakeholders, as well as, an observatory of prices, to match offer and demand. The strategic plan has been recently adapted to new challenges such as the possibility to supply public Food Services (with a particular focus on school canteens and environmental footprint); the promotion of consumer networks supporting small and local farming; the enlargement of good, safe, clean and ethical food access for

all the population, including specific policies against soil consumption and farming areas reduction.

From 2011, the city (departements of Commerce, Public Education and Environment) and the province (departement of Rural Development) of Turin both started to work together, for the first time within the ALCOTRA funded project "Farmers Consumers Cross-border Territories", deepening the issue of metropolitan food policies, in order to make synergy between the eating city and the producing territory, with the main goal of promoting right for all to access healthy, sustainable and ethic food. The initiative aims to produce a survey of different case studies – such as Bristol, London, San Francisco and Vancouver – in order to enhance the existing good practice by studying new ones concerning local territory and food policies according to the different but interconnected needs of the whole metropolitan area (agriculture, commerce, environment, logistic, public health).

As a result, Turin's food system is today characterized by:

- open air food markets: 49 daily open air food markets for a total amount of 1.572 food sellers; among them, 252 are producers and 317 farmers who directly sell their products. The farmers comes from 102 municipalities of the 62 districts of Turin, 24 districts of Cuneo, 11 districts of Asti and 1 district in Alessandria. The province of Turin counts 390 daily open air food markets;
- shops, supermarkets, malls: 2.588 food shops and minimarkets and 1.370 shops selling food among other products; 20 medium only-food supermarkets, 233 mixed shops, 5 mixed big shops and 11 malls and 4.088 cafeterias, restaurants etc;
- public canteens: the public school canteens in Turin provide more than 8 million meals per year; the seven university canteens provide up to 1.232 meals each day and more than 10 milions of meals in peri-urban area";
- alternative food networks : 70 ethical or common purchasing groups and almost 400 urban vegetable gardens. In the metropolitan area 2.128 farms are active, among which 756 directly selling their products.
- wholesale food markets: "Turin has the third wholesale market for fresh fruits and vegetables in Italy (after Milan and Rome), distributing about the 2/3 of fruits of vegetables consumed in the city (506.773 tons in 2013). 31% of fruits and vegetables are produced in Piedmont. The rest is produced in other Italian regions (45%), UE (12%) and extra UE (10%)
- waste management: during 2013, the non-recyclable waste production of Turin's citizens was 301 kg per person, among which 60 kg/person were recyclable organic waste (20% of total waste).

The Good Samaritan project: a social concern deeply rooted in the city DNA

This initiative is based on the so-called Good Samaritan Law (italian Law N° 155/03) created to encourage food donation to nonprofits by minimizing liability. It allows non-profit and recognized organizations to increase the sources of supply by introducing a new possibility of food aid: to recover surplus food from the catering (collective and organized catering, canteens, schools, hospitals, hotels, etc.) and the distribution sectors.
Since 2003, 8 Italian cities have initiated a project: Bologna, Como, Firenze, Milano, Pavia, Roma, Torino, Varese. Primary and few secondary schools in Turin donate bread, fruit, which have not been served on the tables. Every day, around 150kg of bread and 50 kg of fruits are redistributed to social centers according to a list established by the Social Policy department of the city. The whole project is managed by the municipal company for waste management, AMIAT.
This thematic of food waste was in the spotlight of the Smart City Days, held in Turin from May 24th to June 9th in 2013, with a free meal prepared for 3.000 people at the occasion of the national day, with edible food (mainly vegetable) cooked by catering companies, which would have been normally discarded by wholesale markets, because unsold.

Eating with religions: a groundbreaking project for the Public Food Service

In such a multi-ethnical city, a great attention is paid to the different menus served in the school canteens. Therefore, in Turin's schools it is possible to ask for special menus, which are available not only for medical reasons and ethical (religious or cultural) ones. Among 55.000 users, 8.000 of them benefit from the option to ask for

in general or without meat and fish). Moreover, 1.300 children each year ask for a special menu for medical reasons (36).

The risk of these ethical menus is to further discriminate children, highlighting differences. Therefore the aim of the project is rather to build a “religion friendly menu”, which eliminates (and at least reduces) those foods causing the most difficulty in accommodating religious and cultural dietary needs. By exploring differences in diet and eating habits in the context of school canteen service, and by defining how public institutions could consider the religious and traditional beliefs regarding nutrition in the implementation of public food policies, a research was performed to analyze the cultural and religious variety of the food which is then supposed to be used as an instrument for public food policies to promote inclusion and social cohesion, starting from a different way of considering food education in public schools (see more). Original data were collected through different methods, gathering information about food selection and religious food beliefs; charting a map of the religious needs of children attending primary schools and analysing nutritional, economic and environmental issues concerning food distribution in school canteen services.

The menu was tested in different school events within canteen services, attracting the attention and the interest of MIUR (Minister of National Education) and local administrations, such as the City of Nichelino (Turin). An innovative approach is needed, when dealing with nutritional habits and cultural and religious dietary systems as, schools provide a fundamental opportunity for the promotion of healthy lifestyles, because they can encourage the implementation of a coherent set of integrated actions, involving both public and private actors.

Bibliography:

(33) Astrid Winkler, (2007), Torino city report. CASE reports, CASE report 41, Centre for Analysis of Social Exclusion, London School of Economics and Political Science, London.

(34) Greg Clark, (2009), Recession, Recovery and Reinvestment: the Role of Local Economic Leadership, OECD LEED. http://www.oecd.org/cfe/leed/50394250.pdf

(35) Egidio Dansero, Matteo G. Puttilli, (2013), La realtà degli alternative food networks (AFN) in Piemonte. Riflessioni teoriche ed evidenze empiriche, Praticare la territorialità. Riflessioni sulle politiche per la green economy, l’agroindustria e la cultura in Piemonte, Bibiloteca testi e studi, Geografia, Eu-Polis/4, Roma, Carocci, pp. 77-108.

(36) Luca Bossi, Maria Chiara Giorda, Elena Messina, (2014), A table avec les religions, Benvenuti in Italia, Turin, http://www.eatingcity.org
http://nycfoodpolicy.org/publications/research/

CITY FOOD POLICIES

Long term vision for territorialisation and food policies

Territorial and Institutional Tools.

Author: Isabelle Lacourt

To integrate food strategy into the Agenda 21.

Agenda 21 is an action plan to enact the ecological transition mainly through greenhouse gas emissions reduction, natural resources' better management and an economic relocation. Sustainable food systems are not specifically taken into account and usually only specific and sporadic activities are promoted far from the potential of a fully comprehensive commitment of such issue.

All cases that are presented in this essay help us now to anticipate how food issues could contribute to orientate a new generation of Agenda 21 in which people wellness, quality of life and social cohesion could be among the priorities alongside climate and biodiversity. Food is related with numerous public competences such as 1-health improvement (in low income communities, schools, hospitals, workplaces, etc.), 2- (green) public procurement, 3-waste management, 4-spatial planning, (including allotments and community food growing in the case of cities) and 5-economic regeneration, (including jobs and cooking skills improvement), etc.; thus food is a common denominator able to unlock synergies between all these competencies.

Among the greatest assets of the city of Saragossa, there is a deep commitment for environmental concerns, traduced by the will to use the local Agenda 21 as a strategic tool to design the future of the city. Saragossa has also developed the capacity to combine past, present and future, being able for instance, to focus on the future by developing for instance an efficient mobility system and in the same time to give value to old traditions. It is also aware about the intertwined destinies of urban and surrounding rural areas. Therefore the city is developing a very rich and interesting vision able to generate fair and balanced innovation within a common-sense approach.

Therefore, the next generation of Agenda 21 should present a global vision that necessarily integrates a food strategy, embedded in a short, medium and long term action plan. Such trend should not only occur at urban level, but also in districts, regions, etc., since food systems largely overcome the

scale of cities and different levels of local authorities need to coordinate their efforts together. The appointment of "food managers" with well-defined responsibilities, whose role is to integrate the food action plan with the other territorial strategies, could help decision makers and elected officials to arbitrate between the numerous and competing priorities related to food issues. In parallel, international networks should also actively work to raise awareness on the importance of food issues and enable efficient campaigning and training for all decision makers, to increase skill and awareness on food issues.

In 2001, as a result of this policy work, the Toronto Food Charter was endorsed by City Council, as a support to the national commitment to food security providing a well-rounded roadmap in which Toronto not only acknowledge the importance food plays at personal and community level, but also in many core urban issues such as: health, education, well-being, standard of living, cultural pluralism, business and employment, environment and traffic pollution.

To create territorial Agencies using plural-disciplinary approach based on subsidiarity and participation.

Until yesterday, we could pretend to ignore food-related impacts on health, local and global economy, environment etc. Today, in front of all evidences raised worldwide in different urban and rural contexts, this cannot be anymore an alibi for immobilism. However the lack of suitable governance tools hinders the efforts of decision makers. That's why the experiment of Food Policy Council (FPC) launched in the USA three decades ago is very interesting.

Since the first FPC has occurred in Tennessee, their applicability and popularity has spread in all North America. They generally operate at the sub-national (local, regional, or province/state) level and may also serve more than one jurisdictional level. They can be either formally embedded in government structures, or operate outside government, with all possible intermediary situations and often seek to establish a long-term role in advising decision makers on food issues and advocating for food system reform, under different forms and functions. They are a good example of participatory democracy, in which citizens can play a meaningful role in policy deliberation, even when much of the expertise, power, and authority in food systems are all concentrated in higher levels of government and the private sector.

Assuming that the role of future Agenda 21 could be to develop specific food strategies based on an holistic vision of sustainable development, Territorial Agencies for Food Policies, on the model the FPCs, could become governance tools stating on food strategies, in which food governance could shift from an obligation of means to an obligation of results, following a frame of management sufficiently flexible and adaptable to local contexts, that refer back to a tailor-made food metrics system. The same should apply also to the relationships between all different levels of governance concerned (national-federal, regional, urban, etc.), all following common guiding principles. In such a picture, Territorial Agencies for Food Policies would become the conductors able to interpret the score according to orchestra size and instruments.

In 2011, the city of Bristol has made a step forward, bringing such governance tool in Europe. When interviewed, Bristol City Councillors and staff clearly expressed that "*Who Feeds Bristol" report has helped raise the profile of how important the local food system is for the local economy and for health and wellbeing. (...) 'Bristol Good Food' message has helped to engage key influencers, and has helped to unite those working on nutrition, with those working on sustainability and on local economic regeneration*." Therefore the benefit of such experiment lays today in the capacity to summarize numerous food-related challenges in few simple priorities.

According to the declarations reported above, Bristol FPC has been able to remove barriers (either psychological or material) on the will of politicians and decision makers to convince them that sustainable food systems can be a winning key showcase window for the shift to a greener economy and lifestyle. It is now very interesting to follow such experiment, in order to understand how it will frame efficiently with the numerous existing urban and regional planning instruments.

AFPs' members should be distinguished in three different boards: 1- elected officials and 2- staff , both working at all levels and in different services of local authorities and consular chambers, 3- civil society, including the different sectors according to food life cycle approach: farmers, food companies caterers and distributors representatives, local experts, academics and ONGs. They would start by doing an initial state of the art, based on the analysis of food statistics, health, economical parameters and Agenda 21 metrics, in order to give insights on local food production potential, urban sprawling pressure, patterns of healthy food consumption and environmental impacts.

To connect the different territorial levels of the Agencies for Food Policies (AFP).

Large urban communities certainly deserve their own Agencies for Food Policies, but it is at regional level, that it is possible to better integrate food production and consumption in a coherent system made of urban and rural areas. Regional Agencies for Food Policies could be first introduced to coordinate and anticipate agricultural offer and food demand in order to reconcile urban and rural areas in a complementary and not rival relationship; to structure sustainable food supply chain that create employment; to support greener, eco-efficient food production and services and finally to give food a regional/local identity as a quality marker consumers can value.

Rennes Metropole's experience shows how the implementation of consultation mechanisms and dialogue tools allows the different stakeholders to defend their positions and to resolve conflicts about the spatial repartition between urban and rural areas. The implementation of the Archipelago city forces urban extension into planning guidelines that reverse the order of priorities, thus promoting farming corridors and spaces, also in function of urban population food needs. However, dialogue and consultation are not sufficient and specific measures are needed to contrast the actual trend (loss of agricultural land, reduction of the number of farmers, agriculture intensification and monoculture), in order to support local producers to create and/or take over farms, by solving land access problems, giving appropriate economic support, reducing bureaucratic obstacles etc. and enabling small scale producers to meet food

At local level, these AFPs should work in relation with specific food logistics agencies established to be representative of suitable level of people concentration. The objective of such agencies would be to manage both information and goods flows, in order to match food offer and demand at local level while insuring that public buyers can have daily access to fresh local food at a fair price. The advantage of such system would be to optimize economic and environmental performances of transport by pooling orders made by all public bodies, thus creating suitable conditions for local food hubs' economical rentability and in the same time giving small producers access to public procurement.

Ecocity project launched in Parma, Italy is working in two directions:

- to improve local supply and distribution network, by creating a food hub in the existing wholesale produce market, already equipped to handle perishable food.

- to increase transport's eco-efficiency by using methane-fuelled modern vans, together with a computerized system to combine transport flows and optimize routes.

"Ecocity includes a renewed logistics platform dedicated to food products implemented at CAAL [the wholesale produce market], and a fleet of twelve natural gas powered vehicles. As well at institutional level, the local authority promoted a new act to regulate freight transport in the limited traffic area. Moreover, the freight mobility plan adopts an ICT platform for the optimization of routes which provides dynamic routing and scheduling to reduce distance travelled" (37)

Finally, a European AFP is necessary to coordinate a transnational network, welcoming member states and also citizens to contribute to the definition of food policies based on the following pillars: healthy food, (taking into account all nutritional contents and not only calories), social and cultural cohesion, dynamism of local economies (with a focus on employment) and environmental impacts.

The European APF could be implemented in the Committee of the Regions (COR), the European Union's assembly of regional and local representatives. As COR aims to secure sustainable development accross all european territories and encourage cooperation between local and regional authorities it could host an observatory, able to produce and disseminate food-related data and information useful for the network of local AFPs and also for the main European bodies, Commission, Council and Parliament in order to allow them to make change in overall strategies and directives that match better with the objective of sustainable food systems. European FPC would also be able to work in partnership with international structures such as FAO (Food and Agriculture organization of the United Nations), OECD (Organisation for Economic Co-operation and Development), WHO (World Health organization), etc. to promote a unified governance model based on the four pillars described above, traduced at local level in a myriad of gastronomic diverse realities based on specific contexts.

Bibliography:

(37) Eleonora Morganti, (2011), Urban food planning and transport sustainability: A case study in Parma, Italy, "European Association of Agricultural Economists - EAAE" PhD Workshop, Apr. 2011, Nitra, Slovakia, p.15.

CITY FOOD POLICIES

Urban food planning includes primary production

Urban Planning: to create a continuum between urban farmers and rural city-dwellers.

Author: Isabelle Lacourt

To integrate the management of edible landscapes, in and out the city, into urban planning

Farming activity may get a new role that strengthens urban-rural linkages. It start to be widely accepted that by protecting the agricultural land around cities, urban and peri-urban agro-ecosystems can contribute to regulate climate, meet energy needs, support agriculture, prevent soil erosion and offer opportunities for employment, recreation and cultural inspiration. This new vision of agriculture and food production can support a territorial planning in which local food provisioning areas can be more precisely evaluated and optimized and where farming is not anymore synonymous of rurality.

Brussels capital region has investigated to assess the potential of urban farming to create employment opportunities in the cities. By extending this study to peri-urban and rural farming production, farming activity in urban/ rural areas should be integrated into an overall picture of agriculture, emphasizing local employment. Therefore, the resulting farming dynamism would fall within a partnership framework in which local food production recovers its legitimacy and induce an innovative land policy that contains urban sprawling and introduces agriculture into urban areas.

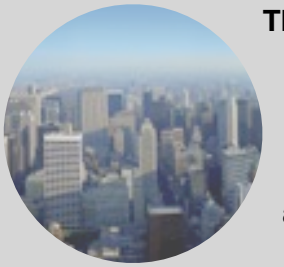
Among the initiatives taken by local authorities, there is also an increasing focus on the use of public owned land-fields to maintain farmland and promote multi-functional agriculture dealing with different issues such as food production, employment, facilities, education, health and environmental protection. Such public owned land-fields can be outside or inside the city, in large agricultural holdings or small plots. Cities can either chose to enrol staff, entrust farmers or create small allotments for family production.

Cities can also stimulate the introduction of gardening in schools, care homes etc. with the aim to reconnect the different generations living in the city with their rural origins.
Cities can also develop actions to support local food producers, mainly by stimulating the demand. Using their connections at national, international level, they can create synergies between local and international producers.

An example of this synergy is provided by the city of Nuremberg, which is using the large shop front to the world provided every year by the Biofach international event to stimulate local urban organic/local markets on a regular basis.

Territorial food marketing may also enable the promotion of local agriculture with the objective to increase food self-sufficiency. This approach allows to go further in the qualitative appreciation of farming. Food then becomes a vector of cultural identity. Using food cultural identity, territorial label promote values, define styles, historical and culture connections.

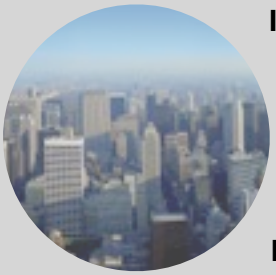
The GRTA label (Geneva Region Land Future) is based on four main principles: good, local, transparent and fair. Precise specifications impose the following rules to produce and transform food according to integrated or organic agriculture, to respect applicable collective employment agreements, within a specific geographical perimeter. The enlargement of such projects would produce a series of local food labels that reflects a territory and can help different communities to value diversity and to bridge on the basis of similar attention to quality, nutritional value, environment, local resources, fair trade etc., not only for local people but also for tourists.



The State of New York has created a local brand and use strategic selling points to stimulate tourist to buy local food as a "souvenir".

To integrate food diversity and quality in all food distribution channels.

Urban food distribution systems have undergone a deep evolution since 50 years. First of all, food wholesale markets have left city centers to move outside, thereby freeing space for real estate speculation. Then small urban food shops have been subject to a strong competition. Supermarkets were able to reduce food price due to their strong purchasing power, but settled mainly in peripheral urban areas. Lately, downtown small food shops have been challenged by other kind of shops selling more appealing services or products for the consumers. The law of supply and demand prevails; as healthy food is becoming more expensive than junk food, healthy food supply in city centers is becoming scarce.



In a context in which a single decision about cents of $ turn to become a bill that amount in millions of $, the commitment made by the City of New York to rebalance healthy food distribution in deprived neighborhoods is exemplary. Its effort to fight obesity looking for the root of the problem and facing the social implication as well as health issues brings a significant stone to work for building sustainable food policies. It is also questioning the real freewill choice of the

Once accepted the idea that agriculture produces staple food that, in good extent, is already synonymous of healthy food without necessity of further processing (for instance, fruits and vegetables), it becomes coherent in the frame of healthy food access management, to implement short food supply chain, from farm to fork, also giving market access to small producers.

Rennes Metropole for instance, works to reinforce the link between farmers and citizens and implement open air markets to reinforce direct selling of local food. Indeed, farmers markets become a time for socialization in communities as well as providing a focal event for visitors. The Italian network Campagna Amica, very active in Rome has shown how much farmers markets provide links between people in a community and bring the consumers and producers closer together. However when economic analysis on food direct sale systems are performed, despite the enthusiasm of people and

City food policies could take into account the possibility to use a synergic effect of fair priced healthy and local food distribution system. Food production, transformation and distribution can create local employment and economy. Therefore, in parallel with urban agriculture projects, cities must also foster the development of capillary sustainable food distribution system. Not only food distributors selling healthy food should be mapped to understand how demand and offer are matched but urban food strategies could be used to network them by the mean of communication tools (branding, campaigns, website), in order to increase their visibility.

In addition to that, the creation of public eaters' spaces could allow to set up common areas where people can eat and share nomad food, also homemade. It is possible to imagine free green areas fitted with tables, chairs and recycling bins, welcoming people working and/or living in the same area. No more necessity for those who cannot eat at home, especially at lunch time, to use company canteen, to pay for restaurant bill or to eat in front of a computer, but rather the possibility to choose what to eat and to get the opportunity of convivial urban eaters' spaces, that could be readily used by the city to communicate about all urban food projects.

To make solidarity and food waste management an issue for more food value within the urban food strategy.

Food is one of the few basic and vital needs. However, cheap food is often synonymous of empty calories, related with obesity epidemics. 23 % of the European population (around 115,5 million people) are considered to be at risk of poverty or social exclusion (38). A network of stores either run by local authorities or by independent associations is developing to provide food at a lower price to people who live on the edge of poverty. The retailing activity is embedded in larger solidarity actions, mainly empowerment and self-esteem reinforcement. These solidarity projects also enlarge their activity, being connected with back-to-work projects, to recover and redistribute edible foodstuffs that could not be sold anymore. Until the quality of food that is recovered is good, such projects are fully sustainable, making synergy between social, environmental and economic food-related issues.
to give food a regional/local identity as a quality marker consumers can value. The combined application of Good Samaritan Law and EU waste management hierarchy may help cities to mainstream food into solidarity groceries.
The Good Samaritan Law model is a food donor protection law model that limits the liability exposure of food companies for product they donate to charities. In Italy this law has been adopted in 2003 and allowed Food banks to collect surplus meal from mass catering and surplus food from retailers on a voluntary basis. The number of ready-cooked dishes that were recovered increased from 18.620 in 2003 to 654.751 in 2012.
The waste management hierarchy in the European legislation on waste (Directive 2008/98/EC) imposes to find any way to re-use or recycle before to throw away definitively. Therefore this law can be used to prohibit any food shop, including wholesale markets and supermarkets, to throw away any edible and unsold food.

Therefore a new regulation should apply simultaneously both good Samaritan and waste management regulation and oblige food retailers and mass catering to provide food surplus to social groceries, allowing cities to implement efficient logistical systems in which all edible food escape from wastage and contribute to feed people.

Bibliography:

(38) Melina Antuofermo and Emilio Di Meglio, (2012), 23% of EU citizens were at risk of poverty or social exclusion in 2010, eurostat; Statistics on focus, http://ec.europa.eu/eurostat/statistics-in-focus

Preserving the dignity of people by feeding them with leftovers.

Civil society has contributed to raise and emancipate public awareness, by being strongly engaged for many years against the scandal of food wastage. By the mean of cities and celebrities championing initiatives such as feeding the 5000 (http://feedbackglobal.org/), disco soupe (http://discosoupe.org/), etc., it is now demonstrated that this idea is well accepted by the population. European projects such as Greencook, engaging local authorities (http://www.green-cook.org/) have received funding support to deal specifically with such issue.

The event Eating and Talking in the Square that took place in Turin, within the Smart City event, during the national day has made this issue a societal theme by organizing a political debate on the right of food within the Italian constitution, around a meal entirely made with leftovers, in one of the most beautiful and prestigious place. This spot event has taken place in a city already committed, with the redistribution of edible fruit and bread not used in school canteens since 2004.

CITY FOOD POLICIES

Public kitchen in Copenhagen
© Risteco

The leverage effect of Public Food service for successful city Food Policies.

Author: Isabelle Lacourt

To implement tools for building capacity and monitoring the leverage effect for sustainable food supply chains

Basic tools are actually missing to enable cities to use the overall leverage effect of public food service within a comprehensive urban food strategy. Indeed, before starting with the commitment of public food service in the implementation of sustainable food systems, it is necessary to well understand what the public food service is. In front of the complexity and the inertia of what can be considered the largest urban restaurant if it is taken in its entirety, cities usually initiate with public food procurement measures involving public food service directly under their responsibility: schools, kindergarten, elderly homes, administrative restaurants, etc. But there are other public restaurants located in the cities, such as universities, jails and hospitals, depend on national or regional public authorities. Even if the city is not directly involved in decision making process to manage these catering services, they impact the urban area, environmentally, economically and socially, for instance with food transportation, food waste management, local employment and various economic fall-outs.

Indeed one big asset of public food service leverage effect is the possibility to plan in advance the demand for large quantities of staple food according to the different seasons all year round. Today this demand is treated separately by all different buyers, thus missing a coordinate enforcement of purchasing power and logistics optimizing. That's why Agencies for Food Policies (see the second proposition for territorial and institutional tools) could have the specific mission to develop a mapping system that take into account several parameters such as the location of public kitchen and restaurant, highlighting all delivery points, the volume of food needed, processed and served, staff number and qualification, etc. Such deliverable would allow to support the identification and programming of measures to optimize food supply chains in large cities, by pooling of means and initiatives. Looking at the specific question of public procurement, such tool would be used as a reference to ease the coordination between different tenders and give the possibility to include eco-efficiency criteria, in particular for logistics.

The ambitious targets set for 2020 to serve 50% of sustainable food (organic or labeled) have lead the city of Paris to widen the reflection to the consolidation of the food supply chain including the facilitation of purchasing processes and the optimization of the last mile logistics. In the case of public food service related transport, several recommendations for improvement have been proposed:
- to shorten delivery times (24 hours) to warrant food freshness,
- to use vehicles with the latest Euro standard implemented,
- the optimization of delivery itineraries,
- goods delivery during off-peak hours,
- bulk supplies to reduce packaging,
- packaging recycling by suppliers.
The construction of a city food hub to allow suppliers to deliver goods in a single place and a uniform computer system to optimize the last mile delivery in the different kitchen city are under study despite they entail a major investment.

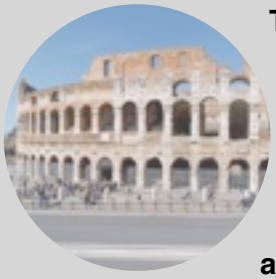
Another mission for Agencies for Food Policies could be the implementation of a standard form, for all public and private structures active in public food service sector, to be filled in with relevant information about energy and water consumption and waste production. The aim of this proposition is to expand the use of simple environmental indicators, directly related to environmental and economic performance, such as the quantity of electricity, gas, water consumed, or the quantity of waste produced in function of the number of meal prepared and/or served. The implementation of such system that rely on the use of meters and on waste separate collection would allow public food service managers, in a short term, to measure and successively to work on the optimization of the level of eco-efficiency of the services. At longer term and on a wider scale, it would engage policy makers to adapt the public procurement rules in order to increase transparency on public food services' environmental impacts.

Eco-efficiency means the possibility to create a synergic effect between environmental and economic performance. As a trivial example, we can consider that saving energy is good for the planet and also for the wallet. But if it is today very difficult to monitor environmental impacts of public food service on a routine basis, it is also very hard to perform economic analyses on such sector of activity because most of data are not available, in part because a unified system of nomenclature that fit into the Statistical Classification of Economic Activities (the NACE code in Europe, similar in function to other international Standard Industrial Classification systems) is missing. Indeed, the NACE system, revised in 2010, proposes six codes to classify food and beverage activities; public food service can be referenced in "catering activities" but it is impossible to distinguish public and private catering. Italian and French NACE system have a specific code for public food service, but it covers specifically contract catering services, leaving out all public food services directly managed by public bodies. In any case none of these codes allow to separate main sectors such as school catering from hospital catering that yet follows different logics and priorities.
Such tool is a formal measure would have the immediate effect to allow public officials and managers to aggregate and compare economic data, also in different contexts, to perform analyses, understand the results of public investments and highlight financial impacts in terms of local economy, employment, health and other social issues in order to measure any leverage effect of public food service on the application of sustainable food policies.

To introduce more flexible rules for public procurement that allows territories adopting agriculture planning tools to increase local food production, to use public food services as a leverage to structure and support local food supply chain systems.

Public procurement rules have been created to regulate public expenditures, in particular to avoid wastage of public money and the use of a system of preference for specific groups of suppliers. In front of the complexity of such rules, big contractors tend to consolidate call for tenders in such wide procedures that are generally out of the reach of small food

they can't make a comprehensive offer to satisfy the buyer. Green public procurement (GPP) procedures allow public buyers to introduce environmental criterions to balance the rule of the "lowest bidder", but these criterions can't be readily used by local food producers to get easier access to the market of public food service.
Many local councillors and public buyers as well as managers and chefs see the interest to serve more local food in schools, hospitals, elderly houses, universities etc. and try many options to buy it despite this selection criterion does not exist: they create, for instance, specific allotments systems on the basis of local production, but these allotments increase the level of complexity of the tenders and need a strong involvement of the administrative office.



The city of Rome was the first to experiment the criterion of "guaranteed freshness" to impose perishable fruit and vegetables to be served at maximum three days after they have been harvested. Even if it does not exclude any geographical origin, it plays in favor of local producers. But its strict application means that time-consuming control procedures are set up.

In front of this bottom-up movement, and in front of the evidence that food, affecting health, environment, is not a simple commodity, it seems logic to adapt procurement rules to increase the amount of fresh local food served in the canteens. However the prior establishment of a territorial agriculture planning system is necessary to meet the objective effectively. As most of the territories are not self-sufficient, a large demand for local food resulting from the sudden liberalization of procurement rules would necessarily reflect on the price fluctuation with negative consequences for all consumers.
A long term planning policy on agriculture is necessary to maintain a vivid activity able to attract new farmers that benefits also to the city. An observatory, based on the territory, could network all food producers, identify production capacities, quantify the offer, on a yearly basis, according to seasonal variability, and warrant local food access both to public buyers and to the other networks of distribution and retail. On the opposite this structure would also be able to quantify the demand, and therefore to inform the structures in charge of agriculture planning in order to better match offer and demand.

The case of Geneva offers an interesting input, with the creation of a territorial brand. By undertaking information, education and communication campaigns, the state of Geneva has selected producers based in a specific area, not only farmers but also food processing businesses working with local products, respecting rules of sustainability and it has advertised the interest of it for the population. The long term finality of this project is to support and maintain a local agriculture that evolves towards more sustainability by influencing the choice of the consumers. The main deliverable is a brand, to allow a large public to identify easily such products, related to technical specifications based on objective criteria. In the Geneva State, this tool can be used readily by public buyers within legal procurement procedures.

To modernize Public Food Service with new production systems and skilled staff.

Public Food service is born to substitute home-meals for people who cannot eat at home, because they are working, studying, or because they stay away, in hospitals, barracks, residences, jails, etc. Menus often use basic recipes, very similar to home cooking; but this apparent simplicity must not hide the fact that the service requires high degree of professionalism to produce and serve large quantities of food thus warranting high safety levels.

As public food service has been until now the poor relation of catering, far behind gourmet restaurants, today, the race for sustainability could be a chance to restore the status of such service and to highlight the cooking qualifications of these professional chefs required to prepare good and nutrient meals, lowering environmental impacts and with a limited budget.

Such shift of Public Food Policy towards sustainable food systems is emblematic of the cultural change good public meals may induce in the population. If the introduction of organic food often is the way to initiate a change, more generally, the modification of meal ingredients and the reduction of food wastage are two major areas of focus that drive to a deep and challenging reorganization of meal preparation, only feasible with skilled staff. Therefore the leverage of action is mainly training and education, to raise awareness of eaters with suitable education tools.

But experimenting and training is only the beginning of a longer term project in which the natural follow-up is the adequacy of kitchens and restaurants with such approach. The larger are kitchens and the stronger is the process of change they must get through to adapt and become themselves an asset of urban sustainable food systems: that is to say a place where adequately trained staff is using fresh and good quality ingredients, for the sake of supporting local food supply chains, cooking from scratch, ensuring as much as possible operational eco-efficiency to reduce simultaneously environmental impacts and costs. Cities must make the network of these new central kitchens a tool to produce good quality meals, in all the neighborhoods, at a reasonable price, also available for the most vulnerable population groups, finding new solutions to use it full time, such as Restaurants Emeraudes in Paris.
A careful reflection is required to evaluate the right dimension, suitable for sufficient levels of mass production, without excessive standardization and industrialization process.

The House of Food in Copenhagen is a perfect demonstration of such a trend of evolution. The city has created a training centre, to teach chefs how to cook with better and more expensive foodstuffs (mainly organic) to prepare healthy and balanced meals without any increase in the budget. This challenging equation has been solved mainly by improving the knowledge of staff, empowered to cook from scratch and with innovative menus, in order to balance animal and vegetal protein intakes. This project also highlights the important educational role of public food service, especially in schools. The city addresses a difficult challenge because numerous children do not eat school meals. Despite it, the city still identifies schools as a good vector to raise awareness, acting as good role model and seeks to make children and teenagers protagonists under staff supervision: doing so, it adds a new attractive and challenging area of competence to Public Food Service.

CITY FOOD POLICIES


Mainstreaming diversity © Risteco

Some lessons learnt: an overview on various strategies.

Author: Isabelle Lacourt

Twelve case studies have been selected among a wide range of relevant experiences and classified in five categories that highlight different typologies of projects. The examination of all case studies shows that progresses are faster and easier where cities already having a deep concern for environmental issues and already have developed agenda 21 or environmental planning.

The exam of these successful projects shows how pioneers have been able to detect the capacity of food-related projects to strengthen social cohesion and create a social bond, on top of such benefits. Indeed, not only food can become a thread that connect all the main competences of the cities related to urban environment, economic development, education, solidarity, culture and leisure, health, politics and governance, but it can also give consistency to a synergic osmosis between cities and adjacent territories.

1. Developing a systemic vision through a Food policy Council

Toronto's and Bristol's cases highlight how instrumental Food Policy Councils have been in working with communities, policymakers, and city councillors to identify opportunities. Their synergic effect can be explained because all food-related activities make more sense within a frame of action resulting from a systemic vision. Not only it allows a more rational use of funding, but it channels with greater efficiency all existing voluntary actions and dynamics that are an essential impetus.
Indeed, Food Policy Councils are multi actor-task force that have demonstrated for 30 years, a consistent capacity for bringing people together across sectors, disciplines, and even political stripes to work together on food issues. With the supervision of experts, they evolve as a resource to their members, fulfilling networking and professional development needs and facilitating the discussion of issues that are relevant to decision makers, practitioners and advocates working on food issues. They have also the responsibility to balance their deliberations on a broad and growing range of potential food system issues with the strategic identification of specific opportunities for action.

2. Food connects social and health concerns

New York City case is a brilliant example of a deep cultural change based on the concept of Food and Nutrition Security, which has framed sustainable food into an essential and transversal element in the life of all citizens within a holistic approach. The budgetary restraint imposes to find solutions to fund these expensive programs.

- Cities may develop a metrics system to measure externalities and impacts in order to justify new expenditures and shifts in the municipality budget. No immediate methodologies are available and tailor-made systems of evaluation need to be adapted to local contexts.

- Cities may support alternative food system to positively contribute to the local economy and to redistribute part of the expenses in their own territory.

3. The leverage of public food service

Public Food service is a direct way to test and exemplify any kind of action about sustainable food systems. Cities, such as Copenhagen may foresee the role of Public Food service to invest more in human resources and know-how, by setting people at the centre of economy and also to educate and raise awareness on the importance of food among the population (from children to elderly people). In particular it is possible to empower municipal staff, starting from cooks, to become able to prepare healthy, inclusive, balanced, environmental-friendly, tasty meals without increasing the price.

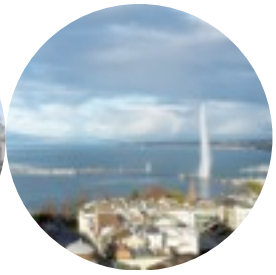
Paris and Rome are good examples of cities aware of public procurement potential to enable them to reorganize the food supply chain, including production (inside and outside the city) and to optimize the last mile logistics in their own area of influence.

4. Urban planning against urban sprawling - using urban assets to preserve agriculture and water resources

The thirty-year old territorial project developed in Rennes is emblematic to show how much food issues can drive cities to develop a responsible and coherent urban planning policy that preserves functional agricultural territories connected together and also vital resources such as biodiversity and water. Not only cities should not grow by erasing rural food-lands, but they can use their specific assets (see two examples below) to stimulate rural development in harmony with urban needs.

The cases of Nuremberg and Saragossa illustrate that cities may develop a pragmatic action to support local food producers, mainly by stimulating the demand among urban population, using a commercial approach (Nuremberg) or an educative approach (Saragossa). In the meantime, by being logistics nodes for people mobility, they become international gateways for instance managing international fairs and cooperation programs and doing so the network also remote rural areas all together.

5. Being smart, developing a local economy based on local food productions



The question of food policy raises the necessity to frame the area of action in order to increase the efficiency. But some cities such as Brussels have experimented the impediments produced by too narrow and precise definitions that were initially used to map out the proposed field of action and finally chose a more pragmatic and experimental approach to foster innovation. For this reason, this city that has decided to implement sustainable food systems mainly to reinforce economy and create local employment, urban agriculture has been identified as the promising area of activity in the food system, still to be implemented.

Territorial food marketing can also be developed to enable the promotion of local agriculture with the objective to increase food self-sufficiency (Geneva) but also to earn recognition worldwide and an international reputation looking to become a capital of high quality food to attract tourism for instance (Turin).

9 propositions, based on lessons learnt, to implement efficient city food policies:

1. To integrate food strategy into the Agenda 21.
2. To create territorial Agencies using plural-disciplinary approach based on subsidiarity and participation.
3. To connect the different territorial levels of the Agencies for Food Policies.

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4. To integrate the management of edible landscapes, in and out the city, into urban planning
5. To integrate food diversity and quality in all food distribution channels.
6. To make solidarity and food waste management an issue for more food value within the urban food strategy.

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7. To implement tools for building capacity and monitoring the leverage effect for sustainable food supply chains
8. To introduce more flexible rules for public procurement that allows territories adopting agriculture planning tools to increase local food production, to use public food services as a leverage to structure and support local food supply chain systems.
9. To modernize Public Food Service with new production systems and skilled staff.

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Bibliography

(1) Nicolas Krausz, Isabelle Lacourt, Maurizio Mariani, (2013), La ville qui mange. Ed ECLM, Paris, p. 285, www.eclm.fr

(2) Ecosystems and Human Well-being: a framework for Assessment, (2003), chapter 2 Ecosystems and Their Services. http://www.unep.org/maweb/en/Reports.aspx

(3) Living Labs, (2012), "Technology Innovation Management Review". http://timreview. ca/issue/2012/september.

(4) Cayla Albrecht, Rylea Johnson, Steffi Hamann, Lauren Sneyd, Lisa Ohberg Lisa and Michael CoDye, (2013), Toward alternative food systems development: Exploring limitations and research opportunities, "Journal of Agriculture, Food Systems, and Community Development", 3 (4), 151-159. http://dx.doi.org/10.5304/jafscd.2013.034.019

(5) Hans-Georg Bohle, (1994), Metropolitan Food Systems in developing countries: the perspective of "Urban Metabolism", "Geojournal" 34.3, pp. 245-251.

(6) Rural Roadmap: The Path Forward for Ontario, (2014), from Ministry of Rural Affairs, April 2014 http://www.omafra.gov.on.ca/english/rural/roadmap-2014.pdf

(7) Rod MacRae, Joe Nasr, James Kuhns, Lauren Baker, Russ Christianson, Martin Danyluk, Abra Snider, Eric Gallant, Penny Kaill-Vinish, Marc Michalak, Janet Oswald, Sima Patel, and Gerda Wekerle, (2012), Could Toronto Provide 10% of its fresh vegetable requirements from within its own boundaries? Part II, Policy Supports and Program Design, "Journal of Agriculture, Food Systems and Community Development", Feb. 2012, pp. 147-169.

(8) Joy Carey, (2011), Who feeds Bristol? Towards a resilient food plan. http://bristolfoodpolicycouncil.org/wp-content/uploads/2012/10/Who-Feeds-Bristolreport. pdf

(9) Christina Maslen, Angela Raffle, Steve Marriott, Nick Smith, (2013), Food poverty - What Does the Evidence Tell Us?, "Food and planning developmental review", Bristol City Council. http://bristolfoodpolicycouncil.org/wp-content/uploads/2013/08/Food- Poverty-Report-July-2013-for-publication.pdf

(10) Food and planning developmental review. A report based on interviews with Bristol City Council staff about their work on food, May 2014. **http://bristolfoodpolicycouncil.org/wp-content/uploads/2014/07/WHO-Food-and-** Planning- Review-BCC-040614.pdf

(11) Sabrina Baronberg, Lillian Dunn, Cathy Nonas, Rachel Dannefer, Rachel Sacks, (2013), The Impact of New York City's Health Bucks Program on Electronic Benefit Transfer Spending at Farmers Markets, 2006–2009, "Preventing Chronic Diseases", 2013; 10:130113. http://dx.doi.org/10.5888/pcd10.130113 External Web Site Icon

(12) Ester Fuchs, Sarah M. Holloway, Kimberley Bayer, Alexandra Feathers, (2014), Innovative Partnership for Public Health: An Evaluation of the New York City Green Cart Initiative to Expand Access to Healthy Produce in Low-Income Neighborhoods, p. 9, Columbia University School of International and Public Affairs Case Study Series in Global Public Policy: 2014, Volume 2, Case 2. Columbia SIPA School of International and Public Affair. https://sipa.columbia.edu/system/files/GreenCarts_Final_June16.pdf

(13) Declining childhood obesity rates – where are we seeing the most progress?, (2012), "Health Policy Snapshot Childhood Obesity", Issue Brief; Robert Wood Johnson Foundation. http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2012/rwjf401163.

(14) Reversing the Epidemic: The New York City Obesity Task Force Plan to Prevent and Control Obesity, May 31, 2012. http://www.nyc.gov/html/om/pdf/2012/otf_report.pdf

(15) The Public Plate Report in New York City. A Guide to Institutional Meals. New York City Food Policy Center at Hunter College, 2014. http://nycfoodpolicy.org/publications/research/

(16) Bent Egberg Mikkelsen, (2008), Public food systems strategies to protect environment, soil and groundwater – the case of organic food in Copenhagen, Summary of paper to the "Agua y Alimento Sostenible", Seminar 4th of July 2008, Expo zaragoza 2008.

(17) Bent Egberg Mikkelsen&T.D. Olsen, (2009), Organic foods in Danish municipal school food systems – a multi stakeholder analysis of available evidence on constraints and perspectives, Aalborg University http://orgprints.org/16550/1/16550.pdf

(18) Le livre blanc de la biodiversité à Paris – Première étape de la construction du plan d'action pour préserver et développer la biodiversité à Paris (2010), p. 80, http://labs.paris.fr/commun/pdf/Livre_blanc_bivodiv_ok.pdf

(19) Sabine Bognon, Sabine Barles, (2012), Nourrir les villes du 21ème siècle: De nouvelles proximités alimentaires, Programme PIREN-Seine, rapport d'activité 2011, Paris, UMR CNRS 7619 Sisyphe, http://www.sisyphe.upmc.fr/piren/?q=webfm_send/1036

(20) Armando Montanari, Barbara Staniscia, (2010), Rome: a difficult path between tourist pressure and sustainable development, Rivista di Scienze del Turismo – 2/2010, pp. 301- 316, http://www.ledonline.it/Rivista-Scienze-Turismo/

(21) Emanuele Blasi, Aurora Cavallo, Paolo Gramiccia, Davide Marino, Romina Polverini, (2013), Sistema Agricolo Roma. Panorama sull'agricoltura nella campagna Romana, Agra Editrice, Roma 2013.

(22) Alessandra Olivi, (2012), Oltre il parco e l'orto urbano. Spazio pubblico in movimento e nuovi immaginari urbani, "Sociologia Urbana e Rurale", n. 98. Franco Angeli.

(23) Brunella Pinto, Andrea Pasqualotto, Les Levidow, (2010), Community Supported Urban Agriculture, The Orti Soldali project in Rome, “Urban Agriculture magazine”, (24); www.ruaf.org

(24) Klus G. Grunert, (2005), Food quality and safety: consumers’ perception and demand, “European Review of Agricultural Economics”, v. 32, Issue 3, pp. 369-391.

(25) Kevin Morgan, Roberta Sonnino, (2008), The School food devolution. Public Food and the challenge of Sustainable Development, Earthscan, London, p. 76.

(26) Roberta Sonnino, (2009), Quality food, public procurement and sustainable development: the school meal revolution in Rome, “Environmental and Planning”, A 41 (2), pp. 425-440.

(27) Observatoire de l’ agriculture périurbaine du Pays de Rennes, (2001), (1), AUDIAR (www.audiar.org), http://www.rac-f.org/IMG/pdf/AGRO-FICHES1-7-2.pdf

(28) Vincent Arcusa, Claire Besson, Cyril Bigot, Valentine Bossu, Uwe Grewer, Maylis Joanicot, Marion Mazodier, Emmanuel Mensah, Julia Mwanza, Julia Schindler, Matthieu Pernis, Cyrielle Rault, Adriana Santos, Samy Tumwesigye, Agathe Vassy, Matheus zanella, (2010-2011), Rennes Métropole, Ville vivrière Ingeneer thesis, http://www.dijon-ecolo.fr/doc-telechargeable/agriculture/Rennes-ville-vivriere.pdf

(29) Rural-Urban Partnerships: An integrated Approach to Economic Development, (2013), OECD Publishing, Chapter 11, Germany:Nuremberg Metropolitan Region. http://dx.doi.org/10.1787/9789264204812-en

(30) Ralph Philip, (2011), Reducing water demand and establishing a water saving culture in the city of Zaragoza, SWITCH Training Kit, CASE STUDY, zaragoza, Spain, http://www.switchtraining.eu/fileadmin/template/projects/switch_training/files/Case_stu dies/zaragoza_Case_study_preview.pdf

(31) Magali Verdonck, Michèle Taysmans, Gauthier Chapelle, Gaëtan Dartevelle, Caroline zaoui, (2012, revised in 2014), Système d’alimentation durable. Potentiel d’emplois en Région de Bruxelles-Capitale, Rapport final de la recherche réalisée pour le compte de l’Institut Bruxellois pour le Gestion de l’Environnement Professeur Magali Verdonck et Index Michèle Taymans du Centre d’études régionales bruxelloises - Facultés Universitaires Saint-Louis, Gauthier Chapelle, Gaëtan Dartevelle et Caroline zaoui de Greenloop.

(32) Le métabolisme agricole de l’agglomération franco-valdo-genevoise, (2010), Direction générale de l’agriculture. http://etat.geneve.ch/dt/SilverpeasWebFileServer/Plaquette_METABOLISME.pdf ComponentId=kmelia187&SourceFile=1286871454564.pdf&MimeType=application/pdf&Directory=Attachment/Images/

(33) Astrid Winkler, (2007), Torino city report. CASE reports, CASE report 41, Centre for Analysis of Social Exclusion, London School of Economics and Political Science, London.

(34) Greg Clark, (2009), Recession, Recovery and Reinvestment: the Role of Local Economic Leadership, OECD LEED. http://www.oecd.org/cfe/leed/50394250.pdf

(35) Egidio Dansero, Matteo G. Puttilli, (2013), La realtà degli alternative food networks (AFN) in Piemonte. Riflessioni teoriche ed evidenze empiriche, Praticare la territorialità. Riflessioni sulle politiche per la green economy, l’agroindustria e la cultura in Piemonte, Bibiloteca testi e studi, Geografia, Eu-Polis/4, Roma, Carocci, pp. 77-108.

(36) Luca Bossi, Maria Chiara Giorda, Elena Messina, (2014), A table avec les religions, Benvenuti in Italia, Turin, http://www.eatingcity.org

(37) Eleonora Morganti, (2011), Urban food planning and transport sustainability: A case study in Parma, Italy, “European Association of Agricultural Economists - EAAE” PhD Workshop, Apr. 2011, Nitra, Slovakia, p.15.

(38) Melina Antuofermo and Emilio Di Meglio, (2012), 23% of EU citizens were at risk of poverty or social exclusion in 2010, eurostat; Statistics on focus, http://ec.europa.eu/eurostat/ statistics-in-focus

To go further (cities' cases histories)

Toronto:

Golden Horseshoe : Food and Farming Action Plan 2021, http:// www.gtaaac.ca
(Golden Horseshoe Food and Farming Action Plan, and Implementation Strategy and Background Report)
Rural Roadmap: The Path Forward for Ontario, from Ministry of Rural Affairs, April 2014 http://www.omafra.gov.on.ca/english/rural/roadmap-2014.pdf
Toronto food Charter: http://www.foodsecuritynews.com/presentations/Toroto_Food_Charter.pdf
Toronto Food Policy Council: http://tfpc.to/

Bristol:

EU Green Capital Award 2015
http://ec.europa.eu/environment/europeangreencapital/
Core Strategy (2010) City plan:
http://www.bristol.gov.uk/page/planning-and-building-regulations/planning-core-strategy
EU URBACT II project 'Sustainable Food in Urban Communities'
http://urbact.eu/en/projects/low-carbon-urban-environments/sustainable-food-in-urban-communities/partner/?partnerid=646
Urban and Community Food Strategies. The Case of Bristol, International Planning Studies Volume 18, Issue 1, 2013
bristolgoodfood.org - Helping create a good food system for Bristol:
"Bristol Good Food Charter"
http://bristolgoodfood.org/wp-content/uploads/2012/03/The-Bristol-good-food-charter.pdf
"A Good Food plan for Bristol"
http://bristolpound.org/blog/2013/12/05/bristol-food-policy-council-launches-good-food-plan-for-bristol/

New York City:

New York City Food Policy Center's website : http://nycfoodpolicy.org/
NYC Food Policy: 2013 Food Metrics report
http://www.nyc.gov/html/nycfood/downloads/pdf/ll52-food-metrics-report-2013.pdf
NYC Food Policy: 2014 Food Metrics report
Available on http://www.nyc.gov/html/nycfood/downloads/pdf/2014-food-metrics-report.pdf
FoodWorks. A vision to improve NYC's Food System. http://council.nyc.gov/downloads/pdf/foodworks_fullreport_11_22_10.pdf

Copenhagen:

Dogme 2000: A manual on a municipal environmental cooperation in progress. This manual is the result of the work in the Dogme Life project 25 October 2007 (www.dogme2000.dk)
Eco Metropolis Plan: our vision for Copenhagen, 2015
http://www.proyectomilenio.org/documents/10156/52626/Copenhaguen+2015+EcoMetropolis.pdf
Web site of the Copenhagen House of Food
http://en.kbhmadhus.dk/servicenavigation/about-us/about-the-copenhagen-house-of-food
"The Copenhagen organic project, to foster sustainability into public food service."
https://www.youtube.com/watch?v=3UB-U0S_3A4

Paris:

Many initiatives are available on the website : http://www.acteursduparisdurable.fr/
simulator for carbon emissions calculation of menus.
http://acteursduparisdurable.fr/sites/default/files/simulateur-carbone/

- Synthèse Plan de développement de l'alimentation biologique dans les restaurants collectifs municipaux et départementaux, Ville de Paris, Février 2010
- Synthèse Direction de la Propreté et de l'Eau, Mairie de Paris, février 2012. Programme local de prévention des déchets de Paris
- Synthèse « Politique de l'offre alimentaire en Île-de-France » Diagnostic 2012, publication en mars 2013
- Le Paris d'une alimentation durable dans la restauration collective, Edition 2012
Presentation of "La ferme de Paris", dedicated to sustainable food production:
http://equipement.paris.fr/ferme-de-paris-6597
- Vers une restauration collective durable en Europe : le cas de Paris.
https://www.youtube.com/watch?v=3UB-U0S_3A4

Rome:

INEA, Italian Agriculture 2008 – A bridge version of the "Annuario dell'agricoltura Italiana, Vol. LXII, Edizioni Scientifiche Italiane, 2008.
Roma Capitale – U.O. Promozione Agricoltura:Censimento degli orti spontanei nel territorio del Comune di Roma dentro il G.R.A., 2006.
Supurb Food. Sustainable urban and peri-urban food provision, Rome City Region Report, http://www.supurbfood.eu/city-regions/metropolitan-area-rome-italy/.
Sustainable Food procurement for school in Rome,
http://ec.europa.eu/environment/gpp/pdf/news_alert/Issue14_Case_Study34_Rome_food.pdf.

Rennes:

Le programme Local de l'Agriculture :
http://www.paysderennes.fr/Le-Programme-Local-de-l.html
Agenda 21 Rennes Métropole :
http://metropole.rennes.fr/politiques-publiques/elus-institution-citoyennete/l-agenda-21/
Rennes métropole - Un partenariat local pour concilier Ville et Agriculture. p13-18 in : Atténuer les émissions de gaz à effet de serres du secteur agricole en France. Recueil d'expériences territoriales. Available at: http://www.rac-f.org/IMG/pdf/AGRO-FICHES1-7-2.pdf
« Rennes : Les Métamorphoses de la Ville Archipel » Article de Dominique Pialot - juin 2013, Grand reportage. http://www.alliantis.store-factory.com/media/130919_Reportage_Rennes_Ville%20durable.pdf
Observatoire de l' agriculture périurbaine du Pays de Rennes
http://www.rac-f.org/IMG/pdf/AGRO-FICHES1-7-2.pdf

Nuremberg:

BioMetropole Nürnberg – Bericht 2012 und Ausblick, Environmental Department of Nuremberg, in German, http://www.nuernberg.de/imperia/md/biomodellstadt/dokumente/bericht_biometropole_2012.pdf
Final Application Nuremberg, Green Capital City, 2012/ 2013
http://www.nuernberg.de/imperia/md/umweltreferat/dokumente/2010_05_28_final_application_us.pdf

Saragosse:

European Green Capital Award 2016, Zaragoza,
http:// www.zaragoza.es/contenidos/medioambiente/ZGZVERDEEN/9Wastewatermanagement.pdf
European Green Capital, Expert Panel – Technical Assessment Repotr, Zaragoza,
https://www.zaragoza.es/contenidos/medioambiente/ZGZVERDEEN/
EGCA_2016_Technical_Assessment_Report_Zaragoza_F01.pdf.
Mensa civica:
http://mensacivica.com/project/mas-alimentos-ecologicos-y-menos-panga-en-los-comedores-escolares.
Life Zaragoza Natural, Creación, gestión y promoción de la Infraestructura Verde de Zaragoza LIFE12 ENV/ES/000567,
http://ec.europa.eu/environment/life/project/Projects/
index.cfmfuseaction=search.dspPage&n_proj_id=4627.0.
Zaragoza Ayuntamento public website, http://www.zaragoza.es/ciudad/medioambiente/life.htm.

Brussels:

Alliance emploi environnement : http://www.aee-rbc.be
Portal Brussels region: http://be.brussels
Accord de gouvernement 2009-2014 available at: http://be.brussels/files-fr/a-propos-de-la-region/competences-regionales/accord-de-gouvernement-2009-2014-rbc
Portal city of Brussels : http://www.bruxelles.be
Programme de politique générale 2012-2018 (http://www.bruxelles.be/artdet.cfm/4167)
Plan communal de développement: http://www.bruxelles.be/artdet.cfm/4172
Agenda 12 : http://www.brussels.be/artdet.cfm/8519
Brussels Environment (http://www.bruxellesenvironnement.be/)
URBACT handbook : http://www.sustainable-everyday-project.net/urbact-sustainable-food/the-handbook/.

Geneva:

Programme Genève, Ville Durable. Available on
http://www.ville-geneve.ch/themes/developpement-durable-energie/geneve-ville-durable/geneve-ville-durable/
Geneve Region Terre Avenir Règlement général 9 octobre 2009, available on
http://www.geneveterroir.ch/fr/content/documents-reglements
Geneve Region Terre Avenir. Cahier des charges Restauration collective Etat au 27 novembre 2012
http://www.geneveterroir.ch/sites/default/files/cahier_des_charges_restauration_27_11_2012.pdf
Suivi Annuel du «Programme Stratégique de Développement Durable de la Ville de Genève (2011-2014)»
Bilan au 31.12.2012.
http://www.ville-geneve.ch/fileadmin/public/Departement_1/Publications/
Suivi_annuel_2011_2012_PSDD_coquilles_corrigees_11_11_2013.pdf
Vers une restauration collective durable en Europe : le cas de Genève." available on: https://www.youtube.com/watch?v=qJ4uJj6GpPg

Turin:

http://www.provincia.torino.gov.it/speciali/2013/actt/dwd/def/4_C4.pdf .
http://www.provincia.torino.gov.it/europa/europa/progetti_europa/prog_agricoltura/ACTT.
http://www.provincia.torino.gov.it/speciali/2013/actt/atti.htm.
http://www.comune.torino.it/regolamenti/363/363.htm.
Slow Food: http://www.slowfood.com

A glance on some projects and networks working around the thematics of city food policies:

CITY REGION FOOD SYSTEMS : http://www.cityregionfoodsystems.org
RESILIENT CITIES : http://resilient-cities.iclei.org
URBACT : “Sustainable Food in Urban Communities” on http://urbact.eu/en/projects/low-carbon-urban-environments/sustainable-food-in-urban-communities/our-project/
COFAMI (Switzerland) - http://www.cofami.org/site-information.html
FOODLINKS (The Netherlands) - http://www.foodlinkscommunity.net
PUREFOOD (The Netherlands) - http://purefoodnetwork.eu
SUPURBFOOD (The Netherlands) - http://www.supurbfood.eu
SUS-CHAIN (The Netherlands) - http://www.sus-chain.org
INNOCAT (Procurement of innovative catering) http://www.sustainable-catering.eu/ ,
Resilient Urban food Systems - http://resilient-cities.iclei.org/
CITYFOOD : ICLEI / RUAF initiative
SUSFOOD, FP7-ERA-Net (European transnational research cooperation project consisted of a network of 25 partners from 16 European countries) https://www.susfood-era.net/home
Food Climate Research Network (UK) - http://www.fcrn.org.uk
FOOD SYSTEMS INITIATIVE (USA) - http://www.uvm.edu/foodsystems/
Sustainable Food Cities http://sustainablefoodcities.org
Food Tank: Building a global community for safe, healthy, nourished eaters. http://foodtank.com/
Urban Food Network (IUFN) http://www.iufn.org/
Purple – Peri-urban Regions Platform Europe (Belgium) - http://www.purple-eu.org
Eating City (France) - http://www.eatingcity.org
CITTASLOW (Italy) - http://www.cittaslow.org
Città del bio (Italy) - http://www.cittadelbio.it
FAO – FOOD FOR CITIES (Italy) - http://www.fao.org/fcit/en/
ICLEI and Sustainable procurement resource centre - http://www.sustainable-procurement.org/
ORU – FOGAR (Spain) - http://www.regionsunies-fogar.org
RUAF (The Netherlands) - www.ruaf.org
City Food (The Netherlands) - http://www.iclei.org/index.php?id=1348
Sustainable Food Lab (USA) - www.sustainablefood.org
sustainable food cities network (UK) - http://www.sustainablefoodcities.org
GLAMUR (Italy) - http://www.glamur.eu

etc.