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TOWARDS URBAN FOOD POLICIES

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SUMMARY

Articles

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THE RELATIONSHIP BETWEEN FOOD AND CITIES AND URBAN FOOD POLICIES: A SPACE FOR GEOGRAPHY?

Introduction. – Over recent years, the theme of «food geographies», established as topic or sectorial considerations, has emerged in the international debate and has developed into a wide range of themes, approaches and scales of analysis that describe, analyse, interpret and criticise the spatial configurations of flows, networks and food systems (Winter, 2004 and 2005; Cook *et al.*, 2006; Cook, 2008; Cook *et al.*, 2011; Colombino, 2014; Goodman, 2015).

One of the most interesting aspects, from both the theoretical and empirical perspectives is the relationship between food and city, and particularly in relation to *Urban Food Planning*, a term that Kevin Morgan (2009, 2013) defines semantically as urban planning of food systems. With a few years of delay compared to Anglo-Saxon countries, that first perceived the importance of food as an area of urban policies, considerations and practices on these issues have also begun in Italy. This monographic issue is in fact a starting point for new reflection and the first outcome of a multidisciplinary path, straddling theory and research-action, which has contributed to the diffusion and affirmation of the Italian urban food policies as a new and promising area of investigation and intervention. Within this process, meetings and confrontations at national and international level were essential to build shared knowledge: starting from the food-city section in the Franco-Italian Seminar of Social Geography (from which some of the contributions presented in this issue originate), to the International Conference of the *Sustainable Food Planning* theme group of the *AESOP* (*Association of European Schools of Planning*) network. Equally central in the genesis of the coverage of this monograph has been the active role of the curators and some of the authors of this issue in building and promoting urban food policies (particularly in Turin, Milan and Bergamo).

In this context, this issue presents a collection of writings that share the attention paid to the spatial and territorial dimensions, yet come from a variety of different disciplines, reflecting the connections between food and city, as evidence of the progressive integration between *food studies* and *urban studies*.

Given the recent appearance of these themes in the Italian scientific and political debate, it seems appropriate, in this introduction, to outline a short conceptual itinerary both on the subject of study of *Urban Food Planning*, i.e. the relationship between food and cities and the food systems in an urban environment, and on the instruments used, namely *urban food policies*. The contribution ends with a consideration on the potential role that geography can play to link the theoretical debate, the practices and the policies.

Food and the city. – The reasons for which food can and should (also) be considered an urban issue are multiple, starting from the most obvious, i.e. the quantitative prevalence of the population living in a city compared to the total population of the world (reached in 2007, according to the United Nations), which is constantly growing and that in some parts of the world has peaked at levels that exceed 80% of the total. Therefore, most of those consumers, whose individual choices are decisive in defining how the food system may evolve, are concentrated in cities.

The relationship between food chains and urban systems dates back to the very birth of the urban phenomenon, as Emrys Jones points out (1990, p. 26): «Behind the urban revolution lay the food-producing revolution, the ability to control the growth of food in permanent settlements as opposed to hunting and collecting. It was this that made cities possible».

Whilst the predominant function of food production sites or places of consumption has historically contributed significantly to the separation between city and country, the transformation of the relationship between food and territory is at the same time one of the causes and one of the consequences of the progressive conceptual weakening of the urban-rural dichotomy. On the one hand, the city has physically and symbolically invaded the nearest rural areas, transforming their spaces and lifestyles; on the other hand, the rapprochement to a countryside, often more imaginative than real, has become one of the recurring symbols of a strongly urban trend in search of lifestyles, societies and economics, alternative to those of contemporary cities (Donadieu, 2006). Food is also a vehicle and a field of action for many of the material and symbolic transformation policies that characterise contemporary cities in the North of the world, from *gentrification* processes that transform the historical centres (Zukin, 2008) to the use of local resources related to the food sector as key to the reconstruction of the image and economy of cities (Vanolo, 2015).

In addition to influencing food systems at different levels because of the food demand that is concentrated within them, cities are the places where the powers and decisions are located thus directing the contemporary - globalised, industrialised and financialised - food system, governed by a few economic and political players who are able to determine the characteristics of production, distribution and consumption (Morgan *et al.*, 2006). On the opposite side, cities are political and cultural arenas in which movements of - more or less conscious and explicit - opposition and resistance to the distortions of the dominant system manifest themselves with great emphasis, through the varied activities of *food movements* (Holt-Giménez and Shattuck, 2011); the increasingly widespread *urban food policy* experiments (Moragues-Faus and Morgan, 2015) and the variety of practices that fall under the broad definition of *alternative food networks* (Jarosz, 2008; Dansero and Puttilli, 2013).

At the same time, however, cities are places where access to food is often problematic and where entire neighbourhoods are called *food deserts,* where it is impossible to find fresh and quality food, especially for culturally and economically disadvantaged subjects (Cummins and Macintyre, 2002). Urban populations are also particularly vulnerable to the possible localised effects of some global dynamics (raw material prices, climate change, etc.) that make up the so-called *new food equation* that characterises the global food system (Morgan and Sonnino, 2010).

As the following paragraphs argue, despite its relevance, the food system has for decades been invisible to the policies and strategies of city government and planning (Pothukuchi and Kaufman, 2000). However, over the last fifteen years, urban food policies have become

the subject of debate on the sustainability, justice and efficiency of food systems, and cities have become critical scopes and players in the strategies, the debate and the economy linked to food (Morgan, 2009 and 2013; Blay-Palmer, 2009; Calori and Magarini, 2015).

Meaning, size and scale of an urban food system. – Referring to the writings of Pothukuchi and Kaufman (1999), who first denounced the absence of food from the city's political agendas, the food system can be defined as the chain of activities related to the production, processing, distribution, consumption and post consumption of food, including institutions and the related regulatory activities.

In a theoretical-analytical perspective, which is the one underlying this type of definition, it is interesting to observe where and how the food system intercepts spaces, players, resources and dynamics in a city and its *hinterland* (Dansero, Pettenati and Toldo, 2014). The production stage in the city involves urban and peri-urban farming experiences, a broad and articulated scope (just think of the differences between produce grown in cities or around the city), characterised by a variety of approaches and a remarkable heterogeneity of practices (Ingersoll *et al.*, 2007) ranging from commercial farms, to farming parks, to the heterogeneous set of horticultural experiences, taking place in public and private spaces (Tornaghi, 2014). Distribution is instead a service activity, the purpose of which is to transfer food from producers and processors (agriculture and food industry) to consumers. In general, food distribution intersects with urban dynamics in spatial terms (as it has implications on how space is experienced, designed, consumed, trivialised or enhanced), social terms (because it is related to relationships amongst players) and environmental terms (because it causes impacts in terms of air pollution, traffic and congestion, consumption of soil and energy, etc.). The urban consumption phase is complex and difficult to analyse, since it addresses a wide variety of issues ranging from the areas in which food is consumed to the cultural implications of customs, traditions, consumer choices, ways and times of consumption, the socio-spatial injustice of food accessibility, etc. Finally, the theme of waste and food scraps - FAO makes a distinction between *food loss* (in production, collection, distribution and processing) and *food waste* (produced in the final stages of sales and consumption) (Gustavsson *et al.*, 2011) - is becoming increasingly relevant in relation to issues such as global climate change, social justice, and food education.

However, the intersections of the food system with the urban system and its spaces require a few clarifications. Existing literature often recalls the relationships between food systems and urban systems, without however providing a definition of *urban food systems* (among others, Morgan 2013).

One such contribution, relating to the scale and characteristics of these systems, comes from the *City Region Food Systems Alliance* network (made up of an international co-ordination of players) which defines the concept of *City Region Food Systems* (CRFS) from a theoretical and operational point of view as

> the complex network of actors, processes and relationships to do with food production, processing, marketing, and consumption that exist in a given geographical region that includes a more or less concentrated urban centre and its surrounding peri-urban and rural hinterland; a regional landscape across which flows of people, goods and ecosystem services are managed.
> According to FAO (2014), the notion of city-region does not only refer to to big urban agglomerations and to the surrounding productive rural areas. It also encompasses regions where small

and medium towns are markets for local productions.
The flexibility of such approach allows to acknowledge the big variety of territorial relationships, food systems and urban-rural linkages.

Calling to mind existing conceptualisations on food systems in general (e.g. as already mentioned by Pothukuchi and Kaufman, 1999) this definition links them to the urban dimension, identifying the scale (of analysis and action) and the specificities of a possible urban food system. Several issues, however, remain open. Speaking of the urban food system, for example, what role do they play and how does one consider those actors and activities (in the food sector) that, albeit located in the city, are a part of poorly territorialised networks and flows?

In this regard, it is interesting to note that besides theoretical-analytical descriptions, it is possible to approach definitions of a more political-design nature, as is the very notion of *City-Region Food System* or that of *«local food system»* (Hinrichs, 2003), which highlights (and hopes for) a local increase of the connections between the different phases, activities and actors of the food chain, and the re-setting of the elements of the food system to be in relationship with the places (Feagan, 2007).

Whilst referring, for a more systematic discussion of these concepts, to the contribution by Bagliani *et al.* in this monograph, we stress here the impossibility of narrowing the «local» on an analytical plane from a functional and spatial point of view. However, the emphasis on the local, which is often controversial (Born and Purcell, 2006), is one of the distinguishing features of *urban food policy* (see also Sonnino, in this issue) that view relocation actions as one of the means to achieve the objectives of sustainability, justice and economic development.

In this context, beyond the slogans and commonplaces on the rhetoric of «local» and «zero food miles», it is crucial, above all in a political-normative perspective, to thoroughly question how much of the food consumed in a territory can be - and should desirably be - of local origin and to ask what are the real advantages (environmental, social, economic, occupational, landscape and nutritional) of the relocation of food flows, also starting from the consideration, contained in the CRFS definition, that not all cities are the same and not all have the same possibilities regarding the potential for proximity farming and processing, storage, packaging and distribution of the product itself.

Scale issues. – Following this logic, it becomes more and more necessary to question the significance of the urban scale to reason both on food and food policies, since in these matters – where the boundaries of the city cross over with the boundaries of the food system – different and important meanings of the concept of scale overlap and also contrast each other (McMaster and Sheppard, 2004), which might be interpreted as:

- *scale as an amplitude and extension of a phenomenon*. The relevance of the urban scale is measured according to the concentration of population and activities. It is evident that, especially for large cities, the municipal scale, albeit relevant as a scale of skills, is increasingly inadequate to govern the scale of processes that refer to a wider dimension. The urban system, conceived as an area where there is a concentration of people and activities together with the relationships between them (typically the home-work-urban services flows), actually develops on a larger scale. These relationships tend to be self-contained in a specific space with fickle boundaries linked

to the progressive improvement of mobility infrastructures, whereas, in a widespread city context, many residences and activities relocate outside the narrower urban centres. The amplitude of the urban phenomenon can therefore be understood by considering concepts such as system of urban commuting, widespread city, urban *sprawl*, city-region, and, on this basis, it can be compared to the food system within the opposing and contradictory processes of de-territorialisation (Morgan *et al.*, 2006; Wiskerke, 2009), and global, metropolitan and local food networks (Wascher *et al.*, 2017). Drawing the attention to the system that feeds a city can lead to the emergence of connections between dynamics, problems and skills, while considering formal public actions and other informal ones already in place, and highlighting the possibilities for intervention;

- *scale of skills*. The urban scale is important both because, more generally, there is greater proximity between citizens, problems and politics, and because there are specific sectoral skills relevant to some very important aspects of food and nutrition, such as public catering (see Toldo, in this issue), the regulation of the spatial distribution of commercial activities and food-related logistics (retail and wholesale markets), the uses of land (for the various possible forms of agriculture in and around cities), thus crossing them with other typical urban skills (environment, mobility, school, social and health services, city planning and urban space). In the Italian case, the metropolitan city as a political-administrative level could offer the opportunity to find greater consistency between the scale of skills and the scale of the urban phenomenon. To introduce into this consideration the question of food and the opportunity/necessity of a food policy on the urban scale poses interesting prospects for a different reading of the town-country relations in the construction of the metropolitan city, and whether or not there is a system of local food at the metropolitan scale, of its possibilities and desirability.
- *scale as a product of action*. The reflections here proposed on *urban food policy* are geared towards building the urban scale as a major scale of food policies. Through the identification of the urban-metropolitan territory in its various functional forms (see Bagliani's and others' contributions in this issue) as a reference scale for *food planning* - which in this sense becomes *urban food planning* - it produces politically a scale of action (and sometimes of skill) for the local analysis and regulation of food systems (considering the term regulation in a very broad sense, and similar to that used in the literature on local development and industrial districts). This raises several issues of meaning and method in relation to urban food policies, discussed in the following paragraph. Global food policies are in fact governed by markets, more and more often by financial ones, but also by trade agreements between states, and, last but not least, by international cooperation actions. At the macro-regional level, the Common Agricultural Policy is the main item of the European Union's budget and, together with the regulations dedicated to food processing and production and free market rules, it creates a regulatory framework that influences the functioning of food systems on the smaller scales, from the national level (which has an important regulatory role in the agri-food sector) to the regional levels (institutional, that are also relevant).

What is the point, on an even smaller scale, of talking about local and, particularly, urban food policies? Ultimately, it implies the possibility of a relatively autonomous local action, compared to the regulatory contexts of the market and supra-governmental policies. This collective action, with different approaches to building an expanded governance of food system actors, is aimed at re-orientating the system that nourishes the city towards locally defined goals, and that are included in the agendas of the various actors involved. This perspective, applied in theoretical-methodological but also operational terms, is an added value in observing and taking into account food systems on the urban scale, more so at a time when the scale, as a concept, and especially an urban one, are ever more frequently questioned as ordering elements of meaning of the spatial analysis (Bolocan Goldstein, 2014).

The activation of local public institutions, civil society and economic actors, in identifying on the urban and the city-region scale a spatial dimension with which to identify and imagine a «food system», is the central step of the socio-political production of this new scale of action; one with which to think of new public policies (the *urban food policy* outlined in the next paragraph) thus dealing with issues of sustainability, justice and economic development linked to the local manifestation of networks, flows and actions related to the nutrition of the urban population.

The city as a space of action for food policies. – Urban food policies define a heterogeneous field of action in terms of objectives, forms of *governance*, contents and actions. Even from a semantic point of view, the coexistence of different terms with which both the scientific literature and the political and cultural debate define them – *urban food policies, urban food strategies* – proves the fluidity, the complexity and the geographical origin, of British and North American origin. These policies were initially developed in the United States and Canada as a response to negative externalities (linked in particular to public health problems and access to food) generated by the dominant food system that, aggravated by the aforementioned *new food equation*, are reflected at a local level and the consequences of which tend to intensify in urban nodes (Morgan and Sonnino, 2010). More generally, these are voluntary policies that share many aspects with strategic planning, such as shared visions, integrated goals, mixed partnerships, but above all, a broad involvement and participation of civil society (for a wider treatise refer to Sonnino, in this issue).

Scientific debate recognises, as the main denominator of the different experiences, the systemic approach to the food theme (Moragues *et al.*, 2013; Sonnino and Spayde, 2014), which translates into policies aimed at integrating and connecting actors, resources and tools in terms of:

- multiple dimensions of food (environment, productive activities, logistics and transport, education and training, economic and occupational development, health and socio-welfare aspects, culture and tourism);
- different phases of the agri-food chain;
- geographic scales and relative levels of government of the territory;
- urban and rural areas;
- public and private sectors, and civil society.

To reach a definition of urban food policies that holds together such a complexity is not easy. Some authors, referring particularly to *Urban Food Strategies* (UFS), recognise them as

processes of change of the city food systems (Moragues *et al.*, 2013, p. 6), which influence the way in which food is produced, purchased, consumed and disposed of by those who live there (Sonnino, in this issue). In fact, the UFS capitalise on existing experiences and networks, and propose complex strategies that aggregate and provide a coherent framework for different interventions (urban agriculture, alternative forms of distribution, food education, waste prevention, etc.) generally aimed at ensuring for everyone – particularly for vulnerable groups – accessibility to food that is healthy, nutritious and of high quality, socially just, ecologically compatible and culturally appropriate (Sonnino, 2009). To achieve these broader goals (each city reinterprets visions within which prevalent narratives are recognisable, Sonnino and Spayde, 2014) it is possible to identify recurrent and interrelated strategies, including the relocation of production and consumption and the reconnection of urban with rural (*ibidem*), the «re-moralisation» of the food systems (Morgan 2010), and the education and training interventions aimed at changing habits and lifestyles.

Although each city develops its own peculiar and contextual process of definition, adoption and implementation of a food policy, it is possible to recognise some common phases that characterise, above all, the North American and North European experiences:

- a more informal start-up phase, usually initiated by the interest of single individuals in the institutional context, or by the commitment of local interest groups (associations, fair trade economy networks, etc.);
- a phase of institutionalisation of the process, through its adoption by public entities, but also by other local actors sufficiently structured and organised to be recognised and legitimised to action;
- an analytical phase, generally conducted by institutions, universities or other research centres, aimed at assessing the food system and mapping its actors. See, for example, the documentation from Calgary (Calgary Food Committee, 2012) and Bristol (Carey, 2011) papers;
- a participatory process, according to different strategies and modalities, involving actors and stakeholders in defining the objectives and priorities of the future *food policy*;
- the construction and the subsequent adoption of a first statement of intent, formalised in a Charter, Agenda or food Manifesto (see, for example, the historic *food charter* of Toronto), sometimes signed collectively or by individuals via web, as is the case with many English *food charters* (Durham, Oxford, Bristol, etc.);
- the establishment of a new food governance structure, generally referred to as the *Food Policy Council* (typically in North America, Scherb *et al.*, 2016), but also *Food Boards* (as in London), *Food Partnerships* (as in Brighton) and other forms (Moragues-Faus *et al.*, 2013);
- The adoption of a strategic document that, depending on the degree of detail and effectiveness, may introduce: the development vision, the general objectives, the specific objectives, the individual actions, the responsible parties, the responsibilities and the expenditure commitments, and the monitoring indicators.

The debate identifies some pioneering realities, such as the major North American and Canadian urban areas, including Toronto (Blay-Palmer, 2009; Mah and Thang, 2013), and New York (Morgan and Sonnino, 2010; Morgan and Sonnino, 2010). More recently, the phe-

nomenon has extended to London (Reynolds, 2009) and small and medium-sized cities in the United Kingdom (e.g. Bristol, Carey, 2013) and Northern Europe (Wiskerke, 2009; Cretella and Buenger, 2016), Greece (Skordili, 2013), Australia (Caraher *et al.,* 2013), to the metropoles of China (Lang and Miao, 2013), Brazil (Rocha and Lessa, 2009) and the South of the world (for a closer look at the countries in the developing world refer, in this issue, to the contribution by Bini *et al.*). Several reviews and comparative studies have been produced over the years, with the aim of identifying common traits, also from the perspective of transferable practices; refer, for example, to contributions by Mansfield and Mendes, 2013; Sonnino and Spayde, 2014; Toldo *et al.*, 2015; Calori and Magarini, 2015; Sonnino, 2016.

The conditions for the emergence and development of urban food policies as we know and practice them today – albeit with their peculiarities – are the fruit of the intersection of different paths, some of a more informal and smaller kind, others of a more institutional nature, both locally and internationally. In addition, the construction of the complex meanings of these policies is strongly influenced by the continued contamination by the world of scientific and academic research. The next paragraph will briefly reconstruct the assumptions that gave rise to *Urban Food Planning* as a new field of action and reflection.

Urban food policies as a result of complex processes. – The first forms of criticism of the non-sustainability of the dominant food system, and the accumulation of its externalities in urban contexts, began to emerge in the 1980s in the political vacuum left by national governments, but above all by local and regional decision makers and planners (Morgan, 2009) and derive from the complex landscape of the *food movements*, a diverse archipelago of social actors involved in more or less radical actions of reaction and reconstruction towards more sustainable and equitable systems (for a thorough discussion see Holt-Giménez, 2011; Holt Giménez and Shattuck, 2011). The role of these «energies from contradiction» (Magnaghi, 2011) that seem to have been the first to understand the many connections between food and human activity (Holt-Giménez, 2011), is crucial if we think about the weight these movements and their associated practices (urban agriculture, *alternative food networks*, forms of food sharing) have had in creating the basic conditions to establish food policies. The entrance of cities into the debate on food issues (Morgan and Sonnino, 2010; Sonnino and Spayde, 2014) imparts a strong acceleration to this process. The progressive awareness of the centrality of food in urban development models and the greater awareness of the agri-food system's externalities have prompted local governments to regain their dietary responsibilities and to actively engage in the creation of institutional pathways and local food governance processes. These paths and these processes are more difficult to map and reproduce, because they are specific to single contextual development trajectories. In general, however, it is possible to at least identify the macro issues within which they have occurred: for example, North American pioneers in urban food planning have a long tradition of policies related to public health (Morgan, 2015), particularly in the fight against obesity and illnesses related to eating habits (see, for example, the *food policies* of Toronto and Bristol), as well as to aspects of socio-spatial justice, with the already mentioned *food deserts* (Walker *et al.*, 2010). The urban realities of South America, Africa and Asia, however, state the food policies more explicitly in terms of food security and promotion of local economic development, especially through urban and family farming initiatives, often with the support of international cooperation (Calori and Magarini, 2015; Bini *et al.*, in this issue). In Europe, the landscape of urban food planning is heterogeneous and very fragmented. Some countries, such as the United Kingdom, have been active

for some time with systemic policies borrowed from the North American tradition. In others, like in Italy and in France (Brand, in this issue), the theme is mainly based on the experiences promoted by civil society (particularly with the reestablishment of producer and consumer relations through the *Alternative Food Network*s) that just recently seem to be evolving into more systematic approaches with the involvement of institutions (Calori and Magarini, 2015).

Regarding, on the other hand, the international dimension, which in part influences and directs the local one, it is possible to reconstruct at least briefly all the key elements that have contributed to strengthening urban centrality in the development of food policies, including: the *Millennium Development Goals*; the publication of the *Food for the Cities* report prepared by FAO in 2000; the Agriculture and City conference, promoted the following year by UN-HABITAT; the *Healthy Cities* programme of the World Health Organization, which explicitly refers to the inclusion of food policies in urban plans; the *Report of the Special Rapporteur on the Right to Food* adopted in 2010 with a resolution of the UN General Assembly; the *Post 2015 Development Agenda* with the new 17 *Sustainable Development Goals* (for a more detailed discussion see Calori and Magarini, 2015) and finally the *New Urban Agenda* defined within the United Nations Habitat III Conference, which took place in Quito in October 2016. Towards the end of the year, the European Union, through the Committee of the Regions, also expressed the need for a «*sustainable EU food policy*» aimed at achieving sustainability and growth goals in European cities and regions ([1]).

In this framework, the final milestone is the *Milan Urban Food Policy Pact* (MUFPP), the first international pact on food policies that directly involves cities, signed by their mayors. Started in 2014, upon the initiative of the city of Milan and launched at the end of the Expo in October 2015, the MUFPP currently counts the membership of 132 small, medium and large municipalities, representing over 460 million citizens all over the world. From a strictly political point of view, this is an important step that legitimises the urban approach to food and nutrition issues, enshrined – as far as the international level is concerned – by the involvement of the United Nations with FAO and – at the national level – by the acceptance of the Italian National Association of Municipalities (ANCI). In operational terms, the proposed framework for the promotion of healthier, more equitable and sustainable food systems is built on the basis of the many food planning experiences initiated around the world. The recommended improvements are therefore to be considered as individual options in a list from which every city should draw to reconstruct an operational agenda consistent with its own context, its requirements and objectives. In this sense, the MUFPP can be considered as a simultaneously political, theoretical, methodological and addressing instrument capable of networking an increasing number of cities in the plurality of peculiar experiences and conditions; thus favouring debate and the exchange of good practices, which are important tools to innovate the governance of the food system globally, starting from an unprecedented scale in food policy such as the urban one (Dansero and Nicolarea, 2016). However, one must remember that since it is a voluntary and non-binding commitment, there is a risk that the Pact will be understood as a simple and harmless statement of intent, and that the adherence of cities - many of them approaching food planning matters for the first time - may not have real effects on the territories. For this reason, a double effort is necessary, by the cities, to operate the pact indications, and by the international

1 http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=uriserv:OJ.C_.2017.272.01.0014.01.ENG

co-ordination of the MUFFP, to constantly monitor its implementation.

Finally, as far as the contribution of the scientific world is concerned, ten years after the publication of the aforementioned contributions by Pothukuchi and Kaufmann (1999, 2000), a monograph of «International Planning Studies» (2009) introduced, for the first time, the term *Urban Food Planning*, hence semantically defining the more general, broader and varied set of practices and policies that have long been launched with the aim of nurturing cities in a sustainable manner, i.e. in an ecologically compatible, socially fair and economically effective way (Morgan, 2009). In this context, the diffusion of urban food planning is certainly accompanied, but also sustained and directed by the structuring of a multidisciplinary international scientific community that is very active and involved in research projects, conferences, territorial partnerships and thematic networks (such as the *AESOP Sustainable Food Planning* network, but also *Eating City* , *RUAF - Resource Centers on Urban Agriculture & Food Security, IUFN - International Urban Food Network* , in addition to the *FAO Food for the Cities meeting Urban Food Needs-MUFS*, etc.) and especially strongly involved in the practices, through their outreach and support for projects, experiences, and processes.

Urban Food Planning in Italy. – In Italy, the need, but also the opportunity, for an integrated planning of local food systems – which not only exist but can rely on a wealth of valuable resources, materials and intangible assets – is not yet a widespread real perception, especially at an institutional level. This is demonstrated by the fact that despite a rather lively scientific debate and above all an important heritage of practices aimed at increasing the sustainability of food systems – urban vegetable gardens, practices of fair trade economies such as GAS (fair trade purchasing groups), charity canteens, innovative *procurement* experiences – only the Province of Pisa and the City of Milan have so far issued documents that can be considered urban food strategies. The Province of Pisa was the first local public entity in Italy to initiate a building process of a Local Food Plan - promoted together with the University through the Sismondi Rurali Laboratory – with the aim of managing the food system in an integrated way with a cross-sectional activity to integrate and capitalise on various manifestations and multiple policies related to food and social agriculture (for a more detailed discussion see Di Iacovo, Brunori, Innocenti, 2013). Stimulated by the Expo 2015 opportunity, Milan started its *food policy* path in 2014, signing an agreement with Cariplo Foundation and launching a four-stage process: (i) the analysis of the city's food system; (ii) the elaboration of goals through a public consultation; (iii) the design of a *food policy* by urban institutions (subsequently approved by the city committee and council) and (iv) its implementation with pilot projects (Està, 2015; Deakin, Borrelli and Diamantini, 2016). Other entities have started food governance processes aimed at building urban food policies, such as in Bergamo (Forno and Maurano, 2014) and in Turin, where the Municipality, the Metropolitan City, the Universities and the *stakeholders* have engaged in the elaboration of a Local Food Agenda (Dansero *et al.*, 2016), in the mapping of the system (Dansero *et al.*, 2015; Bottiglieri *et al.*, 2016) and in designing a food governance structure (*Food Commission*) (*ibidem*), in a complex path that is still open and uncertain.

A field of action for geography. – While on the one hand, among the innovative elements of research and reflection on (urban) food systems, there is the interdisciplinary perspective and the overcoming of the sectoral views which have for too long characterised the approaches

regarding food issues, on the other, it seems important to us to question, here, the potential role of geography, in a close and inescapable connection with the other disciplines. In the international debate on *food studies*, and particularly on *alternative food networks*, *Urban Food Planning* and the relationship between food and cities, geographers occupy a prominent place, especially in the Anglo-Saxon world. By cross-referencing bibliographies of articles on these topics, featured in major journals of various social disciplines, there is a frequent use of quotes from representatives of departments particularly active in this field. The main focus is on the Cardiff *School of Geography and Planning* (Kevin Morgan, Roberta Sonnino, Terry Marsden, Moya Kneafsey), where these themes have been conceptualised and studied ahead of the rest of Europe and probably with the most systematic critical perspective.

In general, the literature on *food studies* utilises and deals with often implicit theoretical and analytic frameworks, that have much to do with the conceptual tools of geography and spatial sciences. These theoretical tools are used in political and civil discourses both in analytical terms and in a prescriptive perspective, as conceptual supports of the goals the food system should be reaching. Although in rhetoric, that has now entered common language, terms have often become mere slogans, such as *km0* in Italy, the scientific debate seems to be well aware of the need to avoid, in food system policies and rhetoric, acritical concepts such as «local» (Hinrichs, 2003; DuPuis and Goodman, 2005; Born and Purcell, 2006); region (Kneafsey, 2010; Donald *et al.*, 2010); «city-region» (Donald and Blay-Palmer, 2006), *foodscapes* (Moragues-Faus and Morgan, 2015) or *foodsheds* (Wascher *et al.*, 2017), or more generally «alternative geographies of food» (Wiskerke, 2009) (see the chapter by Bagliani *et al.* in this monograph). In addition to concepts, even geographic research methods are often used in the research and in the considerations on food systems at different levels, as demonstrated by many examples of mapping of the system, its flows, its resources and its networks (Dansero, Pettenati and Toldo, 2015), or by the dissemination of approaches aimed at reconstructing the spatial configuration of networks formed by material flows and information related to food (e.g. Cook, 2011). The community of geographers also plays an active role in the aforementioned scientific and political networks involved in reflecting on the urban food systems and their policies. Since the geographic debate on these issues appears strongly dominated – especially in the scientific sphere – by Anglo-Saxon geography, British in particular – and although it is important to reflect on national geographies such as the French one – it is essential for the community of Italian geographers to reflect on how the conceptual schemes and operational indications developed in those contexts can adapt to the characteristics of the Italian food systems at different levels. In the national scientific debate, these issues have seen a strong impetus over the last few years, particularly in 2015, in conjunction with the organisation in Turin of the annual conference of the *AESOP - Sustainable Food Planning* (the authors of this article were amongst its promoters) and with the flourishing of organised events, exploiting, also in critical terms, the attention generated by the Milan EXPO and the concurrent signature of the MUFPP. In some cities, moreover, geographers are very active in the processes of building *Urban Food Strategies*, in close contact with agronomists, anthropologists, economists, nutritionists, social psychologists and sociologists and other experts actively involved in *food studies*. This is the case with the group that fostered, promoted and co-ordinated this monographic issue, and is engaged in Turin in research-action paths aimed at promoting and building active, broad, inclusive and established food policies. Especially on paths of this sort, where research is directly involved

in broader policy processes, it is imperative to ask how geography might not only be useful to politics, but also be more active in identifying problems, in a fruitful exploration and criticism of recurring concepts, speeches and practices, recalling the goal of a geography «*in* politics», suggested by Francesca Governa (2014).

Conclusions. – Those relating to food have been defined as «(un)disciplined geographies» (Cook *et al.*, 2006, p. 656), precisely because they are hard to tackle with strictly disciplinary and sectoral approaches. Therefore the selection of the contributions collected in this monographic issue, which adopts a predominant geographic-territorial cut, hosts reflections that examine different themes and come from different disciplines (economics, sociology, urbanism) as well as non-academic institutions. The choice that guided the construction of this volume was to present a manifold, systematic, albeit non-exhaustive, reflection on the food-city relationship in a perspective of urban food policies. This perspective sheds new light on a field of research and action – considering the role of geography as a civic and political commitment (Dansero *et al.*, 2007) – as yet unpublished or still treated very little, at least by the Italian Academia, where new and consolidated specialisations (such as urban and peri-urban agriculture and the related spaces, or alternative agri-food networks) can find a wider framework of meaning and consistency.

In this context, the monograph, following this introduction, opens with a framework that recalls and deepens theoretical and operational reflections on the urban food systems (see the contribution by Bagliani *et al.*) and continues with a first section expressly aimed at the conceptualisation of urban food policies from international experiences, particularly the Anglo-Saxon one (retraced by Roberta Sonnino), and also considering the French debate (as retraced by Caroline Brand). In a literature so strongly focused on the cities of the North, an analysis is then made of the debate in the cities of the global South, especially in Africa (see Bini at al. contributions).

A second section follows, dealing with some of the issues that arise in the planning of urban food systems, that can contribute to the construction of new food geographies. First of all, urban agriculture, which in the paper by Chiara Tornaghi (current co-ordinator of the AESOP Sustainable Food Planning) is understood to be an important opportunity to rethink not only the relationship between city and food, but more in general between city and urbanism, which is the subject of reflections by Silvia Pili and others on the specifics of metropolitan agriculture in the Mediterranean cities. Then, further insights are made on the relationship between food and landscape, which Giacomo Pettenati hypothesises may be involved in the process of de-territorialisation, typical of the dominant food system, and which he explores with the aim of understanding whether and how the conceptual category of landscape emerges in the debate on the relationship between food and city. The theme of *food procurement*, one of the most important levers available for public administrations to drive the market and contribute to sustainability goals, is at the heart of Alessia Toldo's specific contribution that deals with school catering.

This section is closed by three interventions that focus on one of the most central and controversial issues of food geography, the *Alternative Food Network*s. In the first contribution, that approaches AFNs at a national level, Filippo Randelli, Benedetto Rocchi and Sabina Gianpaolo propose a methodology that goes beyond the traditional and reductive dichotomy between conventional and alternative, moving from the assumption that sustain-

able agriculture transformation is obtained primarily with their interaction and co-evolution. Then there are two papers on case studies at different levels, and featuring different disciplinary perspectives: Francesca Forno and Simon Maurano study these processes by analysing the spread of AFNs within the Bergamo territory, gathering insights on the strategies of action and perceptions of the current crisis; finally, Filippo Barbera and Joselle Dagnes propose a socio-territorial analysis of AFNs in relation to other productive-distributive channels with the theme of quality as an important analytical tool to better understand alternative chains.

These contributions, in their diversity of topics, disciplinary approaches, and investigation methods, contribute to reveal the «need for geography» that characterises Urban Food Planning, and that is often expressed, more or less explicitly, by policy makers, activists and citizens. In this context, the consideration on food and its relationship with the land becomes a consideration on the relationship between power, economics, society, culture and the environment, and on a new relationship between rural areas and cities. The focus on the multiplicity and trans-scalability of the phenomena and the spatial distribution of flows and networks, which distinguishes our discipline, plays a key role especially in reflecting on the meaning, the possibilities and the limitations of the study and the planning of food systems on a local scale, in a context where food economies and policies are heavily influenced by global rules and forces.

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RELATIONSHIPS BETWEEN FOOD AND THE CITY AND URBAN FOOD POLICIES: A SPACE FOR GEOGRAPHY? - Food is becoming more and more an urban issue. This paper aims to explore the complex relationships between food systems and urban areas, trying to define the potential role of geography in studying these relationships and supporting urban food policies. The first part of the contribution explores the characteristics and the scales of food systems in urban areas, posing questions about the existence of «local food systems» and about their relationships with global food networks and flows. The following paragraphs are focused on cities as spaces of action for food policies, defining the field of urban food polices and urban food strategies, in an international perspective. The last part of the paper reflects on the role of the geographical approach in contributing to the debate on urban food systems and in supporting food policies.

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TOWARD THE LOCAL TERRITORIAL FOOD SYSTEM: SPACES OF ANALYSIS AND ACTION

Introduction. – In the structure of this monographic issue, focused on the relationship between food and city, this article (1) focuses on the reference spaces for urban food policies.

Although the latter are the result of both public and private practices and proposals, and they cannot be reduced solely to the initiative and to the field of action of the local authorities, typically the Municipalities, the Metropolitan Cities and any institutionalised aggregations (such as the Unions of municipalities) or to the field of design (although made formal, such as the territorial pacts), it is evident that a territory of reference is fundamental. It is therefore a matter of comparing the scales of institutional competence, with the relevant scales for local policy interventions on the food system and of understanding how their territorial intra and inter-urban coordination can be obtained, as desired, respectively, from the reflections on the *City Region Food System* (see p. 27) and from the *Milan Urban Food Policy Pact* of 2015 (see the introductory article of this monographic issue.)

Following this logic, it becomes important to understand how analytical perspectives of study and evaluation of the food system in a given territory, and design and policy perspectives cross each other. In what way we can speak of the urban or local system of food, or even of a local food system?

In recent years multiple studies and insights have been published on food systems, which have seen the proposal of a plurality of paradigms for the analysis and planning of territorial food systems. The objective of this paper is to perform an acknowledgment and systematisation of different theoretical and operational approaches that encode the relationship between space and food system and that are, or could be, used for an urban or local food policy. To this end, we will start from a more general and abstract idea on food spaces, and on their general and metaphoric significance, to deepen the main approaches to spatial processing of the food

(1) The considerations outlined in this article were jointly made by the authors. The final draft, however, can be acknowledged to: N. Tecco for the sections «Starting from food to reconsider the areas: some analytical perspectives», «Areas of policies, areas for policies» and «The definition of areas of action: toward a territorial system of food»; to M. Bagliani for the sections «Areas of food», «Starting from food to reconsider the areas: some analytical perspectives» and «Areas of policies, areas for policies»; to E. Dansero for the sections «Areas of food» and «The definition of areas of action: toward a territorial system of food»; while the introduction and the conclusions are the result of a collective writing. Special thanks for the precious suggestions and comments go to: Andrea Calori, Giuseppe Dematteis, Andrea Magarini and Yota Nicolarea.

system that are present in literature and in the experience of *urban food planning*, (Moragues *et al.*, 2013; Morgan, 2009) considering their evolutions and reciprocal hybridisations.

Finally, we will try to propose a theoretical and operational definition of territorial local food system, as an assumption and at the same time as an outcome of the thinking and action for an integrated project and a local food policy.

The spaces of food. – Space and food are closely connected: the production, processing and consumption of food occur in specific areas and they are determined by them and, in turn, they structure and give shape and content to those same spaces. The link between food and space permeates and gives shape, at many levels, to our lives and the organisation of the territories itself.

In front of the food we eat, the question on its origin allows us to connect a plurality of s in which scales of competence, scales of organisation and scales of action of the processes linked to the food system intersect.

To talk about the spaces of food means taking into consideration first of all the physical spaces and the entire spectrum of their scales and of the food system phases. As consumers, we can focus our attention on the mouth, the minimum scale and the essential space of food, a first instrument of knowledge of the world, to broaden our view toward the plate, the table, the local restaurant, the urban and non-urban districts of widespread and specialised catering, the spaces and the functional value chains that have brought food to our plates, up to the wasted food and the spaces for its disposal. By adopting, instead, a perspective that is more centred on production, we can ask ourselves how a city is nourished, thus approaching a plurality of spaces, players and local and global processes, in which food takes on different meanings and different states, ranging from idea to project, from produce to product, from raw materials to post-consumption waste.

If, from the consideration of just the physical spaces, we expand our gaze by including spaces in a gradually more metaphorical sense, we can easily realise how the «space» dedicated to food is particularly extended: it deals with social spaces, in their different significances, from culture, to economy, from politics to religion. Food occupies such a large space in our daily lives, as well as in the social and public sphere. Think about how the ordinary day is marked by the timing of food and by the spaces dedicated thereto, with all the cultural and social aspects of food and particularly the values of conviviality, that are extremely differentiated from culture to culture. If we go beyond the daily routine time, we consider how even times and spaces of extraordinariness find a structure around food, through the characteristics of rituality and exceptional nature of many festivities, from family and neighbourhood ones, to town festivals, up to the great theme events linked to food (Expo 2015 and Terra Madre-Salone del Gusto above all).

Food has increasingly become a subject of intense public debate and occupies a growing position in media, with a progressive sensationalism, particularly of culinary art. Food is increasingly spoken about with a crescendo of information, but also of trivialisation.

If we consider the extension and the organisational complexity of the food system, it appears that the relationships between food and space, in which these two elements bind, structure and give shape to one another, are characterised in recent decades by powerful and pervasive tensions and processes, pointing in opposite and contradictory directions. On the one hand, the presence of globalising dynamics threatens to cause a progressive abstraction

of food spaces. It is an ongoing process of de-territorialisation, de-connection and de-localisation of production and partly also of the consumption of agri-food products, starting from those that were once dense territories, places of production, and transformation (Wiskerke, 2009). What we eat reaches our tables today through the action of complex value chains, articulated on scales that are tendentially global, with an increasing homologation of food spaces. Many of the innovations or alleged progresses in agriculture had as an objective a greater control of the environmental factor to achieve a greater abstraction from the conditionings that are not only environmental but also economic, social and cultural of the different agricultural territorial structures: in this sense we are witnessing a progressive reduction of the diversity of the spaces of production (and consumption) of food towards a space that tends to be increasingly single, isotropic and uniform, as suggested by many landscapes (*foodscapes*) of the main agricultural commodities (from corn to soybeans).

On the other hand, widespread processes of opposite nature are increasing further, thus focusing on relocalisation, reconnection and reterritorialisation, in alternative geographies of food (Roep and Wiskerke, 2012), where the multidimensional proximity (i.e. intended both in spatial sense, but also in terms of cultural identity etc.) becomes an instrument and value in itself (Dansero, Pettenati and Toldo, 2016). Phenomena such as the food crisis that occurred in 2008-09, have brought to light the fragility of the global food system (Sonnino, Faus and Maggio, 2014) stressing the need for a food governance that is more reflective and better place-based (Marsden, 2012).

In other cases, still, globalisation processes and reterritorialisation may cross each other thus originating hybrid phenomena. Within these dynamics of the food system, the different players, in an attempt to adapt to constantly changing contexts, establish multilevel relationships and become part of food systems that can take up different configurations, including the presence of local and global systems (Brunori *et al.*, 2016) or global, metropolitan and local food networks (Monaco *et al.*, 2017).

Starting from food, reconsidering the spaces: some analytical perspectives. – Food is thus closely linked to the spatial dimension. For this reason, we believe that the concept of space can be used as a privileged interpretation, to analyse and discuss the different perspectives, that are present in the vast scientific production, that focuses on *food phenomenon* understood in its various meanings.

In this sense, we think it is important to recall briefly a schematisation of the concept of space, proposed by Harvey (2008), which considers three main ways of conceiving space:

- *Absolute space*, understood as topographic, like with Newton and Descartes, as a fixed background on which to measure and report items and events;
- *Relative space*, to be understood in the sense of topology, as a space of flows (of matter, energy, information, people, money, etc.) and as a space of distances (in terms of time and cost, energy consumption etc.);
- *Relational space*, i.e. space of relations, in which each point is characterised by the combination of social relations that are based on it and by the symbolic stratification embedded within the man modified environment.

Particularly within the scope of the geographical and territorial reflections, the studies that focus on the food system very often use terms that have a direct spatial connotation:

place, region, local scale, border, landscape (specifically the concept of *foodscape*, see article by Pettenati, in this monographic issue), and other, less direct ones, which nevertheless always have strong spatial implications such as: network, flow, shed, system, chain. This is a reflection of the presence of paradigms, metrics and visions of different food spaces, characterised by similarities and overlaps, but also by differences and conflicting visions.

Here are some of these approaches that analyse the link between food and space, with particular attention toward a perspective focused on urban food policies.

We are going to illustrate the different proposals following an order (although not completely systematic) of increasing complexity: we will begin by explaining those interpretations that use a simpler space concept, understood, for example, as a one-dimensional topographical space of distance between points (*food mile*), to broaden the analysis toward approaches that refer to the topological descriptions and relational spaces of food, up to a discussion on the most recent works which claim the substantial difficulty in grasping the complicated relationships that characterise food supply chains at different scales, hence proposing new perspective interpretations of food spaces that are in continuous change.

The zero and one-dimensional space of physical distance. Amongst the more simplified representations of food spaces we can indicate the one summed up in the idea of «km zero», which indicates those cases where the places of production and consumption coincide, zeroing (at least in theory) the environmental impacts of transport. In recent years, the proposal of «km zero» has progressively spread, because of its simplicity and its apparent ease of application: today many players in the food supply chain (restaurants, shops, fairs, etc.) refer, sometimes distortedly, to the «km zero» paradigm.

At the base of this concept there is the implicit assumption that the world of food and the relationships it entails can be reduced, at least symbolically, to a zero-dimensional topographic space: a simple point where all activities related to food are located. In reality, this interpretation is likely to produce simplified and trivialising visions, in which the complex dynamics that can generate environmental impacts are not taken into consideration, even in cases of simple spatial proximity. The same operational translation of this paradigm (in specifications of school canteens, but not only) forces to abandon the idea of a null distance and leads to the definition of spatial areas (for example with radiuses of 50-100 km) within which food is considered, by convention, «km zero».

The proposal of «km zero» is a limit case that falls within a wider representation, which favours physical distance as the only parameter. This is an interpretation that reduces the complexity of the world of food to a one-dimensional topographical space, wherein every other aspect is neglected. This approach, summarised in the concept of *food mile,* started spreading from the 90s to meet a remarkable success (DEFRA, 2005). The indicator, in its initial formulation, considered exclusively the kilometres travelled by food along the production supply chain to reach the final consumer, thus assuming a simple linear relation between food transport and environmental externalities. These kilometres could also be converted into emitted CO_2, on the basis coefficients of emission, that are constant and independent from the means of transport and the technology used. This type of analysis has allowed us to bring to light the effects of globalisation on the food system, but exclusively from the point of view of transportation energy consumption.

Multiple studies have highlighted the excessive simplification in the *food mile* approach,

leading to a revision of the indicator itself with the proposal of *enhanced food miles* (Van Passel, 2013)*(ii*. In this definition, the quantification of CO_2 deriving from transportation, takes into account, in addition to the distance travelled, also other factors such as the means of transportation used and its energy consumption, the load ratio, the packaging, the waste products, the economic costs, and other pollutants. This version of the indicator moves closer to the sort of analysis proposed by the *carbon footprint* (see p. 25).

The two-dimensional space of areal continuity. An interesting line of research has focused its attention on the concept of *foodshed* (literally food basin) to identify the geographical area from which the foods marketed and consumed in a particular context come from, tendentially identified with the city. This concept was coined by Hedden in 1929 in a book significantly entitled *How great cities are fed*, proposing an approach that a had strong assonance with the previous Von Thunen model (1826) of urban food procurement in concentric rings and with the subsequent analysis by Christaller based on the services offered by the city and the consequent hierarchical organisation of space (1933).

In recent years the concept of *foodshed* has been re-proposed (Zasada *et al.*, 2017) echoing in spatial terms, the analogy of a water basin as a continuous area, marked by homogeneous natural elements and applying it to the food supply system. The perspective of the *foodshed* can be interpreted as a generalisation of the single dimension representation of the food spaces described in the previous section: now, the interpretation used to analyse the food chains is no longer the only one-dimensional parameter of distance, but it acquires the value of a two-dimensional topographical space, a continuous and homogeneous surface.

Some of the most recent analyses (Sali *et al.*, 2014) have extended the concept, including those elements of a cultural and social nature that, within a given context, coexist with the environmental matrix and concur to determine the local food system, typical of a particular place. The *foodshed* approach thus takes on the function of a concept metaphor to represent the indissolubility of the bond between the natural and the social ecosystem (Kloppenburg, Hendrickson, and Stevenson, 1996). These proposals draw the interpretation of the *foodshed* closer to the bio-region, analysed on p. 25.

Finally, other scholars have proposed a redefinition of *foodshed* as set of spaces, not contiguous to each other. Among them we mention the studies of Getz (1991) that analyse relationships that are extremely fragmented and diversified among regions, in a reticular geography of temporal steps from one node to another of the supply chain.

The topological space of the flows of matter and energy. The term *metabolism*, borrowed from the medical and ecology sciences, is used herein to describe the set of processes by which a socio-economic system uses up environmental resources for the maintenance of the system itself, among which: the use of biotic and abiotic resources (agriculture, livestock, hunting, fishing, extractive activities); the handling, the production and processing of these materials; the consumption of final products; the expulsion of food wastes and their reintroduction into the natural cycles. This is a description of the relationships between society and the environment, in terms of stocks and flows of matter and energy.

Returning to the classification by Newell and Cousins (2015) and applying it to the works that have used the concept of metabolism in relation to food, one observes the predomi-

nance of studies of industrial ecology (Fischer-Kowalski, 1998; Fischer-Kowalski and Huttler, 1998), which aim at the quantification of the flow of matter and energy between the city and the outside, with the use of different systems of environmental accounting (Material and Energy Flow Analysis; Human Appropriation of Net Primary Production; Ecological, Carbon and Water Footprint, etc.) (Bagliani and Dansero, 2005). Within industrial ecology, studies can be further divided into two main groups. Many analyses are centred on food, seen as one of the various flows that characterise urban metabolism, in parallel to those of drinking water, waste and energy, which examines the origin, logistics, interactions with other aspects (energy, water, emissions) for descriptive and, especially, regulatory purposes, inspired by a principle of circular metabolism (2).

Other studies, through the *life cycle analysis* combined with methodologies of environmental accounting, aim at the quantification of different metabolic flows, that are located upstream and downstream from food and are in relation to the various phases of its production and consumption. These flows concern, for example, the calculation of the *carbon footprint* (which counts all CO_2 emissions related to various activities linked to the production of food, such as, for example, transportation), or the *ecological footprint* (which accounts for all areas of land used to produce a foodstuff), or the consumption of direct and indirect water, matter, energy etc. The final objective is the quantitative reconstruction of the different environmental pressures generated by the whole food supply chain.

With these interpretations, the analyses of the metabolic flows linked to the production and consumption of foods, propose a description of the spaces of the food not in terms of topographical spaces but of topological spaces. The proposed representations indeed refer to a space of flows that connects places that are very distant from each other. For example, the *ecological footprint indicator*, measured in average hectares, takes into consideration the surfaces of the land of origin of different foods that reach the final consumer: these are areas that are non-contiguous to each other, distributed over the entire globe, and that share a functional-topological link with the final consumer (as land of origin of the different productive sectors, centred around the consumer).

It must be pointed out that the metabolism interpretation is exclusively centred on a technical and quantitative description that does not take into account different aspects that relate to the relational, cultural, social and territorial dimensions.

The relational spaces of food. The bioregion. Starting from the Seventies the reflection based on the concept of bioregion starts developing (Berg and Dasmann, 1977), and is understood as a territorial scope that is uniform, from the cultural and ecological point of view. Unlike the *foodshed*, whose area is determined as a function of the inhabitants that it must nourish, the bioregion is represented by its biophysical borders. The bioregionalist proposal takes into consideration not only the topographic physical space, but above all the relational one: the cultural aspect, which resumes localist reflections linked to tradition, is in fact rather important. In this perspective, the insights on the local closing of

(2) Seven offices of spatial planning in Rotterdam have decided to form a working group on urban metabolism called *the Metabolists*. At the basis of their planning activities there is the multi-disciplinary analysis of the processes and systems that characterize their city. Their work focuses on flows, on the local closing of cycles, on organic urban planning, on the circular economy, and on resilient development. Their projects have shown new approaches and innovative solutions for the local production of food in urban areas (De Vries, 2014).

the food supply chains and, more in general, of the cycles of matter, are not merely limited to a purely metabolic-quantitative vision, but they touch the territorial, social and cultural aspects, by proposing a regulatory guidance, explicitly designed to indicate the best solution to be followed.

In the years following its birth, the bioregionalist approach became very popular as a cultural movement with strong social, environmental and political distinguishing features. Today this vision, attentive to relations between nature, culture, economy, places and communities (Feenstra, 2002) and to the dynamics present between flows of matter, energy and knowledge (Iacoponi, 2004) is revived in the light of the role played by the urban region as contemporary form of settlement. In Italy, within the territorialist reflection, Magnaghi (2010) deepened the theme of *urban bioregion*, in which the organisation of the city, and therefore also the food dimension, is defined starting from the conditions of the environment, including the regional agricultural system (Francis *et al.*, 2003; Fanfani, 2016).

This type of approach has favoured the overcoming of an urban-centric vision, in favour of a perspective that is not hierarchical and polycentric, and which aims at promoting forms of endogenous development capable of connecting a plurality of urban and rural centres (Magnaghi, 2012; Poli, 2017).

The specificity of the contexts and of the territorial elements identified by the bioregionalist reflection (natural resources, institutional resources, knowledge, relationships between places) has exposed the need for political-operational interventions that are adaptable to places according to a *place-based* approach (Marsden, 2012). In recent years, there have been several more or less explicit proposals of regulatory ideal configurations of local food systems, which were then used as templates and tools for planning within the regional geographic space. We describe a few of them here below.

SYAL, SAL and SAT. The concept of SYAL (from the French designation of *Systemes Agroalimentaires Localisées*) was proposed for the first time by CIRAD (Centre de coopération internationale en recherche agronomique pour le Développement) in the mid-nineties, to then be since repeatedly redefined up to date (Muchnik, 2010). The territorial dimension of the food system is incorporated within the SYAL, but this space can assume various configurations, so much so that Requier-Desjardins (2007, p. 11) says that the «spatial limits of SYAL may be quite wide, embracing sometimes an entire region, or a set of micro-basins in a region, a kind of archipelago». The territorial-local and relational dimensions are central in this reflection which stresses the aspects of fluidity and continuous transformation (Boucher, 2007). The SYAL is in fact as a collective process of innovation, a privileged area for the construction of new relations between players who share interests and objectives with respect to certain aspects of the food system and who decide how to coordinate themselves.

Starting off as an initial conceptualisation model of the food system, over time, the SYAL has gradually been used as a planning tool for its development: by placing itself in natural continuity with the industrial district model, it became a body of theoretical reference for the establishment of localised initiatives in a geographical area of regional dimensions. Among these initiatives, we can recall the SAL (local agri-food systems) (Porro et al., 2014) and the SAT (*Système Alimentaire Territorialisé*) (Rastoin, 2015). Among the forms present within the regional policies of Italy, it appears particularly interesting to highlight the tendency towards a districtualisation of the agricultural production with its empirical acknowledge-

ment, and the institutionalisation of rural districts, of the agro-food quality districts and of the biological districts. By adopting a local development approach, these instruments are designed to ensure the maximisation of the local integration of the supply chains, in opposition to globalisation's long supply chains of the agri-food system (Bencardino and Prezioso, 2007) ([3]).

These are approaches that have in common concepts and operational proposals: starting from a given place and in a context of geographical proximity (ideally included within the urban and regional scale), they suggest a strong integration between the areas of production, processing, distribution and consumption (Dunn et al., 2010), trying to locally retain and share the added value (Porter and Kramer, 2011), thus contributing to the development of the agriculture and of the rural territory on which they operate.

The City Region Food Systems. In continuity with the approaches presented in this section, the approach of the *City Region Food Systems* (CRFS) has been proposed more recently. Presented by FAO in 2014 during the World Urban Forum of Medellin in Colombia, the CRFS «encompass the complex network of actors, processes and relationships to do with food production, processing, marketing, and consumption that exist in a given geographical region that includes a more or less concentrated urban centre and its surrounding peri-urban and rural hinterland; a regional landscape across which flows of people, goods and ecosystem services are managed» (FAO, 2017). As stated by Blay-Palmer, Renting and Dubbeling (2015) the CRFS «has emerged at the nexus of both practice and theory. In this way it is evolving with input from both people on the ground working in community food initiatives as well as with input from policy-makers, regulators and academic researchers».

The concept therefore takes as a reference a geographical region, whose centre of gravity is represented by a city with its peri-urban and rural area, and whose boundaries are variables, defined by the presence of functional interconnections between the city and its hinterland. Within this framework, the reflection focuses on flows of people, goods, resources and ecosystem services that revolve around the theme of food in a typical vision of the life cycle, *from farm to fork*.

The approach of the *City Regions Food Systems* has gradually become the compulsory reference in the recent debate on *urban food policy*, to bind sustainable food systems and urbanisation.

This is a richer interpretation compared to metabolism, because next to the physical description of the flow of matter and energy, it combines the consideration of the relational dimension with a particular attention to aspects of governance. We are in the presence of a multidimensional approach (social, economic, environmental, nutritional) which aims at the improvement of local sustainability of the food system, starting from the integrated ecological and socio-economic consideration. Its innovative nature with respect to the regionalist perspective in which it fits, lies in its transverse intent and its systemisation of intra and inter-urban food systems, considering the different territorial specificities (Blay-Palmer, Renting, and Dubbeling, 2015). With this perspective, it becomes clear that not all cities are

(3) In addition to these, we can include the Districts of Economic Solidarity (DES), as a form of active relationship with the territory (Saroldi, 2003). The DES use the networks of economic solidarity to create relations and circulate ideas, information, goods and services by coordinating the needs and the tangible and intangible resources of a specific territory toward a shared goal that is considered to be consistent with their vocation.

equivalent and not all have the same opportunities in terms of potential proximity agriculture, of a town and country relationship configuration, of uses and fertility of the land, of food production, of manufacturing practices used and of processing, storage, packaging and distribution activities of the product itself.

The spaces of food between continuity and fragmentation. Globalisation has led, in recent decades, to the fragmentation of the internal continuity of those once uniform spaces of food: today, the places of production and consumption of food tend to be separate and they lie within increasingly complex supply chains, featuring variable geometries. This has led to further representations in which the food system space is no longer interpreted as a simple fixed substrate, which can conceived in terms of topographical distance and physical proximity, but as a multidimensional space, in which a product and its supply chain are analysed in the light of the relations and the influences that *simultaneously* (Massey, 2004) develop in space and time. These relations help to define the nature of the single points and their relationships (Prisco, 2014).

The food systems space thus takes on characteristics of fragmentation, flexibility and variability, which lead to soften the dichotomous representations of reality. Thanks to the contribution of the *critical food studies*, the boundaries between categories such as alternative/conventional (Sonnino and Marsden, 2006), Local/Global (Brunori *et al.*, 2016) production/consumption, vertical/horizontal (Murdoch, 2000) are attenuated (Castree, 2002) and progressively replaced by different representations, wherein the presence and the interpenetration of different categories are possible. In this case we speak of representations that favour a perspective of continuity (of the *continuum*). The analyses proposed take different shapes and perspectives which have in common the consideration of food, meant as a physical object and at the same time an intangible experience, able to connect people, themes, cultures, disciplines, period of time and spaces. It is interesting to note how, following this interpretation, a concept such as *commodity*, which for a long time was the emblem of the phenomena of de-territorialisation and verticalisation of the production and distribution system, becomes a category of geographical analysis, because of its intrinsic ability to connect and therefore to understand the complexity and the socio-spatial relationality of the food system (Jackson, 2002, 2004).

At the same time, the lateral perspectives spread out (Jackson, 2002): such as those developed within the scope of the studies that adopt the *follow the thing* approach (Cook *et al.*, 2013) that, based on multi-site ethnography, allow food and foodstuffs to bring out their *biography* (Minca and Colombino, 2012; Colombino and Giaccaria, 2013) and the continuity of their relational contents, within the scope of the different trajectories that they can perform.

Spaces of policies, spaces for policies – The food systems: between Autàrchia and Trantòria. As pointed out in the introductory article of this monographic issue, the food system can be defined, in general and abstract terms, as the set of supply chains which comprise all activities linked to the production, processing, distribution, consumption and post consumption of food (Pothukuchi and Kaufman, 1999). This is a functional definition that takes into consideration the causal relationships and the flows of products along the various stages of the value chain of food, which can therefore be represented in terms of a topological space.

Wiskerke (2016), starting from the more general food system, fixes her view on the urban context, to define the *urban system of food*, which refers to the different methods of urban food supply and takes into account the different ways through which the food eaten in the city is grown, processed, distributed and sold. This consequently includes both the food produced industrially at a great distance from the city, and the one grown in the fields near the city centre and, finally, the one cultivated within the city itself, with urban agriculture practices.

To offer a possible development of these concepts, it is useful to systematically cross the topological representations seen previously with a topographic area interpretation of the space that surrounds a city. In this manner, we can ask ourselves how the food system intersects with urban spaces, thus considering all the spaces dedicated to food, in various forms, within the urban context. What emerges is a mix of spaces and activities that, however, do not necessarily form a food system between themselves, because they are productive aspects that may belong to different supply chains.

Consider, for example, the case of a city in which activities belonging to completely separate value chains are located: production from urban vegetable gardens intended for home consumption; export oriented crops; final transformations and exports starting from foreign raw materials; final resale of foreign products destined for local consumption. These food spaces do not form a local (or urban) food system between themselves, because the only element that unites them is spatial proximity. When (some of) these food spaces are connected together within a single production supply chain, which also includes final consumption, we can speak of *local (or urban) food systems* because we are considering those parts of the food supply chain that nourish the city and that are located in the city itself (in the broad sense for example, of city-region). This are supply chains that, in general, also extend outside the urban context. In the case considered, in addition to spatial proximity (topographic proximity), there is a functional connection between these food spaces, i.e. a topological proximity (understood as a causal closeness in the flow space). This crossing of perspectives allows to represent with greater precision the complex interlacing that characterises food spaces.

It is possible to theoretically imagine two extremes, and opposite, limit situations. On the one hand, an urban centre that produces locally all the food that is necessary for its inhabitants. In this city, which, following the inspiration of Calvino([4]), we could call *Aut*ὰrchia, all urban food spaces are functionally linked to one another to form the *local food system*, which thus coincides with the *system of local food* (i.e. the system that produces food from local territories) ([5]), since all food produced locally is consumed within the same local urban scope. In this case the topographic and topological proximity coincide.

At the opposite extreme, we can think of a city that is entirely dependent on food supplies coming from outside, i.e. from locations beyond the boundary of the considered urban system (also in this case, meant in the broader sense of city-region). Resuming a similar case,

(4) Reference is made to the novel by I. Calvino, The Invisible Cities. It should be noted that in none of the city descriptions the food issue appears.

(5) More generally, we define the system of local food a system consisting of all the productive sectors that, starting from the food locally grown, process and distribute for final consumption, both inside and outside of the local context.

imagined by science fiction writer Asimov (6), we might call this city *Trantòria*. Here the local food system consists of the few spaces of food present in the urban area, exclusively dedicated to the distribution and final consumption of food imported from the outside, to which one may add the upstream productive sectors, almost entirely located outside of the urban context. Moreover, in this hypothetical example, the system of local food is non-existent, because nothing is grown locally.

In reality, we find no case corresponding to the two extremes imagined here: there are, instead, cities featuring intermediate combinations. In general, it is difficult to draw net (spatial and functional) borders for the local system of food. However the representations in topographical and topological terms can be usefully crossed to give life to more systematic and coherent interpretations of the different *architectures* and different aspects that can characterise the local systems of food amongst the various cities: availability of agricultural areas; logistic infrastructure; accessibility to conventional and alternative distribution networks; agri-food specialisation and diversification; choices adopted by collective catering; processes of peri-urbanisation that can increase the consumption local food (7); a concentration of low-income people in the urban suburbs that increases the dependence on great distribution and hence on global supply chains, a new culture of food («km zero», typicality, food safety, environmentalism, etc.) which operates in the opposite direction etc.

Spaces and policies. Up to now, we have reflected on the relationship between spaces and food especially in analytical-positive terms, to study and to represent how the food system is made and organised. We now have to question ourselves with a different perspective, of a political-design-regulatory nature, that is more concerned in directing the system toward particular objectives (e.g. environmental sustainability, fairness, accessibility, healthiness, economy).

In the light of the political-regulatory needs of *Urban Food Policy* (UFP), the interpretation of the different approaches proposed in the previous section can be helpful. These are views that are not equivalent to the spaces of food that, considered in their complementarity, contribute to create a more thorough and realistic representation of the links within a system, such as the food one, that is so complex and diversified geographically. Essentially, it emerges how, transversely to the various interpretations shown, a greater orientation toward the UFP changes the perception of the food spaces and the specific knowledge that derives from them, in favour of the identification and proposal of spaces *of food policy* and *for food policies* in the urban policy agenda.

On the one hand, the political-project purpose involves a reconsideration of the food spaces as a function of the definition of the *policy spaces*, i.e. the identification of the more typical areas of action: it is in fact necessary to reflect on what areas one can/should operate on; which borders could/should characterise the design proposals for change. The political players, when planning and acting, define, in a more or less explicit way, a signature space for food policies, functional to the administrative setting, to the institutional structuring, on the borderline of their own responsibilities, but also functional to the interpretations used

(6) In his novels, I. Asimov imagines that the capital of a futuristic galactic kingdom is Trantor, a city which covers an entire planet and that depends entirely on the import of foodstuffs from twenty external agricultural worlds.

(7) We are grateful to Giuseppe Dematteis for these highlights.

to read the local food system and to illustrate the characteristics on which there should political action, which may be more or less inclined to reorient consumption toward the local food system.

On the other hand, the recent proposal for actions and policies explicitly centred on food (Calori and Magarini, 2015) represents a novelty: we must therefore build those *spaces for policies* that are still needed. These are spaces of negotiation and decision, meant both in the physical sense (offices, food departments, etc.) but also in the more metaphorical sense (tables of consultations, *Food Councils* and food agendas, debate spaces, cultural spaces, etc.).

The willingness for a change of register is highlighted in the spaces *of* and *for* food policies: from a sectoral approach to a more integrated and systemic vision which is able to cope with the high level of hybridisation that characterises urban food systems, today, that can be contemporaneously moulded both by the conditions of the local system/regional production, and by the dynamics that follow a global logic (Steel, 2008).

Within this reflection, the theme of the boundaries of the spaces *of* and *for* food policies becomes dominant and forces us to gather further insight on the definition of the «local» scale – the scope of the practice of policies to regulate the local food system – to question the different ways of understanding it, between the political-administrative scale of competence; scale meant as the amplitude of a phenomenon and scale as the product of a social action. This comparison is first of all necessary to avoid incurring into the risks of the so-called *local trap*, i.e. to assume a priori that «eating local food is more ecologically sustainable and socially just» (Born and Purcell, 2006). As stated by the authors, we must indeed be well aware that it is not so much about the scale in itself, rather about the strategies of the players who, at that scale, act to make food more or less sustainable and fair. The reflection on the scale is in any case a compulsory step, especially when the policy is implemented, depending on how much the promoter is a subject anchored to the established territorial boundaries. Suffice it to think of the already mentioned problem of providing an operational definition of the concept of «km zero» or short supply chain in the specifications of the school canteens.

The definition of the areas of action: toward a territorial food system. Reflection on the local policies of food requires thinking at an active level of the local in regulating (within certain limits) food system, or more precisely, at least that part of food system that falls within the local scope (both in terms of localisation, and in terms of potential action by the players who act locally). This local regulation of the food system depends on the capabilities of the local and non-local players (PA, market, organised civil society, individual consumers, etc.) to interact between themselves, to identify and share common objectives within their specific areas of regulation and, last but not least, to put these objectives in relation to the tangible and intangible characteristics established in that local territory.

It is then a matter of discussing, more in depth, about the players, their interaction skills, their self-organisation and planning, and about the issue of recognising the local assets as sources for development. In this perspective, it might be useful to reconsider the interpretations seen above, which, though in ways that are different from one another, deepen these issues, given the theoretical reflections on Local Territorial Systems (LoTS, in Italian SLoT from Sistemi Locali Territoriali), proposed by Dematteis and variously enriched and applied

to real cases by the school of Turin (Dematteis, 2001; Dematteis and Governa, 2005; Dematteis, 2008; Bagliani and Dansero, 2005; Governa, 2014).

As Dematteis recalls, «the LoTS model […] is useful […] to explore and describe the geography of the particular resource that is the local ability to self-organise, as it is the interface required to activate, and to a certain extent to also produce specific resources in the development processes» (Dematteis and Governa, 2005 p. 31). The reflection on the LoTS has allowed us to develop an analytical vision and a design approach based especially on the concepts of *local* and *territorial*: the first is understood as an intermediate level of regulation and self-organisation, between the individual (and groups of individual, such as the Fair-Trade Purchasing Groups or others) and the great supra-local dynamics, from regional policies to the global dynamics of the economy; while the second is seen in reference to a territory and its milieu, meant as the set of materials and non-material elements that become resources at the moment in which they are recognized as such, while new elements and resources are produced in the interaction of the players.

Given the reflection on the LoTSs, the possible local regulation of a part of the food system, deriving from the interaction between the players and the elements of the territory that are identified as resources, can therefore be interpreted as a food local territorial system (*Food Local Territorial System*, *FoodLoTS*).

The LoTS approach is aimed at the recognition, both theoretical and factual, of a level locally active in development processes (Dematteis, 1991), by examining the specific ways in which the local level and the supra-local levels interact between themselves in the territorial changes (Turkish, 1988; Dematteis 1991; Conti and Giaccaria, 2001), as is the case in food systems. The model treats each place as a potential dynamic system of inter-subjective relations, able to establish specific relational, cognitive and organisational resources. Hence this is an approach aiming to a geography for local development (which does not in any case deny the importance of reflections, dynamics and policies at a supra-local level), capable of identifying the value of the interaction between subjects, resources and potentials of the local territory and the dynamics of development. This interaction is studied by searching for the presence of a series of clues and preconditions which favour – suitably supported by interventions of governance – the construction of a Food Local Territorial System to give impetus to its own development path (Dematteis, 2003), with the construction of instruments and ad hoc policies (from *the Food Councils*, to the policies on the green and the urban agriculture, to requests for *local-ness* in their collective catering tender specifications). The starting point to identify a FoodLoTS is hence represented by the research of mechanisms that reflect an active role of territorial entities, gathering as evidence the presence of territorial aggregations of public and private subjects that have produced projects and operations of transformation and territorial development in the various sectors that come across the food theme. It is a matter of drawing a first geography of the territorial action on the basis of the presence and the geometries designed by local design mechanisms, as an indicator of local self-organisation (Dematteis, 2003).

Overall, what this approach aims to highlight is how local development that originates from food is a territorial phenomenon, not a sectoral one, because it derives from the acknowledgement that the various components of the food system are linked to each other in a space, and that transversality and integration are originating sources of new development. So it is not simply a procedure, that is automatically reproducible and exportable into other

contexts, nor a mechanism which can occur anywhere and under any condition, but a process which, based on the interest being created around the UFP (seen as a sparking factor), may find fertile ground for the establishment and the mobilisation of a local network of players (local and non-local) that *looks* at the food system in its territorial dimension, that find the potentials and limitations, and that defines a development path, starting from the objectives, the priorities, and the sometimes conflicting, but actually present, interests. The local network of players also potentially includes both those involved in the local food system (e.g. producers, Purchasing groups, urban vegetable gardens), and players in the local food system aiming to export outside of the local context, which have an important role in economic growth (e.g. Lavazza in Turin or Ferrero in Alba) and that can see the benefits of getting involved in a local collective action.

Conclusions. – After exploring the spaces of food and after highlighting that the spatial perspective is a privileged interpretation to analyse the food phenomenon its various meanings, the reflection has moved onto a design plan, to gain further insight on the spaces of and for food policies. The last section, dedicated to the examination of the areas of action, proposed the concept of food local territorial system as a theoretical-methodological model, as a reference for urban food policies and inspired by studies on Local Territorial Systems that are compared, more in depth, with the theme of the players, their capability of interaction, self-organisation and design, and with the issue of the recognition of the local assets as levers for development.

Within a context of increasing design and planning around food, whence the different and interactive purposes do not necessarily contribute to the creation of an integrated and coherent system, the preliminary knowledge of the local system and the verification of the presence of clues, such as networks of players, and the presence of active resources that can be activated by interventions, becomes a particularly useful condition for the success of projects, actions and food policies.

Notwithstanding its connection to the literature that has variously interpreted food spaces, converging toward a roughly defined prospect of City Region Food Systems, we find rather fruitful the interpretation of FoodLoTS as an analytical representation of the local territorial food system as a network of layers capable of setting in motion locally specific mobilisation processes not only of resources as an acknowledged given (fertility of soils, productive specialisations, image and reputation of a city linked to quality food and wine), but also of those energies and design potentials found in different territorial contexts that can be activated and lead to a (at least partial) local regulation of the local food system.

The prospect of urban or local food policies requires the understanding of what the chances of local regulation are, within given limits of autonomy, which in a territorial context can be put in place by the actions of localised players. The greater and the wider the framework of the players involved in the construction of local food policies, the greater the chance of local regulation. In case only the Municipality is involved, with all or part of its departments, it will be possible to construct local food policies that configure a local food system (not only of local food) that are -definitely smaller in scope and potential compared to a context in which the framework of the players is wide and articulated and includes, in addition to local authorities, even other public entities such as Chambers of Commerce, Universities, food movements, and even private companies of the agri-food sector not ne-

cessarily aiming at the local market etc. Furthermore, the wider the territory of reference is, albeit within a relational context where proximity is fundamental, the larger the ability to mobilise a broader framework of players and steps of a potential local food system. This also varies from case to case, thus comparing the scales of political-administrative competences and the reference scales of the urban system.

In this manner, different perspectives cross over each other: at the analytical level, by considering the presence and organisation of the local food system and food local system; at the institutional level, considering the current and potential skills (meaning that the voluntary nature implies that there are actions and skills that are not provided for, but not even excluded by law) of Municipalities, Metropolitan Cities and Provinces, Unions of Municipalities, up to the regional-institutional level; at the political level, considering the food region, i.e. the local territorial food system, as the outcome of voluntary policies of a large number of players with a *place making* perspective toward a food system that is more sustainable, fair and resilient.

Public Administration, markets and the growing participation of civil society (increasingly organised in associations of producers, consumers, in pacts made between them, in local and transnational food movements) can thus muster further self-consciousness, of the potential and the advantages of the discussion and cooperation at the local scale, and reposition themselves by redefining the local territorial food system in a *governance, that is integrated* since it connects the different components in phases and themes of the food system, from idea conception to post-consumption, and that is *territorial,* since it aims to connect the specificity of each physical local territory, thus redefining its relations and representations.

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TOWARD THE LOCAL TERRITORIAL FOOD SYSTEM: SPACES OF ANALYSIS AND ACTION. – In recent years multiple studies and insights have been published on food systems, which have seen the proposal of a plurality of paradigms for the analysis and planning of territorial food systems. The objective of this paper is to perform a reconnaissance and systematisation of different theoretical and operational approaches that encode the relationship between space and food system and that are, or could be, used for an urban or local food policy. To this end, starting from a more general and abstract idea on the spaces of food, in their general and metaphoric valences, we discuss in depth the main approaches to the spatial processing of the food system found in literature and in the experiences of *urban food planning*, thus considering their developments and reciprocal hybridisations. Finally, a theoretical and operational definition of local territorial food system territorial will be provided, as an assumption and at the same time as the outcome of the reasoning and action for an integrated project and a local food policy.

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ROBERTA SONNINO

URBAN FOOD GEOGRAPHIES IN THE GLOBAL NORTH

Introduction: Food and the Productivist Spatial Fix. – Modern food geographies in the global North have been profoundly shaped by the unfolding of the capitalist project. Throughout the 20th century, the increasingly dominant neo-liberal discourse about the expansion of global markets shaped a very materialistic conceptualization of food, which progressively came to be seen as a resource to be incorporated into production processes or exploited to deliver specific services (Friedman and McMichael, 1989; McMichael, 2007). In this discourse, food is detached from local histories and cultural identities; its value lies primarily in its functionality. It follows that achieving food security is not considered to be a place-based endeavor; rather, it is a matter of addressing inefficiencies and imperfect market transactions through technological and market solutions (Sonnino and Moragues-Faus, 2018).

In this context, «food security and sustainability began to find a long-lasting 'spatial fix', or what some Marxists called 'metabolic rift', which […] provided a platform to sustain continued urbanization throughout the 20th century» (Marsden and Sonnino, 2012, p. 428). By the 1930s, and especially after World War Two, many industrialized countries had issues legislation (such as, for example, the Agriculture and the Town and Country Planning Acts in the UK) that provided a clear allocation of functions for the city and the countryside, demarcating the latter to stimulate food production.

For decades, this fundamental ideological and physical separation between rural intensive production systems and mass urban consumption spaces has been a key factor shaping the geography of food in Northern countries. The challenge of feeding a growing and increasingly concentrated population led not just to a more and more intensive enclosure of agricultural land; it also prompted the emergence of a powerful and long-lasting «productivist» discourse that emphasizes the role of «global markets, agrarian biotechnologies and multinational corporate initiatives as the structural preconditions for alleviating world hunger» (Nally, 2011). Under this approach, the rural becomes the fulcrum of policy intervention; policy-makers and planners learn to look at urban food supply failure as farm failure, rather than as a failure in food distribution (Pothukuchi and Kaufman, 1999).

During the 2000s, the productivist spatial fix (and its associated discourses) began to be challenged. Resource depletion and the dynamics of climate change have indeed shifted the prevailing perception of a world of food surplus to one of food deficit (Marsden and Sonnino, 2012, p. 428). At the same time, food price volatility and widening socio-economic

inequalities, combined with environmental degradation, have been shaping a new global geography of food security. Far from being «just» a problem of hunger in the developing South, food insecurity today is essentially a «bimodal» problem of both under- and over-consumption that is affecting over one quarter of the world's population (especially in poor urban areas) in both the global North and the global South (Sonnino, 2016).

Conventional and sectoral policies (and related spatial fixes) do not have the capacity to address the complex and cross-scale dynamics of this new geography of food security. As several scholars have pointed out, the current crisis raises the need to move away from obsolete dichotomies (e.g., production vs. consumption) and from the tendency to address single issues. In the new geography of food security, it has become all the more necessary for policy-makers, researchers and practitioners alike to embrace a systemic approach that accounts for the inter-relatedness of the whole food chain and of the whole food cycle (Lang, 2010; Lang and Barling, 2012; Misselhorn *et al.*, 2012).

Cities have placed themselves at the forefront of this new agenda. Through the design and implementation of new food policies and the establishment of multi-actor partnerships, urban governments are creating a new counter-paradigm of place-based strategies that can become a significant counterforce to the global intensive food agenda. In the next section, the paper will briefly describe the key features of the emerging urban food geography to then explore, in the conclusions, its transformative potential.

Urban Governments as Active Food Geographers. – Taken together, urban food strategies from Europe and North America are characterized by four interrelated features that signal an important rupture with the past (Sonnino, in press). First, they are informed by systems thinking – a holistic approach to food security and sustainability that integrates health, social, ecological and economic development. Second, they are progressing a «new localism» that challenges the tendency to reify and fetishize the local, giving new prominence to a redefined but flexible and porous urban-regional scale. Third, they often rest upon a participatory governance approach that fosters social inclusion, participation and community capacity-building. Fourth, urban food strategies are beginning to link across trans-local scales through the formation of networks that, collectively, are gaining capacity to span larger geographical and higher political scales.

Systems thinking. – As Mendes and Sonnino (2018) explain, urban food policies can be understood as decisions that affect the ways in which people in cities produce, obtain, consume and dispose of their food. Until recently, these decisions (where they existed) were typically developed as individual or 'stand-alone' policies that did not take into account the inter-dependencies between different stages of the food system or its wider connections with human and environmental health.

Many recent urban food strategies are informed by systems thinking – a concept and practice based on the idea that «complex issues are linked, there are multiple actors in the system and they are connected, and integrated solutions are required» (MacRae and Donahue, 2013, p. 5). Practically, this approach has entailed the structuring of policies around an explicit recognition of food's multidimensional connections with different social contexts, sectors and with other community systems.

One example of the urban effort to embed food policies within broader sustainability

frameworks is Toronto's vision for a «health-focused food system» that «nourishes the environment, protects against climate change, promotes social justice, creates local and diverse economic development, builds community» (Toronto Public Health Department, 2010, p. 6). Similarly, Los Angeles uses the concept of «good food» to frame its vision for a food system that «prioritizes the health and wellbeing of our resident [and] makes healthy, high-quality food affordable», while also enhancing the urban environment, creating a thriving economy and protecting regional biodiversity (Los Angeles Food Policy Task Force, 2010, p. 11). In the UK, Bristol has recognized that a «sustainable and resilient food economy», which is identified as the main objective of the city's food strategy, «has an important contribution to make to both environmental and community health» (Bristol Food Network, 2009, p. 2). A final example is provided by the Philadelphia's plan, which emphasizes the potential of food in terms of «strengthening the agricultural sector, improving public health, protecting soil and water resources» and, more broadly, «encouraging diversity, innovation and collaboration» (Delaware Valley Regional Planning Commission, 2011).

The New Localism. – Systems thinking has important repercussions on the way in which cities approach food re-localization. In general, urban food strategies emphasize the importance of the local scale – particularly in relation to the role that urban agriculture and community growing schemes can play in addressing food security and sustainability objectives. Significantly, however, the re-localization of the food system is never seen as an end goal; rather, it is a means to an end. In simple terms, local food is part-and-parcel of a wider sustainability strategy. Toronto's food policy, for instance, explicitly criticizes the tendency by both the local food movement and its detractors to «become absorbed in debates expressing the same compartmentalized thinking that characterizes the dominant food system». As the document states: «the issue is not so much which single food choice is 'best', but how can we accelerate progress towards a comprehensive health-focused food system where the goals of affordability, environmental protection, local farm viability, land use planning and others, can be reconciled» (Toronto Public Health Department, 2010, p. 2).

Far from falling into the «local trap» – or the mistaken assumption that local food systems are necessarily more ecologically sustainable and socially just than systems at larger scale (Born and Purcell, 2006, p. 195), urban food strategies often progress a nuanced understanding of scale that sets «local» food systems within relational contexts that can be jurisdictional, bioregional or geographical in nature (Mendes and Sonnino, 2018). For example, several North American urban food strategies use the term «foodshed» to broaden the definition of local food beyond territoriality and include a range of quality attributes – such as environmentally-friendly production methods, fair farm labour practices and animal welfare, as stated in San Francisco's food strategy (Thompson *et al.*, 2008, p. 4). In a similar fashion, Los Angeles associates its foodshed not just with food production and consumption, but also with a range of broader regional economic, demographic and environmental indicators (Los Angeles Food Policy Task Force, 2010).

This «new localism» (Sonnino, 2016) also emerges as a way to express the necessity to look beyond a city's administrative boundaries to address the magnitude of food insecurity from a policy perspective. As stated in the Los Angeles' food strategy: «while the benefits of urban agriculture are significant to individuals and neighbourhoods, poverty and hunger […] exist on such a massive scale that supporting urban agriculture should only be viewed as

a supplement, not a replacement, strategy to solve food insecurity and improve food access» (Los Angeles Food Policy Task Force, 2010, p. 26). In the UK, Bristol's Good Food Plan identifies as a key objective an increase in the «procurement of regional staples» through a network of markets that provide «fresh, seasonal, local and regional foods throughout the city» (Sonnino and Beynon, 2015, p. 39). Within this «new localism» are also direct calls to protect the peri-urban agricultural land and, more broadly, to (re-)connect the city to its surrounding region – not just physically, but also culturally, socially, environmentally and economically.

Participatory Governance. – One of the most distinctive features of urban food strategies is their explicit focus on enhancing participation in the design and implementation of food policies. Chicago, for instance, raises the need for establishing a non-profit regional food entity that «should be represented by a variety of members (economic, environmental, transport, agricultural, public health, etc.) to analyze and support food policy issues from a comprehensive perspective» (Chicago Metropolitan Agency for Planning, 2010).

In many cities, community groups and civil society organizations, which were once content to advocate for «alternative food systems» from the margins of the political arena, are now actively collaborating with municipal food policy-makers. Neighborhood food networks in various Canadian cities offer a significant example of participatory municipal food governance. As Mendes (2012) defines them, such networks are effectively coalitions of individual residents, community leaders, health and social workers and representatives from faith-based organizations who share the common goal of identifying and addressing food system priorities in their communities. By combining grassroots citizen-led initiatives, city-wide citizen advisory groups, municipal planning departments and health or social agencies, neighborhood food networks connect (and scale-up) small individual projects. In so doing, they put into practice the more encompassing «systems thinking» approach described above, while also building community capacity.

The key governance mechanism utilized to this effect is the food policy council – a voluntary entity, made up of stakeholders from across the food system, which has the mandate of examining how a food system operates and of providing advice and policy recommendations on how to improve it (Mendes and Sonnino, 2018). In recognizing that food policy councils can play an important role in eliciting «non-governmental input on policy changes» (New York City Council, 2010, p. 75), cities like New York are echoing recent academic emphasis on the importance of adopting an inclusive and participatory approach to food security governance. As Candel (2014) in particular has argued, involving civil society in the food governance arena is vital to identify local problems and response gaps, enhance public support for food security intervention and build capacity between different government agencies, policy sectors and governance scales (see also, Sonnino *et al.*, 2016).

In addition to facilitating the establishment of new institutional arrangements that foster reflexivity, inclusivity and engagement, participatory governance for some cities is also a conceptual values-based goal. For example, one of the stated aims of Brighton and Hove's food strategy is support for «networking opportunities to encourage links between sectors» (Brighton and Hove Food Partnership, 2012, p. 4). Implicit in this view is the recognition that connections with a wider set of actors (beyond the traditional policy setting) are bi-directional and that reciprocal relationships contribute to building capacity between and

within various sectors and actors (Sonnino and Beynon, 2015). Food, in simple terms, acts as both a vehicle and an object of policy change (Mah and Thang, 2013, p. 12). A pervasive emphasis on the development potential of public procurement is a good illustration of this cultural shift. Indeed, in addition to being praised for its capacity to contribute to public health, climate change mitigation and regional development, public procurement is seen as «a tool for rural-urban linkages» (Toronto Public Health Department, 2010) that, as specified in Bristol's food strategy, has the capacity to foster a mutually supportive collaboration between urban communities and the food producers, processors and suppliers located in rural and peri-urban areas (Bristol Food Network, 2009, p. 2).

Trans-localism. – Emerging urban food geographies also have an important geopolitical dimension. Increasingly, the re-ordering of food rights, governance and assets in one city leads to cross-overs of learning and reflexivity in other cities. And, increasingly, the trans-local scale is emerging as a key intervention context to formalize knowledge-exchange and increase cities' collective capacity to engender sustainable food transformations at higher levels of governance. As Blay-Palmer *et al.* (2016, p. 38) state: «by convening around good practices, communities can reinforce a global System of Sustainable Food Systems that: enhances a sustainable flow of food, knowledge and people; develops the capacity to activate sustainable local food systems in a more collective manner; and, potentially, resists the disaggregating impacts of neoliberalism».

In the USA, the Food Policy Networks project currently developed by the Center for a Liveable Future at Johns Hopkins University, for example, explicitly aims to «build the capacity of local, state, regional and tribal food policy organizations to forge working partnerships and to become more effective policy players» (Center for a Liveable Future, 2015). In the UK, the Sustainable Food Cities Network was formed in 2011 to promote peer-to-peer learning and knowledge-exchange between localities that are committed to embedding healthy and sustainable food into policy (Sustainable Food Cities Network, 2013). The Milan Urban Food Policy Pact, launched in 2015 and currently signed by more than 160 cities, and FAO's Food for Cities network are other important examples of new «trans-local assemblages» (McFarlane, 2009) – that is, composites of place-based social movements that exchange ideas, practices, materials and resources. Clearly, the new localism discussed earlier is nurturing a progressive sense of place that transcends conventional scalar categories and state jurisdictions to foster an inclusive and more global sense of citizenship. Trans-localism is increasingly becoming a site for doing, performing, experimenting and practicing – in Sonnino et al.'s words (2016), for creating or consolidating «networked relationalities» between food production and consumption (Sonnino et al., 2018).

Urban Food Geographies: Some Conclusions. – Decades of industrialization and urbanization in advanced economies have historically promoted an «active and artificial flattening of food geographies» (Sonnino *et al.*, 2016). As described in the first part of the paper, for a long time we had the luxury of hiding or disguising the externalities associated with the industrial food regime, relying upon a widely accepted «productivist spatial fix» that created a rigid separation between the city and the countryside (Moore, 2010).

During the last decade, the emergence of a range of complex and cross-scale challenges has prompted city governments to re-cast themselves as new inter-scalar food policy actors.

Through an emphasis on systemic thinking, the adoption of a flexible and open approach to localism and trans-localism, and a focus on participation, social inclusion and collaboration, urban food strategies in in the global North are challenging conventional development theories and planning models. As even FAO (2011, p. 6) has recognized, «a new paradigm is emerging for eco-system based, territorial food system planning [that] seeks […] to improve the local management of food systems that are both local and global».

Relationality is arguably the most distinctive and fundamental feature of the emerging urban food geographies. By harnessing and recognizing their social and political ability to act, cities are beginning to relate their food systems to wider sets of public goods. In the process, new spaces of solidarity are shaping up. As described earlier, urban food narratives are informed by ideas of reconnection between food producers and consumers and between cities and their surrounding rural regions. In some cases, urban food governments are including even distant communities of food insecure people in their strategies. Birmingham Food Council (2015), for example, proclaims its intention to ensure that its citizens support global food security through their consumption habits and «to encourage infrastructures that enable all of us to do the best we can to mitigate against famine, hunger and malnutrition».

Clearly, there is a new and more collaborative political sensitivity developing at the city level, which is embracing and attempting to transform the politics that shape the distribution of, and access to, good food. It is too early to assess how successful urban food policies will be in reshaping the dominant food system. However, it is important to note that there are new questions being addressed and new collective visions being formed at the urban level. Potentially, urban food is creating an important platform to build the social capacities needed to meet a wide range of contemporary joined-up sustainability challenges (including global food security) and, more broadly, to get a step closer to a more inclusive and reflexive post-capitalist politics.

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URBAN FOOD GEOGRAPHIES IN THE GLOBAL NORTH. – Historically, food geographies in advanced economies have been shaped by a «productivist spatial fix» that has introduced a fundamental separation between city and countryside and between food consumption and production. After briefly examining the limitations of this model, the paper focuses on urban food strategies as an alternative response to the complexity of current cross-scale challenges in the food system. Based on a discourse analysis, the paper highlights four main novelties embedded in the urban approach to food security and sustainability: systems thinking; a holistic view that emphasizes the connections between health, social, ecological and economic development; a «new localism» that gives new prominence to the urban-regional scale; participatory governance, with is emphasis on social inclusion, participation and community capacity-building; and trans-localism, or the formation of networks through which cities are gaining the collective capacity to span larger geographical and higher political scales. As the paper concludes, these innovations are promoting a relational turn in the geography of food that deserves attention for its potential to build the social capacities needed to meet the contemporary joined-up sustainability challenges and, more broadly, to advance a more inclusive and reflexive post-capitalist politics.

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URBAN FOOD POLICIES IN THE GLOBAL SOUTH: THEMES, APPROACHES, REFERENCE CASES

Introduction. – The subject of urban food policies, originated from considerations and experiences in cities of the Global North, mainly in North America with the pioneering case of Toronto (Blay-Palmer, 2009), is affecting an increasing number of cities in the Global South. In fact, as noted by Kevin Morgan, «the most damaging effects of the new food equation are being wrought in the cities of the Global South, where the noxious interplay of poverty, hunger and climate change is most apparent» (Morgan, 2015, p. 1380).

The link between agriculture, food and cities is not new to cities in the global South, particularly those in Africa on which this paper is focused. For over two decades issues such as food supply in cities, markets and logistics networks, the role of urban and peri-urban agriculture, just to name but a few of the most important cases, are the focus of analysis and action, often with the support of international development cooperation in its various forms (bi- and multilateral, non-governmental, decentralized).

However, the scene of urban food policies – promoted by various networks and international initiatives (1) and effectively outlined and launched by the Milan Urban Food Policy Pact (MUFPP) – provides a coherent approach for local actions as a whole, framing them within initiatives and policies both at the national and international level, towards greater food security and sovereignty and reticular action amongst territories and cities. As it will be shown in more details below, the new Sustainable Development Goals for the Agenda 2030 and the New Urban Agenda adopted at Habitat III Conference (Quito, October 2016) offer significant opportunities of engagement for urban action within global frameworks.

This requires a reinterpretation, in a systemic way, of the experiences started long ago in many cities of the global South. An increased visibility of such experiences is also needed, thus contributing to «feed» a growing debate and discussion around a relatively new space of action

(1) There are a number of networks and initiatives that move around the theme of urban food policies, between advocacy and action. In 2001, FAO launched the multidisciplinary initiative *Food for the Cities* with the aim of facilitating relations between various actors on a global scale. In parallel with several other organizations such as the RUAF Foundation, ISU, HIC, ICLEI, IUFN FAO participated to a broad partnership that converges in the City Region Food System approach (CRFS Collaborative, *City Food Systems. Sustainable Food Systems and Urbanization*. Call for action on the occasion of World Urban Forum 7 Medellin, Colombia, 2014.) For a complete list of partners and prospects, see www.cityregionfoodsystems.org. In the research field, please see the Sustainable Food Planning group linked to the AESOP network: http://www.aesop-planning.eu/blogs/en_GB/sustainable-food-planning.

in which local food sovereignty can be defined operationally, that is the possibility and ability to locally adjust the food system towards desired and desirable objectives.

This paper, which brings together the authors' different backgrounds and research experiences, will focus in particular on the African context, highlighting firstly the evolution of the debate on food alongside with the institution of the African state in the post-colonial period, to then examine specificities and peculiarities of cities in the global South within the discourse of urban food policies, even with a certain level of generalization. A number of experiences and initiatives in African cities will be examined, also in light of their accession to the MUFPP and their connection to cities of the global North, in particular with the Italian ones.

Food policies in the global South, between food self-sufficiency, food security and food sovereignty. – There is a direct, structural link between the idea of the «global South» and food policies: the issue of hunger has played in fact a central role in identifying this part of the world, since Truman's 1949 speech on «underdeveloped areas». Therefore, the analysis of urban food policies in the global South cannot be detached from an assessment of the evolution of those paradigms with which the issue of access to food has been analyzed and managed politically. Pierpaolo Faggi (2012) identifies three phases – food self-sufficiency, food security and food sovereignty – each of which is characterized by specific goals, actors, procedures, resources and territorial structures. Following the same pattern, it is also possible to interpret the evolution of the role in food policies held by cities in the global South.

The phase of *food self-sufficiency* has marked in particular the decades following the Second World War, which in Africa and parts of Asia coincided with the emancipation from colonial rule. The declaration of food self-sufficiency has thus become a way for the newly independent states to gain political legitimacy among decolonized populations. The theme takes on particular significance in the African case where the new States are instituted on radically different characteristics from those of the precolonial past, thus lacking a historical legitimacy. There is, therefore, a close link between the political affirmation of the new elites and food policies, vividly described by Jean-François Bayart (1989) with the concept of the «*politique du ventre*». Increasing agricultural production towards food self-sufficiency passes through a large setup of hydraulic infrastructures, primarily in rural areas, but with a decision-making centre which is urban and with strategies based on political purposes rather than real efficiency (Dumont, 1986). In this context, the cities involved are essentially the capital cities and being far from representing an independent political subject, are identified with the State itself. At this phase, the food policy is shaped in the city, but it is exercised in rural areas, and local governments, when they exist, do not have actually any power.

The situation changed radically with the crisis of the seventies, especially with the structural adjustment policies of the eighties. The crisis the states went through, the forced opening of markets and the rapid urbanization define the framework for food policies focused on grain imports that move the pendulum of food policies towards the need for urban populations to have low-cost foods. The main objective at this phase is to ensure *food security* in cities, even at the cost of radically compromising the basic structures of peasant agriculture. The fundamental assumption of this policy is the ability to access the international market for low-cost food, something that happen in most cases, but not on a continuous basis, as evidenced by the Nigerian crisis of the eighties (Andrae and Beckman, 1985) or,

more recently, by the food crisis of the year 2007-08. This last event, in particular, has had a strong symbolic value as regards the relationship between food and cities: the urban riots that followed the uncontrolled growth of grain prices have highlighted the shift from the problem of food availability, a typical issue of the «rural» food crisis of the seventies to that of food access and the possibility of buying food available on the urban market (Cohen e Garrett, 2010).

The food crisis of the year 2007-2008 also underlines the emergence of a third phase of food policy, characterized by the concept of *food sovereignty*, a term introduced in contrast to the concept of food security, to later supplement it without replacing it, within the international agencies debate (Patel, 2009; Jarosz, 2014). The concept was established in the nineties by initiative of the international peasant network *La via Campesina* and has been defined in 2007 as «the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems» ([2]). The failure of liberal policies in regulating access to food by the urban populations, on the one hand, and to support peasant farming, on the other, have shifted the attention to controlling production and quality of the food consumed. From a geographical point of view, this has led to a shift from the global market policies to the local dimension: on the one hand, agri-food policies seek to reconnect food production and consumption by shortening commercial networks in order to reduce exposure to fluctuations in the international market. On the other, the political and administrative decentralization policies of the nineties have produced new local public entities looking to establish their own strategy, including the food sector.

The debate and early plans aimed to consider food insecurity at the local level, and particularly at the urban scale, go back in the late eights, early nineties. At the same time, there is an effort to understand the role of cities in the global challenge of achieving food security (Atkinson, 1995; Maxwell, 1999; Crush and Frayne, 2011), which will lead, as we shall see, an actor such as FAO, traditionally oriented to agriculture and rural development, to become interested in cities ([3]).

This process is clearly not univocal. At the same time, there is an intensified presence of imported food and the spread of supermarkets and global shopping centers also in areas such as the sub-Saharan Africa that have remained relatively untouched by this kind of market. However, it is at this phase that the groundwork for proper urban food policies is laid, aimed at supporting urban and peri-urban agriculture and consolidating local trade networks.

Global South and urban food policies: peculiarities and issues. – Urban studies have often seen cities under a negative light, considered as anomalies compared to the standard established by the western model (Robinson, 2002). The same is likely to occur with the debate on urban food policies, which are increasingly gaining recognition in wealthy societies but face a profoundly different reality in the peripheries of the planet. It is therefore necessary to open up the gaze, adopt a «border thinking» (Mignolo, 2000) also in examining urban food policies. «What if the post-metropolis is Lusaka?» wonders Garth Myers (2011) calling for a

(2) *La Via Campesina*, Nyeleni declaration (Mali) 2007.

(3) See for example the materials of the FAO-ISPRA seminar (Dakar, Senegal 14 to 17 April 1997) on *Approvisionnement et distribution alimentaires des villes de l'Afrique francophone*, http://www.fao.org/docrep/004/AB781F/AB781F00.htm#TOC.

change of perspective which looks at cities' future from an African metropolis: what if we look at the theme of urban food policies from the point of view of the South?

Food and Cities in the Global South. – The first and foremost issue that distinguishes the situation of the cities in the global South from those of the wealthier regions is the demographic dynamics: while treated with due caution regarding the reliability of data and the variety of classifications, the urban population of «less developed» (4) countries has increased tenfold in the period from 1950 to 2015 (from 300 million to 3 billion people), while that of wealthy countries have little more than doubled (from 440 to 980 million). If we look at the forecasts for the coming years, the difference is clear and the absolute numbers of urban population growth are even more explicit: from 3 to 5 billion people in developing countries and from 980 million to 1.1 billion in wealthier economies. This is however not merely a quantitative issue: the urbanization of the global South was mostly unplanned and this underpins a substantial difference compared to what happened in the global North (Parnell and Pieterse, 2014). Such dynamics require that policies, including those on food, consider the informal dimension not as an anomaly, but as the norm to confront with in order to achieve effective results.

Closely related to the rapid unplanned urbanization is the environmental issue: peripheral informal neighbourhoods and many of the peri-urban areas lack basic water and sanitation infrastructure and are therefore in a situation of significant environmental degradation than those peripheries of wealthy cities. This fact raises specific issues relating to the integration between urban and rural areas, which is the basis of much thinking about local food systems in urban areas. Urban food policies in the global South will therefore have to specifically address the issue of safety of foods produced in cities' peripheries and thus the environmental restoration of peri-urban areas.

Urban and peri-urban agriculture has different characteristics in the global North and South as well: if in wealthy countries there is a quality turn (Goodman, 2003) founded on a «new-agriculture» (Ferraresi and Coviello, 2007) promoted by a new generation of farmers, in the cities of the global South agriculture is primarily a food and income support for middle-low and low-income groups (Simatele and Binns, 2008).

The debate on the role of urban agriculture in the global South is wide and multifaceted (Mougeot, 2000). Among the positive aspects, it is generally highlighted primarily the opportunity for the most vulnerable groups to access relatively easily a productive activity where the new urban dwellers often have acquired skills in rural areas from which they come from. Alongside these elements of socio-economic nature, mention is made to the potential environmental and cultural benefits of food production and distribution systems that are mostly rooted in the local context. This theme is also shared by the debate on urban agriculture in the North of the world.

The most critical elements are the environmental and health issues mentioned above and the extent of the contribution of urban agriculture to citizens' overall supply of food. A study on cities in southern Africa has shown that in these areas urban agriculture is more like a complement than a real alternative to other forms of food supply, and supermarkets and the informal market represent the largest part of food outlets in the city (Crush and

(4) The definition and following data are taken from the United Nations Population Division: World Urbanization Prospects, the 2014 Revision, https://esa.un.org/unpd/wup/DataQuery/.

Frayne, 2014).

Just as in the North of the world, local agriculture in the global South is also subject to competition from low-cost products by the international market, however, the question of the price of food in the marginal areas of the world assumes a deeper and decisive meaning. In the cities of the global South, in fact, the percentage of the poor is much higher and food insecurity remains a central issue. Food policies in the cities of the global South must therefore take into account specifically the economic possibility of access to food by the urban population (Crush and Frayne, 2014) and thus cannot be separated from social assistance policies (such as the program Bolsa Familia in Brazil) or income redistribution. In this regard, it can be noticed that also in the global South, in prosperous urban centres attention to quality and local food is being developed by the wealthy, but given the strong social polarization that characterizes these cities, such practices are restricted to a small elite.

The social polarization of the cities of the global South, largely caused by poorly diversified and largely export-oriented production systems, opens up a second set of specifics that relate to the colonial past shared by most of these countries.

The remains of a colonial past. – Urban food policies in the global South have to be confronted with agri-food systems that are deeply different from those found in richer regions of the planet. This diversity comes in many forms; however, a unifying element is certainly represented by the weight of socio-territorial structures inherited from the colonial past.

Colonial territorialisation – and largely that of the post-colonial era – has been primarily oriented to the export of agricultural or mining products, thus producing a «territorial mass» (Turco, 1988) meant to that purpose. It is about an intricate system of tangible and intangible elements that still marks the societies of the South and is now a reality with which nascent local food networks must face. Some elements of this colonial heritage can be shown through a specific example taken from the African continent: the case of the Atacora region in northern Benin.

The first point to make is that, while in the global North urban food policies engage in a diversified agri-food system, in the global South production systems are often characterized by a very limited number of products. In this example, it is noted that until recently, and despite the crisis in the sector, cotton is still the first cultivation in terms of area coverage (100,000 hectares in the year 2014-2015, around a quarter of the cultivated land in the region).

In much of West Africa, cotton production was organized in the first place through a system framed in the colonial structures and subsequently controlled by postcolonial state enterprises: in Benin, in particular, is the SONAPRA (*Société Nationale de gestion de la Production Agricole*) to manage input distribution and product marketing. It is a complex system, structured hierarchically from the capital to individual villages, that includes farmers, orienting their production choices. The existence of consolidated, «vertical» systems of power (public and private) that hinder the development of alternative «horizontal» solutions, is another feature that influences the development of local food networks in the global South.

More concretely, export-oriented agri-food systems have resulted in a network of infrastructure centred on coastal cities that has heavily affected the local dimension: in sub-Saharan Africa, the poor state of local viability and the lack of basic services in local markets has made it more difficult to develop local business networks.

The result of these difficulties is that local agri-food systems (Muchnik, 2008) have developed, especially in times of export-crops crisis, but focused on low added-value products, unlike with what happened in the wealthier regions of the world. In Atacora region, for example, there is in recent years a rapid growth in cassava production, which is largely transformed into gari, a very commonly used flour in local cuisine. Nevertheless, one of the main problems for gari producers is the difficulty in enhancing the quality of the product: the price tends to remain low (10 to 25,000 CFA ([5]) per 100 kg, depending on the season), levelled to the lowest quality as there is no demand for a higher quality product.

This aspect introduces one final thought on the valorisation of local products within the post-colonial societies. Decades of colonial de-territorialisation have profoundly deconstructed the local socio-territorial systems, obliterating the «heritage of values, knowledge, typical behaviours and institutions» (Becattini, 2000, p. 132), which is the basis of local development processes. This heritage has not been completely lost, but it would be difficult not to notice how this overwhelming work has left clear signs in the colonized territories and constitutes an inescapable divide between the perception that the colonized and colonizing societies have of their own history and territory. The activation of local food nets in the global South necessarily goes through the not so easy task of recovering the local intangible heritage and deconstructing a system of values that directly associates development with export crops. For this reason, initiatives such as Slow Food's «food communities», aimed at enhancing agri-food products rooted in specific territories, are particularly important in the global South (Dansero *et al.*, 2015). In Kouba, in the region of the Atacora, there is an ongoing project aimed at the recovery of traditional cultivations and products, such as fonio, now almost disappeared from the daily diet ([6]).

The international context: New Urban Agenda and MUFPP. – the colonial era left the continent organized around a few cities and many rural settlements; therefore, policies and investments have focused on major cities and agricultural interventions for the development of rural areas (Pieterse, Parnell and Haysom, 2015).

The current transition is rather reversing the perspective, strong rural-urban migration is making secondary towns grow although they are not at the center of political attention, increasing in such way the difficulties in city governance and in the management of food insecurity, which will be more and more an urban problem (Roberts, 2014). If the answer to food insecurity will only concern agricultural production, the scale of action for interventions will be national and not urban. The high growth rates of the urban population increase consumers in informal economies, which will increasingly become resource-catalysts, competing with the formal economy. If this, in Africa, is now quite evident, also in the global North the theme of food in cities shows similarities as regard environmental unsustainability and employment inequalities as well as differences in a more dormant social tension and slow growth (UN Habitat, 2014).

(5) The figure is expressed in francs of the African Financial Community (CFA), corresponding to approximately 15-35 euros.

(6) The project, entitled «Social enterprise for women and educational programs for the promotion of local agricultural supply chains», is promoted by the NGO *Mani Tese* under the call «Feeding the Planet» (Cariplo Foundation, the City of Milan, Lombardy Region).

The New Urban Agenda. – These and other issues were at the center of the global debate of the New Urban Agenda (NUA), adopted in Quito, during the United Nations Conference on Human Settlements and Sustainable Urban Development Habitat III. The conference offered a broad discussion program on urban issues, with a strong participation of local governments and the civil society. During the process of discussion and adoption of the NUA, which saw participating Member States involved through the drafting of a national report on urban policies, food and nutrition issues have only been addressed in the final period of negotiations. Additionally, the bulk discussions of the conference have remained within the authority of national governments (Forster, 2016). However, there is a fair margin for the involvement of local actors, especially in the implementation phase of the NUA, as several passages in the text emphasize the importance of the contribution of local governments to its operational definition and it is considered equally important the direct participation of the local actors involved. The Second World Assembly of Local and Regional Governments has also moved in this direction, working together in the design of this framework document that aims to steer the world's urban development policy over the next two decades.

It should also be noted that Habitat III has been one of the first major UN conferences since the adoption of the Agenda 2030, which encompasses 17 Goals for Sustainable Development (SDGs) including Goal 2 on hunger, food security, nutrition and sustainable agriculture, and Goal 11 aimed at making cities and human settlements more inclusive and sustainable. A thesis which seems to reflect a growing consensus in the international debate is the dual need to «bridge the gaps» between Goals 2 and 11 on one side, thus addressing the importance of the food system in relation to sustainable urbanization; on the other, to present an agenda that is capable of promoting greater integration and overall coordination of policies and actions in the parallel and interconnected debate that leads to the implementation of the post-2015 and the new urban agendas (Forster *et al.*, 2015).

In all cases, the NUA, just like the Agenda 2030, has a universal scope and can be used as a tool to ground and implement the Agenda 2030 in cities in order to promote sustainable urban development, indicating specific references, strategic guidelines and action areas related to the connection between food and cities and vice versa. Specifically, the NUA, in its statement of principle consider that cities, in order to meet the essential needs of peoples, should also ensure equal access to goods and services related to food and nutrition safety, so as to provide the opportunity for all, in particular to vulnerable groups of the population, to have access to infrastructures (physical and social) capable of providing food that is sufficient, safe, accessible (both in physical and monetary terms) and nutritious.

The Implementation Plan included in the Agenda reiterates in several parts the importance of urban food security and the physical and functional link to be strengthened between urban and rural areas. The declared commitments include the promotion of those local systems that integrate urban-rural functions in territorial structures and in urban systems (paragraph 49), while specific mention is made for strengthening the food system planning (paragraph 51). Indeed, in affirming the recommendations to be implemented to ensure the implementation of such purposes, much attention is paid to the role of urban and territorial planning «to end hunger and malnutrition» (paragraph 123).

To manage the physical and administrative space, the Agenda encourages the development of a city-region model through the use of sectoral urban planning tools (such as metropolitan plans) to foster synergies by strengthened urban-rural connectivity. At the same time, it re-

commends to facilitate trade links that are able to provide small farmers access to regional and global agri-food chains. In addition, trade and local markets gain specific value in contributing to urban food and nutrition security. In this context, the scale of small and medium-sized cities is perceived as an optimal dimension for improving local food systems. In the context of local food security, urban agriculture is being promoted as an environmentally responsible and safe practice. The Agenda also promotes coordination between agri-food policies in urban, peri-urban and rural areas to facilitate the production, storage, transport and marketing of safe and healthy food and the reduction of food waste (paragraphs 95, 96).

The Milan Urban Food Policy Pact. – In parallel to the path of the New Urban Agenda, the link between food and cities has been subject to a broad international debate, developed with increasing intensity over the last 15 years through networks facilitated partly by the United Nations (WHO, FAO, UNDP) and partly by a large, globally active technical-scientific community. On this basis, the Milan Urban Food Policy Pact (MUFPP) has emerged, representing a new space for dialogue and exchange amongst cities around the world, specifically on issues regarding food security and food planning (CRFS Collaborative, 2014). Referring to the introductory chapter in this monographic issue for a presentation of the MUFPP, it is deemed important to emphasize that within the 134 participating cities (in October 2016) there are 21 cities from Latin America, 20 from Africa (including 18 in the sub-Saharan) and 17 from South-East Asia.

African cities, within the Milan Pact, can find solutions on the issues affecting the continent's rapid urbanization process. The MUFPP therefore represents the international framework within which to develop further local applications that meet the needs of each regional context. The FAO, in the context of the agreement, is facilitating the Pact's dissemination and contributing to speed up its implementation in Africa through decentralized cooperation mechanisms.

The 20 African signatory cities of the Pact are spread throughout the continent, including cities from English-, French- and Portuguese-speaking countries. In the vast majority, these are the main capitals of the continent, with only 3 being secondary cities.

Fig. 1 – *The 134 signatory cities of the MUFPP*
Source: Authors' processing on data from www.milanurbanfoodpolicypact.org

The Milan Pact Award. – In order to stimulate the dissemination and exchange of good practices, the first edition of the Milan Pact Award was launched in 2016. Altogether, 33 cities around the world were involved, compiling a compendium of 47 good practices. There were 4 African cities that were candidates for sharing their good practices: Nairobi (urban agriculture legislation), Dakar (horticulture and healthy school meals), Lusaka (women's empowerment) and Arusha (horticulture for a sustainable diet).

In September 2016, a forum was held in Dakar, Senegal, amongst the signatory cities of francophone African countries, with the objective to foster the development of a sub-regional network between these cities, with the attendance of representatives of the cities of Dakar, Abidjan, Brazzaville, Douala, N'Djamena, Niamey and Nouackchott. The debate within the forum brought forth issues concerning the African region which currently do not appear sufficiently considered in the MUFPP guidelines, in particular, the economic fragility of African cities and the attention to support local production, while it is reported the impact of imported food on the consumption of local products. During the Dakar Forum, cities have produced a statement (7) defining the actions of the Pact on which they intend to work on jointly. More specifically, they aim at enhancing participation for all actors in the food system, identify improved technologies for food storage and infrastructure for the peri-urban transport (Logical Framework n. 2 and n. 28, MUFFP 2015). These cities also aim to raise awareness amongst their citizens towards more sustainable diets, develop policies and practices to improve food distribution and food storage (MUFPP, 2016).

The Italian institutional work in Africa and the MUFPP. – The high diversity of African contexts allows the emergence of a possible mapping of the Italian work in Africa, in the light of the urban paradiplomacy activated by the MUFPP. The map helps to frame the priority countries for Italy in Africa (*ISPI-MAE 2012, SACE 2014 reports*), the two countries with a preferential relationship with Italy (Ethiopia and Mozambique), the cities participating in the Milan Urban Food Policy Pact, cities that show, for the period 2010-2025, an estimated growth of more than 50% (*AfDB, OECD, UNDP, 2016*), the embassies established and high-level institutional visits since 2014. These new geographies could facilitate the activation of exchanges amongst cities in the global North and South with the aim of enhancing the «diplomacy of growth» and decentralized cooperation. Several Italian cities have already established relations of exchange and twinning with African cities, some of which (*) are MUFPP cosignatories: Milan with Dakar* 1979 (Senegal) and Algiers* 2015 (Algeria); Turin with Maputo* 2015 (Mozambique), Praia* 2003 (Cape Verde), Tunis* 2015 (Tunisia) and Ouagadougou 2003 (Burkina Faso). Genoa with Pointe Noire 2006 (Congo-Brazzaville), Kaolack 2006 (Senegal) and Polokwane 2011 (South Africa); Bologna with Saint-Louis 1991 (Senegal); Palermo with Bukavu 1998 (Congo-Kinshasa) and Bizerta 2000 (Tunisia).

(7) MUFPP (2016). Dakar forum of African signatory cities. List of recommendations. 22 September 2016. Dakar.

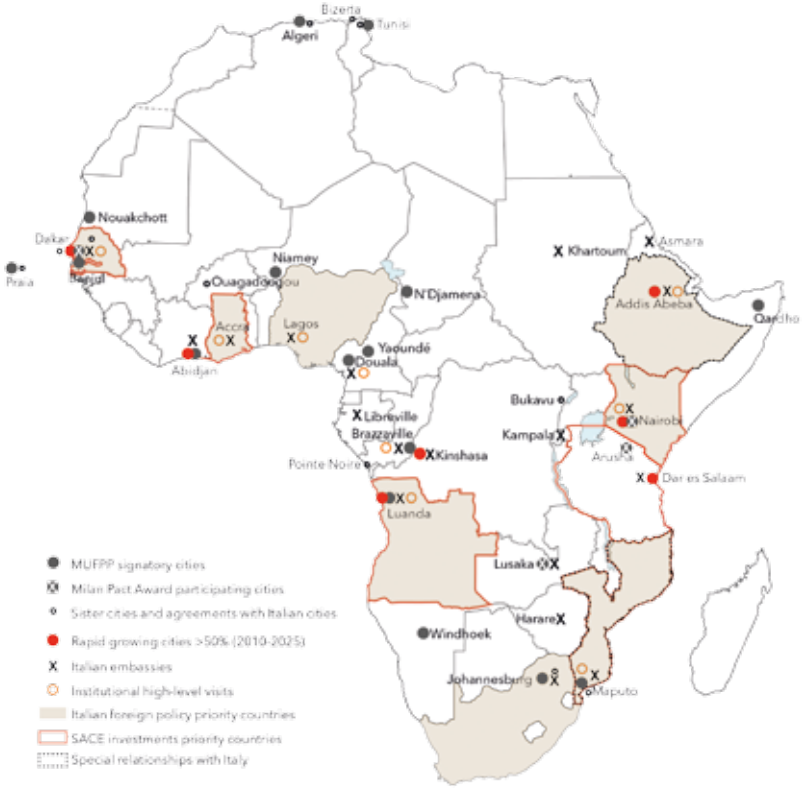

Fig. 2 – *Geography of the Italian work in Africa in the context of MUFPP themes*
Source: A. Magarini, A. Calori, EStà, 2016

Urban Food Policies in Sub-Saharan Africa: a number of ongoing initiatives. – By looking at African cities through the lens of the food system, a wide-ranging scene of themes and issues is unfolded on which cities have started reflecting and working on. Of all, those emerging are urban agriculture programs developed in many cities throughout the continent (FAO, 2012) to ensure an acceptable level of food security, adapt and combat climate change, efforts to ensure access to land, the management of migration from rural areas to cities, access to water for food and urban agriculture, and urban planning initiatives that can have an impact on food production issues. These elements of urban interest, potentially addressed at sectoral level by specific policies and institutional departments, can increase the impact if they are gathered within a single strategy to act in an integrated manner on the city's food system. Being able to manage the food system in its entirety means in fact to extend the action of public policies in addition to food production alone, by integrating urban production into the issues of transformation, logistics, distribution, consumption and waste, or put in synthesis, into the structural elements of the food system. This is particularly true in Africa, where despite the high urban growth rates and high levels of urban food insecurity, there is little analysis of the food systems in their entirety able to restore the complexity of the elements that act within a city

(Battersby, 2013). These gaps in knowledge are identified at the processes in secondary cities, the role of local governments, the impact of inadequate transport systems, food distribution, the impact of supermarkets in cities and the impact of food imports (Smit, 2016).

In view of these shortcomings, several partial responses are emerging across the continent that could be linked to decentralized cooperation mechanisms between cities.

Among the cities which have adopted a food policy with a systemic approach, Johannesburg appears to be particularly interesting. On the one hand, this logistics and socio-economic hub serving the entire southern Africa, offers economic opportunities. At the same time, however, there are 1.9 million people considered as poor, on a population of 8 million inhabitants at the metropolitan level. The city in 2013 committed to increasing the level of food security through the expansion of easy-to-access food distribution systems, using economic incentives and peri-urban agriculture programs. As part of a multilevel governance, urban and intersectoral actions have been integrated with those carried out by its own province, Gauteng, through training courses for farmers to achieve greater sustainability in food production (Malan, 2015).

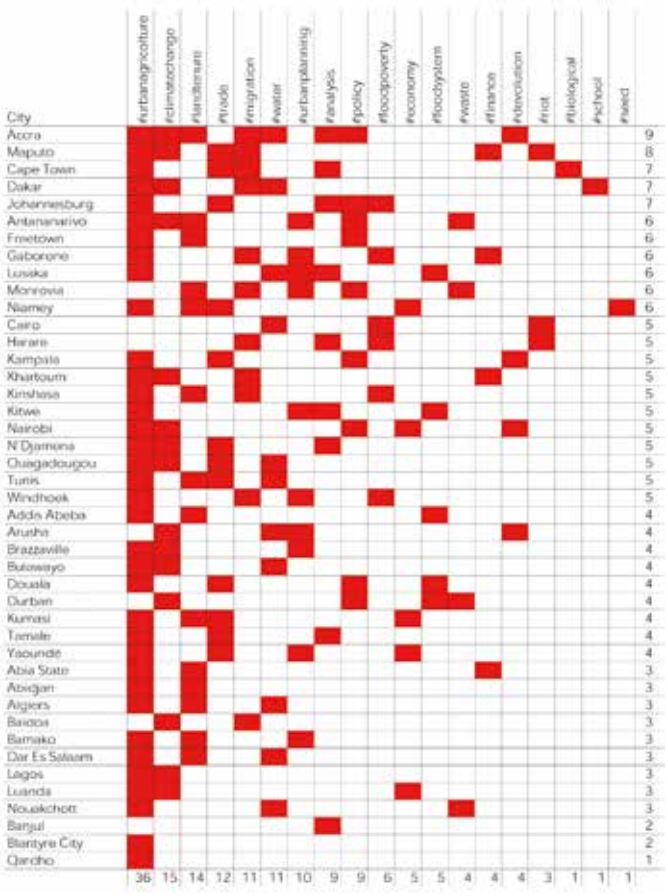

Fig. 3 – *Matrix displaying the issues affecting the food system in 43 African cities*
Source: A. Magarini, A. Calori, 2016

The city of Dakar (2.4 million inhabitants) is working with micro-gardens, an urban horticulture practice for self-consumption and marketing of produce to local markets. Thanks to the support of international cooperation, technical expertise and simplified hydroponics have been provided for the production of quality vegetables to approximately 7,000 people who cultivate 134 production centers, supported by 12 training centers. The local administration has included these practices in urban planning policies (Ba & Ba, 2007). The quality of water for micro-garden irrigation is often poor, pumped from the underground, where it can be mixed with waste water. For this reason, the city government, with FAO support, is experimenting with projects to equip the green belt of the city with facilities for the treatment of waste water (FAO, 2012).

In 2005 the local authorities in Douala (2.4 million inhabitants) promoted networking activities among the urban food system stakeholders to improve food supply and distribution, promoting coordination and technical cooperation between the different actors at the urban level, towards the definition of an urban food strategy ([8]) (CVUC, 2005). The city of Monrovia (1 million inhabitants) is engaged in a strategic planning process aiming to take action on the urban food system through multistakeholder platforms for land access, urban agriculture and waste management (GIZ, FAO and RUAF, 2016). These dynamics have taken a central role due to the Ebola outbreak, which has heavily affected the food supply in formal markets.

The relation between food and cities is also a key to understand some of the social tensions that have emerged in recent years. In Maputo (1.7 million inhabitants), the informal economy is still the largest source of food supply. In the wake of rising food prices, in February 2008, several food riots occurred in the Mozambican capital. A subsequent uprising was seen in September 2010 due to the announcement by the central government of the withdrawal of subsidies on wheat imports, resulting in an additional 25% increase in bread prices. These riots have forced the government to withdraw the proposal, maintaining the subsidy. Further studies have shown that all social groups in poor areas prone to food insecurity had taken part in violent demonstrations. The reasons for these tensions lie mainly in the high rate of food imports resulting in price fluctuations (FAO, 2012). These riots are a common problem in many urban areas in Africa, caused by the effects of excessive import of products from abroad.

This issue was at the centre of the Dakar Forum debate, which took place in September 2016 among the French-speaking African cities, signatories of the MUFPP. In the final recommendations, the cities of Dakar, Niamey, Brazzaville, N'Djamena, Nouakchott, Douala and Abidjan have denounced the impact of imported food products on the consumption of local products, with the consequent change in the eating habits observed in cities (MUFPP, 2016).

Although the city of Maputo has grown rapidly, most of its green areas remain intact and protected under urban legislation. Since 1980, the Maputo City Council has established a peri-urban green belt for horticulture, equipping the area with irrigation systems. This area is being cultivated by 13,000 farmers who have land use rights and can therefore use the land in micro-credit operations within a union of 200 agricultural cooperatives. The daily income

(8) CVUC (2005), *Déclaration de Douala*, Communes et Villes Unies du Cameroun (CVUC).

of an urban farmer is $4 against the $0.5 average of the Maputo citizens, helping to improve the purchasing power of families and hence, their food security (McNordic, 2016).

Access to land is a major issue for urban food policies. Horticulture can be promoted within a legislative framework which should be guaranteed by municipal governments in urban expansion plans, allowing access to credit needed for investments in the food system. Kigali has allocated 40% of its surface to urban development, protecting the remaining 15,000 hectares for agriculture on the most fertile soils. The city of Lagos could allocate 4.400 hectares to food production. To limit hydrogeological disruption, Antananarivo has allocated free land areas to vegetable cultivation, which now involve a 43% of the urban surface, acting as a buffer zone to protect the city from flooding. Bamako in Mali has reserved 100 hectares of land for agricultural cultivation (FAO, 2012).

Access to water is one of the most important issues that African cities are facing in order to ensure food security to their inhabitants. Achieving food security involves access to water both for human consumption and irrigation for urban agriculture, and strongly depends on the presence of wastewater treatment systems (World Bank, 2012). Several cities such as Ouagadougou, Kinshasa, Nairobi, Dar es Salaam, Lilongwe, Maputo, Durban, Cape Town, and Johannesburg have taken action on this issue by deploying urban masterplans for access to water and wastewater disposal, keeping water capture infrastructures separated from those intended for disposal. Diversified infrastructures of this kind have been developed in Abidjan, Lagos, Ibadan, Abjula, Kano, Khartoum, Addis Ababa, Johannesburg, Cape Town, Durban, Lilongwe, Blantyre.

The experiences described herewith represent some of the initiatives that African cities are working on. The MUFPP may serve as a framework within which a cooperation mechanism between cities can be activated. Acting in an integrated and systemic approach will help to rebalance the territorial dynamics between cities and their hinterlands, crushed by strong demographic growth and climate change effects across the continent.

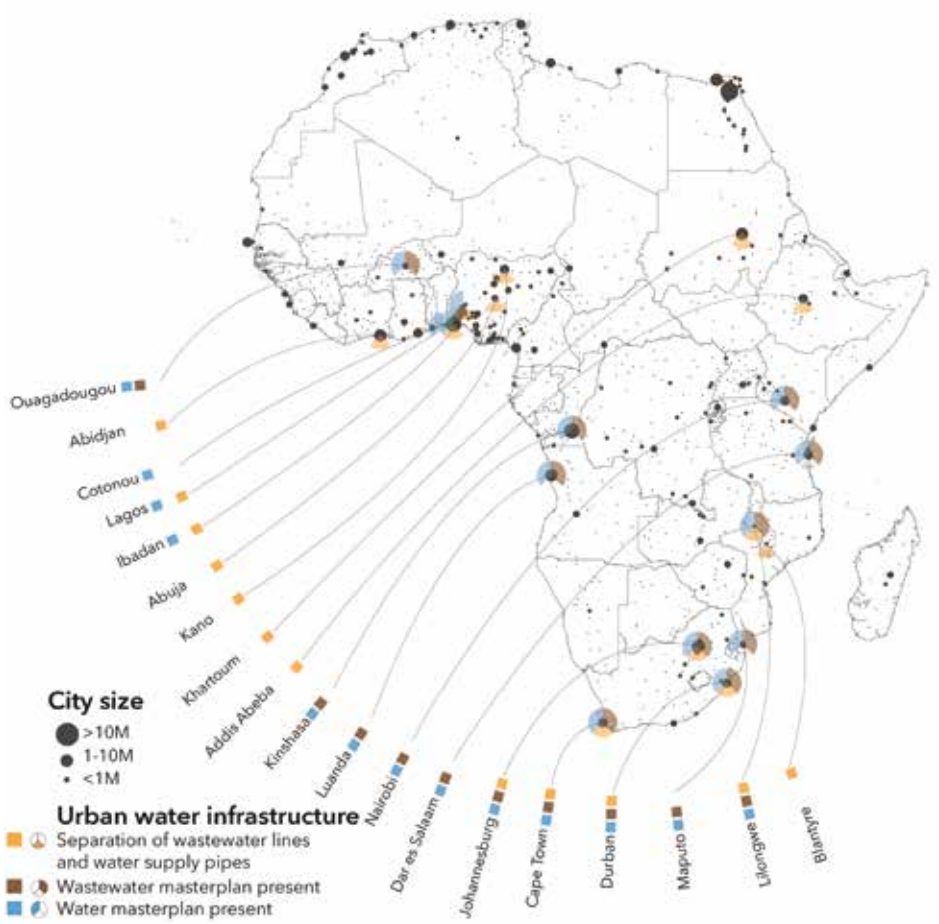

Fig. 4 – *Masterplans and infrastructure for water access in African cities*
Source: A. Magarini, M. Maggi (2016), *Water availability for food security in African Cities*, in «Water: an Atlas», Guerrilla Cartography

Conclusion: towards new territorial partnerships. – Without any claim to completeness, this paper sought to highlight, focusing on the African continent, the contribution of cities in the global South in shaping urban food policies. It also aimed to underline the specifics and peculiarities within the debate and experiences influenced by cities in the global North (Morgan, 2015). It has been shown that, starting from the discussions generated by the MUFPP, there are a variety of relationships that the most active African cities have developed in different contexts and at different times, with Italian cities and the global North in general.

An opening element, rather than a conclusion, is to emphasize that urban food policies can be configured as a new and exciting field of decentralized cooperation and territorial partnership (a term introduced by the new Italian law n. 125/2014 on development co-

operation). Like other parts of this monograph have shown, Italian cities are also moving towards clear, informed and structured urban food policies, keeping in mind that this is a recent and an ongoing process. For this reason and for the differences in phases of the urbanization process and related issues, decentralized cooperation in the food sector between Italian (and in general cities of the global North) and African cities can be characterized by less asymmetry than traditional fields of intervention, where, as mutually enriching the exchange can be, the weight, in terms of urban history and accumulated experiences, as well as of economic power and social conditions, is undoubtedly felt.

The recent initiatives (the MUFPP, NUA) are expanding the number and type of actors involved in the international debate, from technical experts to politicians, enabling new players to the understanding of both problems and possible solutions. During the second MUFPP Mayors' Annual Summit the different speeds in implementing urban food policies emerged clearly between participating cities. This new space for political debate could be the ground from which to draw further strength and drive for existing decentralized cooperation tools, encouraging the sharing of experiences and boosting economic, social and institutional relations between cities around the world. Such relations could also bolster new forms of diplomacy towards economic growth, within a framework of action promoted by the Ministry of Foreign Affairs and International Cooperation, activating an entire network of national mechanisms that further extend the number of stakeholders in the field. City-to-city cooperation mechanisms, city twinnings, partnerships for international projects with bilateral, triangular and multilateral partners constitute a new space where other actors (social, cultural, economic and institutional) can participate with conscious, balanced and proactive contributions.

Moreover, the realm of practices composing the framework of urban food policies is highly internationalized, with transnational and inter-local relations. In this regard, municipalities can act as a platform for these practices by connecting the global North and South (in triangular and horizontal manner) with the extraordinary wealth of experiences and actors. The very same NGOs working in the global South are becoming increasingly important actors in promoting food sovereignty in their home countries. The meeting point between the NGOs and policy-makers also represent a sharing of experiences accumulated in two different areas, the first being predominately in rural areas and the second at the urban and national scale. If the development of cities is also dependent on a positive relationship between urban and rural areas, these two families of actors can help shape the strategies and policies at the metropolitan scale, which can enhance in turn territorial cohesion and sustainable city development.

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URBAN FOOD POLICIES IN THE GLOBAL SOUTH: THEMES, APPROACHES, CASES. - Within the framework of the international debate focusing on experiences emerging from cities in the global North, this paper aims to explore urban food policies under the lens of a global South perspective, paying particular attention to African cities and taking into account the common elements they present -compared with other urban contexts and territories- but also the specificities with respect to the process of urbanization and the linkages existing amongst cities and food. Under this light, urban food policies in an African context are also placed, on the one side, into a path specified by a number of keywords such as food and nutrition security, self-sufficiency and food sovereignty; on the other, they are positioned in a context of internationalization of reflections and actions culminated in the New Urban Agenda and the Milan Urban Food Policy Pact. The prospect of urban food policies is finally presented as an inspiring and propelling opportunity for new forms of territorial partnerships.

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THE FRENCH URBAN FOOD ISSUE EMERGENCE

Setting the picture. – France is well-known across the world as a country where food matters. In 2010, the UNESCO inscription of the French gastronomic meal as an intangible cultural heritage of humanity testifies of the centrality of food and its related social practices in the every-day life of the French people. But, at the same time, in the first paths of the food planning movement in Europe, French researchers and practitioners were conspicuously absent of the nascent debate on the absence of food in the planning agenda. The terms describing this acknowledgement in North-America and in Europe show the sudden realization of a missing piece in the planning thoughts and actions: «a puzzling omission» (APA, 2007, p. 1), «the dark side of urban dwelling?» (Wiskerke and Viljoen, 2012, p. 21), «this intellectual lacuna» (Morgan, 2014, p. 2). What about the French scene? What links are established between food and urban issues? How is the food issue integrated in the city policy and planning debate?

This article intends to establish a picture of the debate about food and the city at the local authorities' level. The research methodology followed is mainly based on observation (participant or not) of diverse scenes of emergence of the urban food issue in France between 2009 and 2014 (conferences, meetings). More particularly, establishing an informal collaboration with the Terres en Villes network (TEV) (1), a major player in the emergence and dissemination of the notion of «food governance» in France, I was able to follow and participate in the progress of discussions. I conducted an interview with the technical secretary of TEV and made observations during my participation in the activities of the association. This allowed us to track the key features and actors of the emerging treatment of food in France.

We will present the agricultural prism through which the «food governance» notion

(1) Terres en Villes (TEV) is defined as the French network of local players in peri-urban agriculture. Created on the 15 June 2000, it is a joint association between elected officials and agricultural leaders developing reflections and actions on peri-urban agriculture in their territories and in France in general. It includes, at the beginning of 2013, 27 cities. The network aims to share the experiments conducted by its members, promote the exchange of know-how around the preservation and development of peri-urban agriculture. TEV is also promoting the peri-urban agriculture interests in France and abroad and contributes to the debate about the city and its agriculture. Its activities are divided into five projects: co-construction of peri-urban agricultural policies / protection and development of agricultural areas, forest and natural peri/development of short food supply chains and food governance of cities / consideration open spaces and peri-urban agriculture in European policies / peri-urban forest.

emerged. Then, we will develop the way this prism moves toward what we call an agri-food perspective. To finish, we will go through the difficulties in reaching the «food governance» notion's ambition and the discrepancy between its rapid diffusion and its all in all limited reception.

The agricultural prism in the emergence of the «food governance» notion. – Till the end of the 19th century, cities, represented by their «maire nourricier» (Bourguinat, 2008) managed the security of the food supply. If their regulator role has never really disappeared, cities have moved away from the strategical character of that regulation. By the end of the 19th century, the governance of the food system has been transferred at the national scale and to the private actors of the agro-food system. As a result, we can observe a form of disengagement as the local authorities still intervene on the food system but with motives distant from the only nourishing function of the promoted activities. Particularly, the strategical vision of the food system has been replaced by the standard approach of economical development of a sector of activity (Marty, 2013) or other arguments related to touristic or social policies (Delfosse, 2014). Nonetheless, in France, food issues are recently reinvested through the notion of «food governance» at the local authorities scale. The vital character of food is now brought to light for other reasons, such as the various failures of the food system and the rise of local production and consumption systems, and in another context, with the problems related to urbanization and metropolization, different from the initial government interventions on the food system.

The peri-urban agricultural issue was the breeding ground for the emergence of the food issue. Since the 1970's, that saw the beginning of the development of actions aiming at preserving and valorizing peri-urban agriculture, the short food supply chains have been mobilized (Brand and Bonnefoy, 2011; Marty, 2013, Bonnefoy and Brand, 2014). The initial motives were strongly related to the amenities generated by the agricultural activity and its multifunctional character. From punctual support, the interventions got structured by investing the diversity of the short food chains market shares and more recently public collective catering (Bonnefoy & Brand, 2014). The new consumer demands and the state recognition of the localized food systems, particularly since the Plan Barnier in 2009, as a way to answer in a cross-mannered to the agricultural and rural development issues have counted in those evolutions. Since the Loi de Modernisation de l'Agriculture et de la Pêche (LMAP) in 2010, the local authorities are explicitly invited to develop the short food supply chains (Kébir, 2012) and the collective catering appears as a good lever in this context. Since the state injunctions for organic food that followed the *Grenelle de l'environnement* in 2007, the food supply issue has grown in the local authorities' agenda. As a result, the nourishing function of agriculture is appearing more clearly in the motives for preserving peri-urban agriculture.

In this context, TEV was leader or co-leader of the first reflections on «food governance» through various partnerships with agricultural and local authorities' actors within the framework of the French National Rural Network (FNRN) workshops and calls for projects. TEV defines itself as a place of dialogue between the urban and the agricultural spaces. Since its creation in 2000, the short food supply chains have been invested in a site entitled «short food supply chains and the city food supply». The apprehension of the food issue in this network is intrinsically related to the Association of Developement of

Grenoble Y's Agriculture structure (ADAYG) (2). The ADAYG and TEV were created by the same person, the ADAYG director until its disappearance in 2012 and current technical secretary of TEV. It is within the ADAYG missions that the food issue began to draw attention, in the late 1990s with a mandate of coordinating the Taste Week national device in the Grenoble city region. At this period the food issue appears as a good way to tackle in a different manner the link between city and agriculture and to develop relation with the inhabitants, little integrated in those structures used to collaborate with the agricultural and institutional actors of the local authorities. From the mid 2000's, the embryos of reflection meet with a favourable national context as the short food supply chains are scaling-up and reflections are being developed on the territorialized food systems.

In 2008, within the scope of a workshop of the FNRN, TEV gathers many actors from various syndicalist tendencies supporting the national and local development of agriculture. Together they develop a project called «food governance and production relocalization» (TEV, APCA, FNCUMA, FNCIVAM & TRAME, 2009). This first occurrence of the «food governance» term reveals its initial opportunist use, its prospective significance and its initial link to the agricultural world: «the 'governance' term imposed itself at this time, it was at the heart of the local authorities policies. But it could have been 'agricultural governance' … 'food governance', it was exploratory» (technical secretary of TEV). The choice of this term is also related to the nature of the actors implied. Each of them brings a specific expertise (national food policy, transformation tools, short food supply chains development, diversification of agricultural initiatives, and collective food actions) and some of them were particularly aware of the food issue, in its public policy dimension and its relation to the consumers. The project aims at studying the so-called food policies being developed supposedly because of the sustainability stakes in 18 of the local authorities' members of TEV network and in London, Torino and Barcelona so as to see the way they integrate short food supply chains and their consequences on the peri-urban agricultural policies. We speak of «so-called food policies» because if the term was used by TEV and its partners, at this time in France the only existing food policy was at the state level and it was just starting to connect food offer and demand stakes (Brand, 2015). At the state level, the food policy really appears by 2010 when it becomes an interministerial policy. At the local authorities scale, there were policies (social, health, culture, economical development, climate change) that treated only partially the food issue but there was no such policy gathering all these policies under a food policy banner. Following this project, another one was led in 2009-2010 to support food policies and short food supply chains (TEV, APCA, FNPNR, 2009). But in

(2) The ADAYG was founded in 1985. It groups the inter-communalities of the Grenoble's Y territory, the Chamber of agriculture from Isère department et the chamber of trade and industry of Grenoble. It led the suburban agricultural policy in the territory of the urban area of Grenoble until its demise in 2012. Its missions were oriented towards promoting agriculture as a partner of the urban region, «this is achieved through the management of an agricultural environment combining quality production needs and demands of the citizens, through the creation of quality products for the local market as in the external market, the emergence of agriculture in the service of citizens, recognised by all (source: http://agriculture.gouv.fr/adayg-association-pour-le, looked up on 06.04.15). As early as the years 2000, reflections appeared on this territory about the food link between city and agriculture (2002 creation of the collective trademark «Terres d'ici», 2004 beginning of the reflections on the links between public collective catering and agriculture, 2007 beginning of the project of setting up a vegetable processing plant for collective catering, reflection on the abattoirs of the Mure as early as in the years 2000 and the wholesale market (MIN) of Grenoble).

the end, the focus is mainly positioned on the development of the short food supply chains, justified by the new food stakes.

As a result, the first path of the «food governance» and of the local food policy issue were mainly used as a way to comfort the peri-urban agriculture position in an urbanization context. The ambition is to consolidate the relocating movements by structuring the short food supply chains so as to develop a city food supply, partly organized by the public power, which would incorporate more local products.

Also in that agricultural perspective, Europe counted on the emergence of the food issue in the French territories. The territorial brands and then the food governance issue were tackled between 2010 and 2011 by the Arc Latin and the Purple networks in which TEV was implied. We can also quote the Leader program that is widening the initial approach of the valorisation of agriculture through the short food supply chains and the collective catering. For the 2014-2020 programme, the Leader program in Rhône-Alpes region and other French regions includes an axis on «territorial food strategies» so as to better structure the initial short food supply chains approach that lacks of a strategic cohesion. Between 2009 and 2011, TEV is partly implied in the European Rururbal (3) project as two of its members from the Grenoble metropolitan area are implied (ADAYG and Pays Voironnais). This projects aims at linking the urban and the rural through food in the peri-urban territories and to initiate a sustainable development of peri-urban territories by relying on local agro-food resources.

The program is based on the acknowledgement of the process of urbanization of the territories, of the fragility of the agricultural activity in peri-urban contexts and of the potential role of the consumers in the emergence of more sustainable territorial models. The program ended with the production of a European « charter of territorial and nutritional governance » whose objectives are to develop a food policy at the local authorities scale and to engage connections between policies around the food issue. Even if the actors implied are mainly from the agricultural field, we will see that Rururbal counted in the French transition from an agricultural to what we call an agri-food perspective concerning the urban food issue.

From an agricultural to an agri-food perspective. – The agri-food perspective is characterized by a progressive sliding of the agricultural silo toward food issues (Bonnefoy and Brand, 2014). For TEV this sliding comes from the progressive investigation of other fields of action than the agricultural one.

The project developed within the scope of the FNRN leads to the first definition of the food governance: «the food governance designates a bunch of new cooperations between

(3) Rururbal is a transnational cooperation program Interreg IVB Med 2007-2013. It was developed between May 2009 and October 2011. It is part of axis 4 «promotion of a polycentric and integrated development of the Mediterranean» and Objective 1 «coordination of development policies and improvement of territorial governance». It brings together partners from 6 regions and 4 European countries (Spain, France, Italy, Greece) as follows: Generalitat of Catalonia, Barcelona Deputación, comarcal Council Vallès Oriental, Province of Torino, Siena Province, Pays d'Aix and Pays Voironnais urban communities, ADAYG and the University of Thessaloniki. The title of the programme is an acronym that stands for «Rurbal-Urban-Alimentation». The subtitle of the program is «draw your territories through eating». It featured the territorial diagnosis phases on the local food chain, the development of pilot projects and the creation of a joint document distributable, of diffusion tools and seminars dedicated to the themes.

various actors and scales of intervention around the common arena of the food stake» (TEV, APCA, FNCUMA, FNCIVAM & TRAME, 2009). This definition is formulated from the multidimensional scope of food. Five dimensions are identified, representing the main identified fields of action treating one facet of the food issue (social access, nutrition and health, cultural identity and gastronomy, agricultural production and short food supply chains, agro-food industry and distribution) and the variety of the actors related to them (Fig. 2).

In the study of the 18 city region members of the network, TEV analyses the relation between the peri-urban agricultural policies and the other fields of action defined as related to the food governance issue. The study reveals a very divided system concerning the treatment of the food issue which is split into distinct silos of action whose actors are little connected. Food is today partly tackled by the local authorities within the production arena (initially centred on short food supply chains, it opens to collective catering and combinations with long food supply chains and to other prospects) and also the consumption arena (collective catering, social food baskets, actions against climate change, sustainable purchase) through actions coming under the thematic fields of action of sustainable development (Climate plan, Green plan, Agenda 21), social economy, health, social cohesion. These fields are stimulated by the development of citizen actions (Community Supported Agriculture, shared gardens, social and solidarity food stores), the territorialisation of the state food policy (National Food Plan, National Plan on Nutrition and Health) and the international and national injunctions in terms of sustainable development. TEV progressively invests all those policy fields which are out of its bosom and partly related to urban planning issues.

In this investment the Rururbal program holds a responsibility. It allowed a first acculturation to the consumption silo and facilitated the echo between food and planning issues. The actors involved chose to use the term «food» instead of «agro-food» during the workshops so as to position the reflections out of the agricultural silo. In relation to the development of the «food governance» notion, two main inputs can be cited. The first is the willingness to exceed the short food supply chain approach in favour of a territorialized food sector approach. The program relied on the notion of «local agro-food systems» defined by the 27.01.11 Notice of the Region Committee. This definition is based on a large approach of the food chain taking into account a wide variety of actors at each stages and including the economical but also cultural and social dimension of those systems. The second input is the broadening of the type of actors included in a debate dominated by the agricultural professional culture as summarized by Torino partner: «the Rururbal revolution is that we started to see food from the perspective of the consumers and other actors». In the course of the program, each partner had to identify the actions conducted in their territories related to the food thematic and to develop pilot actions so as to establish links between those actions and the actors related. In Rururbal, Sienna had a strong approach centred on the everyday food habits of its inhabitants in all its dimensions, including gender. This partner counted in the evolution of the perception of the food issue by the other partners and in particular sensitized the technical secretary of TEV and explains the advanced position of the city region authority Pays Voironnais in comparison with the others regarding the first developments of the food issue in French city regions. Starting from the agricultural issue, the Pays Voironnais got sensitized to food issues by supporting organic production and short food supply chains on its territory before opening to the social and

health sector conducted by the city of Voiron. They try to establish links between consumption and production actors and they got opened to the inhabitant-consumer. The initial approach through short food supply chains has been exceeded in favour of a territorial food sector approach trying to integrate distribution and agro-food actors. Related to that agri-food approach, the metropolitan scale has been identified as a good scale so as to reach the objective of a better structuring of the local food supply. Since 2014, the food issue even appears as a potential factor of metropolitan construction as the food strategy is now thought in collaboration with other local authorities of the Grenoble metropolitan region, including the mountain surrounding territories.

At the end of the Rururbal program, the partners have gone through thematics out of the only support toward agriculture (Fig. 3).

a. Support of access to local products for local consumption of production:
- Increase of the share of local products in the supply of 'staple' products
- Encouraging the use of local products through education, training, awareness raising, public dialogue and the implementation and dissemination of innovative initiatives

b. Organisation and management of the supply and marketing of local dietary products:
- Improvement of the diversity and quality of production and processing, while producers search for better exploitation/use
- Support of placing products in the local market, including communication through the use of logos and labels

c. Promoting dietary models as a means for expanding and reinforcing vicinity and solidarity networks, serving social and peri-urban territorial innovation:
- Establishment of regular time periods and creation of physical locations dedicated to exchanges and meetings of producers, consumers and all nutritional system stakeholders;
- Promotion of clear sustainable operations among producers, peri-urban social groups and other nutritional agencies, modifying nutritional and farming practices
- Support of actions favouring inter-cultural exchanges concerning nutrition and the use of local products
- Developing actions favouring fair relations among peri-urban areas and city-centres
- Facilitation of the emergence of territorial innovation.

Points a. and c. show the investment of thematic related to the consumption field (accessibility of the local products, education, consciousness, intercultural exchanges). Point c. expresses the established link between food and planning issues. The research for synergies between spaces and actors (particularly from the civil society) is at the heart of the Rururbal program. The actors implied open-up to actors from the social economy, culture or health. They realized that many actions related to food where conducted on their territories but without being connected and that integrated food policies would request an articulation between siloed policies at different scales. In that context, a food policy implies that a red thread circulates between siloed policies or actions around the local food issue.

Difficulties in reaching the «food governance» notion's ambition. – The «food governance» notion has allowed a first broadened apprehension of the urban food issue. But, the first uses of the notion give the impression that «food governance» has just replaced the «city food supply» issue in the renaming of TEV work area in 2009 «short food supply chains and the city food supply» by «short food supply chains and food governance». The ambition to see the emergence of a food policy that would establish links between siloed related policies has not been reached yet. This, mainly because of the difficulties of going beyond the initial agricultural prism of formulation of the notion.

Till 2013, in the works conducted by TEV, the agricultural prism, namely the research and the consolidation of markets shares for the peri-urban agricultural economy, stayed strong. The new food demands and the injunctions for collective catering are tools at the service of the peri-urban agriculture maintenance. In this context, the promotion of the food governance is a way to reinforce agriculture as a food strategy would allow the structuring of the local supply at a city region scale. As a result, since 2011, TEV works have been reoriented toward the articulations between short and long food supply chains. If this allows the transition toward an agri-food perspective on food policies, going beyond the short food supply chains and taking into account all the stages of the food chain and the variety of the related conventional and alternative actors (production, transformation, distribution and consumption), it limits the food policy to the only city food supply issue leaving out the other dimensions of a food policy.

Another difficulty in reaching the «food governance» ambition results from an initial difficulty to establish links with the consumption field. The «food governance» term stems from the feeling of an eventual common destiny between the consumers and the producers but beyond that, it was not easy for TEV to seize the social dimension of the food issue and to really meet and engage fertile crossing with the consumer field. The technical secretary of TEV confessed that one of the errors of the ADAYG had been its incapacity to identify the societal movement issued from the urban consumers: «we did not understand the Community Supported Agriculture movement […] the urban agriculture movement; we did not see it very well». In Grenoble, there was a mistrust *vis-à-vis* a movement of an urban militant consumer perceived as not supporting the agricultural values and somehow distant from the real agriculture of the territory as there is a major focus for market gardening. From this point of view, Rururbal was determinant in TEV vision of the role of the consumer and its acknowledgment in the evolution of the agricultural peri-urban policies (Bonnefoy & Brand, 2014). In 2013, the national encounter of TEV members asserts the non-reduction of the food policy to the food supply dimension. Within TEV, it is acknowledged that the agricultural policies can not be dissolved in food policies and that in return, food policies can not be limited to relocating of the food supply policies. If this assumption goes in the sense of the «food governance» notion, there is a separation between those two policies, which produces a discrepancy with the social reality as there is no such «food policies» in the French territories, apart from the state food policy. Health, social cohesion, gastronomic policies referred to as «food policies» in the report of the 2008-2009 workshops of the FNRN are not food policies in the reality. They are sectorial policies treating one facet of the food issue. A junction is established between production and consumption but the formulation frame remains agricultural and moreover lacks the waste management field. In fact, agricul-

tural policy is not soluble in food policies, just as health or social policies.

It is difficult to qualify the carried out actions as food policy because the integration of the agro-food transformation and distribution actors is still limited and complicated (Brand and Bonnefoy, 2011; ADCF *et al.*, 2012; Bonnefoy and Brand, 2014) as well as the effective link with all the consumption facets (health and nutrition, culture, education, accessibility, etc.). The convergence between agricultural and nutritional and social stakes has still a way to go. The existence of an «agri-food arena», «societal questioning arenas» and «sectorial arenas» seizing one facet of the food issue seems more able to display the diversity of the French scenes presently investing the facets of the food issue. Their concrete hybridization remains to be done. The food governance calls for a better articulation between the scenes and today there could be an interest in keeping those scenes divided so as to avoid conflicts: «Agenda 21, PCET [Territorial Climate Energy Plan], ESS [Social Economy] plans would deal with the civil society when agricultural policy would manage the relations between the professionals and the local authorities» (Bonnefoy and Brand, 2014, p. 102). As noted by TEV, the first approaches evolve between an agricultural and a militant conception and both of them are reductive of the food issue. The agricultural conception is limited to the relocating and for the militant conception is it difficult to make links with the real agriculture of the territory and the planning actors (Brand and Bonnefoy, 2011). From a general perspective, the link between food and planning issue stands still.

The discrepancy between diffusion and reception of the food governance notion. – The «food governance» term is used as a language component from 2008 and is strongly diffused since 2012. At the end of 2012, two conferences take place only a few days apart centred on the city-food issue (4).

The International Urban Food Network (IUFN) conference officialised the creation of this network which aims at contributing to the integration of the food criteria in the planning and political agenda and operationalizing the research on the food governance. There is no real prism in the seizing of the urban food issue if not the encompassing one of sustainability and the right to food. As the founder comes from a professional path focused on the sustainability issues, she has developed a transversal approach on this multidimensional issue. On this occasion, a booklet, written by IUFN, TEV, two representatives of the local authorities and researchers, on the city region food governance is diffused (5). The IUFN aims at questioning the local authorities on this theme and at making visible the existent elements on this issue. But, two surveys on initiatives on sustainable urban food and the food issue at the local authorities agenda, conducted in 2011 and 2013 got limited answers. So as TEV's first investigations, the surveys show that the local authorities do not have a global seizing of the food issue, that they are not familiar with the «food governance» notion, that it is far from being a priority on their agendas but that a growing interest comes from the urban sustainability issues. A the end of 2013, a more detailed survey is conducted on some city regions on the initiative of the Ministry of Ecology, Sustainable Development and

(4) *Hungry city. Nourrir la ville de demain*, International Conference organized by IUFN on city region food governance, 6-7.12.12, Paris. *Nourrir les villes … et développer les campagnes : pour une alimentation durable et responsible*, conference organised by the World food systems UNESCO chair and the Breuil school, 13.12.12, Paris.

(5) ADCF, ETD, IUFN, Terres en villes, 2012, *Nourrir nos villes. Pour une gouvernance alimentaire durable et responsable des régions urbaines*.

Energy, of the IUFN and in partnership with TEV so as to avoid the difficulties of a national survey. The survey focused on the fields of action identified by TEV where the food issue potentially appears (Agenda 21, PCET, ESS). They establish that the food thematic appears in projects related to peri-urban and urban agriculture, waste management, health consciousness, food sector structuring. Quoting the difficulty to find a person in charge of the projects related to food, the report (Bastianelli *et al.*, 2013) tells again, in a naive way, the gap between the food governance conceptualisation formulated by some pioneers actors and the reality of apprehension of the food issue by the local authorities. But still, the food issue starts to diffuse more widely.

The French Region Association publishes in 2014 a Declaration in favour of the territorialised food systems. Concerning research on food systems, manifest evolutions are in progress. Mainly centred on the production side, the rural and agricultural geographers open to the consumption side through studies on the evolution of the agriculture in relation with the urbanization or through the arrival of new environmental and food concerns. Even if the agricultural perspective is, here also, difficult to overcome, they begin to seize the urban food issue (Brand, 2015). In this evolution they open up to the consumers and the cities as institutions in the construction of food policies (Perrin & Soulard, 2014). Also, at the end of 2012, the conference co-organised by the World food systems Unesco Chair of Montpellier scores the beginning of a number of encounters on the sustainable urban food systems in an enlarged approach since 2013 (nutrition regimes, taste education, agro-ecology, food security, food aid, right to food, etc.). With the rise of the food issue in civil society, on the agenda of the French state, all of this forms a background that starts to question the local authorities.

Nevertheless it is difficult for them to seize what this «food governance» term really means. This explains partly the limits observed for TEV. Its first investigations were pioneer but its members did not follow completely. The technical secretary reported that the members were mainly asking for operational elements so as to support the development of short food supply chains. The notion leaves the technicians of the local authorities with a fuzzy impression, beside the perception that it is a structuring framework for developing the local food supply of the city. When interacting with the technicians of French local authorities, we observed that they systematically had difficulties in expressing what it covers. Even, the technician of the Grand Lyon in charge of agricultural issues declared in 2011: «in TEV, we speak of food and for me it has always been a UFO». Despite the fact that food policy is a grey area, there is a latent injunction to use it. This field of action becomes evident and appears more clearly on the tables of discussion since 2013-2014. Since then I have been personally asked by the local authorities for general presentations on the topic that stresses the need for clarifying the general use of terms such as «food governance», «local food policy», «local food strategy». In the agricultural field of action, food is seen as the framework of evolution of the field and the «food» term appears in the titles of elected representatives and technicians. This also emphasizes the transition from an agricultural to an agri-food perspective and the way to go toward local food policies. In the Nord-pas-de-Calais region, the vice president in charge of food, agricultural regionalisation and rurality since 2011 fought for the mention of the « food » term in its delegation title. For him, it expressed the fact that the per-iurban agriculture need the alliance with the consumers.

The French food policy paradox? – This article intended to track the stages and factors of emergence of the urban food issue on the French territorial agenda. In the food planning community, one could speak of a French food policy paradox. Despite the centrality of food, France was little visible in the nascent food planning debate scene.

But, if the consciousness of action on the urban food issue was belated formulated compared to the northern American and European countries, France was not that late in terms of action. For instance, in the Urbact «sustainable food in urban communities» program (6), Bristol was first perceived by the other cities implied as an advanced city on the urban food issue. Bristol has developed the first city region food system assessment and set up the first food policy council in Europe. Also, Bristol example was largely diffused in and by the academic circles (Brand, 2015). But, in the course of the Urbact program, the other cities, and Lyon in particular, realized that they had lots of existing actions and actors mobilized and that Bristol was not that much in advance in terms of concrete actions and existing devices on the urban food issue. Bristol representatives even confessed they had difficulties in putting the issue on the public agenda. An apprehension of the topic had just been earlier formulated compared to the other cities.

In France, the diffusion of the «food governance» term preceded the social reality, mainly describing connections and absence of connections between thematic, actors and scales concerned by the food issue. The treatment of the food issue is siloed and the urban food issue has mainly been formulated through the agricultural prism. Siloes remain today in the global perception of the food issue. The «food approach», departing from the siloed glazes on the food issue, encounters the barriers of a sectored territorial action. The agricultural prism still dominates the construction of the urban food issue. The focus is mainly put on the city supply issue and the approach struggles with the integration of the consumption side and of the conventional agro-food actors. The Territorial Food Projects device established by the national Loi Avenir pour l'Agriculture, l'Alimentation et la Forêt of the 13.10.14 appear as a tool to better cross actions related to consumption and production issues falling under state injunctions or under the initiatives of the local authorities. But here also, contradictions remain in the territorialisation of the state food policy and the emergence of local food policies as the «food» notion is not yet integrated in documents framing the local authorities action (7).

(6) Urbact is a programme of community initiative of the economic, social and territorial cohesion policy of the European Union. The thematic network «sustainable food in urban communities» is part of the thematic «environment with low carbon impact» of Urbact II (2007-2013). It groups 10 cities (Brussels, Amersfoort, Bristol, Olso, Göteborg, Ourense, Lyon, Messina, Athens, Vaslui) wishing to reflect and conduct actions for more sustainable urban food system. Between 2013 and 2015 I accompanied the city of Lyon in this programme on an expert, supporting and capitalisation mission. Monitoring this programme was a support for analysing the rising territorial seizing of food at local authorities scale.

(7) In 2013, in the Loi pour l'accès au logement et un urbanisme rénové, an amendment proposing to recognize the nourishing function of the agricultural land in planning tools was rejected. In January 2016, the issue has been rediscussed as the Bonnet report on the planning of the rural and peri-urban territories proposed the creation of a «food competence for the local authorities».

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THE FRENCH URBAN FOOD ISSUE EMERGENCE. – This article intends to outline the key features of the urban food issue emergence at the local authorities scale. France is well-known across the world as a country where food matters but surprisingly, France was almost absent of the first debates of the North-American and European food planning community. Though, food issues are recently reinvested through the notion of «food governance» whose breeding ground was the periurban agriculture issue. This emergence is particularly analyzed from the scope of the Terres en Villes network, leader of the first debates. The first paths of the urban food issue aimed at comforting the periurban agriculture position in an urbanization context. This initial agricultural prism is evolving toward an agri-food perspective. Progressively, the agricultural prism is opening toward other silos and in particular to the consumers. Nonetheless, the red thread of the food policy is not reached yet. Difficulties subsist in going beyond the initial agricultural prism. The city food supply issue dominates and leaves out the other dimensions of the urban food issue. France is characterized by the existence of several arenas seizing one facet of the food issue and their concrete connection stands still. Even if the «food governance» term is largely diffused since 2012, there is a gap between the pioneer of food governance conceptualization and the reality of apprehension of the food issue by the local authorities.

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METROPOLITAN AGRICULTURE: SOCIO-DEMOGRAPHIC DYNAMICS, URBAN GROWTH AND FOOD-CITY RELATIONSHIP IN THE MEDITERRANEAN BASIN

Introduction. – In the contemporary cities the topic of urban and peri-urban agriculture emerges as a strategic element of sustainable management in order to obtain a territorial balance between rural and urban areas. During the last decades peri-urban territories experienced a significant increase in their extensions generating areas that are neither urban nor rural, although these acquire fundamental features of both territorial typologies (Galli *et al.*, 2013; Salvati, 2016). As product of their particular geographical location, the recent and continuous growth of peri-urban territories produces rapidly changing socio-economic interactions and spatial interdependencies which, furthermore, can stimulate the farmers - the main players in this latent transformation- to experiment with different practices of land management.

The definition of urban and peri-urban agriculture provided by FAO (2007) refers to all those agricultural practices carried out within and around cities that provide goods and services and that are able to meet the demands of the urban population. By fulfilling many functions related to the social, economic, environmental, ecological and symbolic dimensions, the cultivation activities in urban and peri-urban areas represent an effective contribution in terms of management and planning the sustainability and the resilience of the cities towards climate change. The importance of green spaces, often considered as areas just waiting for speculative uses, emerges in relation to the country's ability to safeguard and preserve, but also to the social, environmental and economic potential offered by these spaces.

The present contribution investigates urban and peri-urban agriculture in three major metropolitan regions of the Mediterranean (Rome, Barcelona and Athens). In recent decades, these cities are experiencing a revitalization or slow recovery of traditional farming practices, accompanied by the preservation of the landscape and the experimentation of new relationships between the inhabitants and their urban and peri-urban context of life -in a context of economic crisis that has strongly impacted on local communities. Going beyond the traditionally functions of production of goods (food and natural textile fibres), the initiatives linked to agriculture, horticulture and gardening, are rich in socio-economic and environmental values. Through the realization of projects related to green areas within and inside the margins of the cities, several spaces have been created to satisfy the desire for naturalness and rurality that pervades today's citizens so that in multifunctional agriculture they can find places to realize leisure, didactics and aggregative activities. In addition to the

production of recreational landscapes, the agriculture activities contribute to the creation of employment, social and cultural services, thus representing in fact an opportunity for income generation and/or self-consumption, especially for disadvantaged groups.

Urban agriculture, indicated by FAO as «a way out of poverty» and already spread during the wars as a mean of subsistence for the disadvantaged population groups, historically supports food security and self-consumption. Urban agriculture assumes different shapes and roles depending on the relationship between the new urban realities. As indicated by Jouve and Padilla (2007) in a study on peri-urban agriculture in the Mediterranean basin, various categories can be recognized: professional agricultural production, specialized family farming, agricultural necessity and multifunctional agriculture. The modality of agricultural production are decisive for ecological functionality and, therefore, for human well-being in all its dimensions. At present, the emerging interest in this phenomenon is linked to a whole range of issues, including the demand for quality and transparency with respect to the products consumed daily by urban populations. On the bases of the recent flowering of Ethical purchasing group and local markets, the support to short food supply chains represents a success factor both in environmental and economic terms, moreover indirectly contributing to the reduction of the carbon emissions and of the distribution expenses.

The topic of urban and peri-urban agriculture is basically related to that one of food security. The decrease of population that characterized rural areas and the consequent population increase in the metropolitan areas, highlights the urban agriculture portal with respect to the ability to provide adequate access to adequate food, as it contributes to the availability of fresh local food and contribute to the maintenance of healthy populations (Opitz *et al.*, 2016).

The agricultural management of green spaces is currently playing an important role in the territorial policies of the cities as useful tool for limiting urban expansion and contributing effectively to the biodiversity support. Open areas and urban voids, that have hitherto been considered as not relevant areas, back to purchase importance within the sustainable land management. The creation of urban green belts and agricultural parks represents an opportunity for the creation of multifunctional networks that can be enjoyed by local populations. At European level, the European Landscape Convention sanctioned the passage from an essentially aesthetic conception of landscape to a notion that considers it as a fundamental element of cultural and natural heritage - and hence as the basis of the social and individual well-being of the populations. This transition of concepts has brought attention on the need to safeguard and manage agricultural spaces, thus giving to the territories the opportunity to create incomes and to protect the territory.

Urban agriculture and demographic dynamics. – Socio-economic changes that have interested in various ways the Mediterranean regions since the Second World War, have determined the abandonment of the traditional agricultural landscape and the growth of urban areas. Being unable to adapt themselves to the processes of industrialization and specialization of the production required by the market, the small businesses have been disadvantaged. The marginalization of the agricultural world has led to two contrasting effects: on the one hand an extension of forest areas occurred over the last few decades, while, on the other a permanent loss of fertile soil interested these territories.

Faced with such changes, a new relationship between town and country is required. Peri-urban agriculture is suitable to the realization of projects of public interest, constituting itself part

of broader natural infrastructures of public interest (Donadieu, 2013) and being characterized by a territorial perspective. With regard to the supply of public goods offered by agriculture, it should be noted that over the last decades the supply processes changed following the evolution of the demand (Nazzaro, 2008). In this sense, on the basis of the estimated demographic growth that will affect the Mediterranean region over the next few years, coupled with the ever-growing migratory phenomenon, it seems to be important to deepen the issues linked to the food security as also the relationships between the agricultural areas and the city. The structure of the Mediterranean cities is rapidly evolving and is largely characterized by spontaneity and disorganization, densification of the peri-urban fringes and growing population in the neighbouring areas of the city centre (Salvati, 2012). In this context, the traditional relationship between the urban world and the rural world is redefined. Within half century the population of the Mediterranean basin will pass from less than 300 million inhabitants in 1970 to more than 500 million in 2020. The demographic dynamics interesting the Mediterranean area – not least the migratory phenomenon – led the topic of agriculture in the contemporary debate on the increasing urban poverty, food security, and city planning, focusing on the non-renewal of some natural resources. Urban and peri-urban agriculture contributes to sustainable urban planning strategies of the metropolitan cities, which is a common good not only in terms of food, but also in terms of social inclusion processes and fight against poverty.

The design and the project of the open spaces, along with the strategic planning, play an important role both on a metropolitan scale and on a local level, contributing to argue the metropolization of the territory and helping to create more habitable and vital territories (Magnaghi and Fanfani, 2009). However, since the peri-urban territories are subjected to multiple urban pressures, they face problems such as water and soil pollution, due to the proximity of incompatible (potentially or directly damaging) activities to agricultural ones. In this sense, the mere economic support to agricultural enterprises is not sufficient unless it is involved in the widespread and correct management of natural areas, of their resources and biodiversity, in a favourable context for the agriculture and the permanence of agricultural peculiarities in the territories .

With the breakdown of the traditional urban-rural relations resulting from the new settlements, the need for reconciling the two worlds, that are deeply changed and constantly evolving, has become a major source of dialogue and vitality (Bonafede and Canale, 2015). The agriculture, with particular reference to the multifunctional one, is able to create meeting spaces for comparing the needs of the territories, thus playing an important role also in terms of territorial planning (Magnaghi and Fanfani, 2009). Furthermore, with the introduction of the concept of multifunctional agricultural enterprise, the concept of agricultural activities has been extended to several activities as reception and hospitality activities, territorial enhancement, rural and forestry heritage. In addition to being the residence and the source of self-consumption of farmers, the farms offer specific services for urban populations, responding to the need for open spaces with a variety of opportunities (Henke *et al.*, 2014).

Urban and periurban agriculture in Rome. – The historical presence of gardens in the city of Rome can be traced through the famous cartographic representation of the city at the pre-unification times. The «New Plan of Rome», meticulously realized by G.B. Nolli between 1736 and 1744, reflects the image of a city as full of villas, vineyards and gardens: these occupied two-thirds of the whole area inside the walls. As described by Insolera (1962)

large villas, great gardens and woods in the city of Rome have been destroyed to construct houses, houses and houses from the so-called «building fever» season began in 1871 with the election of Rome as capital of Italy. During the war's periods, the urban gardens returned widespread in the city of Rome to ensure food supply to the most disadvantaged groups. Some famous examples are the family gardens realized under the ancient aqueducts of Rome. In the neighbouring areas of Rome the agriculture was an important element of local economies until the years of the economic boom whereupon it was marginalized first in favour of the industrial sector and then of service one (Piccioni, 1993).

Fig. 1 – *Details of the Nolli's Map of Rome. Piazza del Popolo is surrounded by villas and vineyards*
Source: Capitoline Archives, Digital Resources

From the Seventies the modalities of expansion of the urban area, which were increasingly taking the characteristics of discontinuity and dispersion, accompanied the metropolisation of the rural hinterland. The land use transformations has been favoured by the abandonment of the agricultural activities. The urbanization of previously cultivated land take place in different ways: along the meshes of the infrastructure networks, with the quantitative expansion of the urbanization of pre-existing villages, with the creation of new cities in high-potential agricultural contexts and, finally, by models of low density settlements spread across the territory (Cazzola, 2005). While the city's growth in the 60s and 80s follows a compact model, starting from the 90s it begins to be interested by sprawl of the metropolitan area, thus determining a transition from a typically mono-centric spatial organization to a dispersed and moderately polycentric models (Salvati *et al.*, 2016).

Fig. 2 – *High resolution satellite image taken from the French Spot-5 satellite in September 2014 (Esa-ESRIN)*

Taking into account the European context, the city of Rome is an emblematic case for its particular history of agricultural development, which still makes it the largest agricultural municipality in Europe. The municipal area of Rome is large 128.530 ha and holds an utilized agricultural area (UAA) of 37.000 ha: in general terms the agricultural area represent 51.000 ha, an extension that is slightly lower than the whole extension of the city of Madrid (one of the largest urban municipalities of Europe). To determine such a peculiarity, three are the main factors concurred: the vast extension of the municipality of Rome, the presence of large green areas – partially protected – inside and outside the city, and finally the traditional relationship between the city of Rome and the neighbouring agricultural territories (Pigeons, 1993). The strong link between the urban population of Rome and the surrounding agricultural areas is historically acknowledged: this relationship can be better understood if related to the distribution of urban and peri-urban settlements on the metropolitan territory. The shortage of large farms (50-100 ha) in the city of Rome and its abundance of small and medium size farms (up to 10 hectares) reveals an extremely fragmented urban agricultural structure.

From a study on urban agriculture in the city of Rome (Di Donato *et al.*, 2016), it has been detected that the agriculture in Rome, after having suffered a remarkable fall in the agricultural land utilized between 1990 and 2000, then recorded a growth between 2000 and 2010 (+14%). The presence of short chain models is presented as a meaningful data of the

new relationship between citizens and producers, as it create a direct contact between them and thus supporting a mixed quality production. The study shows that a 60% of farms in the municipality of Rome bases their sales on a network of local markets which, in turn, is based on the attention to the quality of the products. The localization of farms is characterized by the proximity to the road axes that radiate from the city centre, to highlight the centrality of exchanges that take place with purely urban environments.

Currently there is a wide diversification of agricultural experiences in the metropolitan area of Rome. Initiatives linked to the green spaces, alongside widespread urban gardening, have experienced the flourishing of professional activities aimed at selling agricultural products. The results of the census on the areas cultivated inside the GRA – a survey carried out by the Environment Department of the Municipality of Rome between 2003 and 2006 – showed a diverse reality of agricultural activities disseminated in all the municipalities (INEA, 2014). As evidence of the recognition of the value of agriculture in the urban sustainability planning, the Department of Heritage-Development and Valorisation of Rome Capital published in 2014 a call for the assignment of rural property of municipal property aimed at the protection and recovery of the productive functions of the Agro Romano through the development of multifunctional farms. The call has seen involved young (and aspiring) farmers with less than 40 years in order to design ideas related to organic farming, biodiversity conservation, social inclusion of disadvantaged people, social and didactic farm. The allocation of the plots (each one extended on 100 hectares) is set for a period of 15 years and the farmers can enjoy easy access to the farmer's local market benches.

In 2010 the UAP Study of Architecture and Landscape of Rome initiated the mapping the of shared green spaces of the capital. The results are available through the Web-GIS of «ZappataRomana» and bring out a rich reality of formal and informal associations dedicated to the care of urban and peri-urban green spaces. In 2013, there were 154 shared green spaces (Figure 3) of which 66 gardens, 58 gardens, 30 «spot gardens» or rather urban green spaces regenerated through *guerrilla gardening* activities realized by groups of citizens.

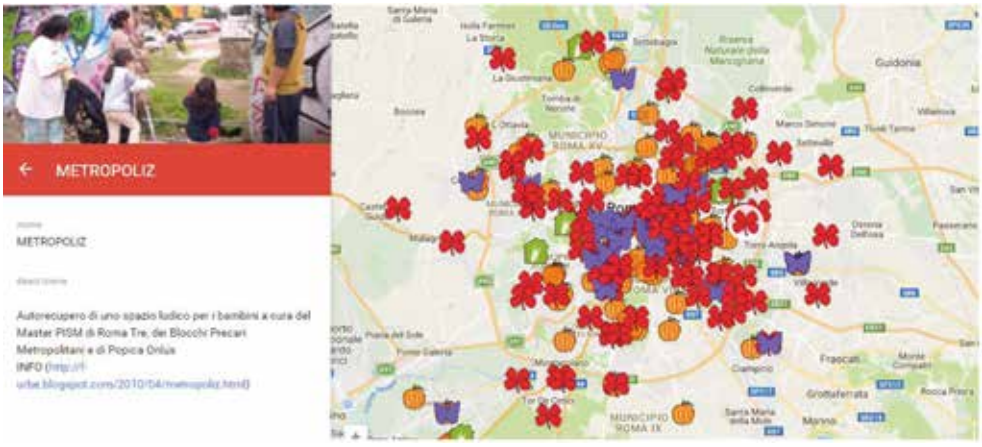

Fig. 3 – *Web Screen of the "Roman Zappa" produced by the UAP study on shared green spaces. With symbolic icons are represented shared gardens, restored farmhouses, shared gardens and commercial gardens. On the left is the detail of the information relating to one of these places (Metropoliz) accessible through web.*

For example, the Genuino Clandestino's experience appears to be of particular interest in facilitating direct relations between farmers and consumers: Genuino Clandestino is a national network that supports small farmers that are in trouble against the implementation of the EU legislation on hygiene of foodstuffs – which require the standardization of equipment and production facilities and transformation – and that, supporting direct links between consumers and small farmers, experiments with different models from those of the big distribution. A large number of farmers, by self-denouncing in front of the consumers as a «clandestine» or «not according to the law», joins to Genuino Clandestino in order to give voice and to spread the different instances of farmers that operate on a local scale through the direct sale to the final consumer (Sacchi, 2016).

Among the urban regeneration projects aiming to the creation of urban gardens, we can cite the Garden of the Palms in the Centocelle district (Municipio VII), which is the result of a participatory process began in 2010 and that involved several subjects such as the local residents, the senior centre Nino Manfredi, the Forte Prenestino's squat and various associations. The garden is large 2 hectares and is situated between the buildings of the neighbourhood and bordering the area of the Forte Prenestino: it is a multifunctional open space with educational gardens, playgrounds and performances, so that the public can enjoy it as a place of conviviality and leisure. The project saw the participation of architects, landscapers and agronomists and received regional fundings through the Municipio VII.

Urban and periurban agriculture in Athens. – Consistent with the socio-economic changes that Europe has invested in the post-war period, Greece experienced major transformations in its traditional rural landscapes: high quality agricultural and historical-cultural contexts have been converted to urban uses with consequent loss of historical functions and identities. In the Athenian context, especially since the 90s, due to the processes of expansion of several categories of land use such as urban, infrastructures and industrial, the agriculture has been pushed into rural areas far away from the city centre. From recent research related to the impact of various kinds of urban expansion patterns on peri-urban agriculture (Salvati, 2016) it clearly emerges that, while in the urban area of Athens, the cultivated areas dropped from a 4% in 1960 to a 2% in 2000, the cultivated areas persisted as major components of the landscape within the rest of the metropolitan area, recording a slight decrease between 1960 and 2000 from 33% to 30%.

In the last fifty years, the Athens metropolitan area has been invested by alternating phases of compact growth and urban sprawl: the population density of the city centre has doubled over half century; but also the suburban population has experienced an increase in population density. The great infrastructural development that occurred in the 90s facilitated the expansion of Athens urban area beyond its traditional boundaries (mountains Hymettus, Parnitha, Aigaleo and Pentelicon) leading so the city toward the fertile plain Messoghia: this is an historically agricultural area located 30 km east of Athens, renowned for the production of fine wines, where smaller towns were already existing. In this area in the 90s it was built the Eleftherios Venizelos airport (Fig. 4).

Fig. 4 – *Sprawl in Messoghia, in the eastern part of Mount Hymettus. Centers affected by highest population growth between 2001 and 2011 are identified*
Source: own elaboration of image Google Earth 2016

Nine municipalities located around the new airport experienced a significant increases in population (up to 61%) during the decade between 2001 and 2011 (Hellenic Statistical Authority, 2011). In the 2004 with the celebration of the Olympic Games, identified by Coach et al (2007) as the «engine» of Athenian sprawl, it started the last major wave of urban dispersion that has led to the transformation of the hinterland territory, especially in the region of Messoghia. An emblematic case of the phenomenon of urban agriculture in Athens is represented by the Thriasio coastal plain in the west Athens suburb, that is surrounded by the Egaleo mountains to the east, Parnitha to the north, Pateras to the west and the Gulf of Elefsina to the south. In the historically agricultural area of Thriasio, safeguarded up to fifty years ago, recent censuses reveal a low number of workers in the primary sector (10% of the active population) compared to 25% of the workforce employed in the service sector, and to the remaining 65% in industry. The abandonment of the lands and unique landscapes of the Mediterranean rural culture has gave way to rapid urban sprawl processes, to traffic congestion problems, to an incompatible land uses and an environmental degradation (OECD, 2004). The plain of Thriasio today constitutes the peri-urban territory closer to the city centre: agricultural activities, speculative and industrial (steel mills, oil refineries, cement and chemical industries) are interlaced resulting in a mix of functions typical of the peri-urban areas (Salvati And others, 2014). During the last decade, even on stimulation of the economic crisis, there has been a rapprochement of the local community to agricultural activities. Eleusi and Mandra, that are traditional farming centres of the region, saw a recolonization of abandoned land, with the recovery of traditional practices and techniques.

A research on traditional rural landscape elements in Attica (Salvati *et al.*, 2014) founds the reactivation of some fountains for collecting rainwater for irrigation purposes. A group of farmers, small in numbers but conceptually meaningful, has spontaneously opted for a return to the agricultural activity to tackle the economic crisis. In the reconquering of the abandoned spaces there occurred a recovery of the characteristic elements of the rural world, such as troughs for animal. The dry pistachio culture, a production confined in the preceding decades to the island of Aegina, was also recovered. Currently, the traditional agricultural techniques represent tools for the application of sustainable practices that have been preserved through the centuries by the rural world to deal with the seasonality of the region. Today, these techniques are becoming even more valuable when compared in order to tackle the climate change and the scarcity of rainfall which sometimes characterizes the Mediterranean area, exacerbated by the waves of heat that are increasingly observed in urban environments.

Urban and peri-urban agriculture in Barcelona. – The metropolitan area of Barcelona has a rich presence of agricultural and wooded areas within a radius of 50 km from the city centre, so that the territory is provided with an high quality of life for its inhabitants. A factor that favours these features is the discontinuous distribution of middle urban centres around Barcelona. In 1983 with the *Pla Territorial General de Cataluña*, the *Generalitat de Cataluña* – that is the territorial organization of the Catalan autonomous community – defined the areas of particular interest for the agriculture and for forestry uses. Three territorial systems were defined: open spaces, settlements and infrastructures. Open spaces, which includes not-urban areas, are considered by the plan as key planning components. Towards these not-urban areas, three levels of protection were defined according to site characteristics: spaces under special protection for naturalistic and agricultural significance; area under special protection for vineyards; areas of preventive protection. With the approval of the *Pla Territorial Metropolis of Barcelona* (PTMB 2010), 74% of the metropolitan area is included in the category of open spaces, of which 70% belong to special protection areas (Giacché and Toth, 2013).

As regards the regional agricultural planning, specific measures for urban and peri-urban farming are not provided. Between 2009 and 2011, initiatives aimed at re-launching short-chains have been developed, so that the topic of the agri-food quality promoted a social favourable environment to the protection of not-urban peri-urban areas. In this sense the *comarca* of the Vallès Oriental, a peri-urban area located in the northeast of the Catalan capital, has been interested by initiatives derived from the adherence to the RurUrbAl project. The project, co-financed by the European Fund within the MED Program, aimed at experimenting with models for the sustainable and balanced local development of peri-urban territories through enhancement, marketing and promotion of the local agri-food products.

At regional level, some subsidies to the peri-urban farming parks were granted, then cut and reduced in 2013 due to the economic crisis, such as to the Gallecs and to the *Parc Agrari del Baix de Llobregat* (BLAP), which are close to the consolidated urban area. The agricultural park of the Baix Llobregat (Fig. 5), founded in 2008, is located in a context characterized by the presence of El Prat Airport in Barcelona, as also of middle urban centres and cultivated areas; it constitutes a cultural, economic and ecological heritage of over 3,000 hectares where agritourism is combined with the alternative food network, thus sustaining the short chains and the direct contact between farmers and consumers. The park also fits into the green ring

of the city communicated between the Collserola Park (northeast), the Garraf Natural Park and the Oral Oblivion's Natural Interest (west), and the Nature Reserves Of the Llobregat Delta (south).

At the municipal level in Barcelona, also thanks to the impulse of the *Pla del Verde y de la Biodiversidad-2020* presented in 2013, numerous common gardens and educational gardens were promoted in line with the EU Biodiversity Strategy. The first urban garden in Barcelona, the Hort de L'Avi, were created in 1986 and born by the initiative of a group of residents in the district of Gràcia. The gardens, as also the products of such gardens established with the *Pla del Verde*, must respect the principles of organic farming. In 2012, the municipality of Barcelona promoted the first edition of the *Pla BUITS* (*Buits Urbans Amb Ambition Territorial and Socia*l): this is a competition ideated by the *Ecologia, Urbanisme i Mobilitat* department, which aims to regenerate disused land within the city of Barcelona. The initiative involved no-profit entities, associations and foundations for the temporary management (from 1 to 3 years) of disused green areas and for the implementation of projects of public interest. The projects cover educational, sports, recreational, artistic, environmental, landscape and social offerings and contemplate the temporary, removable or compostable installation of artefacts. The second edition of the plan was launched in 2015.

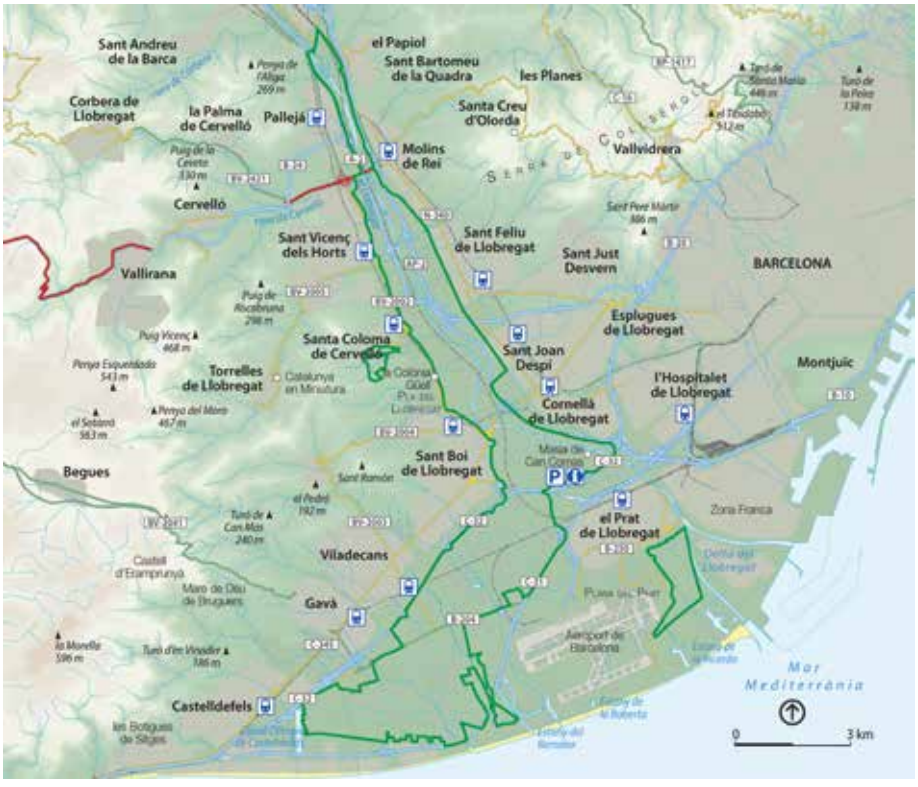

Fig. 5 – *Detail of the map of the Baix LLobregat Agricultural Park (Catalunya). The park is immersed in a highly urbanized context, right on the Llobregat River Delta (Barcelona's El Prat airport in the middle)*
Source: Diputació de Barcelona, Parc Agrari of the Baix Llobregat

About twenty projects started and are distributed in various areas of the metropolitan area of Barcelona (Fig. 6). Between 2013 and 2015, in conjunction with the Pla BUITS, the *Pla de Microurbanizaciones* was ideated by the municipality of Barcelona in order to regenerate small public space with extension of 200 to 6.000 m^2 and to convert them into proximity open spaces enjoyable by the citizens. The plan regards low-cost interventions (from 14 to 300 €/m^2) that are conceived around the needs of the individual districts, where the design of the project, the reduced ecological footprint and free services enjoyable by the residents are factors of primary importance. In 2013, the *European Cost-Action Urban Agriculture Europe Project* conducted an investigation through the vineyards and the cellars of the Alella's area that is Protected Designation of Origin (PDO), located in the peri-urban area of the metropolitan area of Barcelona. It is a wine region that involves over 28 municipalities and has an extension of 314 hectares. The not-urbanized area in the Alella's protected area is 68%, of which a large part is covered by forest and 18% by farms. The vineyards, which are historically present throughout the wine region, have suffered a major decline since the late 80s due to the emergence of *phylloxera* (*Daktulosphaira vitifoliae*). Since the Nineties a varieties of grapes, abandoned since the epidemic (e.g. Red Grapes of Matarò), have been re-introduced. Urban sprawl has reduced the extension of vineyards to fragmented and highly fragmented peri-urban contexts which are requiring specific recovery efforts.

Fig. 6 – *Web Gis screen on Pla Buits projects and detail of one of them on the left (Cardenal Sentmenat urban garden)*

Urban Growth and Food-City Relationships. – Peri-urban agricultural policies are now deeply renewed by three major movements: the urban sustainability, the food security and the return, although slow, to the territorial economy (Bonnefoy, 2013). In this context, however, during the last century the Mediterranean rural landscape that has been characterized by cultural richness and natural biodiversity, and that is resultant of the human-nature interactions, has undergone major changes. The expansion of urban areas has shaped and gave new shape to the relationship between city and country, as also to the landscapes that have experienced, over time, these interactions. Currently, the urban expansion and preserva-

tion of the fringe landscape are phenomena with significant socio-economic, territorial and environmental implications. The conservation and recovery of the rural landscape within rapidly evolving urban fringes is one of the tools which have been recently recognized as key elements of an integrated planning of metropolitan territories.

The rapid demographic growth of the last fifty years caused the expansion of the Mediterranean metropolitan areas. Along with the socioeconomic and political transformation of the rural world, it occurred a general abandonment of the countryside and an unprecedented growth of the urban areas. In this context, the peri-urban regions were that ones that recorded the higher population growth in Greece, Italy, Spain and Turkey (Salvati, 2016). The urban sprawl processes that affected the Mediterranean cities contributed to the fragmentation of forest areas and the degradation of agricultural land in hilly and plain areas, thus altering the traditional urban-rural gradients.

In contemporary urban and peripheral landscapes, however, there are changes that point to a rapprochement to the land and a revaluation of the uses of the lands. The processes currently affecting the agricultural sector in urban and peri-urban areas reflect the changes that agriculture is developing in its new forms, in the landscape and in the production of new forms of hospitality, reception and service to the inhabitants of the cities. The organization of agriculture, in fact, plumbs the supply of products and services around urban demand, determining that this demand results not necessarily limited to the agri-food products, but , contrariwise, that is able to bring social and environmental contents with the creation of employment, as also educational and cultural possibilities. Within the urban spaces, the cultivation of abandoned public and private areas reflects a new dimension in the care of daily living spaces. These spaces do not necessarily have to meet the food needs but also other types of needs as urban regeneration, spare time and recreation: urban gardens, areas converted into common gardens, leisure equipment, are supporting new social relationships and creating new spaces for citizens' interaction.

The spread of new urban and peri-urban land use patterns is reflected in the multitude of the existing realities and projects throughout the European context, which reveal, on the one hand, the will of the metropolitan communities to become the protagonists of the management of the urban green areas and, on the other, a considerable and effective attention to the limitation of soil consumption. There are various European examples of processes related to the active management of open spaces in disuse: in Berlin the *Prinzessinen Garten* is the result a subtraction process of a public space from a project of privatization and was made possible through the participatory mobilization of the local community. The area is located in the centre of Kreuzberg and extends over 6.000 m^2. It is a public space that does not perceive any kind of funding but which, on the contrary, is a self-supporting project supported with the sale of the vegetables produced there and with the restaurant. It represents a space dedicated to the urban horticulture (free from pesticides and chemicals) and to the creation of spaces of socialization: in the garden there is a café, a restaurant offering vegetables that are produced there, a play area for the kids, and, finally a library specialized on environmental thematic. Located in a very multi-ethnic neighbourhood (with migrants from the Mediterranean, the Balkans, Asia, Africa and Latin America), the garden reflects the great variety of its surroundings: in fact the seeds are provided by the returning residents in visit to their native land, thus increasing the diversity of the cultivated species and the links between this site and the community. The land lots are not assigned and fixed, but

are spontaneously co-managed by the users of the gardens. The plantations, the irrigation of gardens, the fruit and vegetables division are carried out in a collective and autonomous way. Furthermore, the cultivation is realized in mobile planters so that the project is open to guerrilla gardening initiatives across the city.

Experiences of metropolitan agriculture seem to be varied and diverse, but essentially they reflect a common impetus for eco-social and social management of the urban open spaces. In France, for example, through the mobilization of civil society, the proximity farming constitute a social issue (Bonnefoy, 2013). Numerous, and often politicized, movements and associations (such as *Terres de Liens* or *Terres du Lac*) are supporting an approach based on peasant agriculture, proximity and support to the creation of agricultural projects in peri-urban areas. *Terres de Liens*, for example, present throughout the country, is an association that promotes land access to project proposers, starting from the land research. Furthermore the association seeks to support the project and to create the conditions for a closer ideal proximity between urban and agricultural world, and for this reason it cultivates in the local communities the issue of the conservation of agricultural land, of the importance of the biologic production and of the proximity consumption.

Conclusions. – The phenomenon of urban and peri-urban agriculture investigated in this article reveals the multidimensional nature of agricultural and extra-agricultural activities that are interesting the open spaces of Mediterranean cities. The presence of farmers in metropolitan contexts, besides reflecting a change in the spatial distribution of agriculture, reflects the approach of the civil society to the environmental and rural issues, followed by the revitalization of the primary sector by experimenting with new forms of relationship between inhabitants. The vibrancy of experiences in the cities of Rome, Barcelona and Athens promoted by both local communities and institutional initiatives - such as urban and common gardens, regeneration of degraded spaces, professional and multifunctional farms- reflect a renewed interest in the care and protection of the territory. The reality of peri-urban agriculture is particularly varied and is made up of a large variety of interventions from the small scale -such as the low-cost interventions for temporary management of small urban spaces- to larger scales with projects concerning the planning of metropolitan areas. Furthermore, the process of return to the land as also the management of the open spaces carried out by associations, informal groups and professional farmers can be described as a process of re-territorialisation or enhancement of the territory, thus highlighting its special environmental, economic and social values.

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METROPOLITAN AGRICULTURE: SOCIO-DEMOGRAPHIC DYNAMICS, URBAN GROWTH AND RELATIONSHIPS BETWEEN FOOD AND THE CITY IN THE MEDITERRANEAN AREA. − The urban and peri-urban agriculture is a pivotal issue in the debate on sustainable management of contemporary metropolitan areas. A multitude of projects are investing large Mediterranean cities such as Rome, Barcelona and Athens. Multiple solutions proposed in social, economic and environmental terms by the new models tested by urban agriculture are playing an important role in the planning's practices of the open spaces. The investigated cities seem to reflect processes of redevelopment of the agricultural practices, through which new landscapes are cultivated, and new relations are created between farmers, communities and territories within peri-urban areas.

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FOOD JUSTICE AND SOVEREIGNTY IN THE NEOLIBERAL CITY: POSSIBILITIES AND LIMITS OF URBAN AGRICULTURE (1)

Introduction. The rediscovery of urban agriculture. An opportunity to re-think the link between city, urbanism and food. – In the last ten years the urban cultivation of food – in the form of allotments, community gardens and more generally urban agriculture (UA) – has raised the interest of community groups, local governments and research in the Global North. Before then, the interest for food cultivation – while still an existing grassroots practice – has been considerably limited in the policy and research communities. A notable exception being David Crouch and Colin Ward's (1988) work which to date, is still one of the most complete overviews of the European urban allotment tradition.

As an Italian immigrant, raised in a context (the south-west province of Milan, and in particular a village in the Urban Agricultural Park on South Milan (Parco Agricolo Sud Milano), where urban cultivation and farming were widespread, although not the norm anymore, a find myself smiling at the claims of «rediscovery» so common in the contemporary literature. This is not only historically ungrounded (the urban cultivation of food, in fact, it is not new, nor it has ever disappeared completely), but it is even more unjustifiable in a context – Italy and Southern Europe - where the food system, the food culture and land tenure systems are radically different from the northern European and American one, where the rediscovery of UA is mostly due to a new awareness of food that in southern Europe has never been wiped out completely.

However, if we look at urban agriculture as an opportunity to rethink the link between food and the city, and between the city and urbanism as a whole, the emerging and renewed interest for urban cultivation is prospecting fertile. A rising number of scholars has indeed begun to explore the potential synergies between urban agriculture and food sovereignty and (Heynen, Kurtz and Trauger 2012; Sbicca 2012; Agyeman and McEntee 2014; Galt, Gray and Hurley 2014; Tornaghi 2017).

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In this article I aim to contribute to this debate by not only offering opportunities to reflect on urban agriculture as a tool to feed people in need, but rather, to go a step beyond, by building the conceptual pillars for re-imagining contemporary urbanism.

The article is structured in two main parts: in the first one, I discuss the forms of injustice which are re-produced in large part of current urban agriculture. In the second one, I discuss how these forms of injustice are not contingent, but rather an expression of the neoliberal city, and present some directions for overcoming them.

Socio-economic and environmental justice in the city, and the limits to contemporary urban agriculture. – Literature on contemporary urban agriculture is largely apologetic: enthusiastically stressing the benefits that urban cultivation can bring to the city. Community building, tackling obesity, isolation, depression and sedentary lifestyles through neighbourhood horticulture, sociality and healthy exercise; inter-ethnic social cohesion; cost-saving maintenance of public space; increased monetary value of buildings next to community gardens; new uses of, and markets for, urban waste. These are just a few of the highly prized benefits of urban agriculture (for example Wakefield *et al.*, 2007; Hou *et al.*, 2009; Firth *et al.*, 2011; Turner *et al.*, 2011; Grabbe *et al.*, 2013; Drechsel *et al.*, 2015).

To a lesser extent, but in rapid increase, is the literature focussed on how UA contributes to change food habits, reduce food miles and environmental impacts of food, and to improve the diets of vulnerable populations, and individuals in poverty. Some of the most recent contributions in this field (see for example Heynen *et al.*, 2012; Sbicca, 2012; Agyeman and McEntee, 2014; Galt *et al.*, 2014) have indicated UA as a concrete possibility to contribute-at least partially- to food sovereignty and justice. It is with the aim of contributing to this particular debate that this paper discusses the limits to the full transformative potential of urban agriculture.

The following discussion, from the perspective of urban agriculture as a food producing practice, is the outcome of over seven years of research, action research and scholar activism in the UK and the Netherlands. The section is organised around five main areas, pertinent to the urban production of food:

i) the motivation to grow food; ii) land access; iii) farming, tending the plants and managing soil nutrients; iv) harvesting, sharing, trading and shaping the food system; v) food preparation and consumption.

The analysis that follows, discussing experiences of food cultivation that fall under one or more of these categories, will show the extent of the limitations that compromise significantly the chances to achieve food sovereignty through UA.

Seeking to grow food. – The desire to cultivate and to produce food for own consumption has no statutory space in the city. While a growing number of allotments and community gardens are proliferating across cities in the Global North – often with the support of local policies supporting urban regeneration or social cohesion – rarely if never these initiatives are supported as a recognition of a legitimate desire to grow food for own use. Not even the contemporary social movements fighting for food security, food sovereignty or the right to food have an unequivocal position on who should provide the culturally, and ethically sourced food that they fight for (Schanbacher, 2010, p. 79): these debates leave us floating between positive and negative rights to food.

However, at least two considerations urge us to claim the right to grow food.

The first is based on what the UK *Food Ethics Council* has called «ethical market failure» (2010, p. 85). The financial measures guaranteed by *Fairtrade* are considered a weak proxy for the environmental impact of food production (for example pollution and extraction of natural resources). Additionally, *Fairtrade* doesn't tell whether the lands on which the food is grown have been subjected to processes of landgrabbing (DeSchutter, 2012) – the ultimate frontier of colonialism – or conversely managed by resourceful communities. Given the structuring power of the food regime, and the omnipresence of food-like products «extracted» by exploited communities and lands, the choice of food self-production and grow-your-own – for many products – may well be the only way to feed oneself ethically.

The second consideration in support of a claim for the right to grow food is based on considerations on cultural diversity, spirituality and food values (Bradley and Galt, 2014). Shillington (2013, p. 104), for example, reminds us that «food is implicated in the most intimate and necessary human-nature relations […]. At the corporeal scale, the consumption of food contributes to the production of our material, emotional and cultural bodily spaces; […] Food is an important part of producing our socionatural bodies».

If we agree that food choices are related to multiple spheres of meaning, and we recognise the right to self-determination and to nourish ourselves in ways that respect and are aligned to our visions of global justice and ethics, then we have to consider the right to produce one's own food. This includes the right to engage with nature and to grow your own, and inevitably invites considerations on urban environments, private property rights and the way they constrain people's empowerment towards self-production.

Land access. – The most widely experienced form of injustice in relation to the urban production of food is the lack of access to land. While vertical gardens, hydroponic and aquaponic systems and rooftop farms are becoming popular means of cultivation, urban cultivable land remains a scarce and alienated resource, mostly dedicated (by urban plans and planners) to housing, commerce, industry and other third sector activities, and almost never agriculture. Interstitial and small green spaces, urban parks and brown fields or areas awaiting development are often the only choice available, but also commonly available only with short leases. Long term contracts for renting the land are extremely rare, and when they exist are charged at market rates, which makes them unaffordable and discourages non-professional, bottom up initiatives willing to upscale. Short contracts, on the other end, often used for brownfield or temporary spaces where the soil is polluted, and the only form available is the growth in removable containers, have the consequence of making the food growing project ineligible to access funding for infrastructural development and commercial start-up (such as polytunnels or irrigation systems), and of discouraging the cultivation of perennial plants, fruits and fruit bushes. This is a common scenario also in those cities that have signed up to networks for the development of sustainable food plans, where little of those aims has trickles down into land policies and planning.

Even though, as pointed out by Galt, Gray and Hurley (2014) and Schmelzkopf (2002) millions of people are already actively changing and rethinking the way they use contemporary urban space in relation to food, fighting for gentrification and land access, for the fulfilment of the human right to grow food it is necessary to develop an approach that unequivocally reclaim land as a common good for food production. Contributions in this

direction are, for example, the works of Passidomo (2014) and Purcell & Tyman (2015), which converge in illustrating the link between grassroots forms of appropriation of processes of urban space production, autogestion and claims for the right to the city. Equally useful for a reflection in this direction is the recent work of Bresnihan and Byrne (2015) and Huron (2015) on the production of urban commons and the more dated, but useful work of Schrader-Frechette (1984) on legal options for the contestation of processes of land concentration. In line with these contributions, in light of a sharp rise in urban food poverty and malnutrition, and given that land property appropriation and concentration often comes with forms of impoverishment and/or destruction of natural resources upon which the survival of our species is based, it is imperative to contest regimes of land property and privatisation of natural resources.

Cultivation and animal breeding. – Access to the land is not sufficient condition to guarantee the possibility to cultivate the urban soil: a number of procedural and capability issues are dotting the long and winding road of urban agriculture. Examples of them include municipal rules (like in Newton, Massachusetts (2) and Orlando, Florida) (3) that forbid the cultivation of people's owned front gardens in residential areas, on the basis of aesthetic criteria, or the various regulations that limit animal breeding (pigs rearing, bee keeping, or chickens) often on health and hygiene grounds. There are also context-specific rules such as allotments limiting a number of agroecological practices (such as keeping ponds with frogs for bio-control of pests) or municipal parks preventing the collection of rainwater or the use od permaculture in the community gardens located on their grounds, due to aesthetic reasons.

Of particular notice from the point of view of the capacity to cultivate effectively and sustainably the urban soil is the prohibition to transport across the city (from the house/kitchen to the composter in a community garden or allotment) the organic waste produced at home (such as inedible parts of vegetable or fruit peelings). A prohibition based on hygiene criteria –although rarely consistently enforced – which nonetheless, indicates that urban cultivation must maintain a (totally un-necessary) relation of dependency from the agro-industry for the allocation of nutrients and fertilisers, or the privatised water service, for irrigation, even when urban agriculture is supported encouraged by the municipality.

These regulations constrain what Shillington call a right to urban metabolism (Shillington 2013), referring to the work of Swyngedouw and Heynen (2003, p. 106): rules and practices that inhibit control over metabolic processes between our bodies (through the production of waste and human manure) and the city (the regeneration of nutritional elements of the urban soil).

Alongside procedural issues, there are also constraints to UA more clearly related to personal capabilities, as well articulated by Sen (2005) and Nussbaum (2006).

The lack of time, the limited awareness or skills to obtain available funding or permits,

(2) See for example: http://modernfarmer.com/2013/06/dear-modern-farmer-can-i-legally-grow-food-in-my-front-yard/ or http://www.wcvb.com/news/local/metro-west/Newton-hanging-tomato-garden-must-go/14421586#!bvpGKS (last access: January 2017).

(3) Details on Orlando's fights for the right to grow can be seen here: http://www.motherearthnews.com/organic-gardening/right-to-grow-food-zb01211zrob.aspx#axzz39RArhvxr and http://patriotgardens.blogspot.co.uk/ (last access: January 2017).

the lack of clear tools and information on how to test for and how to interpret soil quality and pollutants analysis, the difficulty to nurture and reproduce fundamental knowledge about cultivation and nutritional/medicinal properties of plants: these are just some of the limits to capacity to act. The issue of urban soil quality deserves some more discussion. Not only we face the lack of accessible and intelligible textbooks that explain to what degree, for which plants, and in which environmental conditions (proximity, temperature, pH, etc.) the most common pollutants become bioavailable to plants and where are they stored (4), but the legislation on this matter shows also a disconcerting double standard: while horticultural products produced for the market are tested regularly, in the case of hobby horticulture, and under the assumption that production and consumption are modest, legislation rules only voluntary soil testing.

These elements make up the picture of a socio-economic and culturally disabling urban environments. In which it is difficult to consolidate fundamental competences for healthy cultivation of food.

Harvesting, sharing, trading, and transforming the food system. – One of the most celebrated, bus least investigated, aspects of urban agriculture is how the produce is distributed and used. A vast number of the emerging urban agriculture experiences are collective, such as community gardens: projects that aspire to build new urban commons (although perhaps less explicitly). However, many of these projects – from the harvest, processing and sharing of fruit collected from private gardens for the production of cider and fruit juice, to public orchards, to collective plots – share a dilemma: who has the right to harvest and use the fruits of the earth and the labour? The ones that have conceived of the project (and negotiated land access) or the ones who actually cultivated the garden? The project coordinator – sometime paid part-time – or the more or less regular volunteers that looked after the plants? The ones present at the harvest, or the members of the organising committee? The passers-by, walking across an unfenced garden/orchard, or the user of the local food bank?

Observing how UA projects works is very telling: it reveals a patchwork of experiences, often incoherent, accidental, contingent, sometimes based on forms of exclusivity and exclusion within projects with emancipatory aims. Clearly, as Follman and Viehoff (2015, p. 1162) remind us, every open and accessible garden in the city poses the question of how the community can adopt rules that protect the common from its misuse, and at the same time encourage each citizen to create and share commons. Nonetheless, difficulties and contradictions of these projects, forms of appropriation and privatisation of urban resources, forms of paternalism and charity that de-facto inhibit the realisation of projects of food sovereignty and pose the thorny question of how to rediscover, re-actualise and enact the creation of common goods in societies in which the appropriation and privatisation of resources is the norm.

Distributional injustices (as many of the one listed above) are also present, although in

(4) The bio-availability of pollutants to plants – hence whether or not they are absorbed into a plant – depends on variable factors such as temperature or pH of the soil, and the accumulation on the plants can occur in different parts of the plant (ie. roots, leaves, fruits, rhizomes), which vary from species to species. This means that cultivating in polluted soils could lead to healthy products, if we had adequate knowledge of the conditions of the soil and the behaviour of the plant in relation to the most common components of urban soils (on the theme see also SAED 2012).

different form, in larger scale commercially-oriented forms of UA. A vast majority of them struggle to become economically sustainable, and have to rely on volunteers and trainees, or funding based on the social value of their activities (such as the mental health benefits of their volunteers/interns from young offenders rehabilitation programmes, for example) rather than on productive value (i.e. the value of their food-products), or have to rely on self-exploitation and unpaid time to survive.

The two spheres shed lights on one of the most crucial questions: one the one hand the difficulty to consolidate de-commodified forms of urban food production, and on the other hand the difficulty to establish alternative market mechanism (even though within the realm of the solidarity economy) vis-à-vis the growing inability of neoliberal food system to guarantee the right to food (manifest in the rise of food banks). The question then becomes how to experiment pathways to the decommodification of food.

Cooking and eating. – The last area in which to read the limits of UA in contributing to food sovereignty and justice is related to the processes of food transformation and food consumption. My research or participatory research experience across dozens of collective gardens revealed that often fruit and vegetables are not harvested, are harvested too late or are not consumed. Boredom for eating an abundant harvest, or vice versa the lack of a satisfying harvest are frequently the top reasons for such a waste, but we shouldn't forget the lack of cooking skills, of time, of appropriate storage space at home (modern houses do not have cool spaces such as cellars or unheated pantries) or the too extreme individualisation of daily culinary experience. In a society in which the current food regime and the offer of cheap ready meals is considered liberating and emancipatory, the challenged is how to contest a subjugating and dis-abling urban condition and to transform the city in a context which normalises food production and urban agriculture as integral part of the urban landscape and personal and civic education.

Overcoming the limits of urban agriculture: rethinking contemporary urbanism. – From the previous section it should be clear that in order to fully grasp and unfold the transformative potential of UA it is necessary to establish mechanisms to guarantee, simultaneously: i) the right to grow food, ii) the right to land, iii) the right to control urban metabolic processes, iv) the right to reconfigure the food system according to principles of solidarity and equality, and v) the right to live in «enabling» urban environments which guarantee social reproduction and food knowledge. Urban agriculture, in its diverse forms, is often characterised by residual practices, virtuous projects that struggle to coordinate these five fundamental aspects of food sovereignty.

To all this we have to add the growing co-optation of UA to new forms of for-profit market expansion – especially within the commodification and monetisation of so-called «ecosistem services» – which constrain experience of food cultivation within ordinary market logics and which do not significantly change the organisational logics of the resource system in the city.

What trajectories can we then imagine, to overcome these limits? In this second part of the article I aim to present not adaptive tactics, but rather political and conceptual trajectories for equipping social movements and actors mobilised around issues of food, justice and food sovereignty. In particular, I will discuss:

a) the dis-abling nature of the neoliberal city;
b) the strategies to shape an urban agroecology
c) the necessity to regain control of mechanisms of social reproduction, through the recognition of food as a common good; and
d) the necessity to go beyond urban agriculture as a *food-fix* – as uncritical solutions to the unsustainable provisioning of the city – and conceive of an agroecological urbanism ([5]).

Challenging neo-liberal urbanism. – The difficulties encountered by UA projects illustrated above are not occasional or accidental, but rather the natural outcome of how urban planning – and its underpinning principles – have conceived of the role of food and of agricultural practices in the ecology and economy of the city. Ideas of hygiene, aesthetics, zoning, and health have shaped the imaginary of generations of people, shaped their expectations, possibilities and negotiations for the transformation of the city, selected the materials and fields around which struggles for collective services have been articulated over time. As Friedman and McMichael have explained, the consolidation of the food regime born out of the alliance between industrialisation green revolution, capitalism and colonialism, has progressively detached food production – a fundamental component of our social reproduction – from daily life in the vast part of the industrialised Western world.

Given the proliferation of urbanisation, if UA wants to become a true alternative to the logic of the industrial agro-food businesses, and at the same time avoid the risks of co-optation posed by the logics of urban regeneration, it becomes a priority to coordinate the critical strategies that oppose and challenge simultaneously all of the five main aspects of contemporary neoliberal urbanism: i) the aesthetic logics, through initiatives claiming for the right to a social, collective, production of the city; ii) the economic logics, through models of exchange informed by solidarity and heterodox economics; iii) the artificial and rigid division urban-rural which forces urban dwellers to the role of consumers, and marginalises agricultural production as a legitimate urban land use; iv) the forms of institutional education which does not teach agricultural, food/nutritional and cooking competences, because these are considered secondary to mathematical or literacy skills; v) the forms of administration and regulation of collective services and common good necessarily to create resourcefulness (MacKinnon and Derikson 2013).

Building an "urban agroecology". – Discourses, values and struggles which characterise contemporary movements for food justice and sovereignty (as La Via Campesina, for example) have their roots in the science, movement and practice known as «agroecology»: the application of agroecological principles to the study, design and management of agro-ecosystems which are simultaneously productive, resource conserving and regenerative, culturally appropriate, economically viable and socially just and sustainable (Altieri and Toledo 2011; Gliessman 2012; Fernandez and others 2013).

Through the Nyéleni Declaration (27/02/2015) agroecology has been officially adopted by the international movement for food sovereignty by the International Forum for

(5) An «agroecological urbanism» is the theme of a conceptual work and an international forum born out of the collaboration between Chiara Tornaghi (Coventry University) and Michiel Dehaene (Ghent University), […] and has be presented officially at the opening of the 8th Annual Conference of the AESOP Sustainable Food Planning group, Coventry University, UK, 14-15 November 2017.

Agroecology in Nyéleni (Anderson, Pimbert and Kiss, 2015: p. 2). Partially due to its roots in the *campesinos* movement, the imaginaries of this moment tend to be oriented to the agrarian world, despite the evident, progressive disappearance of a real dichotomy between urban and rural lifestyles (Fairbairn *et al.*, 2014, p. 659). The nature and urban origins for the western movements related to food, food commoning and social reproduction, and the growing interdependencies between geographical contexts and the necessity to take into account the role of consumption behaviour in urban contexts, require us to make urban questions (Merrifield 2014) and agrarian question (Weissman 2013) to converge around modes, forms and transformational potential of these struggles for a post-capitalist shift. If it is true that a growing number of UA projects are prone to new forms of accumulation and exploitation, or are content with targeting regressive, self-sufficiency aims, it then becomes a priority to adopt narratives, strategies and value systems which are clear, able to substantiate the struggles for food sovereignty in urban contexts. This role can be that of urban agroecology.

Loosely defined, although still largely under-theorized, urban agroecology is a political praxis aimed at taking forward ideas and alliances for the implementation of productive and sustainable urban agro-ecosystems informed by the solidarity and values of agroecology (Dehaene, Tornaghi, Sage 2016; Van Dyck, Tornaghi, Halder, Van Der Haide and Sanders, 2017). We could say, with Holloway (2010, p. 43), that urban agroecology tends to remove the gap between ethics and politics, and to substantiate the specific urban aspect of practices (such as the *campesino-a-campesino* [6]), for example), born and often confined in rural contexts, for a trajectory aimed at bringing forward the deep socio-ecological transformation implicit in the philosophy and social project of agroecology.

Food de-commodification: food as a common. – The discussion on the commons, and in particular on the new forms of collective management of resources for social reproduction (such as «housing», for example) which go under the name of *commons*, is raising a vivid interest in the academic world. A number of contributions is looking in particular at forms of commoning of urban resources (Caffentzis, 2010; Eizenberg, 2012; Bresnihan and Byrne, 2015; Follmann and Viehoff, 2015; Huron 2015) which are building an alternative world. Despite austerity politics are dismantling what is left of the welfare state, these are also creating new opportunities: for example, the construction of new partnerships for managing collective goods (such as public space) in the name of presumed cost-saving for maintaining urban green space.

Wilson and Swyngedouw (2015), in their recent anthology on the post-political remind us that the governance of cities is more and more subjected to forms of contractualisation, privatisation and utopic managerialism (Raco 2015). It is therefore important to monitor that these new opportunities do not become forms of appropriation of the commons, bur rather opportunities to experiment with de-commodification.

For example, processes of urban commoning could put in common private and public land, harvest and locally produced food. These could be managed by the local community

(6) «Campesino-a-campesino» is a South American movement where the farmers have developed a system of mutual education aimed at promoting ways of life that include self-sustenance as well as environmental protection. One of the first movement for sustainable agriculture, the movement is based on agroecological production, renewal of resources, social equity, solidarity and mutual support.

in the form of co-operative (as illustrated also by McClintock 2010), trading with a mix of currencies, some of which non-monetary (Seyfang and Longhurst 2013) such as time and capacities traded using time-banks, or resources useful for the re-localisation of production, such as portions of land, storage space, help with distribution and transformation of finished goods. The city offers many spaces: from gardens to industrial and commercial rooftops, from school yards to public building vertical facades, to various bits of public space and parkland.

There are many experiments already in place in various forms, but given the strength of the food regime, these are not able to de-commodify food completely. However, they are important to help re-focus our attention on the importance to create urban environments that enable the access and use of fundamental resources, and that allow for the renewal, the reproduction of how collective and traditional food knowledge. The commoning of food production – more specific aim than the declaration of «food as a common good» – can be implemented only if we recognise food as a crucial element of our social reproduction, and from our acknowledgement of the need to reinvent collective approaches able to substitute the individual and unsustainable that we currently have. Common kitchens, neighbourhood canteens, community pantries, could become alternative ways to feed ourselves, could be managed locally, and liberate people from their own individual, isolated, difficult and often problematic management of care/time/work etc. scenarios and configurations that are currently for managed by the nuclear family with great difficulties.

Imagining an agroecological urbanism. – Challenging the neoliberal city, de-commodifying and recognising food as a common good, and promoting an urban agroecology (rather than just simply an urban «agriculture») are surely important – but insufficient – pillars for the realisation of permanent transformations of the food system based on social and environmental justice and equity. If we reflect on the interconnected nature of our daily lives, it becomes clear that transport, storage, division of labour, waste management, land rights and access to resources, and the human diet and habits themselves, are all elements implicated in the food system and management of resources necessary to produce change. Within a urban system that imposes dependency for an unjust food system, which legitimises unsustainable uses of the soil, where the environmental costs of un-necessary food imports are not included in the economic equations, and where zero contract hours and low salaries are legal even when they produce extreme poverty, where soil nutrients are channelled into non-virtuous waste disposal system, food sovereignty cannot take place. It is rather necessary to rethink urbanism as a whole, starting from planning and urban design. Re-visit an intellectual and conceptual trajectory to build an agroecological urbanism.

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FOOD JUSTICE AND SOVEREIGNTY IN THE NEOLIBERAL CITY: POSSIBILITIES AND LIMITS OF URBAN AGRICULTURE. – Recent literature has pointed at urban agriculture as an opportunity to achieve food justice and sovereignty. Building on this body of work, this paper look at the opportunities and limits that constraints UA in the achievement of this goal. In the first part the paper aims to expand the usual discussion on food justice based on consideration of gender, race and income, exploring how matter of distributional, cultural, capability, procedural and global justice unfold in the urban production of food. In the second part, the paper discusses four possible strategies that could inform grassroots political activism for food justice. These are: 1) challenging neoliberal urbanism; 2) converging urban and agrarian struggles; 3) food commoning; 4) conceptualising an agroecological urbanism.

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LANDSCAPE AND URBAN FOOD PLANNING: THEORETICAL AND OPERATIONAL INTERSECTIONS

Introduction. – International debate defines the contemporary food system as characterised by a progressive de-territorialisation (Morgan *et al.*, 2006), which can be interpreted as a reduction of physical, symbolic and organisational proximity (Dansero *et al.*, 2016) between phases, nodes, actors and places of the system itself. Considering the strict and reciprocal relationships between territory and landscape – with the former as structural substance and the latter as perceived appearance (Gambi, 1973; Dematteis, 1985; Gambino, 1997; Raffestin, 2005) – it can be hypothesised that the complex relationship between food and landscape, both in terms of material transformation of the territory and of intangible values, is affected by the de-territorialisation of food systems.

This contribution aims to explore how landscape emerges in the debate on urban food systems and urban food planning (for a definition see Morgan, 2013 and the contribution of Dansero, Pettenati and Toldo in this monographic issue).

Firstly, with a general reflection on the relationship between food and landscape, followed by the outline of some possible research paths and with some reflections on the utility of the notion of landscape in the cultural and political debate on the relationship between food and territories, in urban areas in particular.

The guiding hypothesis of these reflections is that the landscape is, on the one hand, a context of physical and symbolic reference in which food-related choices and actions take place, both individually and collectively, on the other hand, a useful reference of values through which one can create links between urban food policies, consumer choices and urban and territorial planning.

Food and landscape: a complex relationship. – The amount of references to landscape in the debate is so large that it is impossible, and possibly reductive, to look for definitions of a «low definition» idea (Sampieri, 2008, p. 53) whose intrinsic polysemy seems to reflect the fluidity of its multidisciplinary interpretations and to discourage any attempt at single definitions (Gambino, 1997).

In Western cultures, the idea of landscape is based on principles like the synthesis of the complexity of reality (Cosgrove, 1984), and the mediation of an individual or collective subject, which through its perception transforms what is observed into a synthetic representation, and to which specific meanings are assigned (Turri, 1999; Turco, 2002; Raffestin,

2005).

Looking for an operational synthesis of the many possible ways of understanding the notion of landscape, we can say that landscape may be considered at the same time as:

a) *representation of the territory*, a selective synthesis, mediated by the perception of the individual or collective observer, starting from the identification and attribution of the meaning to some elements of the physical form of the territory (Sestini, 1963; Dematteis, 1985; Lanzani, 2011);

b) *a context of life*, at the same time a spectacular backdrop (Olwig, 2007) and a container of resources, especially of symbolic and identity ones, for the territorial action of each individual and society.

c) *heritage*, when values are attributed to the landscape to make it the object of protection practices and policies.

The purpose of this paragraph is to relate food to these possible ways of understanding landscape, starting with the recognition that food systems have - in their nature of complex combinations of flows, spaces, values, activities and representations - in producing landscape, both in material and symbolic terms (Wylie, 2007; Roe, 2016).

Representation: food as producer of landscape. – Since the invention of agriculture and the development of the first stable human settlements, food production is one of the main factors of physical transformation of places (Luginbühl, 2014). Rural landscape, a productive landscape *par excellence*, is one of the main fields of debate, research and planning in landscape studies, especially starting from the fundamental work of Sereni (1961), which defines rural landscape as the form that men consciously and systematically imprinted on the natural landscape, for the purposes of their agricultural productive activities.

The link between rural landscape and productive activities with economic purposes has as a consequence that the evolution of production techniques, crop types and characteristics of the agricultural sector in general are related to landscape transformations, both in terms of material forms of places and of relationships between landscapes and natural environment, society and identity factors (Lanzani, 2003). The deterritorialisation of the food system, led most places of food production, based on the place-based use of localised resources, to become nodes of the global agro-industrial networks. To this shift, corresponds a transformation of the agrarian landscape, that is simplified and impoverished; without the historical relationships between society, culture, environment and economy (Magnaghi 2010).

In the Italian context, one of the clearest examples of this «landscape simplification» (*ibidem*) is t the agrarian landscape of the Po Valley, until a few decades ago featuring clear «iconic» landscape elements (Turri, 1979) of great ecological, productive and cultural importance, such as water-meadows (*marcite*), irrigation systems (*fontanili*), hedges (*siepi*) and mulberry rows, which have almost disappeared with the evolution of the agricultural techniques and the late awareness of their potential value (Lanzani, 2003).

If food production is one of the main factors shaping landscapes in rural areas, in the contemporary urban context a decisive role is also played by consumption. Historically, places of food sale and consumption have always been an iconic element of urban landscape, as witnessed by the symbolic and physical centrality of food markets in cities in different parts of the world and urban cultures, from the *piazza delle erbe* of many Italian cities, to the big covered markets of the main European urban settlements, up to urban suqs in Islamic cities.

In the contemporary city, places and forms of food consumption – often related to *leisure* (Finkelstein, 1999) – are crucial determinants of the process of transformation of many historical centres and urban districts. This often has gentrification effects (Zukin, 2008; Faravelli and Clerici, 2012) and leads to practices of appropriation of the public space by economic activities, the access to which is allowed only to consumers (Aru, 2016).

Context of life: the foodscape. – The concept of landscape as a framework of individual and social life, as a physical, social, cultural and economic context in which individuals live, corresponds in food studies to the idea of foodscape – often associated to that of food environment – i.e. the set of all the physical and virtual places where a person comes into contact with food during his/her daily life and at the same time the set of material, socio-cultural, economic and political influences that influence food choices at every level (Lake *et al.*, 2010; Roe *et al.* 2016; Goodman, 2016).

From a more theoretical point of view, the concept of food-scape can be combined with the great global and globalising contexts and flows (*-scapes*) that Appadurai (1996), playing with the etymological root of the concept of landscape, defines as material and symbolic references of the action of everyone (Brembeck *et al.*, 2013). Glanz et al. (2005), in analysing factors that determine food choices, identify three key areas related to foodscape: (1) institutional policies and business strategies that define the general context within which a consumer can choose what to eat; (2) a series of environmental variables of varying scale and nature (community, organisational, consumer) that affect the availability and accessibility of foods and (3) individual, socio-demographic, psychosocial and perceptive variables.

The foodscape approach is recurrent in the debate on the links between environmental context, eating habits and health (Lake *et al.*, 2010), where the relationship between the access to quality food and socio-spatial inequality is often highlighted. This is often linked to the phenomenon of food deserts, areas (typically in urban contexts) where there is no possibility of purchasing healthy and quality food at affordable prices, notably for low-income or low-mobility segments of the population (Cummins and Macintyre, 2002).

In a socio-political perspective, the concept of urban foodscape is often evoked in a critical analysis of the role of urban food systems in the global dynamics of food systems, which views at the same time cities as strong players of global food networks and weak systems, where the negative externalities of economic-financial rationalities, driving food systems at every scale, are notably visible and produce widespread socio-spatial injustices (Morgan and Sonnino, 2010; Miewald and McCann, 2013). Cities, though, are also places where Alternative Food Networks (AFN), food movements and other practices of resistance to the inequalities of the dominant food system most commonly take place (Psarikidou and Szerszinsky, 2012; Goodman, 2016).

Heritage: food, landscape and territorial marketing. – The third connection between food and landscape, is the promotion and patrimonialisation of rural landscape, as outcome of agricultural work and of cultures, traditions and values of rural territories. Only recently local communities, public authorities and economic actors have diffusely developed the awareness of the potential role of rural landscape as a bearer of identity values (Raffestin, 2005) and as a resource to be used as a driver for the economic development of a region. This awareness paradoxically occurs in conjunction with the progressive separation between agri-

culture and rural areas, with the emergence of a countryside where functions different from those connected to food production (e.g. residential, industrial, infrastructure, recreational, etc.) are increasingly evident (Brunori *et al.*, 2007; Zerbi, 2007).

Rural landscape is thus identified as a heritage and as a resource mostly when it is threatened by the risks of resulting from the transformation of agricultural production – increasingly dependent on exogenous financial and industrial logics – and by the de-territorialisation of the food system (Magnaghi, 2010). The relationship between landscape and food is becoming more and more often a central asset of the landscape conservation policies and of territorial strategies aiming at fostering local development through the promotion of food and wine rural tourism (Cross and Perri, 2015).

At the same time, the recognition of the value of rural productive landscapes is part of the evolution of the scientific and political debate on landscape, from the role attributed to ordinary landscape to the European Landscape Convention (2000) to the growing importance of rural landscapes in UNESCO's World Heritage List (Mitchell *et al.*, 2009). However, the protection and the patrimonialisation of rural landscapes, related to food production, present some critical aspects, for example concerning (a) the relationships between the evolution of local economies and the need to safeguard landscapes and (b) the complex relationships between the role of landscape as a tourist attraction (almost an immutable scenery for outsiders) and as a context of life of local populations (insiders) (Pettenati, 2016).

In addition to being at the same time a product and a producer of landscape, food also becomes a vehicle for the export, the promotion and the representation of a place, through «typical» territorial products, transposing the immateriality of landscape values into the materiality of food (Tamma, 2010). The process of «invention» of typical products is often the result of a process of simplification and (re) invention of local identity and of the features of a place and its landscape (Grasseni, 2009). Food experience goes beyond the nutritional and sensory aspects and leads the consumer to seek, through the consumption of a given product, to «incorporate» (Fischler, 1993) a territory and its landscape (Ferrara, 2013).

Urban food landscapes. – The perception of urban forms, synthesised by the urban landscape, is one of the most studied elements in geography and urban planning, from different perspectives (Bonesio, 2007; Fumagalli, 2011). On one hand, observers and researchers focus on the structural elements of the city – architectural shapes and the relationship between built elements and the geographic and environmental context (Relph, 1987) – or on the design and landscape planning of new urban transformations (Peano, 2011). In other approaches, urban landscape has been understood in its cultural dimension, meaning the city as a concentration of people, symbols, inspirations and sensations (Nuvolati, 2013), or as a privileged and intelligible expression of power relations and a stratified set of traces of their historical evolution (Hayden, 1997).

Every food system, at any scale, produces a complex set of landscapes, consisting of architectures, infrastructures, material signs of the different phases of the food supply chain, that are all present in the urban context. Considering the landscape in a multisensory perspective, urban food landscape is also made of smells, sounds and even flavours that contribute to create the individual and collective *foodscapes* of a city. The features and the evolution of city dwellers' food consumption are also decisive in influencing the character of urban areas, in terms of physical forms and organisation, of city users' behaviours and of dominant urban

images. On the other hand, the physical characteristics and socio-cultural context of cities influence the food choices of their inhabitants and visitors (Roe *et al.*, 2016).

In the following paragraphs, we propose to explore some areas of intersection between the urban food planning and landscape debates and policies, hence considering this operation as a useful starting point for future research trajectories, viewing the landscape as a link between the different elements that produce the complexity of urban food systems.

The landscape of urban and periurban agriculture. – Although urban and peri-urban agriculture has always been an element of urban food systems and of their landscapes and economies, these activities are now central in redefining the physical and conceptual boundaries between city and countryside and between urban and rural areas (Donadieu, 2006; Source, 2010). They also are privileged fields of application of the multifunctionality that characterises contemporary agriculture, especially in economically advanced countries (Zasada, 2011). Next to the original function of food security and local food supply for people living in the city (Barthel and Isendahl, 2013), urban agriculture is now complemented by many other functions, such as social, ecological, recreational, therapeutic, didactic, territorial, aesthetic and cultural ones, whose importance is recognised both by institutional policies and by bottom-up practices (Ingersoll *et al.*, 2007).

Landscape is probably the main intersection between urban food planning, urban and regional general planning, and agricultural policies, representing an interesting field of experimentation. Many of the experiences of protection, planning and design of urban and periurban farming landscape are characterised by approaches and objectives that go beyond planning the spatial relationship between urban areas and contiguous productive rural areas and designing spaces and infrastructures city dwellers' *loisir*. These experiences are rather opportunities to imagine and experiment a new role of agriculture and associated spaces, economies and landscapes, within the urban/metropolitan food system. This is witnessed by examples of evocative concepts, such as the ones of Edible City or Continuous Productive Urban Landscape (Viljoen, 2005) and by iconic projects such as Agromere, where urban agriculture is the founding element of landscape planning of the city of Almere (The Netherlands), established in the 1970s on the lands of a *polder* (Jansma and Visser, 2011).

One of the most interesting tools for planning and governance, connecting landscapes and food systems, is the agricultural park, firstly imagined with the primary goal of designing and protecting agroforestal landscapes in periurban areas. This tool has evolved as a strategic and pactional instrument to govern the mutated city-countryside relations, seeking a new balance between productive, residential, loisir activities and ecosystem services (Ferraresi and Prusicki, 1989; Fanfani and Magnaghi, 2009). This new perspective is also part of the current new relationships between producers and consumers, where an interesting role is played by a new role of productive urban and periurban landscape, whose functions add others like recreational enjoyment, identity framework and political action to the original productive one. The most interesting Italian example of agricultural park is that of the Parco Agricolo Sud Milano, one of the first and biggest in Europe (it was established in 1990 and extends for 147,000 ha), which was established following a bottom-up initiative to protect the fertile countryside south of Mila from the expansion of urbanisation. Today, the Park is not only an increasingly recurring element in the institutional, cultural and political debate linking food sovereignty, multifunctionality, environmental sustainability and critical

consumption (Calori, 2009), but also a field of action for an alliance between producers and consumers, which is part of new critical consumer practices, such as the institution of the Distretto di Economia Solidale Rurale (Desr) del Parco Agricolo Sud Milano in 2008 (Corrado, 2013).

Consumers and Citizens as co-producers of landscape. – The active involvement of consumers and citizens in practices supporting specific models of food supply chains and food systems introduces the second element of reflection deepened in this section of the paper, namely the role of citizens/consumers in voluntarily contributing to produce the landscape of the food system of which they are part. The theoretical framework is the one linked to concepts such as critical consumption and political consumption (Graziano and Forno, 2012), food citizenship (Wilkins, 2005; Lockie, 2009) or reflective food consumption (Du Puis and Goodman, 2002).

Brunori and Di Iacovo (2014) highlight how consumers' choices, after the qualitative turn that characterises contemporary consumer practices, often based on a symbolic, relational and physical relocation of food (Brunori, 2007) and on alternative food networks (Lockie, 2009; Dansero and Puttilli, 2014) have direct impacts on production methods, food cultures and landscapes of the areas of where food is produced, despite the still limited weight of «alternative» practices. The direct effects of the economic choices that «finance» the maintenance of a given landscape are accompanied by indirect effects linked to the relational value between producers and consumers linked by critical consumption practices, which in many cases leads to a greater consumer awareness of the features of the landscape of production sites.

Support provided through consumption to a production model and to an agri-food chain, and related landscapes, can be interpreted as a component of the relationship between AFN and rural development (Marsden *et al.*, 2000; Renting *et al.*, 2003) and of practices like community supported agriculture, in which the economic support of farmers and their communities is associated with an active role of consumers in maintaining and protecting the environment and landscape of production sites (Holloway *et al.*, 2006). Many of the aforementioned initiatives linked to the construction of «solidarity-based economy districts» (*distretti di economia solidale*), especially in peri-urban areas – for example in the territory of the Parco Agricolo Sud Milano – put the environmental and landscape issue at the centre of the alliances between producers and consumers (Bishops, 2014).

The contribution that peoples' food choices can play in contrasting the loss of landscape (Magnaghi, 2010), linked to the affirmation of the global agro-industrial food system, is also part of the narratives of many food movements, starting with Slow Food, which is presented as «*avant garde* response» to the environmental and landscape effects of the global food system (Petrini, 2003). These movements are often in close and direct connection with activism for landscape conservation and the fight against land consumption, that a significant change in food consumptions can effectively support.

Finally, in urban areas people are increasingly active material transformers of urban landscape, through urban horticultural initiatives, where the productive, social and community motivations are often linked to the landscape one, thus viewing vegetable gardens as practices of green areas and urban productive landscape planning as well as areas for the experimentation of an active care of urban spaces by citizens (Viljoen, 2005; Ingersoll *et al.*, 2007; Tornaghi, 2014).

Foodscape as a territorial resource. – The urban foodscape has become a resource that cities use to redefine their image and position themselves in international media rankings and tourism and investment networks. The outward representation of the urban foodscape take on different connotations and focuses on different elements of the urban food system (Dinnie, 2011). In some cases, historic markets adopt new functions as tourist destinations – as is the case of the Boqueria and other markets in Barcelona (Garriga Bosch and Garcia Fuentes, 2015); elsewhere, there are strategies of international promotion of local restaurants and typical products; sometimes, the entire urban foodscape is exploited as a tourist attraction (Richards, 2015), as an economic asset and as a distinguishing element of a city and its surroundings. This is the case of Parma, which defines itself as the centre of a food valley, or Bologna, promoted as City of Food (Marchi, 2015), or Turin, that aspires to become the «Capital of Food» (Dansero *et al.*, 2014).

As is often the case when food culture becomes heritage (Grasseni, 2009), similarly to what happens with landscape (Pettenati, 2016), the construction of an image of urban food, destined to attract tourists or investments, inevitably leads to a selective representation of urban foodscape, according to the relationship with the external subjects, whether they are tourists or investors (referring to the case of the reinvention of traditional Venetian cooking, Pes, 2006).

In Italy, one of the most interesting examples of reinvention of the urban image through the valorisation of food related economic and cultural resources is that of Turin (Vanolo, 2015), where the process of building new representations of the city, following deindustrialisation, has food as one of its main assets, due to the active role of important local players (e.g. Lavazza, Slow Food, Eataly, etc.), events of international relevance (e.g. Salone del Gusto, Terra Madre and Chocolato); the presence of a large number of subjects and practices aimed at enhancing the local food system (Bottiglieri *et al.*, 2016) and the active role of local authorities (Dansero *et al.*, 2015).

Landscape in Urban Food Strategies. – Previous paragraphs, attempted to highlight the connections between the notion of landscape and the Urban Food Planning (UFP) and Urban Food Strategies (UFS) debate, stressing the main existing links and outlining possible research and action trajectories. In this concluding paragraph, I try to reflect on the role of landscape in existing UFS practices, both as an explicitly evoked concept and as an element of connection between different fields of action and strategy objectives. The reference is to all the declinations of landscape described in the previous paragraphs: both the landscape tangibly produced by the practices of production, consumption and distribution of food, as well as the food landscape that make up the context of people's food choices and behaviours.

Discussing the case of the Food Plan of the Province of Pisa, Brunori and Iacovo (2014) emphasise the importance of the role of local authorities in implementing UFSs, in which other players in the food system take part, aimed at creating conditions for foodscapes enabling those alliances between producers and consumers that see in co-production of a quality food landscape one of the objectives underpinning food consumption and production.

Although the transformation of the urban foodscape is the implicit objective of most urban food

strategies, only few of the existing UFS (1), explicitly quote landscape as a field of their action.

When this occurs, it is mainly in reference to urban and peri-urban farming practices, as in the case of Edmonton (Canada), «Urban agriculture is visible from the roads and highways around Edmonton. Local productive landscapes have high amenity value and are part of the community identity and draw interest from residents and visitors» (City of Edmonton, 2012, p. 49); Malmö (Sweden), «The farming landscape is important for recreation and for creating stronger bonds between the city and the countryside. [...] In future plans the importance of the farming landscape should be preserved. Food production in and around the city should be encouraged» (City of Malmö, 2010, p. 25).

New York, «urban agriculture offers significant opportunities to green our urban landscape, foster nutrition and food education, and help reconnect New Yorkers to their food» (New York City Council, 2013, p. 20); and Toronto, «As Toronto moves to a more pedestrian-friendly and transit-oriented city, the convergence of ground-floor food businesses, community gardens and markets on redesigned landscapes will do much to renew tower communities» (Toronto Public Health, 2010, p. 15). One of the most interesting examples of integration of landscape in UFS, always with reference to urban agriculture, is Vancouver, where a food policy exists since 2003 with the aim of developing a more just and sustainable food system (Mendes, 2008), defined as one «in which food production, processing, distribution, consumption and waste management are integrated to enhance the environmental, economic, social and nutritional well-being of our city and its residents» (City of Vancouver, p. 10).

The Vancouver Food Strategy, launched in 2013, counts among its actions the so-called edible landscaping, namely the cultivation of edible plants in as many public green spaces as possible, with the idea of using urban agriculture as a vehicle not only for food production and greening, but also for educational purposes, cultural integration and community building.

In Italy, besides Pisa, the only two cities where the processes of development of UFSs have led to official decisions are Milan and Turin. In the first case, in 2015, following a participatory process of Food System Analysis and identification of priorities, the administration launched the guidelines for the Food Policy of Milan 2015-2020, in which the landscape theme is only marginally mentioned, with reference to the need to integrate territorial and landscape planning with agricultural, environmental and social policies, with the aim of increasing the sustainability of the system (Comune di Milano, 2015).

In Turin, the ongoing processes to involve the food system's stakeholders in defining the priorities of a future food policy have so far produced less programmatic outcomes, with an even smaller presence of landscape as a field of action. As proof of the still limited role of landscape in UFSs, with the exception of actions and strategies concerning urban and peri-urban agriculture, it is useful to highlight how in the text of the Milan Urban Food Policy Pact - currently the main international reference for cities developing UFSs, the term landscape is never mentioned.

(1) This information come from the desk analysis of the following UFS, mostly concentrated in USA, Canada and UK: Amsterdam, Bradford, Brighton and Hove, Bristol, Brussels, Calgary, Chicago, London, Durham, Edinburgh, Edmonton, Islington, Leicester, Malmo, Melbourne, New York, Oakland, Philadelphia, Plymouth, Seattle, Vancouver.

Conclusions. – The purpose of this contribution was to explore the presence and usefulness of the concept of landscape in the scientific and political debate on the relationships between food and cities, in search of existing and potential intersections.

The first part, explored the relationships between food and landscape, especially in the urban context, analysing in detail three aspects considered particularly fruitful for the reflections proposed in this contribution: (a) the characteristics of landscapes produced by food systems at different scales and their evolution according to the changes in the socio-economic and cultural systems associated to them; (b) the role of foodscape as a framework of life, as a material and meaningful context in which everybody's food choices take place; (c) the relationship between conservation and patrimonialisation of landscape, territorial marketing and socio-economic dynamics.

The reflection continued with a focus on the landscapes related to urban food systems, stressing on those connected to urban and peri-urban agriculture; on the importance of citizens/consumers in co-producing the landscape of urban food systems (and that of associated rural systems); the strategies of promotion of the urban foodscape by many cities, as a resource to support the construction of the urban image and new spatial developmental trajectories. Finally, the concept of landscapes has been researched in documents related to Urban Food Strategies in 21 urban areas where strategic policies addressing the urban food system have already been adopted, with sometimes different approaches, paths and objectives.

Both from a theoretical and from a policy point of view, it is clear how urban food landscape is still understood in a very sectoral way, as it is mainly considered in its dimension linked to urban agriculture and its multifunctional potential, or incorporated in the idea of foodscape.

The complex spatial configuration of food systems at every scale – which is particularly dense and conflictual in urban areas (see Dansero and Nicolarea, 2016) – corresponds to a variety of landscapes, heterogeneous for cultural, identity and ecological quality, for degree of recognition by institutions and society, for political management. A research program, that provides a knowledge support and a conceptual framework of reference to the debate and to policies, should include the identification and the interpretation of the many landscapes of contemporary food systems, with the aim of understanding their features, connections, evolutions and supporting their transformation.

Although the explicit presence of landscape in international UFSs is still poor, landscape issues mentioned in the previous paragraphs are central to the goals and strategies of many of the cities that have launched such policies and actions. This confirms the potential role that this polysemous concept could play in the construction and application of food policies, both on a material and symbolic level. To explicitly and systematically relate the transformations of the food system to the production of landscape would allow not only to define a clear multidimensional strategic horizon, but above all to build a shared framework through which to (re) connect producers and consumers, citizens and institutions, places of production and places of consumption.

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LANDSCAPE AND URBAN FOOD PLANNING: THEORETICAL AND OPERATIONAL INTERSECTIONS - Landscape, both as visible features of places and as set of cultural and identity values, should be considered as a crucial element of food systems. The aim of this paper is to explore the presence of this concept in the debate about food systems and urban food planning. In the first part of the paper, three main perspectives on food landscapes are presented: food systems as producers of landscape, foodscapes as frameworks for any food-related action and food landscapes as heritage. The second part explores urban food landscapes, focusing on landscapes of urban agriculture, on the role of consumers as co-producers of landscape and on urban foodscapes as resources for new urban images strategies of urban development. In the third part, the presence of landscape is investigated as field of action in existing Urban Food Strategies/Policies, showing its underrepresentation. The conclusions discuss the potential role of landscape in urban food policies both as the object of specific strategies or actions and as a useful conceptual framework, able to connect the players of the food system, in sharing a vision for its future evolution.

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PUBLIC PROCUREMENT AND COLLECTIVE CATERING
SCHOOL CATERING AS A SUSTAINABILITY INSTRUMENT FOR FOOD SYSTEMS

Introduction. – Among the many issues that converge in the overall relationship between food and city in the context of urban food policies (for a review, see here the introduction by Dansero *et al.*) *Food Public Procurement* (FPP) is becoming increasingly popular, not only amongst administrators and civil society, but also in the academic world (Morgan, 2006; Sonnino, 2010; Morgan and Morley, 2014).

Compared to other areas related to the wider scope of *Urban Food Planning* (Morgan 2009, 2013), public food purchases and collective catering are a very specific topic of investigation but of great interest for various reasons. Firstly, talking about canteens, whether they are in school, university, hospital, prison, etc., means considering all phases of the agri-food chain (Ashe and Sonnino, 2013a, 2013b; Sonnino, 2013) and therefore a large and a varied set of subjects, resources, actions, spaces, relationships, flows, opportunities and threats; and the whole spectrum of the multiple dimensions of food, because in the so-called «public plate» (Morgan, 2006, 2008) converge issues related to health, food security, economic development, environmental sustainability, social justice, culture and ethical-religious integration, etc. (Morgan and Sonnino, 2008). In addition, the end users (including children, teenagers, elderly people, sick people, inmates) are in many cases vulnerable (Morgan, 2014; Morgan and Morley, 2014), and the relationship with food takes on a significant importance for them. Finally, it is above all its position within the context of *welfare*, within public competences and responsibilities (Allen and Guthman, 2006; Morgan 2008; Morgan and Sonnino 2008; Ashe and Sonnino, 2013a, 2013b; Sonnino and Spayde, 2014), that gives it a leading role in food policy. Given this logic, the potential of the FPPs are such to justify the centrality of collective catering activities within the food planning narratives and practices of cities (Sonnino and Spayde, 2014), an element that is another stimulus to further investigate this sector.

Starting from these considerations, this document focuses on school catering, which is the segment on which policies and projects concentrate the most, because of its strategic scope and important social implications (Morgan, 2008).

After a first paragraph where *Public Procurement* (PP) is outlined generally, even from a normative point of view, and more specifically on public food procurement, the second paragraph addresses the theme of school catering, while the third deals with the evolution of canteens in Italy. The fourth paragraph presents a case study and reports the results of

the multi-method survey which involved the municipalities of the Metropolitan City of Turin. The contribution closes with some final considerations, that return theoretical-methodological indications but also policy suggestions.

Public procurement and collective catering. – Public procurement represents a substantial part of the global economy. Just think how government spending on works, goods and services accounts for about 14% of European GDP, equivalent to about 1,800 billion euros a year (European Commission, 2015). From a regulatory point of view, European supply policy – an excellent example of multilevel governance (Morgan and Sonnino, 2007) – is governed by three recent Community Directives ([1]), variably recognised and implemented by national, regional and local levels. The main principles of this policy are «non-discrimination» and «transparency» and are based on the prohibition of the imposition of economic requirements or special conditions restricting free trade or favouring certain undertakings by limiting the contract awarding criteria to the «lowest price» and «economically most advantageous offer» ([2]). However, since 2006 ([3]) European public authorities may include principles of merit as constraints on contractual obligations, provided they are expressly aimed at safeguarding public interests such as health, safety and environmental protection (European Commission, 2011) ([4]). This integration helps to mitigate the traditional tension between the free market and the ideals of sustainability of PP Community policies (Morgan e Sonnino, 2007). Furthermore, a substantial acceleration in the definition of a sustainable supply policy is provided, above all, by *Green Public Procurement* (GPP) and *Sustainable Public Procurement* (SPP) tools ([5]), that promote the inclusion of environmental and social qualification criteria in the demand expressed by public entities through the purchase of goods and services.

With this logic, the potential of PP, meant as an instrument of economic, but also environmental and social policies, is widely acknowledged in political terms at a national and international level ([6]) (Galli and Brunori, 2012; Smith *et al.*, 2016) and is a matter of growing

(1) The Directive 2014/24/EU on public procurement, the Directive 2014/25/EU on procurement by entities operating in the water, energy, transport and postal services sectors and the Directive 2014/23/EU on the award of concession contracts. For a reconstruction of the evolution of public purchasing policies in Europe, see Morgan and Sonnino (2007).

(2) The criterion of the most economically advantageous offer consist in the insertion of contractual obligations to safeguard public interests, such as health, safety and environmental protection (European Commission, 2011).

(3) With the implementation of the Directive 2006/123/EC on services in the internal market.

(4) In Italy, these guidelines are transposed by the new Procurement Code (Legislative Decree April 12, 2006 n. 163), which lays down, in Article 2, the possibility of «subordinating the principle of economic viability to social, health and environmental protection and the promotion of sustainable development»

(5) In the absence of a single definition, the distinction between GPP and SPP proposed by the United Nations in 2008 defines as green procurement contracts, on the one hand, the selection of products and services which tends to minimize environmental impacts throughout the product lifecycle (European Commission EC COM 400/2008) and as sustainable purchases, on the other, those that add – coherently with a multidimensional vision of sustainable development – social considerations such as gender, ethnicity, poverty and respect of the basic labour standards (Galli and Brunori, 2012). Other authors (for a review see Smith *et al.,* 2016) believe that there is no clarity between the two concepts and that this may cause confusion in theoretical and operational terms.

(6) The centrality of the public procurement sector with respect to environmental objectives is stated at the 2002 Johannesburg World Summit on Sustainable Development and with the establishment of the Marrakesh *Task Force* (2006-2011) for the dissemination of sustainable public procurement practices and is confirmed in the Rio +20 Conference of 2012 (Smith *et al.*, 2016). In Europe, GPP potential was first highlighted in the Commis-

interest in the academic debate (Morgan and Morley, 2014). In the last fifteen years, numerous publications have analysed this field with different disciplinary approaches, including geographic ones (Hadjimichalis and Hudson, 2007; Korthals Altes and Taşan-Kok, 2010; Uyarra and Flanagan, 2010; Lember *et al.*, 2011).

Particularly regarding food, the theme of FPP is mainly concerned with collective catering, meant as, in more general terms, a service – carried out by organisations or parts of organisations – in preparation, supply and delivery of meals for facilities such as schools, hospitals, nursing homes, prisons, public entities, etc. This is a numerically and economically very important sector, that is organisationally complex and highly impacting. The latest official data, dating back to 2011 and 2012, show a total public spending of 206.3 billion euros (Eurostat data, 2011) for *food & catering services* in Europe for a total of over 1.5 million companies involved and about 8 million workers (Eurostat data, 2012). In Italy, an estimate made by the Observatory on Catering Services and Nutrition (ORICON), indicates for 2013 over 41,000 distribution sites for a total of about 1,630 million meals delivered per year, of which almost a third in schools.

In organisational terms, this is a sector characterised by a high degree of complexity. In fact, the delivery of the service intercepts all the phases of the agri-food supply chain, by connecting a large number of parties: producers, food industries, distributors, catering companies, public entities in charge of management and control, and end consumers.

Regarding the environmental aspects, a study carried out on behalf of the European Commission reveals how the *food & beverage* sector is accountable for 20% to 30% of the most significant environmental impacts in Europe (European Commission, 2006, p. 15).

Finally, considering that in a country like Italy, about 11 million people eat at least one meal away from home, and one out of two consumes it in a canteen (ORICON data, 2013), it is clear how collective catering affects public health and, particularly in the case of schools, the education of young consumers, with consequent social, political, legal, economic and organisational implications (Galli and Brunori, 2012).

For these same reasons of centrality and strategy, food supply practices and policies have gained increasing attention in the scientific and academic world for the past fifteen years (for a review see Stefani *et al.,* 2015). In general, the scope of collective catering is interpreted as a highly transformative instrument, characterised by a highly structured demand that has potential effects both on production and on consumption (Sumberg and Sabates-Wheeler, 2011). In this sense, the daily and constant demand (Morgan, 2008) channelled through collective catering is potentially able to direct the market and people's eating habits, at the same time, thus affecting the levels of environmental integrity, social justice and economic development (Hadjimichalis and Hudson, 2007), which represent profoundly interrelated goals of sustainable development (Sonnino, 2010). According to Wiskerke (2009), FPP is one of the cornerstones (together with alternative food networks and urban food strategies) for the construction of a new food paradigm, capable of drawing an alternative geography of food. In fact, this theme represents a recurring axis in *Urban Food Strategies* (Moragues *et al.*, 2013) and one of the areas of action outlined by the *Milan Urban Food Policy Pact* (Action 9, relating to Sustainable Diets and Action 30, linked to the supply distribution chain).

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sion's Communication on Integrated Product Policy in 2003 (COM 2003, 302), which recommended that Member States adopt national action plans for green procurement by the end of 2006 (European Commission, 2008).

Although contributions relating to various forms of collective catering, including healthcare (Sonnino and Mcwilliam, 2011; Blomfield, 2015), university (Friedmann, 2007) and penitentiary (Edwards *et al.*, 2009) can be traced in literature, the most significant developments, both in debates and in practices, are mainly found in the field of school catering, the most visible and investigated segment of the «public plate», which can be interpreted as a mirror image of the relationship between food and land according to an *Urban Food Planning logic* (Morgan, 2006; Morgan and Morley, 2014).

Policies for School Catering. – The meal consumed at school represents a complex and stimulating field of inquiry, and scientific literature over the past ten years has explored the various meanings and implications and the multiple modes of implementation in different contexts: in the pioneering cities of creative and sustainable procurement, such as London, New York, Philadelphia, Toronto, Malmö and Rome (Morgan and Sonnino, 2008; Sonnino, 2009; Ashe and Sonnino, 2013b; Sonnino and Spayde, 2014); in rural Italy and UK (Morgan and Sonnino, 2008; Sonnino 2010); in France (Darly, 2012); in Northern Europe (Mikkelsen *et al.*, 2007; Mikkola, 2008), in the South of the world (for a review see Drake *et al.*, 2016). In general, while in middle and low income countries school catering service is mainly intended as a tool to counter food poverty (Bundy *et al.*, 2009) in the global North it is called to reach a difficult synthesis between sometimes discordant goals (Sonnino, 2009). Canteens are asked: to meet health and food hygiene criteria, to have high standards of nutritional and organoleptic quality, to contribute to a healthier lifestyle, to aid integration and multiculturalism, to direct the market towards more sustainable production, to contribute to the economic development of food systems and, at the same time, to be inexpensive.

In this reasoning, school catering policies are complex objects – that vary depending on the context and evolve over time – within which many of the goals of *Urban Food Planning* converge, such as ecological integrity and social justice (Morgan, 2006) (Sonnino, 2013), local economic development (Sonnino, 2010), the fight against food insecurity, understood in its dual nature of poor and incorrect nutrition (Ashe and Sonnino, 2013b; Sonnino *et al.,* 2014).

In more general terms, it can be said that many innovative school-based policies and practices adopt the main strategies of intervention from the broader food planning «by relocalising, greening and moralizing public sector food procurement» (Renting and Wiskerke, 2010, p. 1909).

Regarding the issue of relocalisation, it has for a long time and for many authors been a matter of intrinsic resistance to the de-territorialisation of the global agri-food system, a guarantee of greater environmental integrity, public health, social justice and development Community, and economic growth (Sonnino and Marsden, 2006; Feagan, 2007; Feenstra, 1997). In this framework, the scope of the FPP and school catering have been taken as privileged contexts and, at the same time, as some of the most important tools for the implementation and success of relocalisation policies (Morgan *et al.*, 2006, 196). In the United States, this approach is based on so-called *farm-to-school programs*, which make objectives of sustainability and economic development of local production converge into the school meal, together with educational goals linked to healthier eating habits (Vallianatos *et al.*, 2004; Joshi *et al.*, 2008; Gottlieb *et al.*, 2009; Conner *et al.*, 2011). In some developing countries such as Africa, FPPs' relocalisation strategies are translated into *home-grown school feeding programs* that are potentially capable of contributing, if appropriately designed and implemented, to poverty reduction and to the promotion of economic growth (Devereux *et al.*, 2010), to the stabilisation of local food

prices and the reduction of market risks (including, Sumberg and Sabates-Wheeler 2011) and the achievement of food security and rural development objectives, since these mechanisms enable food sovereignty (Wittman and Blesh, 2015). Conversely, in Europe, instead of such structured projects, countries such as Italy, Sweden, Finland, France and Denmark introduced, in their tender award specifications, criteria linked to the short supply chain (spatially) even before the 2006 European Directive's provision.

Similarly, to what happened in other thematic areas, the rhetoric of local as a panacea for all evils has revealed a number of criticalities, including food. The interpretation of the local trap in relation to food production and consumption (Born and Purcell, 2006) gave origin to a literature that is critical of the broader pairing of local food-sustainability and of the specific theme of school meals and *Farm to School programs* (Allenn and Ghutman, 2006; Allen, 2008). However, authors such as Sonnino (2010, 2013) highlight, especially with the analysis of some school PP experiences, the potential of local food in the production of sustainable development. Under this perspective, since it is true that the sustainability of food systems is never a matter of food origin (Sonnino. 2013), the possibility of creating physical and relational proximity relationships between production and consumption and new urban-rural links is a key element for more sustainable food systems.

Attention to ecological integrity has its cornerstone, as stated previously, especially in the GPP tools, hence with the adoption of actions - throughout the supply chain - that reduce environmental impacts with various expedients (re-usable crockery, kitchens, vehicles, ecological products and packaging, etc.). A recent debate, which finds its practical applications in experiences such as in the city of Malmö (a pioneer in collective catering policies), deals with the topic of sustainable diets (Lang, 2014), which envisage a reduced use of meat and sugars, exclusively certified fish, ancient varieties and seasonal products, and actions to minimise waste.

The idea of a moralization of procurement and school canteens (Morgan and Sonnino, 2008; Renting and Wiskerke 2010) is embodied in a broader moral turn of social sciences (among others, Smith, 1997), which also affects the debate on food and nutrition. While Morgan and Sonnino (2008) interpret the school meal as a form of ethics of care (Tronto, 1993), issues related to the impact of FPP in terms of Public Health (Morgan 2015, Sonnino, 2009) and social justice require different types of intervention, such as the use of fair-trade products (Morgan, 2008), the attention paid to the ethical-cultural appropriateness of the proposed menus (Giorda and Bossi, 2016), and the ability to recover and redistribute surpluses.

This transverse nature of school catering relating to the phases of the supply chain, to the numbers of foodstuffs, and to the goals and the tools typical of food planning, characterises it as a strongly strategic «convergence platform» (Ashe and Sonnino, 2013), potentially able to build a new food geography (Wiskerke, 2009). The following paragraphs describe the Italian experience, particularly the one in Turin, and question the latter's ability to respond to integrated goals of ecological sustainability, social equity and economic development.

School catering in Italy. − To understand the importance and the strategic nature of the school catering service, it is enough to think that, at national level, there is a consumption of more than 2 million meals per school day (approximately 424 million meals a year) and that pupils consume an average 2,000 school meals each, during their compulsory school cycle (Save the Children, 2015).

In Italy, school canteens were born as a welfare service (provided by so-called school

charitable institutions, independent institutions established at the end of the eighteenth century) to integrate and support widespread situations of economic hardship and food insecurity. In the Seventies of the last century, with the transfer of social skills to municipalities, the school meal shed its welfare nature and featured as a public service, as a basic element of the right to study. From there on, the role of the school meal was increasingly oriented to guiding the dietary behaviours of the little users and their families, through an educational approach, and also consequently to the development of a scientific body of indications and recommendations aimed at promoting health through the development of proper dietary lifestyles ([7]). At the same time, not only did the organisation of the service radically change, from traditional management to the outsourcing to specialised companies in collective catering, but the approach to the quality of foodstuffs also evolved with a growing use of organic, typical and local, products (for a reconstruction see Morgan and Sonnino, 2008). The translation of these values into quality criteria in public catering was enacted under Law 488/1999 (2000 Finance Act), which not only promotes the use of these products within school and hospital meals, but recognises the PP sector as a lever «to ensure the promotion of organic and high quality agricultural production» (Article 59, paragraph 4).

Two years ahead of the Communication from the European Commission COM (2001) 274 – thus recognising the possibility of considering environmental criteria in public procurement so as to legitimise the demand for organic and typical products – Law 488/1999 (2000 Finance Act) sets out a regulatory pathway ([8]) which shifts the balance of the historic Community tension in Italy between competitiveness and sustainability in public procurement (Morgan and Sonnino, 2007) in favour of the latter. Greater attention to the quality of the catering service ([9]) was supported and promoted also in the field of legislative activity both at national level, with the «Guidelines on school catering» ([10]), and at a Regional one, through laws ([11]) aimed at supporting and encouraging the use of local, organic and typical products in school catering services. Finally, it is worth mentioning the latest indications produced by the legislator, with the issuance of the Ministerial Decree of May 24, 2016 which increases the provisions for the minimum rates of application of the Minimum Environmental Criteria (CAM) ([12]) – including those relating to the «Catering Collective Service» and the supply of foodstuffs (adopted by Decree of 25 July,

(7) Like the first «Healthy Italian Food Guidelines» (recently reviewed), published in 1986 by the National Institute of Nutrition, and the LARN - Recommended Levels of Intake and Energy and Nutrition for the Italian population.

(8) This path will continue with the Procurement Code, Legislative Decree 163/2006, with the *Green Public Procurement* Action Plan (PAN GPP) introduced by Law 296/06 (2007 Finance Act) and with the «National Guidelines for School Catering» published in 2010 by the Ministry of Health.

(9) Recently, interest in the PP sector has also been translated into a series of cognitive investigations aimed at investigating various aspects of school attendance both at Community (Storcksdieck *et al.,* 2014) and national level: from the themes of management quality (Ministry of Health, 2014); to access to the service (Save the Children, 2015); to waste (http://oricon.it/2015/11/ristorazione-scolastica-indagine-esplorativa-sprechi-alimentari-nelle-scuole/), to the degree of satisfaction of the users (Gorgitano and Maietta, 2015).

(10) Approved in the State-Regions Conference and published in G.U. (Official Gazzette) no. 134 of 11 June 2010, available at the Ministry of Health website www.salute.gov.it.

(11) Since 2010, 13 regional laws and 7 legal proposals have been issued, promoting the use of local and organic products in public catering.

(12) CAMs are specific operational tools that were issued from 2011 in order to comply with the National Public Procurement Green Paper (PAN GPP Legislative Decree no. 135/08 as modified by Min. Decree of 10 April 2013).

2011) - in public contracts in implementation of the New Procurement Code (Legislative Decree 50/2016, Art. 34, Paragraph 4) which acknowledges the Community Directives on public procurement. CAMs related to FPPs include indications such as minimum percentages of organic production, sustainable fishery, production with lower environmental impacts, productions with controlled origin (PGIs, PDOs); seasonal fruit and vegetables and non-packed beverages; traceability of the supply chain; sustainable crockery and measures to reduce the waste of food. The CAM therefore falls within the indications that municipalities, which are the direct holders of school catering, must list in their tender specifications in order to promote the diffusion of products and services with a low environmental impact through the leverage of public demand.

School catering in the Metropolitan City of Turin. – Upon an increasing attention, both in public and academic debate, and in innovative practices, there are no capillary data on school catering systems in Italy capable of providing a complete picture of the services provided, although it is constantly evolving.

Awareness of how cognitive gaps are one of the first barriers to the development of a sustainable PP (Morgan, 2014), but above all the centrality conferred to this subject in the urban food governance processes launched in the city of Turin (Dansero *et al.*, 2016), pushed the University, in collaboration with the Metropolitan City, to structure a large-scale investigation campaign aimed at the acquisition of quantitative and qualitative information relating to the characteristics of the catering services of the metropolitan municipalities. The research, carried out in the six months between 2015 and 2016, is also part of the larger and structured project *Atlante del Cibo di Torino Metropolitana* (Food Atlas of Metropolitan Turin), an interactive initiative for the analysis, representation and communication of the urban metropolitan food system (Dansero *et al.*, 2015).

To this end, a multimethod analysis methodology was developed with the aim of rebuilding a more general knowledge about the service and of evaluating specifically the potential impacts of canteens in terms of environmental, social and economic sustainability. Reference is made to impacts as being potential, because research has taken into account the demands expressed by municipalities through the specifications and not the actual characteristics of the services delivered, because of the lack of data ([13]).

Operationally, the survey was conducted through:

- the provision of a questionnaire on the characteristics of the catering service to all relevant municipal offices (137 respondents, 53% of the total);
- the analysis of the documents of the tenders, particularly the specifications, the tender norms and the produce classification charts, which represent the most important tools of public administration to define their procurement procedures and, in general, favour the adoption of sustainable practices in the provision of services (203 municipalities analysed, 80% of the total);
- 16 semi-structured interviews with privileged witnesses (10 municipal technicians, 1 catering company manager, 3 distribution company managers, 2 representatives of parents' associations).

(13) In this sense, the results of the research allow us to say, for example, that a municipality has introduced as a pretext criterion the supply of organic and local fruit, but do not allow us to ascertain what and how much fruit with these characteristics was indicated by the catering companies in their offer, nor what and how much fruit with these characteristics was actually consumed by the children.

The study (14) involved the municipalities of the Metropolitan City of Turin and 254 administrations (out of the 315 total) that, for the school year 2014-2015, provided school catering services. As shown in Figure 1, the administrative fragmentation and demographic distribution of the territory are reflected in the structure of the school service, which is not provided in 58 municipalities (15) (20% of the total) consisting of very small size towns, mainly concentrated in the Alpine valleys (Val Chisone and Germanasca, Val Chiusella, Alta Val Susa and the Orco and Soana Valleys) whose students commute daily to the municipalities with school complexes.

The information obtained with this survey therefore refers to a total of 1,321 public pre-compulsory and compulsory schools (kindergartens, nursery schools, elementary and middle schools) that deliver just under 20 million meals per year. Considering the average cost of the meal at a bid price of 4.72 euros, the annual value of metropolitan school catering supply contract for 2014/2015 is around 90 million euros.

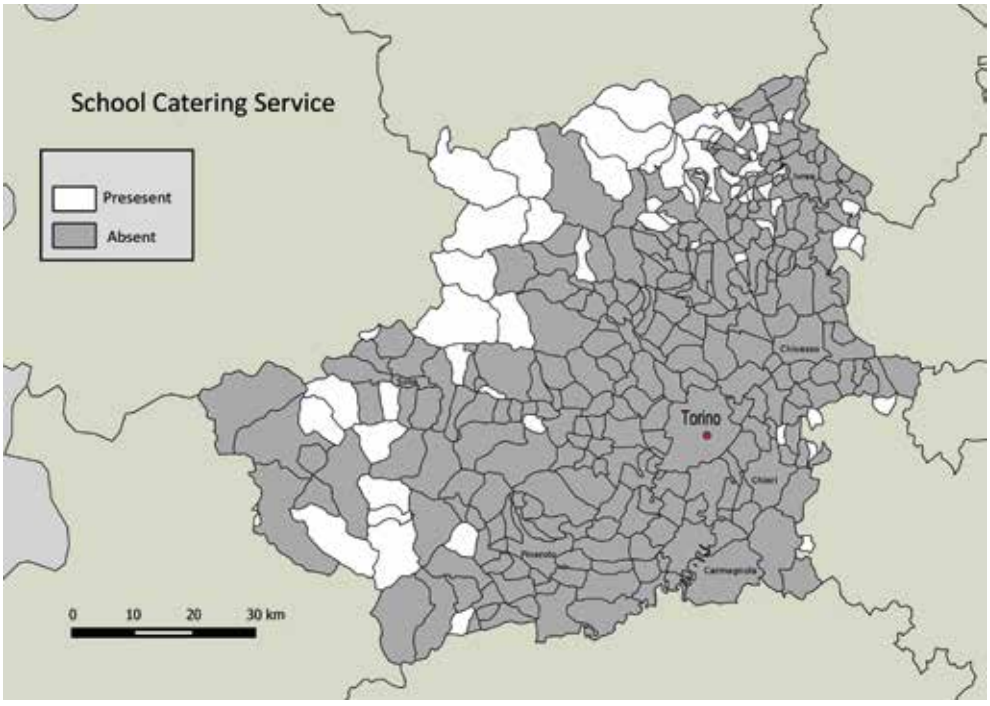

Fig. 1 - *The distribution of the school catering service in the metropolitan City of Turin*
Source: Toldo, 2017

(14) More details are available within the research report (Toldo, 2017, with the partecipation of Alessandra Michi, student of Economics of the Environment, Culture and Territory, at the University of Torino).

(15) In addition to these, there are 3 municipalities that did not provide the catering service during the surveyed year because of the small number of students (under 10 units) who return home for lunch.

In line with national data (see Save the Children, 2015), almost all of the analysed municipalities (218, i.e. 86% of the total) chose to outsource the service, which entails it being awarded to third parties by public tender (in 86% of cases to catering companies) according to the principle of the most economically advantageous offer, although there are, especially in small municipalities, entities such as hotels and restaurants, canteens of religious institutions, paramedical schools, nursing homes and social cooperatives. Direct management, which implies, on the contrary, the maintenance within the contracting structure of the whole catering chain, is found only in 2 relatively small sized municipalities.

The insight into the specifications and product classification charts, obtained with the cross-examination of documents and questionnaires, and the support of interviews with municipal technicians and various economic players in the supply chain, has allowed us to outline the potential impacts of school catering in terms of sustainability. Consistent with its multidimensional nature, which embraces aspects of environmental integrity, social justice and economic development, the table below summarises the key criteria adopted by the various municipalities and which, at each stage of the chain, can affect the sustainability horizons of the canteens, but also of the food systems and territories which they belong to ([16]).

	Production	**Distribution**	**Consumption**	**Post-consumption**
Environmental dimension	- use of organic farming products - use of products from integrated pest management	- use of environmentally friendly means - optimised logistics plan	- reusable crockery - use of water from the mains - ecological detergents - no mono-portions - biodegradable bags - ecological packaging - use of low impact kitchens - food education projects on ecological sustainability	- monitoring of food waste - recycling
Economic dimension	- use of local products		- use of local staff	
Social dimension	- use of fair-trade products - use of social farming products			- redistribution of surpluses

Table 1 – *Environmental, economic and social sustainability criteria*
Source: Toldo, 2017

The diagram below shows the presence of these criteria in the contract specifications and of the product classification charts in the individual municipalities. Here we report only of the criteria that are set as pre-conditions (i.e. binding terms), but it should be noted that in many specifications they are included as a bonus and their satisfaction does accrue to the contract's awarding.

(16) Although some criteria have impacts on multiple dimensions, it has been chosen to favour the main relation. In the case of redistribution of surpluses, for example, the social impact (food access and food security) is preferable, rather than but to a lesser extent, the existing environmental impact, which concerns the reduction of the organic portion of waste.

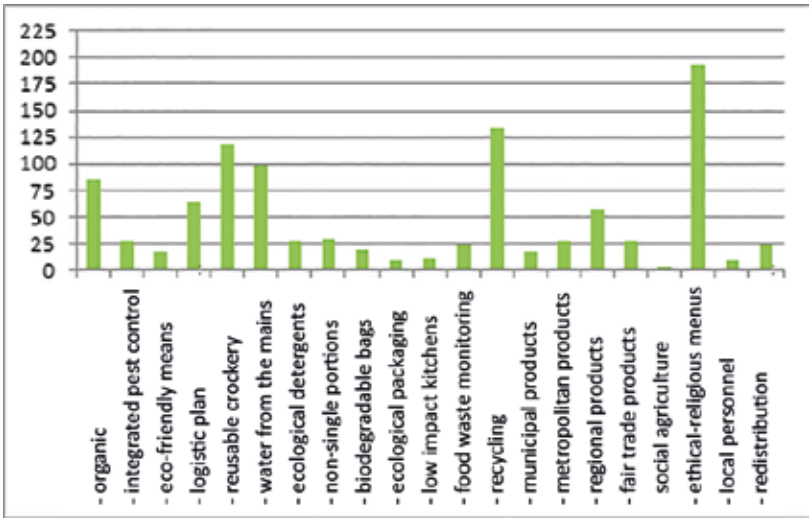

Fig. 2 – *Presence of environmental, economic and social criteria as a prerequisite*
Source: Toldo, 2017

The analysis first of all highlights the primacy of the environmental dimension above the others. This data seems to indicate a reductive approach to the concept of sustainability transmitted through the school's FPP, as already theorised by the scholars who are more concerned with it (Morgan, 2008).

Certainly, criteria such as recycling, the use of reusable crockery, drinkable tap water and ecological detergents are easier to implement, and they fall into those indications that GPP legislation is also helping to establish within public administrations. However, in this context, while the use of environmentally friendly means and low-impact kitchens requires large investments by municipalities and catering companies, an action such as food waste monitoring, which is essential for the re-calibration of the service, still seems to be practiced very little. As for the school catering's ability to direct the production phase, which is mainly concerned with the use of organic farming products, it is reported that nearly 30% of the responding municipalities (which correspond to 77% of municipalities with canteens) insert organic as a criterion of reward, while 43% does so as a prerequisite for the contract. This latter figure was subsequently broken down, for each municipality, into a more detailed analysis of the number of organic foodstuffs required (evaluated on the 13 most frequently recurring on the menus) from which, however, it appeared that more than 30% of the municipalities actually requires only one organic foodstuff, while only one municipality went up to 8.

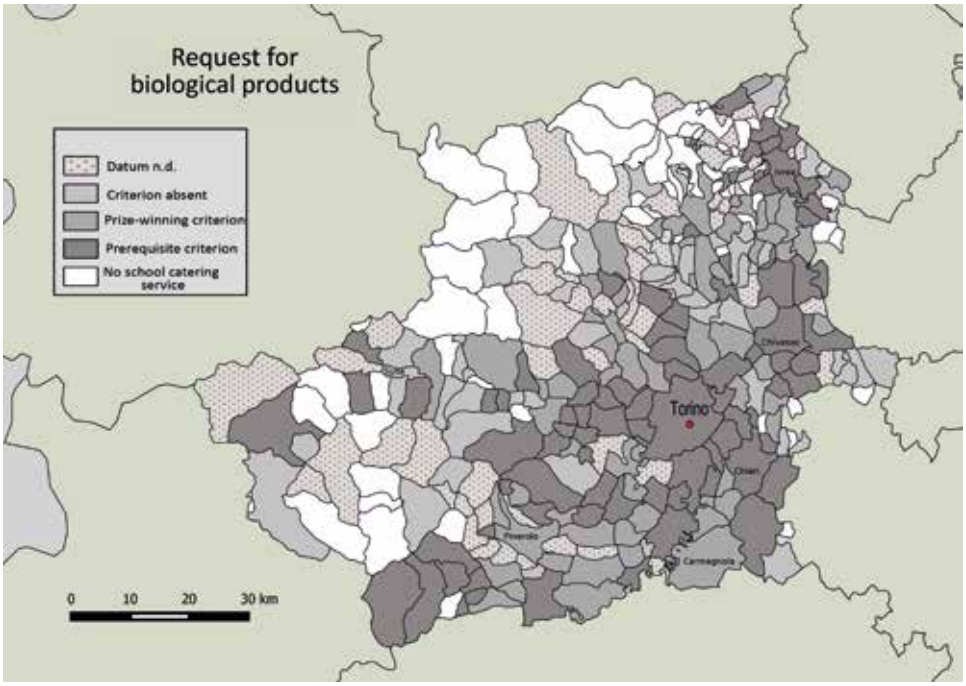

Fig. 3 – Distribution of the organic product supply criteria
Source: Toldo, 2017

The economic dimension is essentially based on the use of local products in terms of support to agriculture and the productive fabric of the territory ([17]). The first interesting fact that emerges from the survey is the absence of a common dimension of «local» which expands or shrinks to include from the Italian to the municipality food supply chain, going from regional products, kilometre indications (ranging from 20 to 100 km) to very precise territorial delimitations (Turin, Pinerolo, etc.). In percentage terms, the question «what is meant by local products?» (asked both in the questionnaire and in telephone interviews) refers more often to the Italian supply chain, followed by the regional one (out of 194 respondent municipalities, 30% from Piedmont territory insert it as a prerequisite and 67% as a reward)., while the municipal origin is included as a pre-requisite only by 10% of the 190 municipalities responding and by 55% as a criterion for reward.

In terms of economic impacts on the local food system, we point out that parents' associations that manage the canteens of some small municipalities have opted to open a network and be supplied only by local producers and businesses, thus contributing to their support (e.g. Prarostino and Angrogna, in the Pinerolese Pedemontano). However, in the case of the municipality of Turin, which accounts for almost 40% of the school meals of the entire Metropolitan City, the choice to limit the purchasing range for some products,

(17) For a closer look at local products in school catering in the Metropolitan City of Turin, see Ribotto and Barbera (2014).

such as bread, has favoured the birth of new businesses on the territory. However, it also occurs that in some specifications the demand for local products (at times, also organic) is as specific as a little out of adjustment with the actual availability on the territory. As it appears from the interviews with several members of staff of both institutional and economic (catering and distribution) organisations, this not only creates difficulties in responding to calls, but also strong discrepancies between the specifications and the effective management of the service in terms of quality of the products administered.

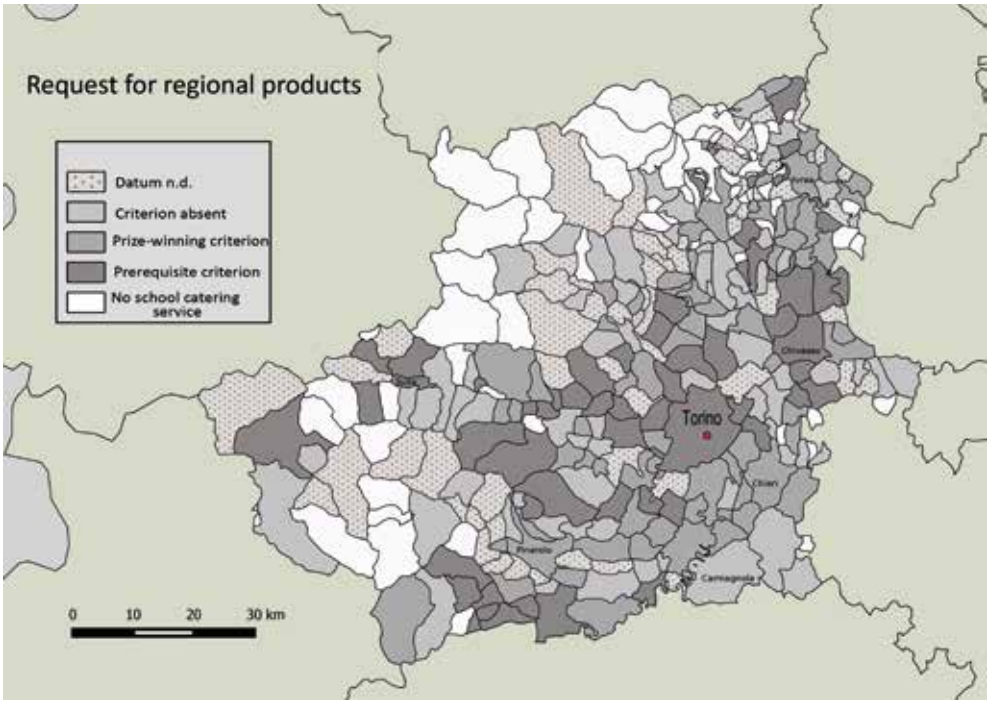

Fig. 4 – *Distribution of regional products as a prerequisite*
Source: Toldo, 2017

In this perspective, several economic operators have expressed the need to take part more actively in the design of the menus (in agreement with the people currently in charge) in order to combine nutritional needs with productive and distributive needs, thus contributing to making the whole catering supply chain more efficient.

The values of the criteria related to the social dimension of sustainability are conversely much lower: from production (incorporation of fair trade and social farming) to post-consumption (recovery and redistribution of surpluses), there are indeed few municipalities that envision in their own canteens a tool capable of contributing to equity and solidarity, hence underestimating its potential in terms of moralization of the food system. In general, we are referring to values that fluctuate around 10% for municipalities that indicate fair-trade and solidarity and the recovery of surplus as a prerequisite and 15% as a reward, while social agriculture is mentioned by only 9 municipalities.

Finally, we highlight that the interviews have shown the conviction that a quality list of specifications is necessarily translated into higher costs, which are difficult to support, especially for small administrations. A statement that research tends to prove wrong, by showing that there is no relationship between the breadth of the service (and therefore the size of the municipalities), the cost and the potential quality of the contract. However, as anticipated, this paper investigates the potential impact expressed by the specifications, without going into the merits of the actual service modalities, due to the unavailability of the data.

Conclusions. – FPP and collective catering are privileged areas from which to explore and reconstruct the relationship between food and land according to a logic of urban food planning. Public food purchases are in fact one of the most important areas of direct public-sector competence to guide the market and contribute to objectives of ecological integrity, public health, food education and economic development (Sonnino and Spayde, 2014). The territorial implications of procurement practices and the organisation and management of canteens push the growing interest in geography, which has long been tackling the food theme (Colombino, 2014) and the relationship between urban systems and food systems (Morgan, 2009). Issues such as the reconstruction of urban-rural links, socio-spatial justice in access to food, food safety, environmental sustainability, and the development of local economies are key elements of the FPP, which, in a multidisciplinary approach, are of interest also and above all for geographic research. This contribution deals with a specific segment of public food purchases: school catering. From field research, there appears to be a reductive approach to sustainability, which clearly prioritises the environmental aspects. In addition, interviews with municipal officials highlighted significant competence gaps, in addition to the above-mentioned belief that quality specifications are necessarily translated into higher costs, which are difficult to support, especially for small administrations. These gaps translate both into specifications that do not make the most of (or do not exploit) the potential of the FPP, and in documents that put forward requirements that are not in line with the characteristics or the real productive capabilities of the territories. Cases such as these reveal the strong geography needs for a policy such as the FPP, that is heavily characterised by unexpressed potentials (Morgan, 2008), but sometimes also by perverse effects which is reflected in the quality of the service provided. Following the idea of a geography «*in* policies» (Governa, 2014), a first operational proposal implies the launch of further activities, such as an analysis of the real capability of the territories to meet the demands conveyed through the FPP, and tutorship and training for those municipalities that have expiring tenders, in order to provide a catering service that can act as a platform where integrated goals of ecological sustainability, fairness and territorial development may converge.

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FOOD PUBLIC PROCUREMENT AND SCHOOL CANTEENS AS A TOOLS FOR THE SUSTAINABILITY OF THE FOOD SYSTEMS. – The food public procurement is considered one of the main tools for rebuilding the relationships between food and territory in the field of Urban Food Planning. Public food purchases are in fact one of the most important levers held directly by the government to drive the market and contribute to sustainable and economic development, public health, social justice, education, etc. This contribution presents the results of a research on school canteens in the territory of the Metropolitan City of Turin, in order to define a conceptual framework and to evaluate the potential impacts of schools' food procurement in terms of environmental, social and economic sustainability.

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ALTERNATIVE FOOD NETWORKS IN TIMES OF CRISIS
PERCEPTION AND TERRITORIAL ACTION: THE CASE OF BERGAMO

Introduction. – Given the significance placed upon the figure of the citizen-consumer in public discourse and public policies, which has progressively replaced that of the citizen-worker, student, patient, etc. (Clarke et al., 2007; Bauman 2010, Paltrinieri 2012), even social movements have modified their repertoires and arenas for action. Between the end of the nineties and the first years of the new millennium, for example, some important boycotts campaigns against large multinationals have contributed to spreading the so-called «critical consumption» (Forno and Graziano 2016).

Since beginning of the 1990s, the diffusion of the idea of consumption as political action has consolidated and strengthened some experiences such as fair trade, responsible tourism, and ethical finance, which adopt «political consumerism» as a mean to confront the drawbacks of the neoliberal globalization, by choosing the market as a political arena (Micheletti, 2003).

Within this phenomenon, food and the creation of Alternative Food Networks (AFNs) play a central role. Scholars agree that AFNs might strongly contribute to the transition of the agro-food system from a linear economic approach to a so-called circular one (Andrews, 2015).

The piece of research presented here is aimed at analysing the diffusion of AFNs within the area of Bergamo, by exploring their action strategies and their perceptions around the current crisis. The study originates from the hypothesis that the recent spread of the AFNs has a twofold drive. On one hand, the loss of purchasing power within important portions of the middle class, due to the increasing unemployment rates following the recession which started in 2007-2008. On the other, people's search for a meaning in their life (Castells, Caraça and Cardoso, 2012) which seems to have been lost in a consumer society threatened by an economic, environmental and social crisis (D'Alisa *et al.*, 2015).

The development of AFNs in a province of Northern Italy. – The focus of this research [1] is on the organisational structure, governance systems as well as projects and expectations of the groups and associations comprised within the AFNs of Bergamo. The decision to look

(1) The study presented here benefitted from a research collaboration within the project «Bergamo 2.035-A New Urban Concept in a New World», promoted by University of Bergamo and financed in the academic year 2014-2015 by the Italcementi Foundation.

at the local context is due to the fact that the organisations promoting critical consumption are more and more acting at the local level, where AFNs often originate (Forno and Graziano, 2014).

Specifically, the research presented here focuses on the province of Bergamo. The intention was to take advantage of previous research works carried out on this specific area which already produced a considerable amount of data and knowledge (Cores Lab, 2013). This study investigates the grassroots movements promoting «sustainable practices» ([2]) from a «meso» perspective, i.e. from the organisational dimension, through the adoption of research tools which allow a deeper understanding of the intra and inter organisational dynamics.

The first step was mapping the variety of practices present across the territory. This started in 2014 and it was followed by a series of interviews and focus groups, with a methodology inspired by Participatory Action Research (PAR). This method involved in-depth interviews following a dialogical approach aimed at investigating opinions and perceptions of key-actors, facilitating the identification of opportunities and barriers for them (Forno and Maurano, 2014). The mapping provided an overview of the numerous local organisations committed to «sustainable practices» ([3]). Beside the context analysis, we performed 31 in-depth interviews with the representatives of the main social movements organizations involved in the creation of AFNs. The interviews allowed to identify and reflect on similarities and differences between the organizations of new economy, and the oldest social movements.

The research context. – The province of Bergamo presents an advanced economy, high-quality of life, and unemployment rates relatively low, with a still relevant traditional manufacturing sector, composed of typical industrial districts of SMEs. Despite being lower than the National average, the unemployment rate has notably increased during the recent economic crisis, going from 6,4% in 2004 to 18,3% in 2014 among people between 15 and 29 years old (Istat).

Higher level of education did not result in the same rate of incomes increase observed between the Eighties and the Nineties. Moreover, female employment rates are lower compared to the national average. These data might suggest a conservative tendency of the local cultural heritage. Historically, this area and its people have been considered «closed» towards phenomena such as multiculturalism, with a greater dedication to a traditional working and savings culture. However, the social fabric has been traditionally enriched by a tendency to social cooperation. Deeply rooted in the Catholic culture (Camozzi and Forno, 2008), this tendency strongly stimulated the emergence of a variety of associations and volunteering activities.

Thanks to its rich and diverse landscapes, the agro-food sector is enhanced by the pre-

(2) This expression refers to the variety of experiences aimed at increasing citizens' awareness about negative externalities of individual and collective production and consumption. Moreover, they try to rebuild social relations between actors, in order to influence the community development model, starting from the local level.

(3) In other research defined as SCMOs Sustainable Community Movement Organizations (Forno and Graziano, 2014). The dimension of AFNs comprises varies groups and organisations promoting critical consumption – such as fair trade, ethical finance, «Bilanci di Giustizia», Degrowth movement, new barter groups, Solidarity Purchase Groups (GAS), and some networks of local producers participating in local farmers' markets and other forms of direct food sales.

sence of several local typical products and specialities. Contrary to the industrial agro-food sector mostly developed in the southern part of the valley, hill and mountain farming adopted a multifunctional approach. This approach is better suited to solving problems related to the geo-physical conditions of the area (considered «fragile» areas) ([4]), as well as creating job opportunities in the touristic and rural sectors.

It appears evident how the socio-cultural and economic context described here brings along opportunities as well as constraints for the development of organisations and experimentations of new (and alternative) economy.

Main results. AFNs in Bergamo: mapping and empirical analysis. – In Bergamo – as in other contexts – there is a growing interest around the study and the (re)construction of community networks of production and consumption. A study commissioned by the Province of Bergamo (2004) reported the presence of 363 businesses «producing and offering typical and traditional food products, services related to restaurants, accommodations, entertainment, and educational activities». Data from the Province of Bergamo highlighted that in 2013 ([5]), there were 73 educational farms, 144 holiday farms, 243 farms processing their milk own within their business, and 34 farms equipped with fresh milk vending machines. Moreover, 370 farms operating within short food supply chains are located in the most urbanised and densely populated areas of the city of Bergamo and the nearby municipalities (Fig.1) ([6]).

(4) On this concept, see www.zoes.it/gruppi/aree-fragili, visited on 1 August 2016.

(5) Data provided on 19/05/2014 from the Department Agriculture and EXPO. We would like to thank Giulio Del Monte and Giuliano Oldrati for the elaboration of data from SIARL (Sistema Informativo Agricolo della Regione Lombardia).

(6) Ongoing research of the Cores Lab on the Participatory Guaranty Sistems. The identification of businesses was carried out through a snowball sampling, thanks to which important and recognised representatives of AFNs indicated businesses known to them.

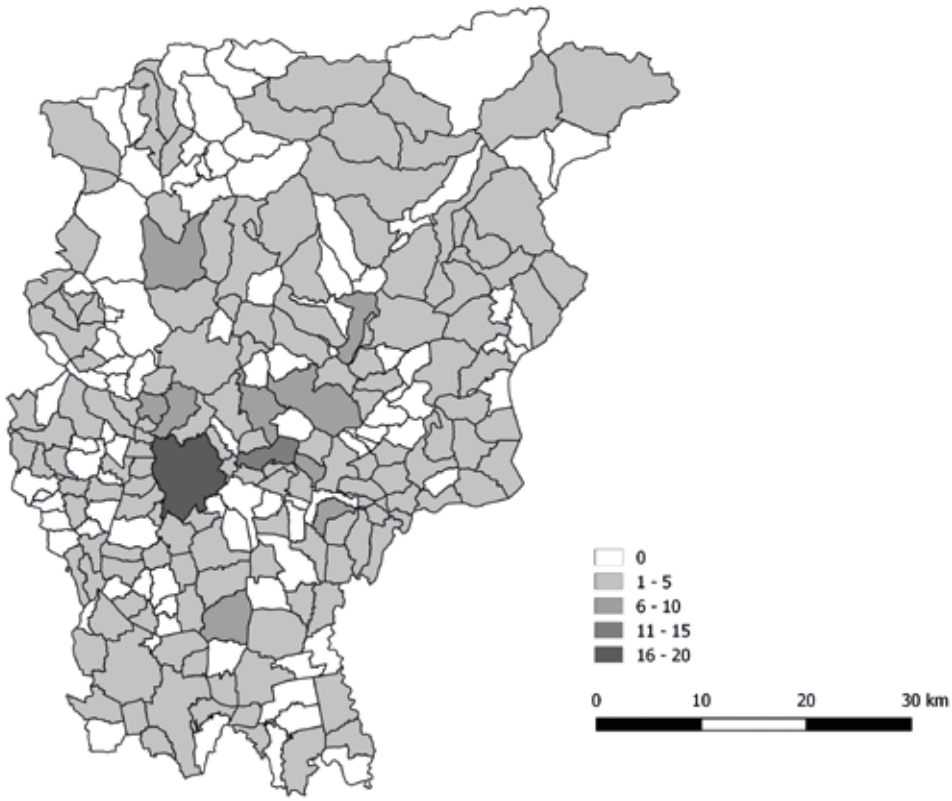

Fig. 1 – *Number of businesses operating in short food supply chain per municipality, in the Province of Bergamo*
Source: Data from the Coreslab, collected during a parallel ongoing research (Salvi e Vittori, 2017), and through a complementary research we conducted, and updated to December 2016. These data are based on participatory observations and snowball sampling, which was based on information provided by some of the actors involved (GAS members, coordinators of farmers' markets, networks of producers operating in the short food supply chain, who consider themselves part of these circuits).

Bergamo is the second province in the Lombardy region for presence of Solidarity Purchase Groups (GAS) with 70 active groups (Forno, Grasseni and Signori, 2013) (Fig.2).

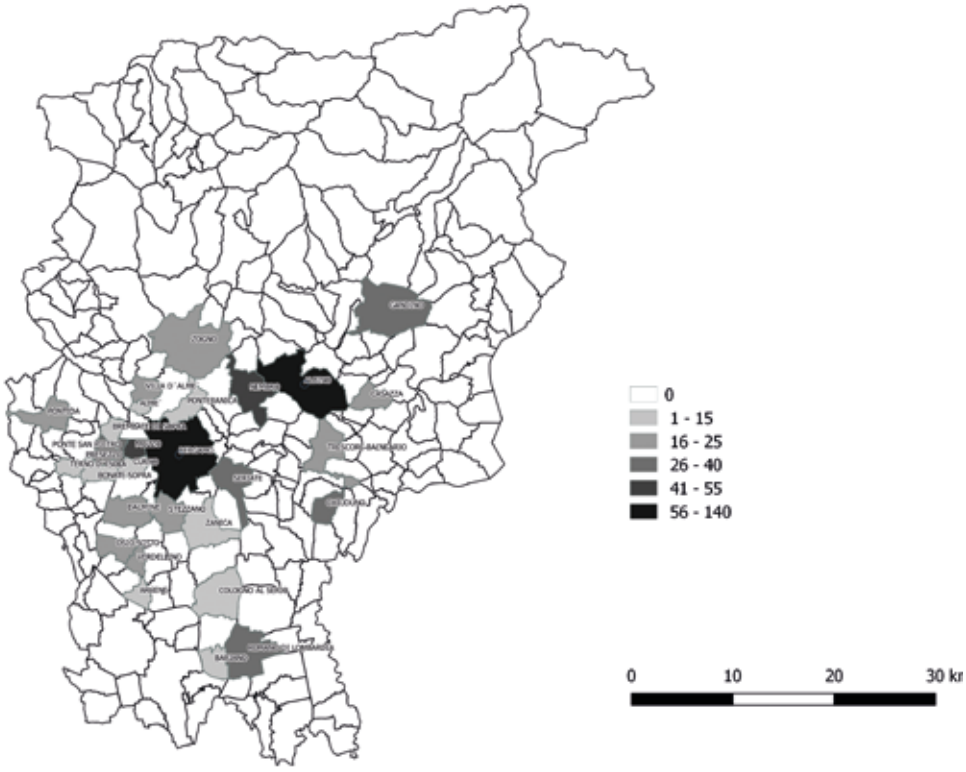

Fig. 2 – *Presence of one or more GAS per municipality, within the Province of Bergamo, with indication of number of families involved*
Source: Research and Data Elaborated by Cores Lab.

In the most densely populated area there are also 26 agro-food markets inspired by the values of the short food supply chain. These are coordinated by 13 different organisations involving about 160 producers mostly from SMEs (Fig. 3). There are more than 100 activities related to urban agriculture in the city of Bergamo, and about 60 allotments assigned by the municipality and other 50 used as educational garden or social and shared spaces, which facilitated the establishment of interesting collaborations between the municipal botanical garden and some local schools (7). Ultimately, we are witnessing a growing emergence of shops and

(7) The main source of data about urban gardens in Bergamo is the mapping performed by the association «Orti nel Parco» and presented on April, 9th, 2016, at the conference «Orti di città: la prima mappatura degli orti a Bergamo», in the office of the public authority Parco dei Colli of Bergamo.

restaurants committed to offering products coming from organic and/or local businesses, recommended by Slow Food and GAS.

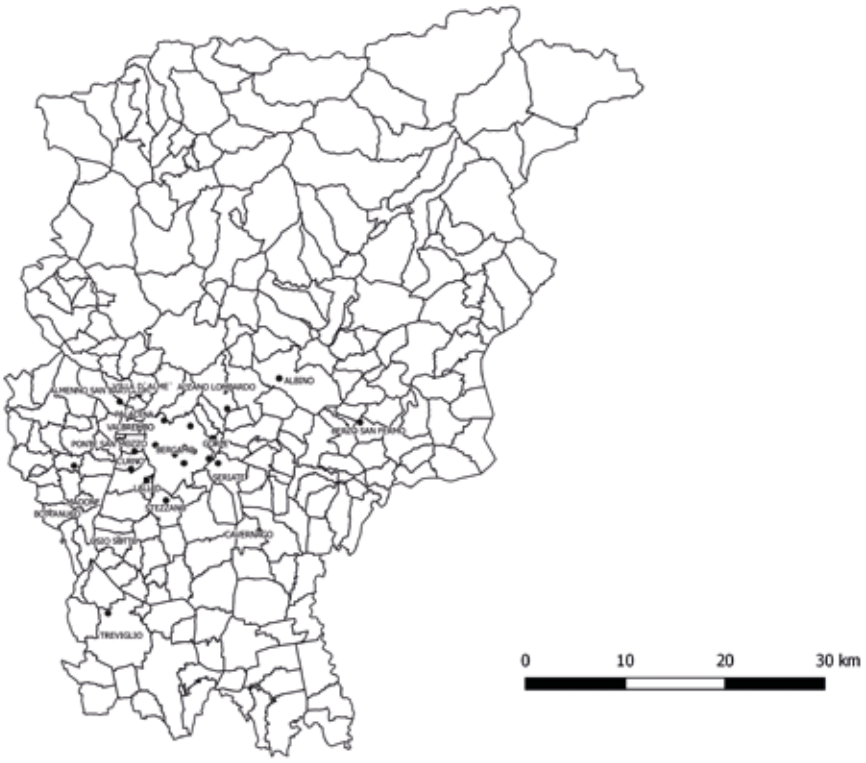

Fig. 3 – *Presence of farmers' market of the short food supply chain, 2016*
Source: Research and Data Elaborated by Cores Lab.

Markets occurs monthly, weekly or two times in a month. Producers could take part in one or more markets.

For a long time, citizens and local administrations have not reserved enough attention to this rich set of experiences, which not always in contact to each other. However, in Bergamo, the recent economic crisis appears to have triggered a shift in the attitudes of municipality and community in general, towards greater awareness and interest around sustainability and alternative economy. The administration of Bergamo, in office since 2014, expressed the intention ([8]) to build a network of collaborations between local producers in order to provide the city with high quality food, as well as to valorise the urban and peri-urban green areas. With this purpose in mind, the Mayor currently coordinates an Agriculture Roundtable, to which actors from the agro-food local system are invited to discuss. More-

(8) In its programme, at the point «Nutrire Bergamo» (Feeding Bergamo).

over, some other nearby municipalities (Gorle, Paladina, Valbrembo, Villa d'Almè, etc.) in 2016 started promoting and organising farmers' markets.

The interviews performed highlighted that some organisations and grassroots movements originating in the Nineties played a pivotal role in encouraging the development of AFNs as well as an interest by local administrations. Among them, the Fair Trade movement (1990) and Ethical Bank, which has been active on the territory since 2003 and has financed some of the nodes of the AFNs. The Time Bank (1997) and Slow Food (1987) have been present on the territory for a long time and have strongly contributed to cultivating this new approach to food and sustainability in general. For example, the Bank established its own GAS, called «Time Banks». With regards to Slow Food, initially it was mainly focused on the promotion of culinary excellences among a chosen few. However, lately, it strongly contributed to raise awareness about the importance of «Good, Clean and Fair» food for all, promoting the territory and the producers behind culinary excellences. These initial experiences provided the basis for the development of the social and cultural fabric characterising the organisations behind the formation and expansion of diversified AFNs.

Unlike historic movements, these new organisations present a different organisational form, which is less structured and more horizontal. They are aimed at operating on a local level, through a core group of people who are able to keep in contact with many others via new technologies. This is clearly shown in the case of GAS, but also in the local network of solidarity economy, called Sustainable Citizenship. The latter was created in 2007 and gathered 20 associations of various nature. It currently organises 4 farmers' markets on the territory, which have become spaces for dialogue and diffusion of the principles of solidarity economy, thanks to some cultural initiatives promoted during the markets ([9]). The same can be said for the Degrowth Movement (2011) and the associations Il Quarto Paesaggio (2013), which managed some community urban gardens. A similar, although not strictly food related concept is represented by Pedalopolis (2003) and Regalo e Presto (2012) ([10]).

With regards to the socio-economic status of the participants, we found similar results to those presented by other researches (Carfagna *et al.*, 2014), i.e., it is mostly middle class people with medium-high level of education who get involved in these experiences. This might confirm that especially within wealthy areas, these forms of self-organisation do not originate from a context of necessity and marginalisation, but rather from actors already active in the social realm, and within associations

Moreover, the presence of young people is still limited. However, interesting intergenerational exchanges occur within these organisations, as stressed by a young facilitator of a project around an urban garden:

(9) The farmers' markets are organised by an association created for this very purpose, called Market and Citizenship.

(10) Pedalopolis focuses on the promotion of cycling and the diffusion of repairing bicycle shops («ciclofficine»). «Regalo E Presto» is a mailing list which enables people living close to each other to give away or land materials or/and tools they do not use, in order to avoid waste. Over the last year, this network has grown to count more than 500 people, and stimulated the emergence of other six groups based on proximity. They act within specific neighbourhoods of the city of Bergamo, or in some nearby municipalities, with the aim «originally, to reuse and exchange», «but with the purpose of facilitating social relations» and «creating also a network on the territory» (Regalo e Presto, interview from 23/01/2014).

> You might have noticed that we really focus on the elderly... The elderly are our greatest resource, not the new generations… They have much more time than the young people. (Il Quarto Paesaggio, interview from 07/02/2014)

However, it seems that the presence of young people is increasing within the GAS, where we note the presence of young families with kids. Young men and women are also increasing their presence as producers of the short supply chain.

The interviews carried out with the short supply chain producers highlight the importance of an increased awareness of citizens and their role as consumers (11) around sustainability. This awareness is important in order to sustain the producers' business as well as the maintenance or re-launch of the urban and peri-urban agriculture.

In Bergamo, as in other localities in the central-northern part of Italy, the spread of AFNs appears to be fostered mainly by the activism of consumer-actors (see also Guidi & Andretta, 2015). than interesting example is the experience of «Farmers' Market and Beyond», promoted by Mercato & Cittadinanza (M&C) (Market & Citizenship). M&C is an association founded by some «gasisti» (participants of GAS) from the Bergamo area, which is aimed at facilitating the meeting between producers and consumers within the context of the farmers' market, where they can interact and exchange practices and information:

> When we organise the markets, we try tomake it clear what lies behind them [...], in the attempt to economically sustain them [the producers]. They have a space to sell their products, within which they are required to be fair, transparent etc., but to which they can also have an easy access. [...] Many consumers ask information about the products to the producers, and they know that the producer only sells [...] his/her own products. (Mercato & Cittadinanza, interview from 14/02/2014)

The space of the market is therefore identified as an important form of collective action, as it facilitates the creation of new bonds and relationships. For instance, inspired by sustainability principles and by the experience of M&C, some local small producers, created two other informal networks, i.e., Agrimagna in 2012, and Orobiebio in 2013.

Compared to the social movements of the past, the action of these organisations is led by a greater pragmatism, that is not limited to the promotion of more sustainable consumption. Thus, the action is driven by their willingness to create spaces within which active participation becomes a form of exchange and co-education to critical consumption and auto-reduction. These actions have the overarching aim of creating relations and consolidating shared missions and ideas, through which the actors can envision new identities and life styles.

AFNs actors within the crisis: from old risks to new opportunities. – The interviewees generally agree that the economic crisis stimulated a greater attention towards the social and environmental issues linked to consumerism and economy of the limitless growth. The crisis is also considered as an input for the emergence and diffusion of new experiences. However, this did not lead to the same effects in all the analysed cases.

(11) Also called «consumer-actors», as they are actors of these changes.

The most evident drawbacks were reported in the case of the Fair Trade:

> Although the economic crisis has made many people more aware [...], the fact that there is less money circulating has made it impossible for our cooperative to employ people for the last two years, which is obviously a big problem for us. (il Seme, interview from 12/12/2014)

Differently, other experiences recognised a positive influence of the crisis on their activities. For instance, the representative in Bergamo of Ethical Bank, maintains that the economic crisis stimulated a new awareness. The same is claimed by representatives of the community urban gardens, the GAS, the Farmers' Markets, or the new barter's circuits.

Within these experiences, the economic crisis is perceived as the main driver behind the increase of demand.

The development of two new networks of small local producers called Orobiebio and Agrimagna is an interesting case. These are businesses and cooperatives which are not based on volunteering work. The coordinator of Orobiebio claims that the crisis:

> did not have a negative influence. Also because [...] our prices are not higher than the conventional one: we sell directly, and very often we actively involve people in the harvest phase, they harvest themselves, and we support families' economy. Therefore, I think it was… I would not say positive, but it did not provoke great variations. (Orobiebio, interview from 07/04/2014)

According to the coordinator of Agrimagna, there seems to be a positive trend, and at times the offer does not meet the demand. The crisis currently represents:

> an opportunity to go back to agriculture. All these things we are experimenting and building [...] in the last 2 or 3 years, I have seen growth, partly because of the circulation of information, I have seen a growing trend in business. [...] The opportunities have actually increased. This does not mean in anyway that things are not easy, simple, or straightforward. (Agrimagna, interview from 08/04/2014)

These networks seek the collaboration with the institutional contexts They strongly believe in the importance of the institutional role in supporting those activities related to sustainable farming, such as organisation, promotion and training, which mostly need an active institutional:

> In my view, one of the weaknesses of the system is the fact that we are part of a quite young productive sector, which is not equipped with a system yet, a system as the one that made Italy great [...] and we have not reached such an economic organisational level yet, in order to organise and structure our activities in that way. (Orobiebio - Focus group from 19/05/2014)

In this context, there is always a risk of initial participation and enthusiasm gradually disappearing. Indeed, this happens either due to the fatigue related to the volunteering work of a very small group of people, or because these associations decide to adopt organisational forms similar to those present in the conventional market.

As shown in other cases (Bresnihan and Byrne, 2014), the issues related to the long term sustainability of these kinds of economic practices reflect an unequal distribution of power, which privileges private to public interests. Therefore, it is not possible to conceive

the solution of the issues that are rooted in the current crisis only through the creation of alternatives within the same market. What is needed is a political action aimed at influencing the way local policies are envisioned. However, people who participate in these experiences of alternative economy seem to show indifference towards politics, and the importance of participation in order to change the rules of the game. Instead, they tend to be rather focused on small, pragmatic achievements:

> We, as local group, act to achieve pragmatic goals, even small…Small? Actually, last year we started with around hundred seeds of the Wipper Snapper type of tomato, and now there are almost hundred thousand! (Civiltà Contadina, interview from 24/01/2014)

> We have small goals [...] Active and responsible citizenship, people's lifestyles... (Circolo della Decrescita Felice di Bergamo, interview from 04/02/2014)

Small achievements appear to be the only strategy to achieve short-term goals, with a potential to pave the way for other type of actions. Indeed, this approach might represent a more effective drive for people compared to the political way, which often results in frustration and failure to achieve objectives.

> There are politicians running after us, as I see them, I avoid them. (They follow us]seeking votes, apparently. They make themselves look good to seek votes. No, no, mistrust is big [Il Seme, interview from 12/12/13)

Nevertheless, some of these experiences collaborate with established national organization (such as Ethical Bank) and other groups working at the local level (Time Banks, Civiltà Contadina, Il Quarto Paesaggio, MDF). The cooperation occurs away from political parties, and is focused on pragmatic objectives:

> We work with an idea in mind, that means a philosophy associated with our lifestyle,auto-production, culture, and it is not possible to refer only to one political party [...] Obviously, you need to interact with the local administration... besides its political orientation. (MDF, interview from 04/02/14)

> We are non-political and non-confessional, [...] generally our relation with the institutions is quite good. [Within the administration of Mozzo there are] good interlocutors, [...] there is bureaucratic support [...] [For the local administration] it is useful having some volunteers doing the job... eventually, it is a win-win situation, it is convenient for both of us. (Il Quarto Paesaggio, interview from 07/02/14)

Besides the above mentioned risks, it is important to highlight the opportunities generated within the situation of economic crisis, as stressed in the interviews of the coordinators of the networks of Orobiebio and Agrimagna. What they report is confirmed by other ongoing research. At the local level, the results of a survey submitted to 44 producers of the short food supply chain of the Bergamo area, claim that after the adhesion to the short food supply chain, the economic situation of most of these producers improved, although there is a general complaint about the time-intensive activity of this kind of organization of distribution. It is worth noting that, during the period of crisis, new businesses were created,

which were not inherited from family members (16 in the period 2008-2013, compared to 6 between 2000 and 2007) (Salvi and Vittori, 2017).

If the emphasis on consumption trends is a product as well as a result of the consumer and increasing wealth in the society, the attention reserved to production appears to be linked to the current time of crisis. This is an interesting point in the discussion about the economic sustainability of AFNs. As stated by the coordinators of Orobiebio and Agrimagna, there are opportunities for the future development of the short food supply chain. However this will require important efforts:

> [We have to] make a big effort, in terms of time investments [...] Mmm, I see the future [...] very positively [...] This does not mean that the result is granted, but definitely... Nowadays, those data suggest that this sector has good potential for development. (Agrimagna, interview from 08/04/2014)

> We are taking high risks, as all pioneers do... It difficulties hard and risky, as we are investing money. Although these are organisations without important capitals, they are such small ones that are very vulnerable from an economical point of view. [...] Moreover, we have no control over climate conditions, and this brings to high level of stress and uncertainty. [...] We see the future always positively, otherwise we would not do this job, as we believe in it, and we think this is one of the few sectors in evolution, within the system. (Orobiebio, interview from 07/04/2014)

Therefore, considering the positive local implications of AFNs activity, and what might limit their dissemination, it is important to understand what can, on the contrary, favor it. A possible perspective on this point is the study of the collaboration between social movements, local institutions, and other stakeholders around the development of urban food policies and food councils. These are attempts at coordination of the urban food governance, which originated in some cities in North America and North Europe, and have recently developed in some Italian cities as Milan, Turin, Pisa, and Bergamo too. On this topic see, for instance, Di Iacovo *et al.*, 2013; Dansero and Puttilli, 2014; Calori and Magrini, 2015. Also our own research contributed to the formulation of some initial considerations about these processes currently ongoing in Italy and Bergamo (Forno and Maurano, 2014; 2016).

Conclusions. – The crisis, as described by Bauman (2010) and Castells *et al.* (2012), appears to provide new perspectives for the development of a circular economy, including a reterritorialization of part of the food system. In this situation, though, the social movements have to face a twofold challenge. On one hand, they have to deal with Institutions, which are often not ready (for lack of capacity or will) to satisfy the requests for greater environmental and social justice. On the other hand, they have to re-build relations of solidarity and cooperation within a social context characterised by individualism and consumerism.

Looking at the local scale, this article provides an initial reflection on the transformations generated by the crisis on the AFNs actors. As highlighted in the interviews, there are three main drivers shaping the form of development of this type of collective action:

1. Greater citizen awareness around economic, social and environmental sustainability issues;
2. Economic crisis and impoverishment of the middle class;
3. General loss of meaning, due to the consumerism and the depletion of social re-

lations, along with the decoupling of GDP growth and happiness (as suggested by the paradox Easterlin, 1974)

In these terms, this research confirmed what emerged from other studies (Morgan *et al.*, 2009; Goodman *et al.*, 2012), i.e., that these forms of action represent interesting spaces for experimentation and social innovation, within which the consumption becomes a form of collective action (12).

The «sustainability practices» and the dynamics within AFNs analysed here appear to fit well within the translation model, developed by Callon and adopted by Colombino and Giaccaria (2013). These authors state that the process of creation of movements follows some phases, during which activities and collaborations are shaped around a common issue, and the solutions are elaborated together. If the network created gradually increases its cohesion, then it will be ready to interact with the outside world and, through new alliances and partnerships that will increase the bargaining power of the actors involved, it will manage to pursue more effectively the solution to the identified problems.

Applying the translation model to the case of AFNs of the Bergamo area, we can outline their organizational and historic development:

1. Problematizing Phase: one or more actors – as Slow Food and the Fair Trade of the Nineties – recognise a problematic situation, and start identifying their own solution;
2. Concern Phase: other actors who care about the problematic situation get involved. In the case of Bergamo area at the beginning of the years 2000, it is identifiable a strong development of GAS-like organisations;
3. Recruitment/Enrolment Phase: these actors define their roles, rules, routine, and shared meanings. This set of elements helps the alignment of its actors and strengthening the stability of the network. Over the past few years, we have seen the development of short food supply chain farmers' markets due to the involvement of activists and volunteers in the «recruitment» of producers concerned with the issue at hand.
4. Mobilisation Phase: the network interacts with the outside worlds, seeking the support of other actors, which is potentially fundamental in order to achieve the solution of the problem. In the case of Bergamo, this might be represented by the local institutions, as the administration of Bergamo, which has been coordinating since 2016 an Agriculture Roundtable (13), during which projects operating within the local food system are discussed.

(12) The position of those highlighting the limits of these experiences is also worth noting. They stress their limits of these movements in terms of transformative potential as well as efficacy. For instance, Goodman et al. (2012) stress the fact that AFNs continue to be an expression of consumption trends of middle and high class; they are scarcely politicized, strongly interested in preserving their own health and identity. Therefore, they claim that this model is destined to remain a niche at the edge of the market, with no impact on the consumption of the mass. There is a risk that AFNs will remain a niche phenomenon, and that they are exploited in favour of green washing practices on conventional agriculture production.

(13) The Mayor of Bergamo took part in this Roundtable, as well as the officers for Environment and Education, main Farmers' Trade Unions, associations as Botanical garden, Parco dei Colli, Slow Food, the Network of Sustainable Citizenship, Professors from the University of Bergamo experts on landscape, tourism, consumption (among which is located our research group Cores lab), and other local actors and stakeholders.

Given the strong involvement in this context of grassroots movement organizations in the development of AFNs, it seems possible to foresee the conditions for a fruitful collaboration between spontaneous movements, forms of solidarity economy and public administration. This seems, indeed, possible despite the historically rooted divisions and the long times usually required to implement constructive collaboration between different actors.

Lack of participation within experiences of urban food strategies and food councils is a well known and reported aspect both at international and national level (as discussed in Forno and Maurano, 2016). This aspect, however, seems less evident in this case. What has emerged in the case of Bergamo is, in fact, the rather important role which grassroots groups play within the territory. A dynamic that will be interesting to continue investigating in its evolution process, in order to understand if, and to which extent, this embeddedness might influence the local policy-making.

Further research is needed to assess the effects of the crisis, the development of AFNs within a territory, and the ongoing and future evolution, especially in the current «mobilisation phase».

Appendix: list of interviews. – We interviewed the representative of the associations, groups or bodies specified in the following list.

Acli Terra, Bergamo, 07/04/2014
Adiconsum, Bergamo, 26/02/2014
Agrimagna, Corna Imagna (BG), 08/04/2014
ASL Bergamo, Bergamo, 14/04/2014
Aspan (Associazione panificatori), Bergamo, 10/04/2014
Associazione Amici Orto Comunitario-Auser, Bergamo, 16/01/2014
Banca del tempo di Longuelo, Bergamo, 09/02/2014
Banca Etica, Bergamo, 22/01/2014
Banche del tempo, Bergamo, 09/02/2014
CEEA (Centro di Etica ed Educazione Ambientale)-Cascina Gervasoni, San Giovanni Bianco (BG), 12/03/2014
Centro di Etica Ambientale, Bergamo, 03/04/2014
Circolo della Decrescita Felice di Bergamo, 04/02/2014
Cittadinanza sostenibile e Mercato & Cittadinanza, Provincia di Bergamo, 14/02/2014
Civiltà contadina - provincia di Bergamo, Bergamo, 24/01/2014
Coldiretti Bergamo, Bergamo, 09/04/2014
Comitato Altra Ponte, Ponte San Pietro (BG), 21/01/2014
Comitato Parco Agricolo Ecologico, Stezzano (BG), 09/03/2014
Confagricoltura, Bergamo, 15/04/2014
Confcooperative, Bergamo, 05/05/2014
Cooperativa Il Seme - commercio equo e solidale, Bergamo, 12/12/2013
Federconsumatori, Bergamo, 11/03/2014
Gli Armadilli, Dossena (BG),18/01/2014
Gruppo Amici dell'Isolotto, Ponte San Pietro (BG), 21/01/2014
Legambiente, Bergamo, 29/01/2014
Mais Gandino, Gandino (BG), 08/04/2014

Mario Carminati - agronomo,Bergamo, 25/02/2014
Orobiebio, Bergamo, 07/04/2014
Orto Botanico «Lorenzo Rota», Bergamo, 05/03/2014
Pedalopolis, Bergamo,06/02/2014
Progetto «Mangio locale penso universale», Bergamo, 14/04/2014
Provincia di Bergamo - settore Agricoltura, Bergamo, 09/04/2014
Quarto Paesaggio, Mozzo (BG), 07/02/2014
Regalo e Presto, Bergamo, 23/01/2014
Slow Food, Bergamo, 11/12/2013
Slow Food Valli Orobiche, Pontida (BG), 17/04/2014

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ALTERNATIVE FOOD NETWORKS IN TIMES OF CRISIS. PERCEPTION AND TERRITORIAL ACTION: THE CASE OF BERGAMO – The ongoing economic crisis and the growing concerns about food quality and safety are leading to an increasing awareness of consumption habits among citizens. Critical consumption is defining an alternative geography of food. Alternative Food Networks (AFNs) are expanding market niches based on the commitment and involvement of local actors. By redefining consumption, distribution and production, they often bridge the gap between producers and consumers and promote endogenous development, production re-localization and food system reterritorialization. In this sense, AFNs could represent new forms of sustainable self-organized collective action. This article describes the evolution of alternative food practices in Bergamo, a medium-sized town in the North of Italy, and its province. It presents a reflection on the effect of the crisis on alternative economic practices, while taking into account the main constraints and opportunities that foster/limit their spread. Data for the analysis came from different sources of information such as interviews, participant observation, an extensive mapping of actors, practices and projects.

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ALTERNATIVE FOOD NETWORKS AND CITIES IN ITALY: SPATIAL ANALYSIS FROM CENSUS DATA

Introduction. – In the last twenty years the study of alternative food networks (AFNs) gained growing attention insomuch as some scholars argue (Goodman, 2003; Sonnino and Marsden, 2006; Tregear, 2011) that it is appropriate to reflect critically on the results of these body of literature and consider what is needed for the focus and directions of future research. AFNs are described as forms of food provision considered being in contrast – therefore the adjective «alternative» – to conventional types of food production and distribution system which have come to dominate markets in developing countries. The latter are characterised by strong economies of scale reliant on industrialised methods of food production and processing, large distribution and consumption networks, while the former can rely on localised and short food networks such as farmers' markets, community supported agriculture, direct sale in the farm, informal groups of consumers, community gardens, vegetable box scheme, etc.

It follows that a first problematic feature in AFN research is a tendency to bifurcate agri-food systems into two antagonistic type, namely «alternative» and «conventional» food systems. There are a few case studies (Murdoch and Miele, 1999; Straete and Marsden, 2006; Jarosz, 2008) demonstrating that clear boundaries between them do not exist and therefore «in the context of the evolutionary dynamics of alternative food networks, the conventional dichotomy between standardized and localized food does not thoroughly reflect the present reality of the food sector» (Sonnino and Marsden, 2006, p. 184). In a regional agri-food system AFNs do not operate in isolation and then it is needed to go further the dichotomy and to assess the evolution of both networks in the same context of the conventional sector. Furthermore, both alternative and conventional networks have a role to play in the sustainable transformation of agriculture. In isolation, none of these two agri-food systems would necessarily lead to sustainable transformation of mainstream markets because AFNs tend to get stuck in their high quality, low-market penetration niches, while conventional food systems have a tendency to react to cost pressures by lowering the quality standards of their products (Sonnino and Marsden, 2006). (Hockerts and Wüstenhagen, 2010).

The present study goes beyond the dichotomy between conventional and alternative and it argues that the sustainable transformation of agriculture is not going to be brought about by alternative or conventional food networks stand alone, but instead that their interaction and co-evolution is essential (Hockerts and Wüstenhagen, 2010). The challenge posed by

the co-evolution between conventional and alternative food systems goes beyond a more intense integration of studies and it requires a stronger understanding of the competitive space in which both are embedded. This would allow to uncover the evolution at the niche level of competitive (network of) farmers and their ability in creating new spatial organizational structure which compete with the more standardised productionist systems. In this sense we propose to study the agri-food system as a competitive rural space where conventional and alternative food system coexist, although with different set of quality, embeddedness and commercial networks.

A second problematic feature of AFNs research is an unclear theoretical perspective and a large focus on specific case studies of AFNs. The shift from a de-localized conventional food system to a re-localized alternative food system is not a linear process, as it involves experimentation, learning processes, new spaces, new capabilities, new policies, adjustment and reconfigurations. In addition, the geographical dimension of the transition changes the background of every process and the transition may be shaped differently in every region (Coenen and Truffer, 2012). In order to reveal the dynamics and mechanisms that move towards a ri-localization of food systems, this paper suggests to draw the analysis upon recent evolutionary economic geography (EEG) literature (Boschma and Martin 2010).

This paper is structure as it follows: section two introduces the theoretical framework and the hypothesis to be tested in the model; section three we present the methodology used; in section four and we introduce the dataset and the descriptive statistics; in section five we report the results of the econometric analysis; section six presents some conclusions and insights for future research and policies.

Theoretical framework. – In recent years, EEG has attracted increasing attention (Frenken, 2007; Boschma and Martin, 2010) and its conceptual framework has been applied to explain the path creation process in many different economic sectors. As Boschma and Martin (2007) put it, EEG deals with the process of spatial diffusion of economic novelties such as innovations, new product, new firms, new networks. The emphasis is on the micro-behaviours of economic agents (individuals, firms, organisations) and the analysis focus on the locational behaviour of firms and how firms compete and learn on the basis of their routines in time and space. Due to their tacit and cumulative nature, routines do not change easily and they are difficult to be imitated (Boschma and Frenken, 2003).

The development of AFNs is a novelty that requires a deep renovation of farmers' routines. In the early stage of a new path such as the re-localisation of agri-food system, the key mechanisms is the imitation of successful routines. The literature (Boschma and Frenken, 2003) has focused on agglomeration externalities as a mechanism that allows firms to acquire successfully routines from other firms. In particular, co-location creates possibilities for knowledge spill over and the exchange of ideas through face-to-face contacts (Storper and Venables, 2004). Broadly speaking, there is a general claim in the literature that location matters in the sense the more proximity between actors, the more interaction, the more interactive learning, and more innovation.

Few scholars took a rather critical stand toward this claim (Nooteboom, 2000; Boschma, 2005) and argued that proximity means more than just geography as it includes also non-spatial dimensions such as cognitive, organizational, institutional and social aspects. Therefore the geographical proximity is important but it is not sufficient to have access to

new routines (Boschma, 2005). It follows that also other characteristics may foster the process of innovation and not all farmers in the cluster will have equal access to the knowledge but only those with an absorptive capacity which is to say with a specific background and skills.

The objective of this study was to evaluate which variables may have had a greater impact in spreading mode of marketing its products independently and in which areas of our country this process is at a more advanced state. The variables extracted from micro Agriculture Census data are very numerous and in another forthcoming work will be proposed an econometric model capable of simultaneously evaluating an extensive number of variables that could be divided into two groups: business characteristics and entrepreneur, and spatial characteristics of the company's localization. The availability of micro data, that relate to the specific farm, we will assess the impact of these variables on the spread of AFNs in Italy. In this work, placed in a special issue on the relationship between food and the city, we decided to select the most suitable variables to study the issue. For this reason we will analyse more specifically the role of local demand in the spread of alternative sales methods.

Research questions. In recent years there have been some manifestations of a growing dissatisfaction with the conventional food network, linked to broader concerns that the current agro-industrial food system has not effectively provided a nutritious, sustainable and equitable supply of food to the world's population (Marsden, 2003; Graziano and Forno, 2012). Technological innovations have provided cheap food to millions, but there are external costs of the system in terms of soil and water depletion, food safety scares, animal welfare, declining rural communities, rising obesity and diet-related health problems, as well as growing food insecurity (Donald *et al.*, 2010). Furthermore, some food scandals combined with recent media attention on pesticides and obesity (Hargreaves *et al.*, 2013) fuelled a surge in demand for healthy and secure food. The re-positioning of consumers purchase decisions might open a window of opportunity for new configurations (networks) at the niche level and new spaces of interaction with farmers (Migliore *et al.*, 2013). Such networks also function as social production system in which trust and knowing each other play an important role (Heebels and Boschma, 2011). These localized networks are important for yet another reason: it is through these networks that farmers gain reputation and recognition within their field. Although reputation and credibility are important for all firms, they are even more crucial for firms producing food. The partnership-based characteristic and the high value of face-to-face contacts in AFNs makes it important for farmers to be geographically closed to these networks (Brunori *et al.*, 2012) which have a double effect: to reinforce the alliance between consumers and farmers and to increase the demand for local food. These emerging networks are both informal groups of consumers (called Solidarity Purchasing Groups in Italy) and farmers markets. It follows that farmers that decide to sell their products out of the conventional networks (supermarket, food processing companies) they need to have access to a local demand. Broadly speaking, the informal groups of consumers and farmers markets function as incubator spaces as they support the novelty. Furthermore, the quality of local food can be a driver of destination attractiveness and then the tourist movement can reinforce the growth of local AFNs.

In addition, in innovation processes in general and even more so in those geographically localized, creating learning environments (De Marchi, 2004), physical or virtual spaces in

which knowledge is shared, transmitted, metabolized and then you can evolve. Such learning environments are essential, especially in a logic of creation and diffusion of innovation as the AFNs (Dansero, 2013).

In this way the farmers markets can serve as a learning space for both consumers and producers to «learn» to take an innovative path which is to sell their products directly from the farm or so independent outside company. In other words, they can imitate those routines of success that other farmers and consumers have already learned. It may be interesting to determine whether the proximity to such places, which by their nature swap are more concentrated in urban areas, influence the spread. As a measure of the degree of «urbanization» of a municipality it may include in the population density and check if the proximity to the most densely populated areas affects the spread of AFNs. The impact of the resident population, here understood as consumers, could be amplified by the presence of tourists.

In order to investigate the active role of consumers in supporting the evolution of AFNs in this early phase of development we will test in the model the following hypothesis:

Hypothesis # 1: Higher the population density and the GDP per capita in the surroundings of the farm, higher the probability to operate in the AFNs;

Hypothesis # 2: The number of tourists in the area boosts local demand and thus increases the likelihood of the spread of AFNs.

The role of population density, which in this paper is used as a proxy for the degree of urbanization, however, is a purely quantitative measure of local demand potential. In fact the consumer spending power increases proportionally with the disposable income that we can measure with the Gross Domestic Product (GDP) per capita. The specificity of the products sold through alternative networks and their inherent cultural value, it can be assumed that will make them attractive to a niche of consumers aware and with a medium-high cultural level. These qualities of the population (awareness and cultural level) of consumers can be assumed to be proportional to the level of schooling and then, in this work we decided to measure them according to the degree (percentage of graduate population).

Hypothesis # 3: In areas with a higher GDP per capita the AFNs are more developed.

Hypothesis # 4: The local presence of a higher percentage of the graduate population has a positive effect on the spread of AFNs.

Statistics. – In our spatial analysis model, the dependent variable is the presence of farms that move in AFNs selling part or all of their production directly to the consumer. Specifically to question. 55 of the questionnaire submitted to the Italian farms (1,620,884 companies surveyed) asked the marketing mode of farm products, both plant and animal. The possible answers were five: direct sale to the consumer (in the company or outside the company), sales to other farms, sales to industrial companies, sales to commercial companies and last, sale or transfer to associative organizations. We are therefore able to measure the number of companies and therefore the percentage of the municipal total of companies that have selected the first response, distinguishing between those who sell directly from the farm (hereinafter IN) or off-farm (OUT). Below are given some general statistics on business size, biological and age of the conductor and the head of the business. The companies are divided between those who does not sell directly to the consumer (no) and one who sells IN, OUT, or both IN and OUT the company.

%		Number of farms	Surface of Agricultural land	Organic Agriculture
		%	%	
Classification direct sale	no	77,5%	79,1%	68,5%
	onlyINfarm	14,7%	13,6%	19,1%
	onlyOUTfarm	4,9%	4,5%	6,6%
	IN and OUT farm	2,9%	2,8%	5,8%
	Total	100,0%	100,0%	100,0%

Table 1 – Statistics on the company and the biological surface (Census of Agriculture, 2010)

77.5% of Italian companies do not work in AFNs and this is equivalent to 79.1% of the Utilised Agricultural Area by companies. It follows that the companies operating on AFNs have an average size less than those operating only on conventional channels. In contrast, companies operating in AFNs account for the remaining 22.5% of the total, and account for 31.5% of the biological agricultural area. It follows that companies operating on AFNs impacting the biological more than companies operating on conventional channels.

Average		Age tenant	Age manager
		Average	
Classification direct sale	no	59,51	69,51
	only IN farm	57,25	67,25
	only OUT farm	56,86	66,86
	IN and OUT farm	54,00	64,00
	Total	59,06	69,06

Table 2 – Statistics on the age of the conductor and business head (Census of Agriculture, 2010)

Instead of looking at the average age of the conductors of the companies operating in AFNs and conventional one we can say that the operators of the former are on average younger. In particular, the average of the companies conducting with both direct sales types (IN and OUT) have an average age of 54 years compared with 59.1 years of conventional companies.

After a preliminary analysis, spatial distribution shows that in the most productive agricultural areas of the Po Valley and Puglia companies that sell through AFNs are not very present. In this work, we are not able to explain this phenomenon but probably this is due to the corporate structure, in such areas, thanks to the flat terrain, is dominated by large, with a high degree of specialization and mechanization. On the other hand however it can be seen as AFNs are most common in regions such as Piedmont, Liguria, Lombardy, Friuli-Venezia Giulia, Tuscany, Abruzzo, Calabria and Sicily. The latter has many companies selling off company and then it can be assumed that they are included in long sales networks, also extra-regional, rather than local networks around the company. For example, could sell local products such as citrus fruits, pasta and cheese to GAS and street markets and/or the centre-north peasants.

Description of spatial analysis tool. – Data analysis was performed using GeoDa, an open source software product by the Center for Spatial Data Science at the University of Chicago (http://geodacenter.github.io/index.html). The package supports the exploratory analysis of geo-referenced data through the construction of maps and charts, and the identification of spatial autocorrelation in the data structures.

Using GeoDA could be calculated for the variables of interest to the global index of Moran spatial autocorrelation data I (Anselin, 1995). Territorial units (in this case the municipalities) are represented as a cloud of points in a scatterplot: x-axis is represented on the value that the variable in each municipality and the value on the ordinate axis corresponds to the average (weighted by the distance) of the value that the score takes in the municipalities «close» to that question. The Moran indicator is given by the slope of the interpolation points. The Geoda software allows you to use different spatial weighting matrix of alternative approaches based on data in the measurement of «distances» between units.

For variables that showed a high spatial correlation (you can analyse correlations between two variables) was also performed local spatial correlation analysis through the construction of the so-called LISA (Local Indicator of Spatial Autocorrelation) Cluster map. The procedure identifies groups of homogeneous territorial units submitting a statistical test (through a bootstrap procedure) the hypothesis that the value of a particular variable in the individual municipalities is more similar to that in neighbouring municipalities than it would be if the value of the variable did not show any recognizable spatial pattern of destruction. The spatial clustering allows you to distinguish between spatial territorial units clustered with values higher or lower, respectively, of the media and to identify any spatial outliers, ie territorial units with individual cluster but having a negative spatial autocorrelation (high values in the vicinity of territorial units cluster with low values and vice versa). The software allows to carry out a sensitivity analysis of the results, both by increasing the number of replications of the bootstrap procedure that narrowing the statistical significance threshold. In the present analysis the clusters were identified basing randomization of 999 replications and accepting a statistical significance threshold of 0.05%.

Results. – The GeoDa spatial analysis software allows us to answer the research questions stated above that we report here with their progressive number. The hypothesis will be tested on the two dependent variables direct sale to the consumer IN and OUT company. The spatial correlation between variables was calculated up to a third level of geographical contiguity that is, we asked the software GeoDa consider contiguous neighbouring municipalities up to the third level of the border. This allows you to calculate the spatial correlation of two variables, i.e. assess whether the growth of a variable in the vicinity (up to the border third level) is also increasing the dependent variable (laggate variables). To facilitate the reading is shown below table summarizes the preliminary results.

Research questions	IN	OUT
Population Density	0,05	0,07
Tourist overnight stays	-0,04	-0,04
GDP per person	0	0,02
Graduates	-0,01	0

Table 1 – Indicator Values Moran I

A preliminary analysis of the spatial correlation of the two dependent variables (IN and OUT) shows a discrete statistical significance only in population density (Moran's values greater than 0.05). This means that among the cases stated in Section 2.1, only the first is respected and that the geographical proximity to urban areas and therefore more densely populated increases the likelihood of diffusion of innovation.

He then proceeded to the calculation and display of the LISA cluster map that allows us to check on all the Italian municipalities (8094) the existence of a common cluster where the phenomenon is more developed.

Between municipal clusters, in which the spatial correlation between the two variables is very strong, are clearly identifiable groups of municipalities contiguous to the urban areas of Turin, the triangle Milan-Como-Bergamo, Rome and Naples. One can therefore conclude that the most densely populated urban areas with very high levels of the population are able to exert a positive influence on the spread of the direct selling company IN contiguous agricultural areas. The presence of a large number of consumers who personally went into companies to buy food products is therefore an incentive for companies to neighbouring cities to undertake and develop alternative paths to conventional sales channels. In the same areas contiguous to large cities are still present common cluster with a high concentration of OUT companies and therefore we can say that the two are very often both marketing mode present. Large urban areas are also a suitable place for the development of short chain with enough opportunities to direct sales outside the company (GAS and farmers markets).

The areas where spatial correlation is low are characterized by a high diffusion of companies IN but not a high population density. The last case concerns the areas that are characterized by a negative spatial correlation that is, with low values of both variables.

Conclusions. – The spread of AFNs is constantly growing, and Italy is considered a leading country in the world. Farms see these sales methods outside traditional channels a chance to improve the profitability and in some cases to survive. Consumers who turn to sales chains court where you can also meet with farmers and learn about the origin of the food purchased, are also growing, as is the demand for organic products.

On the basis of the census data in this work we set ourselves the goal is to evaluate the role of urban areas in the spread of AFNs. A specific question in the census questionnaire has enabled us to identify the companies that sell its products direct IN or OUT of the company, i.e. those that operate in the AFNs contexts. The distribution in Italy of such companies is not homogeneous and this may depend on local business features and specifications that will evaluate in a work still in progress. In this article we evaluated the spatial correlation between the distribution of the companies operating in AFNs and urban areas. The results show a good spatial correlation that occurs markedly in the vicinity of the large Italian urban areas (Turin, Milan, Rome and Naples). Based on the results of the spatial correlation between the variables it can be said that large urban areas exert a driving force for the diffusion of AFNs in adjacent agricultural areas. The city then becomes the ideal place to decrease the distance between food production and consumers and to offer farmers the opportunity to free themselves from a large distribution and an industry that for years tend to decrease prices paid to farmers, the ring weak in the production chain of food. But the city is not only the ideal place for the high concentration of consumers but also space for sharing and disseminating new routines, which is always accompanied by the spread of

new production and/or distribution of products mode. Farmers close to urban areas have the opportunity to get in touch and attend new spaces in which to learn new methods of contact with consumers. It can also be assumed that the spread of these innovations is facilitated by the absorption capacity of farmers to new routines (computer use, direct contact with the consumer, organic farming, etc.). Not surprisingly, the direct sale to the consumer is most prevalent among young entrepreneurs and with a qualification, which are expected to have a greater absorption capacity. Ultimately, the proximity to urban areas (geographical proximity) and some characteristics of farmers (absorption capacity) had a driving role in the spread of AFNs in Italy.

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ALTERNATIVE FOOD NETWORKS AND CITIES IN ITALY: A SPATIAL ANALYSIS BASED ON CENSUS DATA. – In the last twenty years the study of alternative food networks (AFNs) gained growing attention insomuch as some scholars argue that it is appropriate to reflect critically on the results of these body of literature and consider what is needed for the focus and directions of future research. A first problematic feature in AFN research is a tendency to bifurcate agri-food systems into two antagonistic type, namely «alternative» and «conventional» food systems. In order to go beyond this problem this paper considers AFNs as an innovation emerging in our agri-food systems. The empirical analysis will be applied to all agricultural businesses in the Italian territory as they emerge from the last Census of Agriculture (2010). This work was possible due to the availability of the Agriculture Census micro-data (2010). In particular we know which farms sell their products directly to consumers both in the farm and outside. Using a spatial analysis we will be able to evaluate which context characteristics foster the evolution of farmers direct sale. In particular we are interested in evaluating the role of urban areas in the transition towards a short food supply chain.

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ALTERNATIVE AGRI-FOOD NETWORKS IN TURIN AND PIEDMONT. A MATTER OF QUALITY

An agricultural alternative of proximity. – The proliferation of models which promote an alternative way of understanding production, distribution and agro-food consumption has attracted the attention of many social disciplines. These range from anthropology to geography, from agrarian economics to sociology. These have now defined a fertile field of inter-disciplinary studies, rich with further potential for interdisciplinary geography studies (see Cook *et al.*, 2006, 2008, 2011 and 2013; Winter, 2003, 2004 and 2005; and on the state of the discipline in Italy Colombino, 2014).

One of the cardinal themes is the relationship between food and territory. Re-thinking the agro-food chain by proposing an alternative model starting from bottom-up experience, means also redefining the spatial, social, cultural and economic relationships of each specific context. This means looking at the role of local players within territorial policy-making involving food (see Dansero and Puttilli, 2013; Dansero *et al.*, 2015). Cities play a particularly important role in this process, if we consider on one hand, the distance between production and consumption of food and on the other, the capacity to collect experience and promote alternative practices to reconnect local agro-food systems (see Wiskerke, 2009; Dansero *et al.*, 2016).

Here, we intend to explore the scope of these points from a sociological point of view. We will make a socio-territorial analysis of these alternative food networks in Piedmont as well as looking at relationships with other productive-distributive channels. As we will see, the motor behind many of these alternative experiences, as well as behind new forms intertwining with industrial and other alternative aspects (as is the case in Eataly), is precisely the urban context.

Alternative agri-food chains or alternative food networks (AFN) are a composite group of practices, which include amongst others, direct sale by companies and also home delivery such as *box schemes* (1); direct sale from companies, in open markets and local farmers' markets; forms of collective production and/or distribution, as in the case of *community gardens* or of solidarity purchasing groups (Renting et al., 2003). In more general terms, AFNs can be defined as a vast collection of practices that, even in their diversity, have the common

(1) Box scheme was born at the beginning of the Nineties in the United Kingdom. It is a distributive form in which the farmer periodically provides fresh products by delivering them directly to the consumer's home (Brown *et al.* 2009).

role of proximising the extremities of the productive chain (Murdoch *et al.*, 2000: see also Goodman *et al.*, 2011; Tregear, 2011). The closeness between farmers and consumers is considered here in a wide sense, as both exclusive and combined, in spatial, economic and social terms (Kebir and Torre, 2012).

In the following pages, we will first propose a brief panorama of AFNs in Italy. Then we will look at their role in the agro-food system in Piedmont, which can be considered a particularly lively context. Subsequently, we will explore the theme of quality as a relevant analytical instrument to understand alternative chains better. Finally, we will show the preliminary results of a current research project on the definition of the concept of quality, widespread among the consumers of the various productive-distributive channels ([2]).

The spread of AFN in Italy and the case of Piedmont. – In Italy, AFNs are a marginal phenomenon compared to large-scale organized distribution. However, recently, these alternatives have become increasingly widespread, which, even if it is difficult to estimate the size given its fragmentation, certainly seems to be unequivocal.

From the producers' side, there has been an increase of farms that sell directly to the public (Corsi *et al.*, 2014). According to Coldiretti, these have increased approximately 44% between 2001 and 2008 ([3]). In 2010, 16.7% of Italian agri-food companies, or 270 thousand, carried out direct sale to the public either exclusively or in combination with other channels ([4]). Of these, over 210 thousand sell directly on-farm, while approximately 90 thousand ([5]) sell from external locations such as farmers' markets or 0 km stores, etc. (off-farm sales). On reflection the farmers' markets have spread consistently, while still being extremely rare at the turn of the century (Gardini and Lazzarin, 2007), there were 500 in 2010 but subsequently doubled to approximately 1200 in 2014 ([6]).

Over the same period, solidarity purchasing groups (GAS) also experienced a similar expansion, even if this was more on an uneven basis. The first Italian GAS appeared in the 90's. From then they have constantly spread, according to the national network Retegas to about 300 in 2006. Recently, their growth rate has increased more consistently, possibly due to the economic crisis, to about 1,000 groups in 2015 ([7]).

Even given this proliferation, the most typical forms of AFN still only account for a marginal share of Italian families' budget for fruit and vegetables, 1.2% in 2012 ([8]). We

(2) Research is part of a larger project named AFNIA (Alternative Food Networks: an Interdisciplinary Approach), funded by the University of Torino and Compagnia di San Paolo. The project, which began in 2013, aims to investigate AFNs in an interdisciplinary perspective. It involves sociologists, economists, geographers and agrarian scientists. The research focuses on the following dimensions: the concept of quality for farmers and consumers, the relationship between AFN and the territory, the economic and relational value of alternative productive and distributive chains and their environmental sustainability.

(3) Source: Coldiretti International Direct Sales Observatory promoted by Agri 2000.

(4) Source: our analysis on data from the 6th General Census of Agriculture, Istat 2010.

(5) So there are about 30,000 agricultural farms doing both on-farm and off-farm direct sales.

(6) Source: Coldiretti, Fondazione Campagna Amica.

(7) Data available on the website http://www.economiasolidale.net. In August 2015, the censed purchase groups are 986. Since the registration at Retegas is voluntary, these data represent only a proxy of the actual spread of the phenomenon. Retegas estimates that the number of active groups in the area is about double (Grasseni 2013).

(8) Source: Observatory on the fruits and vegetables consumption of the Italian families promoted by Macfruit and realized by GFK-Eurisko (http://www.macfrut.com).

should however remember that a significant quota of fruit and vegetable sales in our country occurs in open markets, 21.2%. These markets are emblematic of local traditions which have been renewed thanks to the spread of AFNs. Open markets are indeed very widespread in Italy, and farmers selling directly to the public have recovered both a primary economic and social role in them (Rossi *et al*., 2008).

As we have mentioned, the spread of alternative agro-food chains has increased very unevenly. While certain areas have been particularly lively, others do not seem to be so receptive. Indeed, as shown by Dansero and Puttilli (2014), there is strong territorial, social and relational *embeddedness* of AFN production and consumption. As such, we need to study specific case studies, such as the Piedmont case in this study.

Piedmont is a particularly favourable example of the development of an alternative culture in the agri-food field (Dansero e Puttilli, 2013). The percentage of farms involved in direct sale is above the national average (21.7% in Piedmont, 16.7% in Italy) and is also considerable in terms of activity within the farms themselves (16.4% in Piedmont, 13% in Italy), and outside them (9.4% in Piedmont, 5.2% in Italy) ([9]). Furthermore, there are regular, either weekly, more than weekly or daily local markets – about 1,000 ([10]) and there are also periodically, about 90 farmers' markets (Pettenati and Dansero, 2015). Finally, at the moment there are no less than 170 solidarity purchasing groups (GAS) in Piedmont (*ibidem*).

Another sign of the dynamic regional situation is the institutional, associational context as well as the particularly lively agri-food sector. As a consequence this is fertile ground for the growth of AFNs. Without intending to be exhaustive, we can mention the national organisations of agricultural entrepreneurs, above all *Coldiretti* and the *Confederazione Italiana Agricoltori e Confagricoltura*. In Piedmont, the local sections of these associations are active in pushing forward an alternative food culture, both by means of educational projects in schools and with promotional events dedicated to off-farm direct sale of fruit and vegetables (Aimone and Cavaletto, 2010).

Furthermore, at an intra-regional level, there are numerous associations, groups of producers, consortiums etc., dedicated to foster local food systems and develop short chains (Ciulla, 2012). These institutions have also promoted various initiatives along the same lines. One example is «GAC», collective buying groups, created in 2005 thanks to the Province of Turin, with the aim of promoting responsible consumption and fighting poverty (Matteucci, 2012). More recently, the *Nutrire Torino Metropolitana* project has become important, which supports dialogue between strategic partners in order to create a true local «food agenda» (Dansero *et al*., 2016). Leverage in these as in other cases, is the self-organisational and networking capacity of the area, which public stakeholders can help put into place within the system (see Dansero *et al*., 2013).

The co-existence of various stakeholders' activity within the food sphere, and more specifically for agri-food products, has given rise over time to an articulated partnership between these stakeholders. The most emblematic case possibly is Eataly, a well-known private entrepreneurial initiative created in Turin with the avid support of local public entities as well as the strategic advisory support of Slow Food and *Coop Italia* (Sebastiani *et al*., 2013). Eataly is without doubt the most successful phenomenon of the hybridization between alternative

(9) Source: our analysis on data from the 6th General Census of Agriculture, Istat 2010.

(10) Department of Commerce of the Piedmont Region (ww.regione.piemonte.it/gestione/commercio/mercati/dynIndex.php).

agri-food chains and organised large distribution. At the heart of this narrative, as in much of the AFN world, there is the search for quality. In the following chapters, we will go into this concept as it is applied to the agri-food world, showing its multifaceted character and means by which the notion of quality has spread among the various stakeholders involved.

The concept of quality in the agri-food sector. – The search for high standards of quality in agri-food production and distribution is one of the principal aims of AFNs. At the same time however, the very definition of quality is rather problematic. Asking ourselves whether we can find quality fruit and vegetables within the alternative chains implies an objective and shared idea of quality itself, which the social construction of the concept has taken on as its mantel (Sage, 2003; Goodman and Goodman, 2009).

The economics of conventions reveals a more complex scenario. According to this prospective, there is a degree of semantic uncertainty concerning the quality of products which are exchanged at markets and prices are not enough in themselves to regulate (Callon *et al.*, 2002). For this reason, differentiated concepts of quality spread among actors. The recomposition in a common judgment is made possible by the adoption of conventions and forms of a reciprocal coordination (Boltanski and Thévenot, 2006; Jadg, 2007). Boltanski and Thévenot (2006) identified six different conventions adopted by actors in order to orientate judgement and make an evaluation possible whenever price in itself is not enough to evaluate the quality of products, as in the case of agri-food products.

Each of these forms of coordination identifies specific elements that can be evaluated to express quality. Apart from the market convention (i), expressed in terms of price, there is the industrial convention (ii), where attention is paid to the existence and respect of technical productive standards; the convention of fame (iii), where quality is expressed in terms of expert opinions; the domestic convention (iv), where uncertainty is resolved by means of emphasis placed on guarantees and long term relationships; the convention of inspiration (v), created by the enthusiasm of stakeholders in the productive process and finally the civic convention (vi), that refers to positive effects for local society and the environment. In certain subsequent contributions the environmental aspect (vii) has been separated from the civic one to create a convention by itself.

The process of defining the concept of quality, as well as actually being defined, is not permanent. The attributes that identify it are continually subject to negotiation, compromise and conflict by the stakeholders in this field, i.e., producers, distributors and consumers. As such, the shared ideas of what agri-food quality actually is, spread and sometimes disappear to be replaced by new concepts (Barbera and Audifredi, 2012). This dynamic situation, if it is analysed with suitable analytical instruments, allows us to develop a more mature understanding of the evolutionary process of certain specific markets, such as the alternative agri-food sector, as well as of the central role played by quality.

It should not escape us that in this analysis, certain collective stakeholders with more resources have more ability to push their own idea of what quality is and manipulate information for their own benefit. On the other hand there is the possibility of individual players, primarily consumers, to nudge the market by addressing their preferences to specific aspects of quality, both in conventional channels and, even more so, in AFNs.

To be able to clarify into these aspects, we carried out a survey to find the various articulations of the idea of quality, running throughout the principal agri-food networks in Turin. Specifically, we have looked at the conventions expressed by consumers of fours

channels, i.e., farmers' markets, periodical open markets, points-of-sale for high quality products (Eataly) and the large organised distribution chain. With a close-ended questionnaire, we were able to find the socio-demographic profile of respondents and their perception of the notion of quality ([11]). This was measured according to how much they agreed with a series of items. These items, each of which referred to one of the specific conventions, were presented in two distinct groups, focused respectively on the quality of the product and on the producer/distributor, according to the following table:

Quality convention	*Product quality*	*Producer/distributor quality*
	Fruits and vegetables can be considered high quality when:	**Who do you feel comfortable with when you buy fruits and vegetables:**
DOMESTIC	They are grown according to tradition	From who I know personally and who I trust
ENVIRONMENTAL	They are products that do not damage the environment	From who respects the environment when they produce and sell
CIVIC	They are produced by many people within a territory	From who not only follows their own interest but also works for society
FAME	They have a solid reputation from recognition and the opinion of experts	From who deals with and advises products which are generally judged to be of optimum quality (recognition, expert opinion)
MARKET	They have a high price	Who sells higher cost products
INDUSTRIAL	They have precise rules for production and working techniques from the earth to the table	From who sells products with an industrial/standardised productive process
INSPIRATIONAL	The product transfers the passion of whoever made it	From who makes and believes in their products

Tab. 1. – Items used to show the quality convention used by consumers in Turin
Source: authors' elaboration

Quality in alternative and conventional food chains according to Turin consumers. – The analysis shows that the average score of each quality convention was relatively high. As we can see in fig. 1, indeed the average score was always above sufficient, with the sole exception of the commercial or market convention, which was 4.7.

(11) The analysis presented here refers to a sample of 939 respondents in the four productive and distributive channels. The questionnaires were administered as follows: 87 in farmers' markets, 216 in traditional local markets, 251 in high-end stores (Eataly), 385 in large-scale retailers. Data collection was carried out from March 2014 to June 2015 by trained interviewers supervised by the research group. To diminish self-selection biases, in each supply chain the interviewers contacted one consumer every five, regularly varied the point of administration (rotating in different locations within the markets or supermarkets), and operated on different days of the week (from Monday to Saturday) and time slots (morning, afternoon, and evening). The regional markets and farmers' markets where the survey was conducted were selected through a stratified sampling procedure, first dividing the 28 smaller markets in three strata based on their number of farmers' stalls, then randomly extracting from each stratum four specific markets. Finally, we added to the sample the biggest market in town, Porta Palazzo, which represents a peculiar case being the largest open-air market in Europe (the total number of markets selected is 14 out of 28). The detection in the remaining channels was determined by the willingness expressed by the direction of the stores to participate in the investigation.

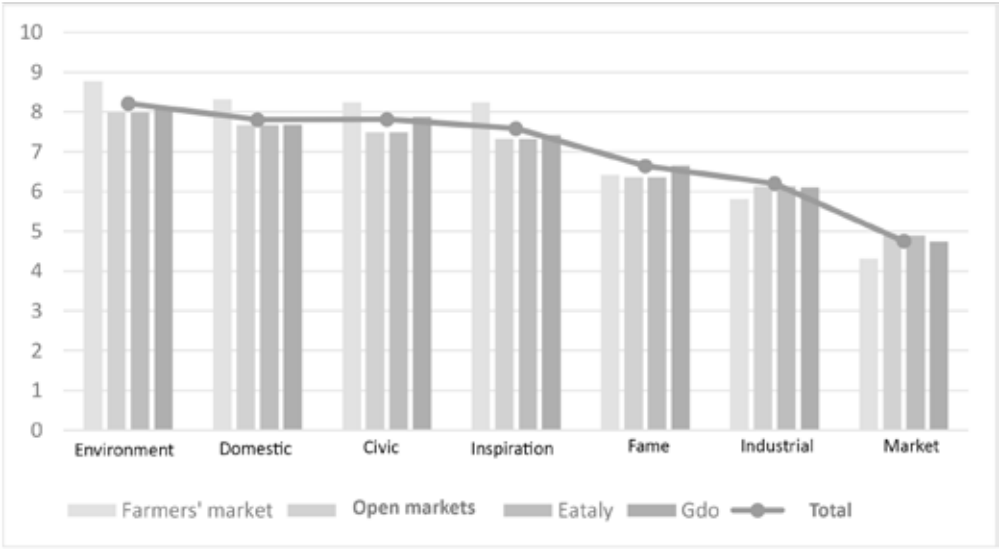

Fig. 1 – Average score of quality conventions in the four studied channels.
Source: authors' elaboration

Distinguishing between the scores of each of the conventions, two elements became clear: seeing what occurs within each chain, according to a *within* logic, there is for the most part a common pattern. In each channel, the environment scores the highest (with the sole exception of organised large scale distribution). This is followed by the domestic channel and then, civic and inspirational , which all have similar scores. More contained however are the values for the conventions of fame, the industrial and the market conventions, even if they all maintain the same order of evaluation for each of the chains considered.

If we compare the scores given by consumers to the four channels, according to a *between* logic, we can see a specific tendency for farmers' markets consumers to give average scores higher than the other consumers to the more popular conventions and vice-versa average scores lower than the other consumers to the conventions which are the least appreciated by the whole sample. In other words, consumers from farmers' markets tend to express polarized judgements, giving highly positive scores to environmental, domestic, civic and inspirational conventions, and clearly negative views on the industrial and commercial conventions. Clients from the other three channels gave more homogeneous scores.

What at first seems to emerge is a picture, which is substantially similar to the definition of quality, widespread throughout alternative hybrid and conventional channels. In all of these channels, indeed the semantically distinct notions of quality seem to be equally shared by consumers. However, beyond any appreciation for individual elements, it is reasonable to suppose that customers with different acquisition and consumption habits show a different means of constructing their individual judgements. In other words, it is plausible that differentiated composite concepts emerge from the various food chains, which orientate the idea of quality.

To clarify this aspect, we carried out we carried out a principal component analysis, in order to identify any latent factors which lie beneath this variables. We can see in fig. 2 a graphical representation of our results. As we have simplified in the graph ([12]), there were two principal concepts of quality, which emerged from our sample. The first we have called *hard quality*, which refers to certain immediately visible characteristics, such as price, the existence of standardized production and distribution, as well as the attribution of awards, brands and other recognition.

The second concept, *soft quality*, on the other hand refers to less directly perceivable characteristics, which emphasizes the role of economic actors within a local context, respect for tradition, the existence of trust relations, attention for the environment, value given to shared community spirit and passion for farming.

Carrying out separate analyses by productive chain, we can see that on one hand the macro-distinction *hard* e *soft quality* remains in each channel. On the other, consumers

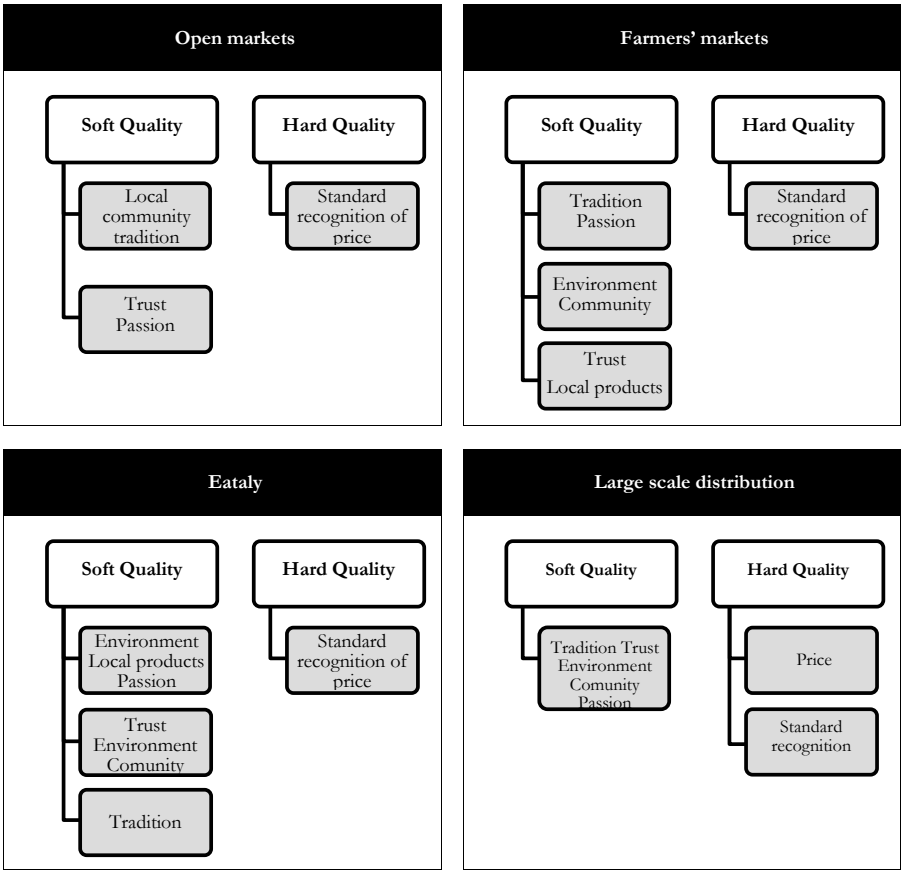

Fig. 2 – *Graph of concepts of quality in the four distribution channels*
Source: authors' elaboration

(12) Principal component analysis conducted on 939 cases with Varimax rotation method: two component emerge, explaining 51.6% of the variance (32.5% by the first component, 19.1% by the second component).

tend to express ideas of quality which are partially differentiated, articulating differently these two concepts. In particular, we can see that in open markets, farmers' markets and in Eataly, there is an overriding idea of hard quality, while there are different concepts of soft quality. Of these, some are rather extensive, since aspects that are not closely related are included from a semantic point of view (in this case for example, trust and passion go together in the open markets; trust and local products are associated in farmers' markets; trust, the environment and the local community in Eataly). There are however some cases of extreme descriptive specificity; for example for some of Eataly's customers, the quality of the product is connected quite without appeal with its relationship with tradition. Among customers of large scale organized distribution, there is a mirror image of this interpretation; indeed there is a general idea linked very much to soft quality that unites all of the characteristics we have mentioned but which distinguishes within the macro-concept of hard quality between price on the one hand and productive standards and recognition on the other hand.

Conclusions. – Beyond the specificity of individual inclinations, certain more general aspects of the relation between quality and the productive-distribution channels seem to have emerged. Above all, hybrid models such as Eataly seem to be able to meet requests for soft quality that their consumers ask for. At the same time, even if soft quality is more relevant in AFNs, even customers of large scale organized distribution have their own particular idea and consequently their demand of soft quality. This is a vaguer question that we could say is coarsely grained compared to ideas in the other distribution channels. However, this idea is taken seriously by large scale distribution, as is evident in the many strategies supermarkets and hypermarkets use to conjure up certain 'alternative' ideas in their products and their distribution proposed to consumers. In a nutshell, the many different expressions of soft quality within alternative and hybrid chains, on one hand are still present, if somewhat vaguer in large scale organised distribution, while on the other, there is still space for further spread of alternative agri-food networks.

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ALTERNATIVE AGRI-FOOD NETWORKS IN TURIN AND PIEDMONT: A MATTER OF QUALITY. – This article makes a socio-territorial analysis of alternative agro-food networks compared with other productive-distributive chains. The focus of the analysis is on the concept of quality and its conception by consumers of the various distributive chains. In line with convention theory, quality is considered an emergent social construct by the players who give the market its form. The article is an empirical analysis applying this analytical reasoning to conventional, alternative and hybrid agro-food chains in Turin and Piedmont.

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