Peri-urban agriculture and alternative food networks in Athens: Solidarity dynamics, spatial planning challenges and institutional reforms

Agriculture périurbaine et réseaux alimentaires alternatifs à Athènes : dynamiques de solidarité, défis d’aménagement du territoire et réformes institutionnelles

Sofia Nikolaidou
There has been a growing literature on the linkages between peri-urban farming and alternative food networks. As can be seen in empirical studies conducted in big metropolitan areas of Europe (see the examples of Barcelona, Milan and Paris) the re-organization and management of sustainable agro-food systems can influence the relocalization of agriculture and the rural-urban interplay. Consumer awareness towards food quality has endorsed short agri-food networks and the need to reconnect urban dwellers with the nearby food production and countryside. The capacity to develop innovative practices for local food supply and food sovereignty plays an important role for the preservation and strengthening of peri-urban farming. However, urban sprawl pressures and conflicts, increased land fragmentation, price speculation and reduced farmland preservation policies are some of the main constraints that peri-urban agriculture has to face. In this sense, land availability and land-use competition are also influencing processes of ownership, occupation and conversion expectations of agricultural land.

Peri-urban areas of Athens Metropolitan Region (AMR) have experienced massive urban sprawl in the past three decades. The model of metropolitan development of Athens was based on the rapid uncontrolled post-war urbanization and the poorly...
planned urban development which have led to a “metropolization” of rural areas on a widespread scale. Demographic growth in combination with an increasing demand for land for housing and other non-agricultural activities had a transforming effect in peri-urban areas which until very recently were rural. The gradual decrease of the economic and social importance of the agricultural sector coupled with the conversion of land rights and use from agricultural to built-up properties, has resulted in a highly heterogeneous landscape with a mixture of rural and urban land uses and a high amount of informal settlements scattered around the metropolitan rural periphery: large scale infrastructure, delocalization of services and industries and extended patterns of lower density residential areas. Formerly agricultural lands and coastal areas were radically transformed into discontinuous leapfrog and strip development zones consisting of residential areas and economic activities. This has led to a loss of farmland and natural landscape in rural/urban fringe raising concerns about the negative environmental impacts of unsustainable land-use practices and low density development.

Despite the decreasing importance of agriculture and the intense urban pressures on land resources in the rural periphery of Athens, food and agriculture have gained renewed attention in recent years of social, economic and environmental crises. In the context of the current depression (unemployment, poverty, decline of the welfare state and low quality of life), raising societal claims associated with the question of social, spatial, environmental and food justice, underly the importance of food security and nutrition of the urban population and the role of agriculture in urban or peri-urban environments. This newly emerging discourse is associated with anti-poverty aspects, social inclusion and awareness of environmental, economic and health concerns within and around the cities, reclaiming localization and revitalization of agriculture. Deriving both “from below” and from public actors, it has generated innovative forms of collective action favoring the emergence of localized consumer-producer networks and of spontaneous civic or public initiatives aiming at reintegrating agriculture into the city or near the city fringe.

This article discusses whether such new Alternative Food Networks (AFN) can have impacts on governance patterns of the food chain, commitments and favorable policy environment for the revitalization of peri-urban agriculture and the promotion of “food democracy” (security and sovereignty). The first part of the article contextualizes the contemporary dynamics of AFN and the role of peri-urban agriculture and it provides the theoretical background to the case study. The second part puts forward the recent development crisis in the territorial and institutional context of the AMR by providing a brief overview of the contrasting trends as well as mapping of land uses and AFN's dynamics. It further attempts to examine the interplay between formal/informal civic practices and national institutional change related to land-use and food policies in order to specify the conditions under which these practices can effectively support food safety strategies.

A mixed method approach was used, comprising qualitative and quantitative research as well as spatial data collection. Peri-urban agriculture and alternative consumer-producer networks were explored through literature review, web-based information, national agricultural statistics, legislation, fieldwork and spatial data organization and mapping. The analysis also assesses prior learning and experience from fieldwork on AFN's. Previous research on peri-urban transformations and agricultural dynamics in
the AMR is enriched by updated spatial and statistical data and further reflection on post-crisis perspectives of land-use and agricultural dynamics. Mapping represents geographic aspects of data including locations or spatial concentrations of phenomena of interest (e.g. land cover, land-use zoning, agricultural statistics, localization of AFN’s) which are visualized through maps and the use of QGIS (Open Source Geographic Information System and Google Earth).

**New food geographies: AFN, peri-urban agriculture and the role of institutions**

Alternative food supply chains have been the subject of a number of studies. They are usually developed as a response to a growing demand for healthy and quality food that helps population re-link with local food production and (rural or peri-urban) producers reconnect with (urban) consumers. Proximity of short food-supply chains includes different forms of distribution and networks in which producers and consumers are geographically, socially and organizationally close and generally no more than one intermediary is involved in the relations between the two parts. These chains serve urban and peri-urban neighborhoods via several types of short distribution networks such as direct farm sales, Community Supported Agriculture (CSA) and other box-schemes or Organic Farmers Markets (OFMs) and other markets without intermediaries. The emergence of these networks highlights an increasing commitment to sustainable food production and consumption depicting the social demand by urban dwellers for direct access to fresh, safe, local food at fair prices while new rural-urban relations are reorganized on the basis of reciprocity and solidarity. Seeking more sustainable food production and consumption systems is also a response to huge environmental impacts of the food chain. It often stimulates a more agro-ecological approach that promotes climate resiliency, less food waste and higher agrobiodiversity through environmentally friendly farming methods and specific agro-ecological practices such as organic agriculture, biodynamic farming or permaculture. Such practices might also emerge as a survival or recovery strategy of small-scale farmers against urban development pressures or crisis impacts. In all cases, producer/farmer networks allow both re-socialization and re-spatialization of food and new social, economic and spatial proximity relations between the city and rural areas, by recognizing the importance of urban food planning, especially in times of crisis. This new food geography influences food availability and food choices and interrelated challenges of food security and food policies.

Civil society, to a certain extent organized through social movements as well as the public sector can play an important role in enhancing sustainable food production and consumption patterns at national, regional and local levels. According to Renting and Wiskerke, there is a growing importance of lower administrative levels in policymaking and implementation of food-related policies. Especially cities and metropolitan regions play an active role by changing their food procurement strategies in order to “generate positive impacts on smallholder livelihoods, local economies and food security and nutrition.” By including food in their policy agendas, they intend to promote healthy diets (eating habits, obesity, food poverty, etc.), environment (climate change, “food miles”, etc.) and food quality and safety (local and authentic food, organic, fresh etc.). Moreover, cities can enable synergies where food is produced,
procured and consumed and facilitate civil society initiatives as a part of urban food strategies. At the same time, European rural development policy 2014-2020 supports short and alternative food supply chains through regulation, while some countries such as the French Ministry of Agriculture have officially defined them “as a marketing mode involving either the direct sale of products from the producer to the consumer, or the indirect sale with no more than one intermediary.”

In this context, the demand for local food which is produced nearby and has short supply chains is mainly influenced by urban and peri-urban farms operating at the urban-rural interface. The discussion around the preservation of peri-urban agricultural production and the importance of the agri-food sector through food-related initiatives emerges as a potential response to increasing food insecurity in cities. Especially in metropolitan areas where there is a large number of consumers, peri-urban agriculture becomes a significant element for building resilience to food crisis and creating sustainable rural environments. Peri-urban agricultural systems and new forms of food provisioning are linked to issues such as food quality, food safety in regional and local supply, ethical consumption, as well as open and natural space preservation. Tied to metropolitan development and change, they mainly have to deal with strong pressures of urbanization and the challenges of environmental degradation and food insecurity. As a result, they are embedded in wider social, ecological and agri-environmental networks of the city by providing the means of preserving environmental (biodiversity, management of environmentally sensitive areas and biotopes, land and water resources management, agro-forestry) and social functions (social bond between the city, the countryside and the nature, recreation, open spaces, landscapes, etc).

In this regard, the linkage between secure access to land and food security is increasingly recognized as a constant problem for peri-urban farming which has to face the increased fragmentation and various conflicts over farmland, especially in a context of rapid urban extension in metropolitan peripheries. However, the sudden strong economic crisis and the property crash in many Mediterranean countries particularly affected the model of rapid urban growth prior to 2008 leading to a reduction of investments and land transactions associated with construction and real estate activities. Nonetheless, while the cuts and stresses in public financing reduced infrastructure and large-scale development projects, new political orientations emerged pushing the system towards a more neoliberal approach for instant economic growth. At the same time urban food security and nutrition assumed a strong urban dimension and became central or even ‘emergency’ issues in a context of increasing poverty, food insecurity and malnutrition. While the motivations and social needs vary greatly across the global North and South, contemporary food justice movements focus more on the “access to food rather than the supply of food” and “the right to food as a component of a more democratic and just society.”

Agriculture dynamics in the contested metropolitan periphery of Athens: land-use planning, conflicts and resistance

In the AMR, peri-urban pressures and conflicts over land uses were for many years associated with urban sprawl, unauthorized and unregulated land development for
housing and economic activities (logistics, commercial centers, industries), or with reactions to new developments or expropriation decisions for large-scale functions. Socio-economic transformations of peri-urban areas have increased shares of developed land in commuting zones affecting former agricultural areas, forest/natural areas, open spaces and the quality of life. Competing land uses and claims paired with the ineffectiveness of the spatial planning and rural policies (rural zoning, agri-urban policies, cadastre etc.) marked the fast-changing and often ambiguous peri-urban land tenure system. This ambiguity is often related to discrepancies concerning land boundaries and titles that complicate the legal status of the land, the lack of a complete record of property ownership, the absence or inefficacy of land-use planning and control delimiting urban growth boundaries.

Extensive sprawl phenomena and the construction sector that have been booming over the last three decades affected peri-urban agricultural systems: farmland turned into urban built-up properties and tended to become smaller while increasing competition for land, increased land fragmentation and prices, pluri-activity, speculative strategies and farmland sales, all resulting to a great loss of landscape and environmental damage. Some farms (mainly vineyards and garden crops) intensified their systems in order to adapt to urban conditions and increase their profitability (market oriented, new technologies, diversification, small-scale processing). Others remained less intensive and less profitable or kept agricultural activities as a secondary livelihood working on a part-time basis.

Despite periodic attempts to limit unplanned sprawl and to provide resilience through long term policy, AMR suffers from fragmented policy making and peri-urban areas have been mostly regarded as land reserves. Many objectives of the Athens Metropolitan Master Plan (approved in 1985) were bypassed over the years with the excuse of ‘emergency’ in the name of metropolitan competitiveness and entrepreneurial urban strategies. Planning of the Athenian countryside has been deeply affected by the system of spatial planning in rural areas which is rather complicated mainly regulating construction activity in out-of-plan areas with a multiplicity of laws and a predominance of a command-and-control type of normative planning. Rules can easily be disrespected, “revised” or undone by a change in the zoning ordinance or by authorization/legalization processes. This is also coupled by the fact that many local authorities in rural areas have not completed their local land-use plans while the chronic absence of a comprehensive national cadastre reveals the weak land-use control and protection mechanism. This intensified the need for special zoning in order to protect sensitive natural areas and the remaining productive farmland and crops from sprawl and incompatible uses. The institutional protection of agriculture is mainly based on land-use and zoning regulations including specific construction and subdivision limitations in areas outside formal town plans through the use of permanent regulatory zones (Urban Development Control Zones-UDCZ). Apart from certain requirements and restrictions concerning (peri)urban land uses, construction and development limits (maximum height of buildings, density, lot coverage) there is no clear mechanism that effectively intersects rural zoning (UDCZ) and planning laws from one side with the agricultural protection laws on the other side.

Austerity priorities following the 2008 crisis were incorporated in the metropolitan planning policy by further eliminating regulatory constraints to ‘urgent’ privatization.
of state land and assets. The new “fast-track” law\textsuperscript{37} appeared as a “state of emergency” in the years of memoranda and was ratified in order to provide multiple incentives that attract and accelerate the so-called (public and private) strategic investments\textsuperscript{38} through special tax incentives, exemptions and fee discounts during the licensing process. This law facilitated large capital, domestic privatization and sellout venture in order to pay off part of the public debt while deepening spatial inequalities and induces a more open-ended approach to planning.\textsuperscript{39} In this context, new priorities of fiscal policy lead to loosening of land-use restrictions and make rural zones more permissive. This gives more flexibility in requirements for large land acquisitions in city edges and peri-urban areas, fallow land, brownfields, agricultural land and public real-estate assets which are increasingly viewed as the ‘potential’ space for the redirection of speculative capital.

The extended period of economic recession has practically reduced employment and investments in new infrastructure, residential, commercial and industrial developments on the city’s outskirts transforming the spatial dynamics and the previous intense sprawl patterns. Meanwhile, the fiscal crisis on property markets and the new tax-regime are considered to have a dual indirect effect on agricultural land and food sovereignty. On the one hand, the limitation of the land market mobility decreased construction and property transactions which prevented agricultural land sales to non-agricultural investors and indirectly preserved the remaining farmland. On the other hand, the increase in farmers’ taxation (income tax, farmland taxation, excise tax on farmer diesel, higher taxes on agricultural inputs) as well as the abolition of the special agricultural insurance organization created new higher costs of production and reduced incomes.\textsuperscript{40} This is coupled with the fact peri-urban agriculture in Athens is not fully entitled to EU funding schemes (CAP) because it is functionally and strategically integrated into the urban metropolitan system.\textsuperscript{41}

Unplanned and informal dynamics of urban expansion was encouraged through the infrastructural development strategy of Attica suggesting the location of economic activities towards peripheral areas. Peri-urban sub-areas with a strong agricultural tradition concentrate the remaining potential “agricultural pockets of resistance.” For instance, vineyards of Messoghia plain are more exposed to urban expansion whereas vegetables in Marathon and Megara are less affected by urban sprawl areas. Taking as example East Attica, which occupies approximately half of the total regional crops and represents 85% of the total regional vine culture, it has witnessed a discontinuous urban expansion from the 1960s through the 1990s. This has led to a loss of a great deal of agricultural land predominantly composed by grapes and raisins. In response, the state enacted two UDCZ by presidential decrees since the early 90’s (in Lavreotiki and Messoghia\textsuperscript{42}) which designate priority agricultural areas under certain preconditions where agriculture is intended to be the principal use. The most emblematic example of radical decrease in agricultural land is the traditional wine-production area of the plain of Messogphia,\textsuperscript{43} which is famous for the popular retsina table-wine (mainly made from savvatiano and rhoditis grape varieties). The plain was facing continuous development pressures since the post-war era of rapid urbanization, explosion of housing development and home ownership (rural exodus, uncontrolled urbanization, illegal settlements, second homes and tourism in coastal areas). Later, during the period 1990-2000 a major wave of public infrastructure investments was directed towards the plain enforcing ribbon and leapfrog sprawl (extension of transport networks, Olympic Games’ settlements-2004 and the relocation of the new international airport zone-2001, see Map 1). The area is characterized by agricultural land fragmentation and small farm
size mainly comprising scattered small historical vineyards and olive crops mixing together with low-density settlements, large-scale infrastructure and semi-natural areas. The extended sprawl-pattern reveals the weakness and inappropriate zoning/control tools against informal settlements and unplanned infrastructure-driven urbanization taking place over agricultural land.

Despite the general decline of the primary sector over the years, peri-urban agriculture still can present some advantages and employment opportunities, particularly in times of economic instabilities. According to the national statistics for the year 2017, the total cultivated agricultural land of the region of Attica was 41,315 hectares of which 2,292 hectares were fallow land. Productive transformations of fallow land (to tree crops including vines and olives) were visible in more accessible rural areas during crisis. Almost half of the existing regional farmland is mainly covered by tree plantations (20,077 hectares), 20% of crops on arable land, 14% of vines and only 8% of it was vegetable cultivated area. West Attica has also an important share (25%) of the total cultivated land mainly comprising arable land (49%, 5,093 hectares).

Alongside these trends, the metropolitan rurality is enhanced through several innovative projects at the individual, municipal or collective levels (cooperatives and producer groups, several informal producer-consumer groups etc.), in all stages of production, processing and marketing of agricultural products by local producers or new farmers (organic and conventional farms, small dairies, visitable wineries, beekeepers, free-range poultry farmers, etc.).

Under the above circumstances the peri-urban and rural periphery turns into a contested territory, where a series of bottom-up initiatives for food security and space justice emerge. Citizen movements and local initiatives appear as a critical protest against neoliberal hegemonic ideology, large infrastructure networks, austerity, privatization, further construction and the aforementioned “fast track” strategic investments. Several grassroots initiatives and practices for land appropriation that claim ‘open space’ and the ‘right to the city’, dispossession of land and valuable public resources, socio-environmental justice and ethics emerged especially in times of crisis (e.g. guerilla gardening, public space occupations). In this context, short food supply chains and proximity between producers and consumers started to enhance different forms of AFNs that play an important role in preserving small-scale farming and sustainable land use.
Building resilience to food crisis through solidarity economy: food related practices, policies and institutions

AFN’s in Greece mainly emerged within a wider discourse on raising societal claims for long-term security and resilience of the food system, especially in times of economic crises. Several food democracy movements, informal networks, collective self-help structures and market-oriented activities developed due to the crisis in order to fight urban poverty, aiming at enhancing local and peri-urban production or reintegrating agriculture into the city. Though such networks remain marginal across the country, there is a variety of individual and collective food examples including common grassroots and public initiatives observed in many foreign countries that are also identified in Athens.

Food-related movements and entrepreneurship range from non-commercialized self-production practices (such as collective urban and peri-urban gardening initiatives) to alternative direct food-purchasing networks between producers and consumers. Such initiatives generate innovative forms of collective action on food justice while experimenting with building up local food production and consumption systems. Hence, new forms of urban-rural linkages are established at different proximity scales through alternative sustainability and governance practices. In these terms, new forms of producer-consumer networks manifest farmers’ resistance strategies through social innovation, solidarity economy and collective practices.
First of all, community gardens are one alternative manifestation of non-commercialized self-production. Apart from various grassroots initiatives that were developed in Athens, many local authorities started to include food governance in the city agenda via urban gardening mainly located on public abandoned urbanized lands. Municipal vegetable gardens (‘astikoi lachanokipoi’) and other ‘anti-poverty structures’ that were developed since 2011 are the most prominent examples of food-related public action in Greece. Supported by European funds, they were developed as a social welfare measure at the municipal level together with other social structures (social groceries/food banks, social kitchens). They are mainly subsistence gardens that produce fresh organic vegetables, ensuring self-sufficiency and reduction of poverty while alleviating socioeconomic and psychological effects of the crisis. Municipal gardens target households in difficulty and vulnerable social groups (low incomes, pensioners, unemployed dwellers, single parents etc.), meet societal demands for preserving green spaces in and around cities (environmental and landscape functions, recreation and leisure, educational farms etc.) whilst contributing to the sustainability of the city by weaving new relationships between urban and rural space (social inclusion, togetherness, social interaction at the neighborhood level). This municipal support that was arising due to the ongoing economic decline was also facilitated by slow real estate development in times of crisis enhancing a temporary access to unused or abandoned, vacant public (or private) land. Despite their great initial success, they have also encountered many challenges. Being a spontaneous and dispersed approach rather than a formal practice, they were small-scale and short-term ‘emergency’ social welfare structures disconnected from organized urban planning or revitalization efforts. Nevertheless, the formal inclusion of ‘urban agriculture’ as a new land-use within urban planning in 2018 might be a small step for the future institutionalization of municipal vegetable gardens.

In addition, new forms of direct food-purchasing networks comprise CSA and other box-schemes, Markets Without Middlemen (MWM-Agores Horis Mesazontes), local Organic Farmers’ Markets (OFM-Viologikes aores), food and consumers’ cooperatives and groceries, fair trade or small specialized shops and other solidarity buying groups of local or/and organic food. Their claims usually concern food and space justice, fair prices and solidarity for producers and consumers, protection and preservation of agricultural land and the environment as a common good. They directly inform urban consumers about how, where and by whom their food is grown, reshape the relation between cities, their peri-urban fringes and deeper rural hinterlands, and therefore strengthen local and regional food systems and organic agriculture.

Many of these initiatives seem to encourage small-scale farming in peri-urban areas through a more direct contact between producers and consumers and empower solidarity-based economy and human connection while protecting farmers from the invasion of cheap agricultural imports. On the one hand, both CSA/box schemes and OFM support regional producers operating in close proximity supply chains while preserving organic agricultural enclaves and valorizing local knowledge, regional food cultures and agro-ecological transition process (e.g. short distance between production and consumption and reduced food miles, fair prices, organic agriculture, low packaging use). On the other hand, MWM constitute an alternative marketing channel for artisanal, small-scale or marginalized producers in the rural hinterland that extend further at the national scale and aim at minimizing consumer costs. According to
Rakopoulos\textsuperscript{56} this movement is rather perceived as a means of political awareness (sensitization) and a protest against the austerity measures and social exclusion. What distinguishes organic box-schemes and OFMs from MWM is the fact that the latter has not been proven to radically change the main rules and practices of conventional trade and producers do not necessarily comply with general fair trade’s values, democratic governance practices, organic farming methods, or a cooperative structure.\textsuperscript{57} Thus, sustainability and solidarity is mostly addressed in social and economic terms, while fairness and trust are not necessarily connected with transparency and secured rights in terms of labor conditions, social inclusion or ecological food production methods.

It is important to note that the aforementioned food networks thrived under difficult socio-political and institutional conditions and were not initially covered by formal arrangements. Consumer-producer alliances and other informal entrepreneurial food-networks were chiefly facilitated by grassroots initiatives and civil-society groups and later gained increased recognition by the public. The majority of self-organized food-purchasing networks such as OFMs, MWM or CSA\textsuperscript{58} were initially operating outside the formal reach of the law. Contrary to this unfriendly institutional environment, several municipalities spontaneously facilitated their development and operation in a hybrid operational context rather than merely prohibiting them. Some of them supported MWM and collaborated with informal food solidarity structures in order to tackle poverty and social exclusion, ensure food sufficiency and agricultural activities within the city and in peri-urban areas. In most cases, local administration informally allowed farmers to use public municipal space once per month for the needs of the MWM and collaborated with collectivities and volunteers.\textsuperscript{59} Furthermore, some local authorities got into the food policy and ‘urban resilience’ discourse through the implementation of strategies with a more agri-environmental orientation, the creation of food councils, regulation efforts to support new forms of local and regional partnerships to guide and promote the development of local and regional resources (e.g., the Urban Resilience Program of the Municipality of Athens and the Program for Sustainable Food in Urban Communities – URBACT 2014).

These informal civic and public food-related practices seem to have also induced important formal official food policy changes and legislative reforms at the national level. This is mainly demonstrated through the institutionalization of social and solidarity economy and direct exchange practices such as the OFMs, MWM, the new legal framework about Social Cooperative Enterprises and the integration of agriculture in urban projects and land use planning, within the framework of the crisis. Regarding OFMs\textsuperscript{60} that have been informally operating since the 1980’s, a new law\textsuperscript{61} recently gave them the legal permit. Furthermore, a new type of outdoor commercial markets called “Consumers’ Markets” was introduced in 2017\textsuperscript{62} by giving the organizing initiative of MWM to associations of citizens and consumers’ cooperatives to municipalities, and the right of licensing to Municipalities. Moreover, the legal framework on Social Cooperative Enterprises that was recently reformed by the Law on ‘Social and Solidarity Economy-SSE’\textsuperscript{63} coupled with the new law on Agricultural Cooperative\textsuperscript{64} empowers alternative networking of food-related entrepreneurship, the cooperative movement and small and medium-sized farmers and agri-processing enterprises.

In an effort to demonstrate the wide variety of the emerging AFNs in Attica, Map 2 identifies the major geographical concentrations of the main direct food-purchasing
initiatives discussed in this article (which is by no means exhaustive) including OFM’s, MWM’s, agricultural cooperatives, CSA farms and box-schemes as well as open farms that also operate direct sales. There are currently 22 active agricultural cooperatives, 23 OFM spots reported in Attica that operate weekly sales (in open-air markets) of regionally grown food products and more than 30 MWM that are allowed monthly on receiving a municipal permit. The majority of MWM is organized by citizen movements, consumer cooperatives and consumer groups while nine of them have a municipal-driven character. There are five individual farms serving on a weekly basis multiple urban household by delivering organic vegetable (and fruit) baskets or via online box schemes in several neighborhoods of Athens. Among these box-schemes, there has been reported only one consumer-led CSA (collaborating with one main farm for vegetables and dairy products based in Marathon), nine open farms and one food-related collective based in a social economy hub located in the center of Athens, combining both online order box-schemes and on-site OFM. At the same time, solidarity trade collectives (there are two in Athens) collaborate with many newly appeared cooperative cafes, bars and restaurants (mainly trading coffee, sugar, cocoa, chocolate, tea, spices, herbs and cereals) as well as with small grocery shops. This networking creates an extended local network of grocery and specialty shops that among their many suppliers also support small, local farmers (e.g., regional produced wine, olive oil, fruits and vegetables). All these short circuits depict changing food distribution opportunities in the AMR (alternative retail channels to supermarkets and wholesalers), increase the average food quality while reducing packaging waste. They build direct and stable trust-based partnerships with domestic and local individual or collective suppliers, agricultural cooperatives and small farmers’ groups, engaged with fair trade, eco-friendly practices and the promotion of traditional varieties.

Map 2. Spatial distribution of AFNs, Attica, Greece (2020)
Conclusion

26 Peri-urban agriculture that has been marginalized over the years by the advance of urbanization is now facing diverse manifestations in terms of access, production opportunities and direct food networks that favor new types of governance and rural-urban interaction. The metropolitan area of Athens shows an important potential for the development of peri-urban farming and the improvement of food security. Shortening of the distance between local farmers and citizens stimulates market opportunities for small-scale farming, innovative forms of social economy and implementation of cooperative business models, especially during the recent economic recession. This dynamic has induced related policy reforms and novel institutional arrangements that also play a key role in the creation of an enabling policy environment for short agri-food networks and urban/peri-urban agriculture. Nevertheless, land-use policy and related legislation seems to have the most significant impact on agricultural protection issues over the years. Rural zoning does not effectively contribute to the balance between urban areas, open space, rural and natural landscape neither assures the agricultural activity or suppresses speculative ambitions (of both landholders and investors) for future urban development.

27 Poor land management can be recognized as a major constraint to sustainable agricultural production and farmers’ resilience in AMR. Experience over time shows that land-use planning and development control legislation have not been effective and insecurity of tenure and access to land remain major problems. Even though land-use restrictions through zoning can generally minimize conflicting peri-urban land uses and help to retain the rural character of these areas, still the established regulations and ordinances have not successfully managed to constrain non-agricultural uses in the long run. What is more, the lack of a clear agricultural strategy or a comprehensive agri-environmental plan at the metropolitan level failed to prohibit extensive pressure on the land prices, promote access to land and treatment of abandoned or fallow land or ensure agriculture as a viable component of the local economy. Tools such as farmland pools or land banks, disincentives or land value restrictions through zoning are not effective while further support of short-food chains and direct support of agricultural activities are still not considered as a priority by urban planning.

28 Nonetheless, conflicting interests between top-down policies and pressures for (urban) growth and large-scale investments intersect with locally defined bottom-up priorities and claims. Considering the transition from economic expansion to an extended crisis period, we observe divergent dynamics and contradictory coexisting trends regarding land-use and agriculture in Attica: On the one hand, recession limits construction and urban expansion reversing the previous intense sprawl patterns and weakening of the primary sector. The real-estate decline is associated with a parallel stimulation of peri-urban agriculture and the development of informal AFNs. On the other hand the metropolitan periphery turns into a contested territory because of the extensive land privatization policies and the general crisis impacts that mobilize multiple agro-ecological claims and a renewed interest in alternative food strategies. Under these circumstances, transitional and contested peri-urban zones, in terms of land use and function, public policy and planning practice appear. Fallow land, land scarcity, land concentration and conflicting uses become critical factors for sustainable rural
development and issues of claims and struggle. Special attention is given to civic and public mobilizations and claims for affordable and qualitative food that were largely based on agricultural and environmental protection by developing alternative producer-consumer networks.

The research suggests that the creation of alternative governance structures and regionalized food networks through short food-chains and solidarity economy actions are key factors for building agri-food system resilience embedded in metropolitan contexts through a more agro-ecological approach. A range of local solidarity partnerships among producers and consumers and informal types of direct sales ensuring access to healthy, local fresh food have been identified in Attica. Some of them improve cooperative or social solidarity movement; others value collective or individual practices that support small-scale (mainly organic) peri-urban farming through direct sales or small local retailers at lower prices, resisting against urban sprawl or/and crisis impacts. Others are a good opportunity for conventional local or domestic produce to be sold without middlemen through alternative consumer or municipality-driven initiatives that engage organized civil society, citizens' movements or local administration. As stated in the research, the major challenge is to take advantage of the increasing visibility and the support of these AFNs from administrative bodies. It is shown that they seem to have a transformative effect on socio-economic processes, public policies and the institutional framework. Gradual legitimization of many informal civic and public practices that promote direct food linkages to cities secure urban food provisioning and strengthen the links between urban and rural environment and eventually start to form new collective dynamics through locally and agro-ecology-based solutions in the peri-urban areas. This results from two main drivers: a) civil society is seen as an important local force that can potentially have a reinforcing effect at the local production and small-scale farming, b) the increasingly important role of cities as political actors enables institutional reforms that are triggered by legitimization processes of informal food-networks and alternative direct-sales schemes in time of crises (e.g. OFMs, MWM, or the inclusion of urban agriculture as a specific land-use category). This entails a shift to a more ‘neo-localist’ approach in regulatory restructuring enabling a fairer, affordable, transparent and environmentally friendly approach to the production-distribution-consumption cycle that promotes locally produced agricultural goods and consolidates ecological, political, economic and socio-cultural processes rooted in place. Subsequently, institutionalization and legitimization processes seem to give an opportunity to new spatial configurations and agri-territorial planning aspects that are discussed in the context of local-municipal initiatives and public policies. In this way the productivity and economic viability of peri-urban and local/regional primary production is enhanced giving the potential to scale up and engage more consumers and producers to local and alternative food networks.

However, in this picture of financial insecurity, the questions that remain concerning this crisis-driven model are how the economic recovery will be combined with the new era of large-scale investments and the rise of housing prices in central urban neighborhoods will influence the peri-urban land sales and agriculture dynamics? Will they induce a new demand for residential development and economic investments in low-density peripheral areas where there is still vacant and underutilized land awaiting urban development? For the moment and in a context of recession, there is access to agricultural land at affordable prices, however land can still be owned by non-
agricultural interests and is farmed under largely insecure rental arrangements with no clear institutional protection. The successful implementation and durability of bottom-up and public initiatives that promote alternative short agri-food chains, require the active and long-term involvement, engagement and the common vision between civil society, local communities and policy makers in order to deal with issues such as urban poverty, food relocalization and the future preservation of peri-urban agriculture.

NOTES
8. Nikolaïdou Sofia, Urban social initiatives for ‘food justice’: new forms of solidarity networks and social interaction in Greece, Independent Post-doctoral Research funded by the Research Centre for the Humanities, Athens, 2017. This research analyses interviews with farmers and consumers that participate in 4 CSA and box-scheme initiatives in Athens and other key informants.
22. In Article 35(2) (d) of Regulation (EU) No 1305/2013 and Regulation No 807/2014.


34. Sofia Nikolaidou, Peri-urban dynamics…, op. cit.

35. According to Georgia Giannakourou, “Planning Law In Greece: A Brief Overview” w.d. (https://internationalplanninglaw.net.technion.ac.il/files/2013/09/Greece-Planning-Law-GiannakourouBalla.doc), out-of-plan areas are not regulated by statutory detailed town plans and traditionally (since 1928) permit a limited (but significant) amount of development so long as landowners possess plots of a minimal size of 4,000m² and road access” which is enacted by the national government but interpreted and enforced by municipalities.


37. Law 3894/2010: “Fast Track licensing of Strategic Investments”.

38. The term “strategic” primarily refers to large-scale projects that are considered to have a positive multiplying effect on GDP and may, in particular, include the construction, reconstruction, expansion, restructuring, modernization or maintenance of existing infrastructure, facilities and networks which are expected to promote further opportunities for urban growth (Ellí Ampatzi, “Strategic Investments in Greece”, 2019, on line: http://www.greeklawdigest.gr/topics/finance-investment/item/230-strategic-investments-in-greece).


40. According to Stephan Backes et al., “Democracy not for sale…”, art. cit., p. 32, since 2016, a new flat tax was imposed on all (urban and rural) property owners (Unified Real Estate Property Tax-“Enfia”) which increased farmland taxation to 10 euros per hectare. At the same time the income tax rate increased in accordance with general income tax brackets of 22%-45%.

41. There is 40 kilometers zoning limit that excludes many areas of the metropolitan periphery with a strong tradition and valuable agricultural activity in Attica (such as the plain of Messogoria and Marathon) from EU funding measures.

42. Land-use zoning and building restrictions in the out-of-plan areas for Lavreotiki peninsula (Presidential Decree - 125D/1998) and Messogoria (Presidential Decree - 199D/2003).
43. As explained in Sofia Nikolaidou, “Politiques de planification...”, art. cit., in the case of Messoghia, there are: a) general agricultural protection zones (6,222 hectares) which are not exclusive, including uses such as greenhouses, livestock units while also allowing non-farm activities such as residential dwellings, campings, wind parks and, b) zones of special protection preserved exclusively for traditional and organic agriculture (830 hectares) where wineries/cellars and vineyards are mandatory.

44. Average farm size in Messoghia was 1,8 ha in 2001, average number of parcels/farm 4,5 (at the national level) and average size of the parcel is 0,43 ha (while at the national level they were respectively 4,4 ha/farm, 6,2 parcels/farm, 0,72 ha/parcel). Sofia Nikolaidou, “Politiques de planification...”, art. cit.

45. According to national statistics, the proportion of the economically active population engaged in the primary sector decreased by 13% between 2001 and 2011 in the region of Attica (17,528 people were occupied in the primary sector in 2011).


49. David Harvey, Rebel cities: From the right to the city to the urban revolution, London, Verso, 2012.


54. This institutional reform refers to the Presidential Decree 59/2018 (“Categories and content of land-uses”) which is a new land-use codification at the national level that includes urban vegetable gardens as a special land-use code in the category of mixed residential urban areas.


57. Ibid.


60. The main difference with the conventional open markets that also operate since decades (known as “laiki agora” which literally means the “people’s market”) lies on the fact that only farmers are allowed to sell directly in the market, without the participation of intermediaries/vendors.

61. Law 4492/2017: “Trade of fresh and fragile agricultural products and other provisions”.

62. Article 37, Law 4497/2017: “Operation of outdoor commercial activities”.

63. Law 4430/2016: “Social and Solidarity Economy and development of its agencies and other provisions”. This law establishes important supportive structures such as the Social Economy Fund and the Regional Support Centers, which provide free support and advice for SSE enterprises.

64. Law 4673/2020: “Agricultural Cooperatives and other provisions”. Some of the main changes concern minimum membership which is reduced to ten people (from 30) and annual turnover which is reduced to 1,000,000 euros (from 2,000,000).

65. Open farms have been identified by the network ‘open farms’ and the list is not exhaustive (http://openfarm.gr/agroktimata-map/).

66. According to the official lists retrieved from officers of the Department of Agricultural Cooperatives and Group Activities, Ministry of Rural Development and Food.


68. These numbers are recorded according to the updated list of MWM accessed through web-based research (https://omartarif.blogspot.com/p/blog-page_13.html, accessed on 10 May, 2020). Some MWM are temporarily inactive either because they still haven’t got a legal permit or because of the COVID19.


70. This refers to ‘Bostani’, a recent urban collective that operates since 2019 in the Municipal Market of Kypseli and brings together local producers with urban consumers on a weekly basis. ‘Bostani’ collaborates with eleven organic producers who are mainly based in Attica. The market is an open space for the locals, it promotes social entrepreneurship and is governed by ‘Impact Hub Athens’ through a participatory model of management (https://www.mpostani.gr/ebdomadiaia-kathalia-froutwn-kai-laxanikwn-kygeo, https://athens.impacthub.net/kypseli-municipal-market/?lang=en accessed on 2 June, 2020).

71. FAO, *Profitability and...*, op. cit.
ABSTRACTS

The article discusses the role of alternative food networks (AFN) in local food supply, food sovereignty and the preservation of peri-urban agricultural production especially in metropolitan areas. Within a context of prolonged economic and financial crisis, a growing engagement of local public and national institutions in short food supply chains helps to revitalize the local economy, strengthen rural-urban linkages and contributes to sustainable development. The analysis focuses on how newly emerging AFNs reflect the contemporary dynamics of agriculture, food-chain and land use in rural peri-urban areas of Athens. By examining the links between the current economic, environmental, social and institutional challenges the discussion focuses on the potential of formal and informal civic practices to enhance revitalization of peri-urban agriculture and support institutional change policies through a more agro-ecological approach of the metropolitan food system. A mixed method approach was used, comprising qualitative and quantitative research as well as spatial data collection and mapping representations. The analysis shows that bottom-up claims for food security had a favorable impact on the promotion of sustainable food production, consumption and distribution systems and a transformative effect on food-related public policies and the institutional framework. Gradual legitimization of many informal alternative retail channels and self-production schemes in time of crisis were able to strengthen the links between urban and peri-urban environment building agricultural ‘pockets’ of resilience to food crisis. However, poor land management and zoning control are the major constraints to sustainable agricultural production and farmers’ resilience in the Athens metropolitan area.

L'article met en évidence le rôle des réseaux alternatifs au niveau de l’approvisionnement local, de la souveraineté alimentaire et de la préservation de la production agricole périurbaine, en particulier dans les zones métropolitaines. Face à la crise économique et financière prolongée, les institutions publiques aux niveaux national et local s’engagent dans les circuits alimentaires courts. Cela contribue à la revitalisation de l’économie locale, au renforcement des liens entre les zones rurales et urbaines et au développement durable. L’analyse porte sur la manière dont les initiatives agroalimentaires émergentes révèlent les enjeux actuels liés à l’agriculture, au fonctionnement de la chaîne alimentaire et à l’utilisation des terres dans les zones périurbaines rurales d’Athènes. L’article examine les défis économiques, environnementaux, sociaux et institutionnels actuels, à partir de pratiques et initiatives sociales formelles et informelles observées autour de la relocalisation de l’agriculture. À travers une approche agro-écologique, l’analyse vise à enrichir la réflexion relative aux réformes qui pourraient favoriser la transformation du système alimentaire métropolitain, la revitalisation rurale et la promotion de la production locale. L’approche méthodologique mixte qui a été utilisée inclut une analyse de données qualitatives et quantitatives, la collecte de données spatiales ainsi que des représentations cartographiques. Les résultats de cette recherche illustrent le fait que les revendications populaires ont eu un effet transformateur sur les politiques publiques en faveur d’un système durable de production, de distribution et de consommation. La légitimation progressive de nombreux réseaux informels de vente au détail et de modes d’autoproduction dans un contexte de crise a permis de renforcer les liens entre l’environnement urbain et périurbain en créant des « poches » de résilience agroalimentaire dans la zone métropolitaine d’Athènes malgré une mauvaise gestion du territoire.
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**Keywords:** alternative food systems, peri-urban agriculture, short agri-food chains, food security, farmers’ markets, community supported agriculture, sprawl, crisis, Greece, Athens

**Mots-clés:** systèmes alimentaires alternatifs, agriculture péri-urbaine, circuits agroalimentaire courts, marchés fermiers, AMAP, sécurité alimentaire, étalement urbain, crise, Grèce, Athènes

AUTHOR

**SOFIA NIKOLAIDOU**

Sofia Nikolaidou is an urban and regional planner who holds a PhD degree from the School of Architecture (National Technical University of Athens). She currently is an adjunct lecturer in the School of Social Sciences (Hellenic Open University) and the School of Spatial Planning and Development (Aristotle University of Thessaloniki). Her research and teaching topics cover spatial planning and new approaches to sustainable urban and rural development, with particular focus on urban sprawl, urban-rural relationships and community development. Her recent publications are related to food sovereignty movements and Alternative Food Networks, agri-food policies and social and solidarity economy (urban and peri-urban agriculture, Community Supported Agriculture, Short Supply Chains, food movements 'without intermediaries'). (https://orcid.org/0000-0002-1050-4662)

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