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## Territorial innovation in the relationships between agriculture and the city

Christophe-Toussaint Soulard, Coline Perrin, Françoise Jarrige, Lucette Laurens, Brigitte Nougaredes, Pascale Scheromm, Eduardo Chia, Camille Clement, Laura Michel, Nabil Hasnaoui Amri, et al.

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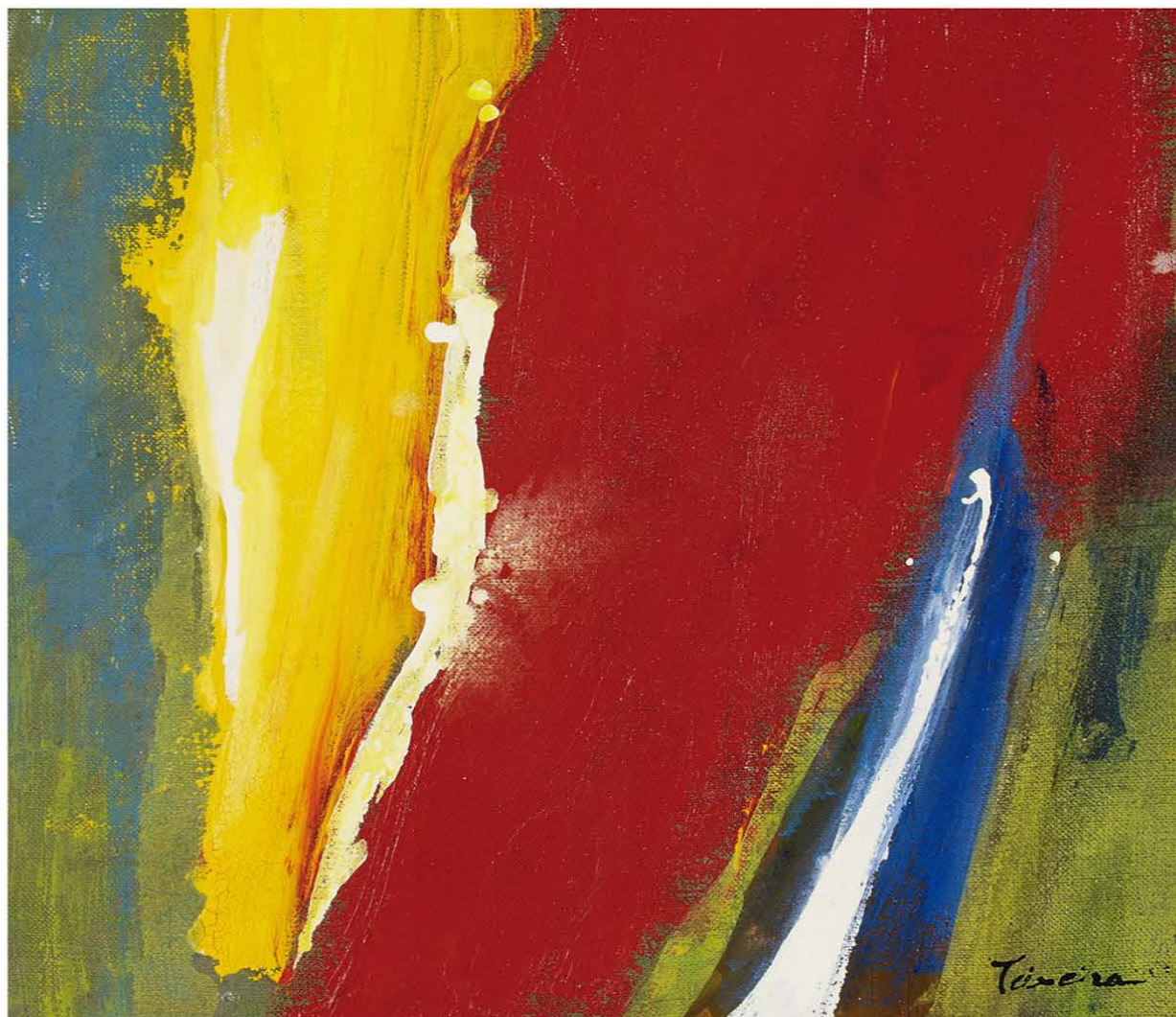


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**Syn**thèses

# Innovation and development in agricultural and food systems

Guy Faure, Yuna Chiffoleau, Frédéric Goulet,  
Ludovic Temple and Jean-Marc Touzard, editors  
Afterword : Gaël Giraud



éditions  
**Quæ**

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# Innovation and development in agricultural and food systems

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Torre A., Tanguy C., 2014. Les systèmes territoriaux d'innovation : fondements et prolongements actuels. *In: Principes d'économie de l'innovation* (Boutillier S., Forest J., Gallaud D., Laperche B., Tanguy C., Temri L., eds), Peter Lang, Business and Innovation collection, Brussels.

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## Chapter 7

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# **Territorial innovation in the relationships between agriculture and the city**

CHRISTOPHE-TOUSSAINT SOULARD, COLINE PERRIN, FRANÇOISE JARRIGE, LUCETTE LAURENS, BRIGITTE NOUGARÈDES, PASCALE SCHEROMM, EDUARDO CHIA, CAMILLE CLÉMENT, LAURA MICHEL, NABIL HASNAOUI AMRI, MARIE-LAURE DUFFAUD-PRÉVOST AND GERARDO UBILLA-BRAVO

**Summary.** The concept of territorial innovation is used in the literature to analyse centre-periphery relationships, the quality of the environment and the territorial governance. Our research uses this concept to apprehend the multiple dimensions of relationships between agriculture and the city, and thus to understand the transformations of agriculture in the context of an urban society. To this end, we analyse social, spatial and organizational arrangements in local agri-urban initiatives. Starting from the history of the recent integration of agriculture in urban planning and local policies, we use the example of Montpellier to illustrate how these 'agri-urban' arrangements are sources of territorial innovation. In fact, innovation becomes territorial through the accumulation of micro-changes, which end up influencing established practices, uses and norms that regulate city-agriculture relationships. This process of scaling up opens up new research perspective on the relationships between territorial innovations and global transitions.



An analysis of the relationships between the agriculture and the city, or ‘agri-urban’ [24] relationships, helps apprehend the transformations of agriculture in the context of urban society. After several decades of the expansion of the corporate food regime, these relationships have become frayed. Cities have spread spatially by ignoring the agricultural and food issue (Steel, 2013). This disconnect between the urban and the agricultural is at the origin of a series of dysfunctions of which society is gradually becoming aware. On a global scale, recent studies have emphasized the expectations and adaptations necessary to make the agrifood system more sustainable, showing that neither the ‘fully local’ nor the ‘fully globalized’ scenarios are sustainable. At the regional and national levels, the principles of sustainable development are leading to the incorporation of environmental and food security issues in the drafting of public policies. At the local level, a multiplicity of initiatives and movements are militating for the relocation of agriculture and food production, especially in and around cities. In this context of a ‘new food equation’ (Morgan and Sonnino, 2010), what are the new modes of organization of agriculture and urban food systems?

Relationships between agriculture and the city encompass several dimensions: agriculture and food issues, urban planning, public health, and environmental protection. These relationships involve actors who operate according to different temporalities, rationales and values, and at different scales. The approach by territorial innovation aims to make sense of this complexity. Indeed, the concept of innovation focuses on the new agri-urban arrangements. These arrangements can be at the origin of innovations which, little by little, end up influencing the established functioning of the uses and norms that regulate city and agriculture within a territory. It is this process of change that we call territorial innovation.

How does the concept of territorial innovation help us understand the relationship between agriculture and cities? What does it tell us about the actors, the territories and the dynamics at work? Which method allows us to identify and describe these innovation processes? This chapter addresses these questions. In its first part, we argue the interest in studying innovations that link the urban to the agricultural. We define the concept of territorial innovation according to the literature. In the second part, we illustrate how the city and agriculture are connected, based on a case study of the city of

Montpellier in southern France. In the conclusion, we suggest a research perspective for future work.

## ▶▶ Territorial innovation: conceptual and methodological framework

The concept of territorial innovation makes it possible to explore the relationship between innovation and territory. There exist two schools of thought in this regard. The first focuses on innovative territories and the second on the territorialisation of innovations. We follow this latter school by considering the territory as a socially appropriated space, subject to political and social issues.

## Existing research on city-agriculture relationships with regard to territorial innovation

The literature on city-agriculture relationships covers four main fields of study: urban and peri-urban agriculture; agricultural land and urban planning; urban food supply; and urban policies.

Research on urban and peri-urban agriculture examines the forms of agriculture present in the cities and on their peripheries. While all the researchers concerned highlight the difficulties in defining these two terms (Nahmias and Le Caro, 2012), the majority of them focus on intra-urban agriculture (mainly urban gardens and market gardening) and on its contributions to urban sustainability. They identify the various forms of intra-urban agriculture as well as the actors who undertake them, and they evaluate the techno-economic models to which these forms belong. The innovative dimension of these forms of intra-urban agriculture is based on their novelty, or their rediscovery, at the technical, organizational and social levels. These forms are different from those of peri-urban agriculture. While the dynamics of the latter mainly pertain to the agrifood sector, they are also influenced by urban expansion, land dynamics, and by the commercial opportunities they create in terms of short food supply chains and socio-ecosystems services.

While the issue of innovation is ever present in studies on intra-urban agriculture, it is less so for peri-urban agriculture, mainly because the transformations that take place here – in practices, profiles of the actors and agricultural activities (Poulot, 2010) – are less radical, with changes in modes of production being more incrementally adaptive than disruptive.

Studies on agricultural land and urban planning normally focus on the preservation of peri-urban agricultural areas so that advantage can be taken of their multifunctionality. Researchers evaluate and compare planning tools, and analyse conflicts of land use in peri-urban agricultural areas (Chia, 2013). They analyse experiments of including agricultural buildings in urban planning (Nougarèdes *et al.*, 2017). The status of these spaces remains unclear, between public space and private space, between individual uses and common goods (Clément and Soulard, 2016). Territorial innovation then refers to a choice between new planning decisions and local social dynamics.

The topic of urban food supply is eliciting growing interest (Viljoen and Wiskerke, 2012). The research community is developing urban planning schemes that integrate agriculture, nature and food. The innovation concerns architecture and the landscape as much as it does the economic and social aspects. Other research studies highlight the role of citizen movements in the emergence of local food concerns, especially in the pursuit of greater social justice (Reynolds and Cohen, 2016). They identify practices and innovation pathways that can trigger a transition to sustainable food strategies.

Studies on the inclusion of agriculture and food issues in urban policies make use of umbrella concepts such as the agri-urban system or urban food planning (Steel, 2013; Morgan, 2009; Viljoen and Wiskerke, 2012). Transversality and territoriality are indeed intrinsic characteristics of the governance of agriculture and food. Territorial innovation lies in the construction of new local political arrangements and new modes of territorial governance (Rey-Valette *et al.*, 2014).

Thus, city-agriculture relationships renew the interface between the urban and the rural, agriculture and food, the implementation of urban planning and territorial development strategies.

## **Territorial innovation: a combination of social, spatial and organizational arrangements**

In analysing the relationships between innovations, spaces and territories, authors usually follow one of three currents of thought.

The first focuses on centre-periphery relationships. For example, the new geographical economy (Krugman and Obstfeld, 2006), originating from the spatial economy, relies on agglomeration economies to explain the polarization of places of innovation. According to this theory, the density and diversity of economic agents at the local level provide external benefits to the enterprises concerned. This is why cities are keen to implement local policies to create 'innovation ecosystems'. As a counterpoint to these studies, Giraut (2009) has conducted research on the dynamics specific to rural areas, located thus on the outskirts of these agglomeration centres. According to him, the outskirts offer spaces of freedom from the dominant norms. Some organizational arrangements between actors and resources are conducive to organizational and institutional inventiveness. For example, to adapt to competition for peri-urban land, farmers innovate by introducing nomadic farming systems adapted to land insecurity (Soulard, 2014). This reading is very interesting for the study of peri-urban areas, seen as an intermediate space between the city and the countryside, called 'third space' by Vanier (2002), where new territorialities, neither urban nor rural, are being constructed. Territorial innovation is born here from the encounter between different social worlds, in particular between the agricultural world and the urban world. It is based on socio-spatial arrangements that create new territorialities (Giraut, 2009).

The second current is based on work in regional sciences and economic geography. It focuses on the natural and human resources of a territory, and on the innovative effects of proximity between actors. Research studies focus on different territorial innovation models (Moulaert and Sekia, 2003), such as industrial districts, local productive systems, innovative environments, localized agrifood systems, alternative food networks (see Chapter 6). These studies all consider the territory as a place of resources, which offers geographical proximity and specific organizational capacities to reinforce the territorial anchoring of enterprises or products. Innovation becomes territorial

through the links created between the actors to activate and mobilize multiple resources, derive value from them, and thus produce ‘territorial innovation systems’ (Torre and Tanguy, 2014). Innovation is seen as the driving force behind territorial development, in which conflicts can lead to new forms of cooperation (Torre, 2015). Transposed to city-agriculture relationships, innovation brings together resources and actors that hybridize the agricultural and the urban.

Finally, the third current of thought focuses on the institutional and political innovations generated by the territory’s administration. For example, the decentralization of the National State produces new administrative territories. These decouplings modify the modes of governance, with the actors concerned having to coordinate increasingly nested levels of intervention. At the same time, new forms of public participation in political decision-making are being promoted (Douillet *et al.*, 2012). Territorial innovation then originates from the construction of new political spaces, especially at emerging territorial scales (grouping of municipalities, metropolitan regions), and in the modes of governance and project engineering encouraged by local authorities. The administration of food and agriculture leads to the invention of new instruments of public action.

These approaches show that territorial innovation is a process of change based on three main drivers: spatial and political relationships, activation of resources, and configurations of actors.

## **‘Place-moments’ of innovations and ‘space-times’ of territories**

City-agriculture relationships are part of a dynamic of continuous change. From a territorial innovation perspective, their study requires a focus on particular places and moments that are strategic for the actors. Fontan (2008) calls these situations ‘place-moments’. That means a spatial and temporal reading of the innovation process.

From a spatial point of view, it is a matter of identifying the places where novelties emerge and the scales of their deployment. Innovations result from

new initiatives that may emerge in a specific place, just as they may be the result of an actor operating on an all-encompassing scale and leading to multiple local translations. Innovation's territorial dimension can be apprehended through these relationships between local levels and encompassing levels, and between bottom-up rationales and top-down ones. Our comparative analyses between countries emphasize the need to consider both large scales (national or supranational) as well as small ones (municipality, neighbourhood, farm) to identify and analyse these territorial innovations (Banzo *et al.*, 2016). In each case, the territories of action are different: metropolitan areas, municipalities, inter-municipalities, development zones, agricultural production basins, project territories, etc. Describing the process of innovation will require the qualification of the different spaces that the city-agriculture relationships act upon, from large metropolitan areas to agricultural interstices embedded within the urban environment (Laurens, 2015; Perrin and Soulard, 2014).

From a temporal point of view, studying an innovation consists of focusing on particular moments: not only at the moment when a novelty emerges, often at the initiative of an actor or a small group, but also at those when the process stops, transforms or deploys. These novelties can fizzle out or be transformed, generate conflicts, or stimulate cooperation (Torre, 2015). However, the novelty's temporal markers are not the same as those of the territory concerned. Novelties emerge during short periods while territories are transformed over much longer time spans since they retain the accumulated effects of past legacies. To characterize territorial innovation, one has thus to be attentive to legacies and inertias (notion of path dependence) as well as to current configurations and events that impel or block activation or implementation (notion of window of opportunity). The short periods of novelties have to be articulated with the long timelines of territories. Identifying the key moments of the novelties to relocate them in the territories' timelines is necessary to analyse the innovation situations. In practical terms, an innovation situation has to be characterized by a combination of agri-urban initiatives that interact in a territory. Studying the process of territorial innovation consists of reconstructing this situation from its origins to its various deployments in space and time. The method chosen to perform this longitudinal monitoring of an innovation process is to tell the story of the situation, its transformations and its effects at different scales,

with the help of a description tool called ‘*dispositif*[25] chronicle’(Paoli and Soulard, 2003).

## ►► From agri-urban initiatives to territorial innovation: the case of Montpellier

Montpellier is a city in southern France of 270,000 inhabitants that is experiencing strong growth. Its urban area extends over more than 100 municipalities with a total of 550,000 inhabitants. The relationship between the city and agriculture has changed over time. Perrin *et al.* (2013) distinguish three distinct periods. Until the 1960s, Montpellier was a wine city, living on income from vineyards and the wine and spirits trade. This organic link between the city and agriculture then became increasingly frayed. From the 1960s to the 1990s, Montpellier experienced a boom of the tertiary economy and turned its back on agriculture. Viticulture also suffered from several market crises, which accelerated its decline in favour of urbanization. Since the 2000s, several changes, local and global, have contributed to a reconnection between agriculture and the city.

Research conducted in Montpellier illustrates how agri-urban initiatives are developed and deployed within a metropolitan area. It illustrates two phases of change of city-agriculture relationships. First, a phase during which territorial innovation emerges from a new conception of sustainable urban planning, breaking with existing ones, followed by a second phase in which territorial innovation has been driven by a new local food policy.

## Innovating through territorial management: agriculture in urban planning

A first major development was the inclusion of the issue of agriculture into urban planning. In Montpellier, the creation in 2001 of the ‘Communauté d’Agglomération’[26], initially grouping 38 municipalities in the urban area, led to the implementation of the first French Scheme for Coherent Territorial Development (French acronym: SCoT[27]). This comprehensive plan

specified the development guidelines for the next ten years. In Montpellier, as elsewhere in France, the implementation of SCoTs was a novelty. A SCoT reflects both the willingness of the French State to devolve the prerogatives of spatial planning to local governments and an injunction to these same governments to emphasize planning in an inter-municipal perspective, thus creating a favourable context for local innovation.

The Montpellier experiment was at the heart of a new concept in urban planning, involving a complete reversal of perspective. Urban planners in charge of the SCoT pursued development no longer in terms of urban infrastructures but on the basis of natural and agricultural spaces defined from a cartography carried out by researchers (Jarrige *et al.*, 2006). The new value accorded to open spaces, previously perceived by urban planners as blank areas to be filled, encouraged this reversal of perspective, which now placed natural and agricultural areas at the heart of the urban territory project. This innovation has since spread to many SCoTs across France. However, while this new approach has allowed the Montpellier agglomeration to define urban growth boundaries and protect farmlands, it has not been able to stop the decline of agriculture, nor has it met expectations from peri-urban agriculture regarding the urban landscape and local food supply.

At the same time, the Montpellier region, faced with urban sprawl, was subject to a strict enforcement of the new national legislation reinforcing the protection of farmlands by reducing the derogatory building rights granted to farmers. This engendered conflicts between the agricultural profession and the State, and led to the creation of a department-wide negotiation authority, the Urbanism and Agriculture working group. This unprecedented initiative served as a model for generalizing these working groups at the national level in 2008 (circular DGFAR/SDER/C2008-5006, known as the ‘Barnier circular’). At the local level, the Urbanism and Agriculture working group created a new concept, that of the ‘agricultural hamlet’, which consists of grouping agricultural constructions within subdivisions in continuity with the villages concerned and, in this way, reducing construction in agricultural zones that fall within the ambit of local urban plans. This option was included in Montpellier’s SCoT (approved in 2006) and a dozen or so agricultural hamlets came up in ten years in Hérault department. This agricultural subdivision model, however, is struggling to disseminate because its



implementation is complex. Other more flexible forms of grouping are thus being devised by local elected officials to manage the coexistence of residential and agricultural activities (Nougarèdes *et al.*, 2017).

In addition to the protection of agricultural land, Montpellier's SCoT also defined another planning mechanism to support agricultural development in line with urban demand: the 'agripark' (or agricultural park). This term defines a space that combines several functions: agricultural production, food supply for the city, preservation of undeveloped landscapes, leisure and environmental education for city-dwellers. The purchase of an area of 190 ha by the Communauté d'Agglomération of Montpellier in 2010 led to the creation of a first agripark and the allotment of plots of land to about 20 farmers. However, most of these beneficiaries practice conventional farming, without any new contributions to the multifunctionality expected by the local government. Only a market gardener and the members of an organic-production cooperative nursery undertake direct sales. This situation is the result of negotiations between the community and the agricultural actors. It is revelatory of the local power that actors practising viticulture and cultivating field crops have, with their production oriented towards exports, while agriculture oriented towards the city and short supply chains remains far smaller (Jarrige and Perrin, 2017).

These local experiments revealed several characteristics of the territorial innovation. The new perspective proposed by the SCoT turned out to act as an organizational myth (Vitry and Chia, 2016), which succeeded in making many believe that an urban territory might be managed by its green belt. Even though it does not represent the reality, this novelty has grown in strength: it has spread nationally and is driving other local initiatives. The relationship between centre and periphery in the process of innovation may be observed, between the local and national levels, and between the urban centre and the rural periphery. At the local level, the results obtained with the agricultural hamlets and the agripark illustrate the disconnect that can exist between an initial project and the actual course of action resulting from negotiations between stakeholders. The interplay among actors leads to local adaptations of the initial project that reveal the power of the dominant actors. These local arrangements produce unequal results, as public resources can be captured by a minority of farmers and owners belonging to the wine sector.

Territorial innovation does not always succeed in redistributing resources equitably or in stimulating agricultural development in line with urban demands. These examples show that this first phase of territorial innovation is limited to an institutional dimension of the city-agriculture relationship: land planning.

## **Innovation through territorial development: including agricultural and food issues in policies**

A new political team was elected in 2014 to lead the Montpellier city-region (named 'Montpellier Méditerranée Métropole' in 2015). Among the new strategic orientations set by elected officials was an agroecological and food policy designed with the support of the research community. This policy's ambit included divisions of the local government pertaining to the economy, planning, land, water, transport, waste, social cohesion, urban matters and communications. This transversality of the policy is also a source of its fragility since, without a dedicated administrative department, agroecological and food policy remains dependent on the elected officials' goodwill.

The implementation of the agroecological and food policy can be described as territorial innovation at the organizational level, because it induces new arrangements between the various divisions of the inter-municipal establishment and between the different municipalities within the Metropolis's territory (31 municipalities). Are we witnessing new dynamics of development on the ground? Two new actions of the Metropolis provide an answer.

A first action concerns the use of public land to set up farms that will function as part of short supply chains. While the intention is the same as for the agripark (see above), the approach used is different. Here, the land is used to set up small scale farms called 'fermes nourricières' (nourishing farms), defined by the Metropolis as small farms that rely on the principles of agroecology for farming. The communities invested in the recruitment of project leaders. In 2017, two farms were set up and the Metropolis offered support to other such farms set up by municipalities or local management bodies. The process is slow, and, as of now, concerns only a small surface

area (around ten hectares), but it is impelling a recomposition of the agriculture of the Metropolis.

A second action focuses on citizen participation in the formulation of agroecological and food policy. Following an inventory of agricultural and food initiatives in the Metropolis area (more than 400 were identified with the support of the research community), a collaborative platform was envisaged to exchange information and experiences, and to bring together the actors of the voluntary sector around agroecological and food policy. The relationships, sometimes tense, between the Metropolis, the municipalities and the non-profit organizations are however leading to a delay in the implementation of the platform project. Multi-stakeholder working groups have therefore been constituted to discuss a joint-action agroecology strategy. After a year of discussions, agroecology was chosen as a mobilizing theme. As a flagship action, an agroecology month was organized, consisting of various events held at the initiative of the Metropolis, its municipalities and non-governmental actors (one of the latter was selected and funded to coordinate the event the following year).

The city-agriculture relationship in Montpellier is right now at a new stage. Territorial innovation is here not only political (development of a territorial policy), but also institutional (new internal skills and recourse to new external experts), experimental (new knowledge networks) and social (citizen participation).

These novelties are however fairly recent. The transformations they engender are reversible and their magnitudes remain uncertain. This situation of openness and uncertainty presupposes new cooperation and partnerships between public actors and civil society for the adoption and the implementation of a participatory policy and its institutionalization over time. To this end, actors involved in these situations will have to learn new ways of territorial governance, i.e., ‘processes that allow the territory’s actors to produce a shared vision, develop a strategy and to legitimize collective action’ (Vitry and Chia, 2016). In Montpellier, this new way of governance is still emerging. Compared to the previous phase, territorial innovation has become much more complex, mobilizing a wider network of actors, going beyond the traditional one-on-one interactions between the State and the wine

sector. New elected officials, new non-governmental actors and new private operators, proponents of a different model of agricultural development are arriving on the scene. Innovation is being territorialized through the creation of a way of governance that is attempting to build an urban food system specific to the Metropolis. However, these agri-urban dynamics remain marginal (including in terms of resources mobilized) within urban development and the agrifood sector. Will this movement remain marginal and eventually fizzle out? Or will it, on the contrary, drive a transition towards a sustainable agri-urban system?

## ►► Conclusion: the dynamics of territorial innovation

The example of Montpellier shows that territorial innovation emerges from the encounter between a multiplicity of agri-urban initiatives and a wider process of inclusion of agriculture and food issues in urban policies (Michel and Soulard, 2017).

The temporality associated with territorial innovation is both long and stuttering. The slow speed of changes and difficulties observed arise from the resistance, both by the city as well as the agrarian system, representing the territories's long timelines and the effects of path dependence. But the initiatives and the changes of context testify to an effective reconfiguration of the relationships between actors who, only 15 years ago, hardly knew each other. City-agriculture relationships, and the innovations they engender, also reveal the importance of social equity issues in the governance of agricultural land. The risk of instrumentalization of agriculture in urban projects remains clear, while the risk of exclusion of innovative forms of agricultural remains significant in the face of entrenched sectoral agricultural forces. While a rebalancing of city-agriculture relationships remains an integral aspect of territorial innovation, it cannot however be achieved without evaluating the issues of social, environmental and food justice (Tornaghi, 2017).

Territorial innovation thus presents itself as a path strewn with hazards, on which progress is made in fits and starts. One question remains unanswered: Which agri-urban innovations are successful, in the sense of being able to

enhance the sustainability of the agri-urban system? This process of scaling of innovation, i.e. the mechanisms for the appropriation of novelties acquired by actors who are able to transpose them and legitimize them at higher levels, opens up a field of research on the relationships between territorial innovation and global transition. Identifying, analysing and testing mechanisms for the deployment, transposition and institutionalization of innovations at different scales can form the agenda for future research on city-agriculture relationships.

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14In conservation agriculture, it is the conservation of soil fertility that is the focus. According to the UN's Food and Agriculture Organization's definition of this type of agriculture, this involves maximum soil cover (by crop residues or cover crops), the absence of ploughing, a strong reduction or even an elimination of tillage, and diversified crop rotations and associations.

15This chapter is an edited version of an article we published in the journal *Innovations* (Chiffolleau and Paturel, 2016).

16Set out in the French law for the future of agriculture, food and forests, dated 13 October 2014 (art. 39), territorial food projects (in French: PAT, *projets alimentaires territoriaux*) are developed in a concerted manner on the initiative of all of the concerned territory's actors. These projects are based on a shared diagnosis, an assessment of local agricultural production and of food requirements expressed at the scale of a population area or consumption area, in terms of individual consumption as well as of collective catering requirements.

17Short food supply chain presented by its founders as *a network linking direct buying communities to local producers* (<https://thefoodassembly.com/en> , French version: <https://laruchequiditoui.fr/fr> ).

18System of trade between a producer and a group of consumers who contract to buy his produce during a season, often by paying in advance, and then receive a package of farm produce on a regular basis (<http://www.reseau-amap.org/> ).

19Grocery store reserved for social minima beneficiaries and subsidized by the State (in French: *épicerie sociale*).

20The phenomenon of technological lock-in refers to the fact that when a technology has become dominant and entrenched, it is difficult to replace it, even by a more efficient or



powerful one.

21 Marshall had already described this phenomenon in his work at the end of the 19th century, writing about the ‘industrial atmosphere’ of industrial districts, within which ‘industrial secrets cease to be secrets. They are in the air itself.’

22 Reference to the book *Les régions qui gagnent [The regions that win]* (Benko and Lipietz, 1992).

23 This community is structured at the national level in France (creation of a LAFS scientific interest group, or SIG), then at the European level (LAFS European research group, or ERG) and at the international level (with the constitution of a LAFS network in Latin America).

24 In this chapter, we use the adjective ‘agri-urban’ to describe the relationships of proximity between agriculture and the urban environment. It also designates intra-urban agriculture (which we sometimes also describe, more simply, as ‘urban’) and peri-urban agriculture.

25 *Dispositif* is a French notion, without exact English translation, proposed by the philosopher Michel Foucault to describe an arrangement between heterogenous actors, tools, processes and controversies, implemented to control a situation or to reach a goal (authors’ note).

26 A ‘Communauté d’Agglomération’ is a metropolitan government structure in France that unites a group of towns/municipalities to work together. Communautés d’Agglomération have responsibilities that were earlier dealt with by the individual towns themselves, e.g. economic development, urban planning, garbage collection, etc.

27 *Schéma de cohérence territoriale*.