

Escape from the global field? Local and sustainable initiatives in the urban and peri-urban agri-food field: emergence of an institutional work reframing places

*Le bonheur est-il dans le champ ?
Initiatives locales et soutenables dans l'agri-alimentaire urbain et périurbain :
émergence d'un travail institutionnel de redéfinition des espaces*

Flore TISSONE

Doctorante en Sciences de Gestion - Institut de Management Public et Gouvernance Territoriale
21, rue Gaston de Saporta - 13625 Aix-en-Provence Cedex 1 - flore.tissone@univ-amu.fr

Solange HERNANDEZ

Professeure en Sciences de Gestion

Emmanuelle MOUSTIER

MCF en Sciences Économiques

ABSTRACT

The current prevailing food system is unsustainable, providing negative externalities and inequalities. In the face of this alarming situation, actors from different spheres (whether public, private, civil society or academia) are organizing themselves to encourage the transition towards sustainable, responsible and inclusive local food systems. In order to better understand how these actors do this, we want to understand how the ongoing institutional work in the field of food and agriculture is leading to a reframing of borders, practices, and spaces of intervention? Our exploratory methodology consists of a multiple case study conducted in six North Mediterranean territories within the framework of the European project MADRE (Metropolitan Agriculture for Developing an Innovative, sustainable and Responsible Economy). Our results show a proliferation of sustainable innovations, where the public sphere is considered relatively passive. The institutional field of urban and peri-urban agriculture (AUP) is extending through the enhancement of its multifunctional aspects and the conquest of new development places. We are

also seeing a transformation of food value chains in urban and peri-urban areas as a result of the creation of a chain of support and influence activities. The latter, which mainly comes from actors usually external to the institutional field, aims to minimise negative externalities and integrate more sustainability into practices. In addition, sustainable and local food value loops are sometimes created in this context. In addition, innovations are often driven by a desire to overcome constraints that turn into opportunities, recalling the work on sustainable and frugal innovations (Le Bas 2017). The role of the actors is essential in the face of the constraints they face. In this context, the choice of the collective, moderation and sobriety in the management of resources, as well as the revitalisation of ancestral practices are vectors of innovative and sustainable practices.

Key-words

Local and sustainable food system, Urban and periurban agriculture, Institutional work, Retro-innovation, Food value loops

RÉSUMÉ

Le système alimentaire qui prévaut actuellement est insoutenable, pourvoyeur d'externalités négatives et d'inégalités. Face à ce constat, somme toute alarmant, des acteurs relevant de différentes sphères (publique, privée, société civile, académique) s'organisent pour encourager la transition vers des systèmes alimentaires territoriaux soutenables, responsables et inclusifs. Afin de mieux comprendre la manière dont ces acteurs s'y prennent, nous souhaitons comprendre en quoi le travail institutionnel en cours au sein du champ de l'agriculture et de l'alimentation entraîne-t-il une redéfinition des frontières, des pratiques, et des espaces d'intervention? Notre méthodologie exploratoire est constituée d'une étude de cas multiple dans le cadre du projet européen MADRE (Métropole et Agriculture Durable pour des Relations Équitables) menée dans six territoires Nord-Méditerranéens. Nos résultats montrent un foisonnement d'innovations soutenables, là où la sphère publique est considérée comme relativement passive. Le champ institutionnel de l'agriculture urbaine et périurbaine (AUP) s'étend par la mise en valeur de ses aspects multifonctionnels et la conquête de nouveaux espaces de développement. Nous

observons également une transformation des chaînes de valeurs alimentaires en zone urbaine et périurbaine sous l'effet de la création d'autres chaînes d'activités de soutien et d'influence. Cette dernière, qui émane principalement d'acteurs habituellement externes au champ institutionnel, vise à minimiser les externalités négatives et à intégrer plus de durabilité dans les pratiques. De plus, des boucles de valeur alimentaires, soutenables et locales voient parfois le jour dans ce cadre. En outre, les innovations ont souvent comme moteur la volonté de dépasser des contraintes qui se transforment en opportunités, rappelant les travaux sur les innovations durables et frugales (Le Bas, 2017). Le rôle des acteurs est primordial face aux contraintes qu'ils rencontrent. Dans ce cadre, le choix du collectif, la modération dans la gestion des ressources, tout comme la redynamisation de pratiques ancestrales sont vectrices de pratiques innovantes et soutenables.

Mots-clés

Systèmes alimentaires territoriaux durables, Agriculture urbaine et périurbaine, Travail institutionnel, Rétro-innovation, Boucles de valeur alimentaire

INTRODUCTION

Global demographic and living standards trends pose challenges for the food system of tomorrow, especially since the current one is unsustainable, providing negative externalities and inequalities. The global food model is characterised by a twofold trend that needs to be questioned.

On the *supply* side, it is not the capacities that are to be questioned but rather production practices and allocation, “especially since 30% of world food production is not consumed but wasted” (Nahapétian 2017: 7). The sector's environmental impact is worrying, accounting for “a third of global greenhouse gas emissions linked to human activity” (*op. cit.*).

In social matters, there are also major negative externalities of the current system. In France, for example, farmers have been the socio-professional category most threatened by the risk of suicide for several years now¹ (rate 20% higher than the rest of the population). As for farmers in southern countries, they are plunged into a food deficit situation and face competition from low-cost exports from northern countries. Indeed, they are subject to dumping practices: selling prices being regularly below real production costs as a result of public subsidies. The Mediterranean countries are particularly concerned by the question of public aid, through the Common Agricultural Policy (CAP) and its reform planned for the period 2021-2027.

¹ Report of the National Public Health Agency of 5 October 2016.

Finally, from an economic point of view, the current food model imposes a double vulnerability, the prices of goods being extremely volatile on world markets. And, this volatility is accentuated by the increasingly close interdependences between financial markets (including the energy market). The 2008 crisis is a perfect illustration of this.

On the demand side, several trends can be observed which can be grouped under the same fundamental issue: food security². The balance sheet of the world food system in terms of food security remains divided. Progress is very uneven between and within the different countries of the world. The spread of export-oriented systems has reduced the diversity of agricultural and food production as well as that of distribution systems. This has led to the disappearance of local systems in favour of globalised supply and distribution chains. In addition, eating habits have changed. In particular, we are witnessing a global standardisation of consumption patterns with worrying health implications. This nutritional transition is also accompanied by a widening of income inequalities (Piketty 2013), leading to disparities in access to food, and in the quality of the food consumed. At the same time, the worldwide proliferation of supermarkets is increasing the demand for ultra-processed food and over-packaged products, whose health and environmental impact is to be deplored. The 2015 report published by the Climate Action Network is eloquent on this point, our food patterns are not sustainable, neither at individual, local nor global level.

However, in the face of this alarming observation, actors from both the public and private spheres are getting organised. Members of civil society (consumer associations, community gardens, NGOs, etc.), private actors (farmers, businesses, professional associations, etc.), the academic world (academics and researchers, technical study centres, etc.) or public authorities (and related), many of them are acting to encourage the transition towards sustainable, responsible and inclusive food systems³. The objective is to strive for a delicate balance between “a global

food system of worldwide solidarity” and local food systems, thanks to “*food fact (re)territorialisation*” (Bonney and Brand 2014; Rastoin 2015). To this end, 144 authorities signed the Milan Pact⁴ in October 2015 and committed to creating Local and Sustainable Food Systems (LSFS).

In the latter, it is not a question of pitting agriculture and territories against each other. Indeed, urban and peri-urban production complements rural agricultural production. The question of the structuring of STFS and urban and peri-urban agriculture (UPA) is therefore crucial. It makes possible, among other things, to re-territorialise activities and re-create social and cognitive links between production and consumption. To achieve this, stakeholders are imagining and experimenting with innovative managerial practices in all the links of the food value chains. The latter is composed of production, processing, distribution (marketing, logistics and retailing), consumption, including waste management activities. This implicitly creates an objective of circularity in the processes at work (Arnsperger and Bourq 2016).

The transformation of food systems is therefore at the heart of this work. Since a food system is made up of food chains, we are interested in the innovations that develop within and around them. It should be noted, however, that innovation, although widely mobilised in research work, is a complex concept. In 2009, Baregheh *et al.* counted more than 60 definitions in different disciplines ranging from economics to management. Thus, the construction of a universal definition of innovation is made difficult by the diversity of the currents which have taken hold of it (Baregheh *et al.* 2009) and by the ideological foundations on which they are based. However, common characteristics have been identified by these authors concerning, among others: their *nature* (novelty, improvement, change), their *type* (product, service, process, technique), their *means* (technology, idea, invention, creativity, market), their *purpose* (success, differentiation, competitiveness), etc. (Baregheh *et al.* 2009).

² “Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.” (FAO, 1996).

³ According to the High-Level Panel of Experts (HLPE) of the Committee on World Food Security (CFS), a sustainable food system is one that “ensures food security and nutrition for all without compromising the economic, social and environmental foundations necessary for the food security and nutrition of future generations”. (HLPE, 2014).

⁴ The Milan Pact now includes more than 180 cities (March 2019).

Moreover, innovation is an evolving concept. It initially focused on technological innovations, but non-technological innovations are receiving increasing attention by incorporating commercial or organisational innovations: “an innovation is the implementation of a new, or significantly improved, product (good or service) or process, a new marketing method or a new organisational method in business practices, workplace organisation or external relations” (OECD 2005).

More recently, with regard to ecological issues, we are again observing a shift in this notion. While the initial objectives of innovation revolve around the creation of competitive advantages to maintain employment and growth, these are no longer limited to this. Mitigation and adaptation to ecological and climate changes, in particular by reducing the pressure on natural resources, are becoming new purposes assigned to innovations. In this perspective, our research focuses on responsible and sustainable innovations, breaking with the classic determinants and previous innovations models (Le Bas 2017). These innovations are both anchored in the behavioral evolution choices of local populations and integrate environmental and social issues (Le Bas 2017; Gupta 2010). Sustainable innovations must also guard against rebound effects on natural resources in order to be considered as such.

This study aims to understand the mechanisms at work within and around food value chains in urban and peri-urban environments of six North Mediterranean metropolises. **Our analysis is based on the notion of institutional work, in progress within the field of food and agriculture. Is there such institutional work on the part of agri-food field actors? Does this lead to a redefinition of borders, practices and places?** We mobilise this concept in a rapidly expanding field of research: local and sustainable food systems (LSFS) and urban and peri-urban agriculture (UPA), of which we aim to improve conceptual and practical knowledge.

To do so, we draw, in the first part, on the work of Zietsma and Lawrence (2010) on the role of “Boundary work” and “Practice work” in the evolution of institutional fields. Then the methodology is explained. We conducted a multiple and multi-national case study of initiatives in six northern Mediterranean

territories. An emergent coding process of the collected data has been carried out. In a third step, we present the results of this research: a proliferation of sustainable innovations that integrate the constraints encountered, and a transformation of food value chains in urban and peri-urban areas under the effect of an other chains of support and influence activities. Finally, we interpret these results and draw the conclusions of this article: clarifications and modulations regarding the transgression, creation and networking capacities of the actors, as well as a broadening of the spectrum of institutional work by adding a third dimension: place work.

1. AGRI-FOOD, a fast-moving institutional field

We approach agri-food as an institutional field⁵, paying particular attention to the intentional actions of actors or groups of actors in relation to Urban and Peri-urban Agriculture (AUP). They aim to act on it, whether from the point of view of its borders or the prevailing practices in this field (Zietsma and Lawrence 2010). This allows us to observe the innovations in management practices and tools deployed by organisations or individuals intervening locally in the field.

1.1. Agriculture and food, a new field of action for local public actors

The intersection of the fields of agriculture and food is particularly conducive to the observation of innovations, whatever their nature. Indeed, following the example of Lardon and Loudiyi (2014: 3), many researchers have analysed that “*transformation processes are underway around agricultural and food systems and the reconfiguration of their links to territories*”. Increasingly numerous and heterogeneous stakeholders are developing activities aimed at better integrating urban, agricultural dynamics and local food issues.

In this context, public organisations (national or local) and managers of territories, may have a role to play in this dynamic (Capt *et al.* 2014: 4).

Yet, traditionally, local authorities and other local public actors have had little involvement in agriculture, particularly in France. Decentralisation in the early 1980s did not dramatically change the situation. Agriculture remained for a long time the prerogative of national or European policies. Modernised and intensive food production was done in rural areas, far from the largest cities. The rise in local authorities' interest in this topic can only be observed from the emergence and development of so-called alternative agriculture, often urban or peri-urban⁶. Consequently, some of them choose to pursue proactive policies in this area, sometimes in connection with quantitative or

qualitative food objectives (Blanc 2013; Minvielle *et al.* 2011; Peltier 2010; Jarrige *et al.* 2006).

Despite their recent multiplication, local (or relocated) agriculture and food projects can still be considered innovative in many territories. Moreover, this innovative dimension is often illustrated both by the initiative itself and by the configuration of actors who participate in it.

Indeed, the traditional division of roles in the agri-food field is becoming blurred. Local authorities are intervening in agri-food matters, outside of their competence. Consumers participate in agricultural production and marketing (collective gardens, AMAP (association for the preservation of local and peasant farming), collective supermarkets, etc.). Farmers are “converting” to organic farming: some who are breaking away from the dominant model are doing so outside the system, others associate their individualist profit-seeking approach with public concerns for the defence of the general interest (preservation of the environment, protection of biodiversity, positive externalities on the health of consumers and local residents, etc.).

In fact, new actors (so-called alternative farmers, neo-farmers, urban farmers, producers and/or consumers associations, local authorities, etc.) are appearing on the scene. The latter is itself renewed (urban and peri-urban agriculture, organic farming, agroecology, agro-sylvo-pastoralism, local and short circuits, locavores restaurants and shops, etc.). This creates original initiatives, which themselves generate innovative practices, if only because they are unusual for the group of actors who take them over.

These local actions mobilise territorial management practices and tools (Hernandez 2018). The most frequently mobilised aim at involving stakeholders in local agriculture and food, characterised by their great diversity. The managers of the territories here mainly use tools for managing the interface with the environment. They mainly aim to monitor the environment and interact with external stakeholders (Hernandez 2017): partnerships, networking, project management, consultation, participation, forums, information meetings, training, in particular.

⁵ Or as an institutional “meta-field” including that of agriculture and food, which is currently being brought together.

⁶ Many alternative projects are being set up in rural areas but are not the subject of this article.

The proliferation of projects observed reveals a notable evolution in the agricultural field. Increasingly linked to food issues, the field is experiencing crises, disputes and transformations, notably under the pressure and the impetus of local actors groups. The boundaries between actors with hitherto clear-cut aims and practices are becoming porous (Samak 2012). However, the voluntarism of actors is confronted with a certain institutional inertia.

1.2. Institutional work of UPA actors for an evolution of borders and practices

How to characterise this confrontation? How to apprehend this situation and its dynamics? By drawing on the work of Zietsma and Lawrence (2010), the latter specified the “institutional work” developed in neo-institutional theory, that is, the efforts of actors or groups of actors to change the institutional fields⁷. They highlighted the efforts of stakeholder groups to act on the boundaries and practices of an institutional field, that of the forest industry in Canada, in order to create, maintain or destroy this institution.

In an institutional field considered to be stable, the boundaries mark a clear distinction between individuals and groups, and delimit a set of practices (Zietsma and Lawrence 2010: 191). In this framework, practices refer, for their part, to “*shared routines [...] or recognized forms of activity [...] that guide behaviour according to the situation [...]*” (Zietsma and Lawrence 2010: 192). Thus, the actors' efforts to act on the field can be of two kinds: focusing on the boundaries of the field or on the practices of the actors who are part of it (Zietsma and Lawrence 2010: 194) (see Figure 1).

In the first case, boundary work consists of trying to establish, extend, reinforce or destabilise boundaries around an institutional field. In the second case, practices work, at the initiative of other actors, aims to modify the legitimacy of certain practices and to create new ones.

The links between boundaries and practices are intense and mark the interdependence of these two

elements. Indeed, if boundaries delimit the legitimate and conceivable practices in an institutional field, the practices support the boundaries, marking the difference between those who act as *they should* in the field and those who do not (Zietsma and Lawrence 2010: 196).

Consequently, any destabilizing work on one of these elements (boundaries or practices) weakens the other, creating cycles of institutional evolution marked by four stages (stability, conflict, institutional change/innovation and re-stabilisation).

This work of destabilisation takes place when the actors successively exercise their capacities for transgression, creation and then networking. They are thus likely to compromise field's boundaries, to make practices illegitimate and/or to create new practices (Zietsma and Lawrence 2010). In this approach, the role of stakeholder groups in institutional change is crucial.

Yet, in the agri-food field, these capacities tend to develop. Thus, alternative agricultural practices seem to be transgressive by nature and the boundaries of the agri-food field are very unstable. Actors are creating new forms and structures in all the links of the food chains.

This field is marked by innovations and institutional work is currently carried out by actors. For this reason in particular, we have chosen to observe, study and better understand urban and peri-urban agri-food initiatives. Six northern Mediterranean metropolises were selected and their actors observed and questioned (public authorities and related, civil society, private actors and the academic world).

⁷ This work is in line with the article by Lawrence and Suddaby (2006) which contributed, among other things, to broadening the perspectives of the neo-institutional approach beyond its sociological dimension (isomorphism), which was dominant for a long time.

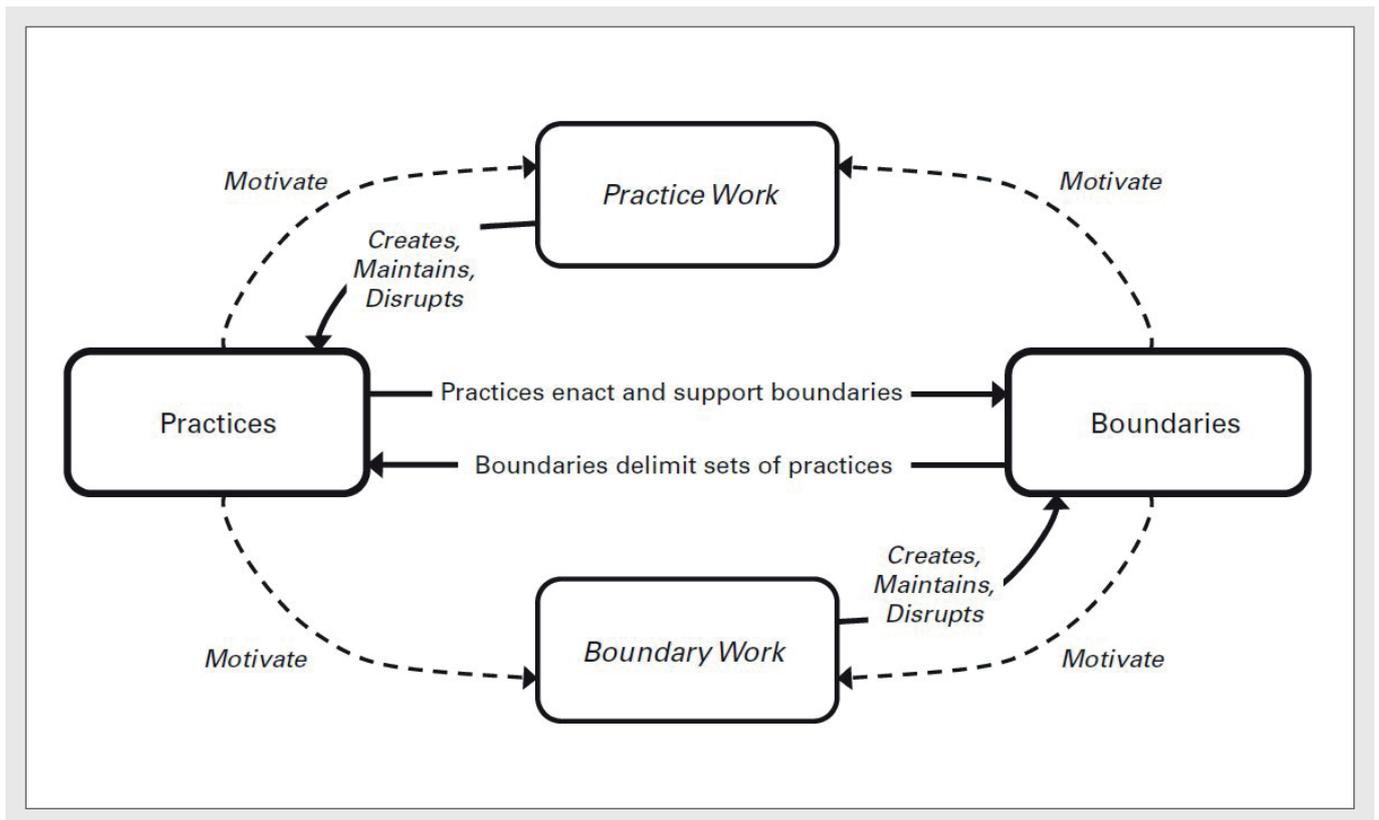


Figure 1 – The recursive relationships among boundaries, practices, boundary work, and practice work (Zietsma and Lawrence, 2010)

Source: from Zietsma et Lawrence, 2010 : 196

2. EXPLORATORY METHODOLOGY

applied to the European project "Metropolitan Agriculture for Developing an Innovative, sustainable and Responsible Economy" (MADRE)

Let us now detail the methodology used to carry out this research. To do this, we first present the MADRE project, its purpose, its participants, its development and the six metropolitan territories involved in the process. Then, we expose the data collection and processing techniques used.

2.1. Presentation of the MADRE project and the six metropolitan territories studied

This research including a multiple and multinational case study is conducted, independently and is not funded, within the framework of the European project

MADRE (European funding INTERREG-MED). Started in February 2017 and lasting 18 months, the project has two main objectives. The first consists in supporting the change in production, consumption and supply practices in metropolitan areas, in particular by strengthening the innovation capacities of actors in UPA. The second aims at stimulating a dynamic of territorial and transnational cooperation with the ambition of achieving a lasting networking of actors from different metropolitan areas. The creation of a Mediterranean network and a web platform on urban and peri-urban agriculture "Agri-MADRE" is thus envisaged. The selected territories are presented in Figure 2 (from west to east).

Around the lead partner, the Agency for Sustainable Mediterranean Cities and Territories (AVITEM, Marseille), are gathered the different metropolitan working group leaders for each metropolitan area (see column b of Figure 2). In addition, several dozen of local partners from each territory are involved in the project. Each is associated with one of the four categories of actors selected by MADRE: public authorities (and related), civil society, private actors and the academic world.

This European project was carried out in two phases. First, metropolitan meetings were organised by each territory within metropolitan working groups. Then, international and thematic meetings (called “transnational working groups”) were held in the six metropolises, bringing together stakeholders from each territory. These two-day meetings successively focused on several innovation-related themes (see column c in Figure 2).

level of replicability (Yin 1989). The metropolitan territories studied are located in northern Mediterranean states, close or very close to coastal areas and fairly highly urbanised. Several initiatives from the four categories of actors have been identified. Innovative actions and projects have been developed and carried out in the field of urban, peri-urban, local and sustainable food and agriculture, thus generating the use of management tools. They were selected to participate in the European MADRE project.

At the same time, differences were maximised between the cases, in order to test the replication of the results discovered later. Beyond the above-mentioned

requirements, the cases vary in terms of surface area, in categories and number of actors involved, but also because of their socio-demographic, regulatory or even pedoclimatic characteristics. One of the territories, Tirana (Albania), is not part of the European Union. Population densities and useful agricultural area also vary. We will now detail the methods of investigation and processing of the selected data.

2.2. Methods of investigation and data processing

Investigations began in April 2017 and continued until the summer of 2018. They were carried out in three stages. After a step of participant and non-participant observations, a period of primary and secondary data analysis followed. Then the third step of data collection, via an open questionnaire online was conducted.

The accumulation of primary and secondary data was done thanks to several sources of evidence. Indeed, the diversification of the latter meets the principle of triangulation, because it facilitates the enrichment,

Metropolitan territory (Country)	Local Partner	Topic of transnational working group (Date)
Barcelona (Spain)	Mediterranean Cities Network (Med Cities)	Social innovation (October 2017)
Montpellier (France)	L'Institut Agronomique Méditerranéen (CIHEAM-IAMM)	Territorial innovation (January 2018)
Marseille (France)	ANIMA Investment Network (ANIMA)	Producer innovation (November 2017)
Bologna (Italy)	Metropolitan city of Bologna (CimetBo)	Transnational networking (December 2017)
Tirana (Albania)	Agricultural university of Tirana (UBT)	Consumer innovation (March 2018)
Thessaloniki (Greece)	Aristotle University of Thessaloniki (AUTH)	Academic research (February 2018)

Figure 2 – The six metropolitan territories studied

Source: Authors

- The official reports of the Metropolitan Working Groups (MWGs) that have taken place in the different metropolises with local stakeholders (about two per metropolis) ; The reports of the six thematic transnational working groups (TWGs) bringing together stakeholders from the six metropolises;
- The presentation support of the project and initiative leaders;
- The action sheets of the initiatives present in the territories, collected and produced by ANIMA and presented in the MADRE catalogue of good practices.

Figure 3 – Secondary data collected

Source: Authors

questioning, control and verification of data, and thus allows for more validation of the construct (Yin 1989: 41).

We therefore retained three types of secondary data (see Figure 3).

As for the primary data, there are two types of them. First, extensive notes were taken during participant and non-participant observations in the metropolitan working groups in Marseilles and in all of the thematic transnational working groups. The TWGs included focus groups, presentations of project leaders' activities and field visits to each metropolitan area. Secondly, a questionnaire (translated into three languages: French/English/ Spanish) was drawn up on the basis

of participant and non-participant observations as well as secondary data collected (see Figure 4).

The questionnaire included questions such as: *In your opinion, what are the three main functions of urban and peri-urban agriculture?; In your opinion, what are the three secondary functions of urban and peri-urban agriculture?; Overall, in what environment do you develop your activities?; Do you consider that your activities in urban and peri-urban agriculture have links with other fields?; What space(s) do your activities promote directly or indirectly?; What are the main constraints you face while developing your activities?; Do you think you are managing one of your resources and/or skills in an unusual way? Why?; etc.*

Five sections (45 questions including 30 closed questions*)

1. The profile of the respondents (actors and stakeholders identified within the urban and periurban agriculture field on their territory);
2. Their mental representations of urban and periurban agriculture (UPA) ;
3. Their activities related to UPA ;
4. Their management practices regarding these activities ;
5. Their expectations regarding the creation of a Mediterranean network.

**The closed-ended questions in themes 2, 3, 4 and 5 allow respondents to answer the question via an "other" textbox.*

Figure 4 – The five sections of the questionnaire

Source: Authors

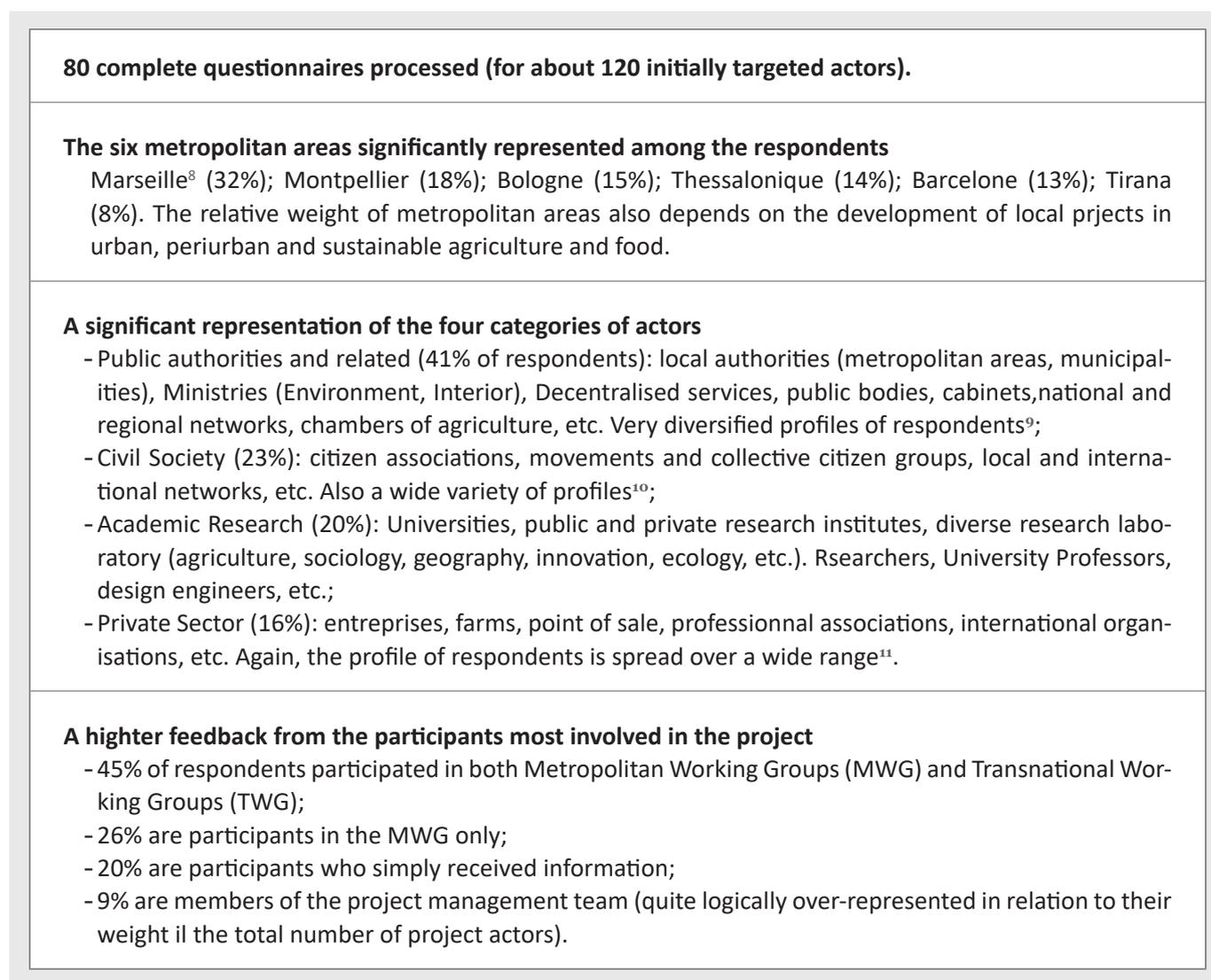


Figure 5 – Structure of the theoretical sample

Source: Authors

Several waves of follow-up were carried out in order to reach a satisfactory response rate for each territory according to the number of actors initially identified and contacted by the various managers. Figure 5 presents the structure of the theoretical sample.

Finally, we conducted statistical analyses based on the results of the closed-ended questions. The results of the

open-ended questions were added to the qualitative material collected upstream and were the subject of a qualitative data content analysis (Miles and Huberman 1991). As the data collected were extremely abundant, a coding system has been constructed which, after successive groupings via emergent coding, revealed different hierarchical categories for each question in the questionnaire (see Figure 6).

⁸ The weight of respondents from Marseilles can be explained by the presence of two partner structures instead of one in the other metropolises (Anima and Avitem).

⁹ Elected official, manager, technician, delegate of the prefect, technical secretary, agricultural engineer, department head, department director, architect, town planner, economist, network leader, project manager, auditor, research officer, coordinator, communications director, etc.

¹⁰ Facilitator, director, project manager, training officer, policy officer, treasurer, trainee, funder, agronomist, coordinator, association president, network facilitator, etc.

¹¹ Farmer, entrepreneur, project manager, HR manager, president, director, coordinator, founder, agricultural engineer, development manager, landscape architect, etc.

<p>Question: In your opinion, do you manage any of your resources and/or skills in an unusual way? Why is this? (40 out of 80 respondents answered this question in the affirmative)</p>	
<p>“Food waste used in a innovative way as amendment for agriculture” ; “To use gardening as a support treatment tool for people suffering from cancer” ; « L'agriculture urbaine étant multifonctionnelle les financements peuvent venir du social, de l'environnement, de l'agriculture, du développement économique ce qui a tendance à dérouter les financeurs car c'est une approche globale dont ils n'ont pas l'habitude (portant la base du développement durable) »</p>	<p>Circularity, multifunctionality and transversality in processes</p>
<p>« Trabajamos y compartimos información y experiencias de proyectos de agricultura urbana en red » ; « Besoin de fédérer des compétences auparavant disparates au sein de mon réseaux d'experts. » ; « Nous mobilisons des bénévoles engagés pour le climat, la biodiversité, les générations futures. »</p>	<p>Creation of networks and communities</p>
<p>« Nous adaptons nos compétences en fonction des besoins, c'est habituel » ; « Besoin de fédérer des compétences auparavant disparates au sein de mon réseaux d'experts. » ;</p>	<p>Skills</p>
<p>“Money, because we're a CSA, community supporting agriculture, so our farm's activities are supported by people that decide to participate and support us, also financing us, in exchange of weekly vegetables, cereals, fruits. instead of trade we're creating community.” ; « Même sans argent, la mise en place et les essaimages du projet » ; « Parce que son accompagnement n'est pas prévu ni financé » ; « Oui je travaille souvent en sous capacité financière. De manière générale, travaillant sur la biodiversité des sols, il semble que les autorités locales ne se sentent pas franchement concernées »</p>	<p>Financial under-capacities</p>
<p>« Nous pratiquons l'agriculture en collectif avec une gestion partagée » ; « education and faciliation of co-design events » ; « Trabajamos y compartimos información y experiencias de proyectos de agricultura urbana en red » ; “By co-creation and responsible research and innovation methods” ; “We reserve part or our burget to support local producers in case of serious climate damages to the productive structures. Small organic producers have few chances to access adequate insurances .”</p>	<p>Shared management of activities and/or risks</p>
<p>« changer les regards, les représentations, favoriser la créativité » ; « Certainement : imagination et capacité d'adaptation sont nécessaires à une Direction de la Prospective pour saisir des opportunités, convaincre des partenaires ou contourner des obstacles ! » ;</p>	<p>Capabilities deployed</p>
<p>“I try to create new public-private partnerships, which still involve stakeholders (who contribute to control the management of the land).” ; “Foncier public agricole géré en direct par la collectivité récemment, de façon à démontrer qu'il est possible de redéployer des activités agricoles autour de la ville, en lien avec les attentes des habitants. » ; « Le foncier : des zones affectées à l'urbanisation (2000 logements potentiels) de longue date en plein cœur de ville ont été remises en zone agricole protégée. (32 ha) » ; « Mise à disposition de foncier public pour de l'agriculture urbaine »</p>	<p>Land management</p>

Figure 6 – Extract from the coding grid for the unusual modality (s) of management of resources and/or skills
 Source: Authors

3. A PROLIFERATION OF INNOVATIONS in the face of the globalised food system dominant practices

We now present the results of the field study. We first draw up a portrait of the constraints encountered by the actors, because these are often at the origin of

the innovations observed. We describe the proliferation of these constraints within and around the food chains in the six territories studied. Then, we observe their consequences on borders, practices, but also on areas of intervention, which jointly influence the agri-food institutional field. The latter is constantly expanding, under the impetus of many local public and private actors, from the traditional agri-food sector, or not. Finally, we highlight more particularly the

transformation of the practices of actors within food value chains, especially under the effect of a chain of territorial actors aiming to relocate their activities and make them more sustainable.

3.1. Integration of constraints by and for the emergence of innovative initiatives

3.1.1. Faced with dominant practices, the exacerbation of constraints and the relative passivity of the public sphere

The agri-food field is changing, due to the initiatives of stakeholders in connection with the UPA. But this is not self-evident according to the respondents. They expressed their difficulties in developing activities, still often out of step with prevailing practices.

Thus, of the 80 respondents, half of them estimate that they encounter obstacles very often or rather often, and 40% from time to time. This varies greatly depending on the category of actors, since 70% of those from civil society say that they encounter many obstacles in the development of their activities in connection with the UPA, compared to less than 45% for the other three categories. Among the territories in which they are located, Albanian respondents indicate that they face the most obstacles of all kinds. Next, in descending order, are Marseille, Bologna, Montpellier, Thessaloniki, and finally Barcelona. What are these obstacles and constraints?

A total of 116 occurrences were cited in the questionnaire. They are therefore of a great variety. However, coding made it possible to classify them into a few categories. The most frequent were economic and managerial constraints (47% cumulated).

From this perspective, some obstacles are directly related to management tools and practices (27%). Working within a collective, designing and leading project with others, especially when the actors come from different fields and categories, is not self-evident. Being able to take on all facets of project management, especially when these are cross-cutting projects, acquiring technical know-how, conducting strategic monitoring, identifying and accessing the appropriate technology,

training, developing partnerships, etc., require specific skills that not all actors possess yet. Other obstacles are directly linked to funding difficulties and the lack of a stable economic model (20%).

If the eco-managerial constraints are experienced as the main difficulty, respondents also mention difficult relationships with the public sphere (41%). Described as compartmentalised and bureaucratic, the latter does not favour the development of the UPA due to the absence of a single window and the lack of inter or even intra-organisational coordination. The fact that actions very often overlap, without knowing each other, is also mentioned several times by private and public actors.

The responses also emphasise the gaps between public actors declarations of intent and the concrete actions that they carry out in the territories. How can this discrepancy be explained? First, political conflicts or inter-organisational conflicts make the governance process more complex, and complicate project development. Next, respondents point to public policies, which remain largely favourable to the conventional system. Ultimately, they note the absence or scarcity of proactive policies in favour of alternative agri-food systems, whether due to lack of interest, awareness and/or political will. As such, resistance to change is mentioned several times, sometimes explained by a “path dependency” (in other words the weight of habit), inertia and an obsolete and unresponsive system of thought.

Finally, the overall functioning of the public sphere appears to be inconsistent with that of the UPA actors. The synergies between links in the value chains, the multifunctionality and the transversality of projects do not fit in with the working habits of public organisations. At the same time, legal and statutory obstacles are denounced: the regulations in force in urban and peri-urban areas are not very consistent with the evolution of UPA. And UPA also suffers from a lack of legal recognition (some speak of a “legal vacuum” like the status of an urban farmer). In the end, the responses overwhelmingly indicate that the public sphere remains, in many respects, a brake on the spirit of innovation.

Two last major categories of constraints are also cited: those related to land access and preservation (10%) and, to a much lesser extent, geographic and climatic

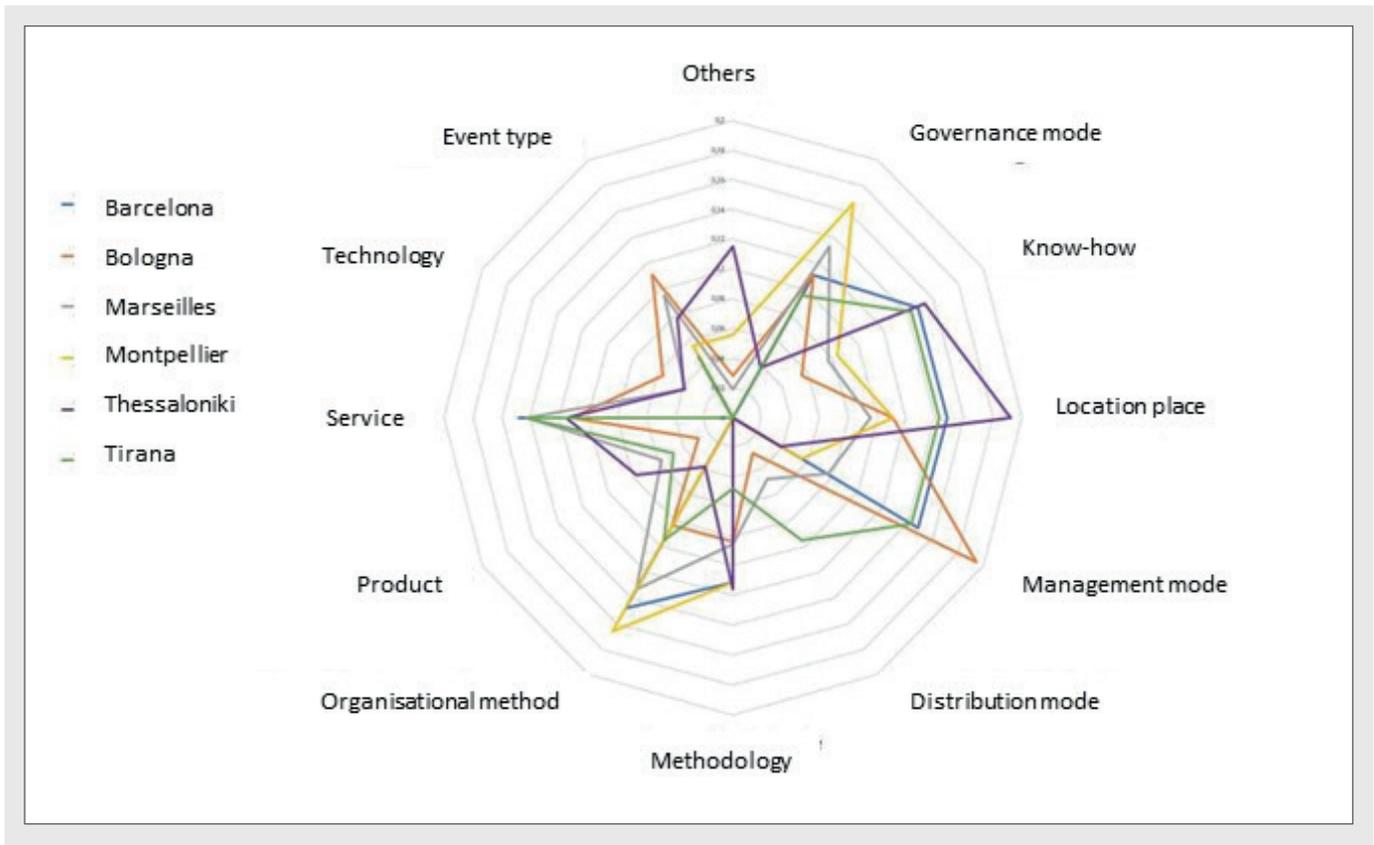


Figure 7 – Assessment of the originality of the activities by territory

Source: Authors

constraints (2%). Two explanations are possible to clarify the very low occurrence of the latter. Either the respondents are actors in the field of agriculture and food, we touch their core business there: they are able to overcome these constraints. Or they come from categories of “non-productive” actors: they have only a very weak awareness of this type of potential difficulty. In addition, *future* climate concerns (which emerge in other sections of the questionnaire) are much more present than those *currently faced* by stakeholders.

3.1.2. Emergence of innovations within and around food chains

Faced with numerous obstacles and constraints, most of which seem to be beyond their control (public

sphere), the actors linked to the UPA are encouraged to be creative in order to better circumvent them or transform them to their advantage. The difficulties encountered by the actors are paradoxically sources of innovative practices¹².

What is the view of the MADRE project stakeholders on the innovative nature of their activities?

All respondents indicated how their initiatives were original, and they are generally so in several ways (three cited on average per questionnaire). The territories present differences and similarities as to the original character of the activities developed (cf. Figure 7).

The most cited innovation is the service provided¹³ (cited by 42% of respondents) followed closely by the

¹² Here are a few examples. Water is not made accessible by the public authorities on a piece of land? Actors design and lay out a Mediterranean garden and cultivate seeds more adapted to the climate. Access to land is increasingly difficult? Actors are grouping together to buy them collectively and support agricultural projects. Some actors do not have gardens? An initiative has been set up to link garden owners who do not use them to make them available to other private actors who need them, etc.

¹³ Training for user groups (workshops, technical advice, working groups, etc.), setting up of participatory guarantee systems, etc.

location of activities¹⁴, the mode of governance¹⁵, and the organisational method developed¹⁶ (38% each). Then come the management mode¹⁷ (31%), the know-how used¹⁸ (30%), the methodology followed¹⁹ (29%) and the type of event proposed²⁰ (25%). On the other hand, the product, the distribution method and the technology developed are each put forward by less than 12% of the respondents.

Emphasis is therefore placed on service, organisational (governance, management), and process (know-how, methodology) innovations. More importantly, we note that the location of activities can influence all types of innovation, whether it is the product (local production), the process (bringing together places of production, distribution and consumption), the service (networking of local actors) and technique (traditional know-how).

It is also noted that UPA initiatives very often combine several original aspects. No need to consider a single model in this field: despite similarities, each initiative has a unique character, due to the stakeholders who drive it (categories of actors involved, number, status, purpose, etc.), the scope of its implementation, the type of agricultural production (market gardening, livestock farming, orchards, etc.), the type of activities developed and, more broadly, the pedoclimatic, historical, political and socio-economic context in which it takes place. However, common features may emerge in some of them in order to change the agri-food field, be it at the level of boundaries, practices, and also, in terms of areas of intervention that are being relocated.

3.2. Beyond the constraints: boundaries, practices and places that are transforming to relocate activities

3.2.1. Extension of the agri-food field through the multifunctionality of the UPA and the (re)conquest of local places

In the six territories studied, we are witnessing the extension of the UPA field in both the representations and the activities of the actors, and this, in several ways. Indeed, the multifunctionality of the UPA is clearly established among the respondents. At least seven different functions are checked by territory (12 maximum). Also almost unanimously, the fields of agriculture and food are linked in the representations. In fact, three quarters of those questioned cite food as the primary function of the UPA and 20% as a secondary function. The food function is therefore mentioned by 95% of respondents.

We are therefore very far from the UPA's purely educational and non-productive representation, to which, for example, educational farms were confined for a long time. The UPA is gaining ground in local public and private activities as actors are increasingly aware of the functions it fulfils. Moreover, only one out of 80 respondents feels that its agricultural activities fall only within the field of agriculture. The other 79 respondents mention an average of six other fields.

Beyond the importance of the food function in the representations, respondents carrying out activities linked to UPA also consider that they fulfil environmental, spatial planning, economic, educational, social, nutritional, health, landscape and welfare

¹⁴ Vegetation in public places, atypical agricultural production places, etc.

¹⁵ Integration of several links in the food chains in the management of activities, dual status of entrepreneurs and employees within cooperatives, public-private-people partnerships, etc.

¹⁶ Combination of activities to valorise local products and organisational methods (selection of local project leaders, structuring of local supply chains, etc.).

¹⁷ Pooling of resources and skills, setting up of collective projects, development of test areas, etc..

¹⁸ Production methods that respect the environment and natural resources, reactivation of ancestral know-how, etc.

¹⁹ Methodological co-construction along the way, call for "open" projects in which the activities are co-developed by the sponsor and the project leader a posteriori, etc.

²⁰ Dissemination, awareness-raising, advocacy, willingness to go beyond the circle of the people already convinced, etc.

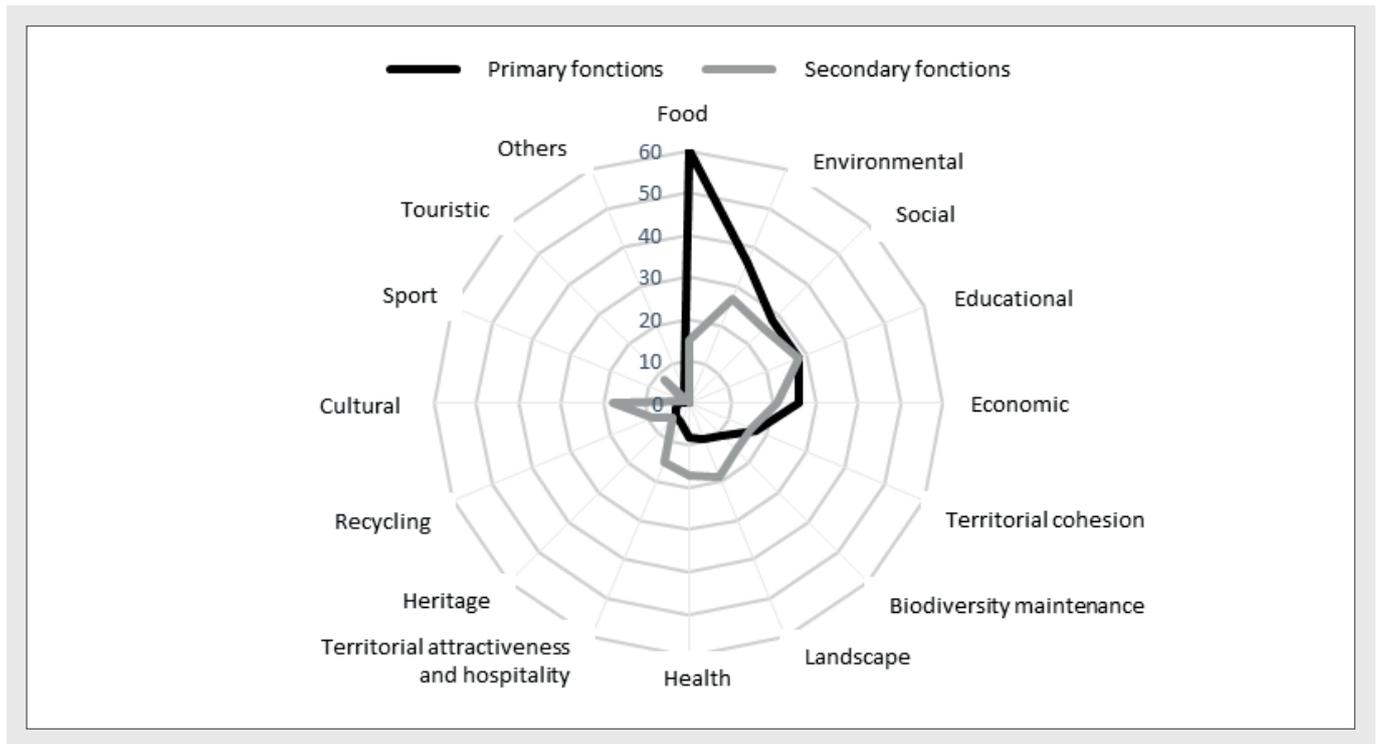


Figure 8 – Primary and secondary functions of UPA (number of times mentioned)

Source: Authors

functions. These are the ten most mentioned fields in the actors' activities (from the highest to the lowest frequency). The requested actors also had the possibility of adding other functions if they so wished. In this respect, the increase in the territory's resilience and the support for the circular economy were noted.

In the end, this heterogeneity of complementary functions, often coming from different institutional fields, helps actors to face certain constraints that they meet and helps to make the boundaries between the different fields more porous. This is making the agri-food field boundaries evolve.

And if we look at the detail of the products valued by the UPA²¹, this porosity can be observed on the one hand, between urban, peri-urban and rural agriculture whose productions can be complementary (including with regard to the types of products and volumes generated), and on the other hand, between edible and non-edible plants (decorative, aromatic, medicinal, etc.). The latter, in addition to their intrinsic value,

contribute among other things to reducing negative externalities (pollution, heat islands, Co₂, etc.), and to maintaining the biodiversity necessary for food production (pollinators, soils, etc.).

Furthermore, if the development of the multifunctionality of the UPA allows the extension of the agri-food field, it is also generated by the propensity of the activities identified by the MADRE project to occupy all kinds of local environments, mainly terrestrial.

In fact, half of the places invested in agricultural activities in the six metropolitan areas studied are urban (48%). Peri-urban areas are much less represented (31%). Note also that rural areas are mentioned (20%) and that 15% of respondents indicate that their activities relate to urban, peri-urban and rural areas at the same time. We note that the use of these three types of space is fluctuating. Rural areas are much less represented in Barcelona and Thessaloniki, while they are equally represented in other territories. In Montpellier and Thessaloniki, the peri-urban areas

²¹ Four groups emerge in the activities of the respondents: a first one including vegetables, aromatic plants and fruits which are the most mentioned. Next come honey and small animals (hens, etc.), then wine, dairy products, inedible plants, and finally, to a lesser extent, insects, products from aquatic environments (marine and river), and livestock products.

are generally less invested while the share of the urban is increasing. Spaces vary more according to the territory in which the respondent belongs to than the group of actors to which he or she belongs.

Beyond the extension of the UPA field by its actors (development of multifunctionality, conquest of new terrestrial spaces), the data analysis reveals the transformation of practices within the classic agri-food value chain in the six metropolises studied.

3.2.2. Transformation of practices within and around food value chains in urban and peri-urban areas

In the metropolises studied, we are observing the evolution of practices within “classic” food value chains²². These are transformed under the effect of an other chains of activities. This chain of supporting activities are created to transform classic food value chain and support UPA. They are developed by actors traditionally external to the agri-food field or straddling several fields (see Figure 9).

Territorial actors act, on the one hand, at the level of the food value chain (also composed of internal support activities) and, on the other hand, on influence and support activities from actors initially external to the agri-food field. These actors, in turn, form a chain of territorial influence and support activities. The function is to support and enhance the UPA. It encourages traditional value chains to transform themselves or even create new local and sustainable food chains.

Thanks to the targeting of the four categories of actors whose participation is valued by the MADRE project, we have identified the activities that make up these “new” chains. Indeed, whether it is a matter of public and related authorities, civil society, private actors and the academic world, their primary vocation is not to cultivate. Consequently, the seven activities newly linked to the food chain are (in decreasing order of frequency of citation): educational enhancement and awareness-raising, development of supportive public policies, land use planning, research, production

support or accompaniment services, cultural and event-related development and revegetation of places. Other respondents spontaneously cited economic promotion and international cooperation.

On average, each respondent values the UPA through 3.7 different activities. Observations show that the classic food chain and the chain of supporting territorial activities are very closely linked. In fact, only two respondents (out of 80) say that they only carry out activities that fall within the classic food chain. And when we cross-reference all the data collected, we note that all the metropolises studied have actors intervening in these seven areas of indirect valorisation of UPA emanating from the chain of territorial activities of influence and support.

Thus a value chain traditionally internal to the agri-food field and a new chain of territorial activities, usually external to the promotion of UPA’s valorisation, are developing innovative connections. Their activities are strengthening to contribute together to the development of broad, local and sustainable food value chains in the territories.

We now go into further details of the links making up this evolving value chain. Within food chains, different types of innovations have emerged. The innovation can come from a change within one or more links, when the place (environment, middle), the production mode, the product, the material equipment, the sales modalities, the configuration of actors involved, etc. vary. For example, this is the case of: an *urban* honey house, *agroecological* production, production of edible *insects*, the use of *mobile* processing tools, distribution by *baskets* from AMAP or a *local* distribution platform, *locavore* consumption, a *collective* composting platform, etc.

Innovations can also come about when an actor, previously focused on one food chain link, decides to diversify and bring together several of them. For example, a farmer *processes and sells* his products directly, or a restaurant owner *produces and processes* his raw materials.

The same diversification process can be carried out by a group of actors, which ensures sales activities

²² By classic food value chain, we understand the usual activities of food value chains (FAO, 2015): production, processing, marketing (logistics and distribution), and also consumption. Loss and waste management is integrated in a more recent way.

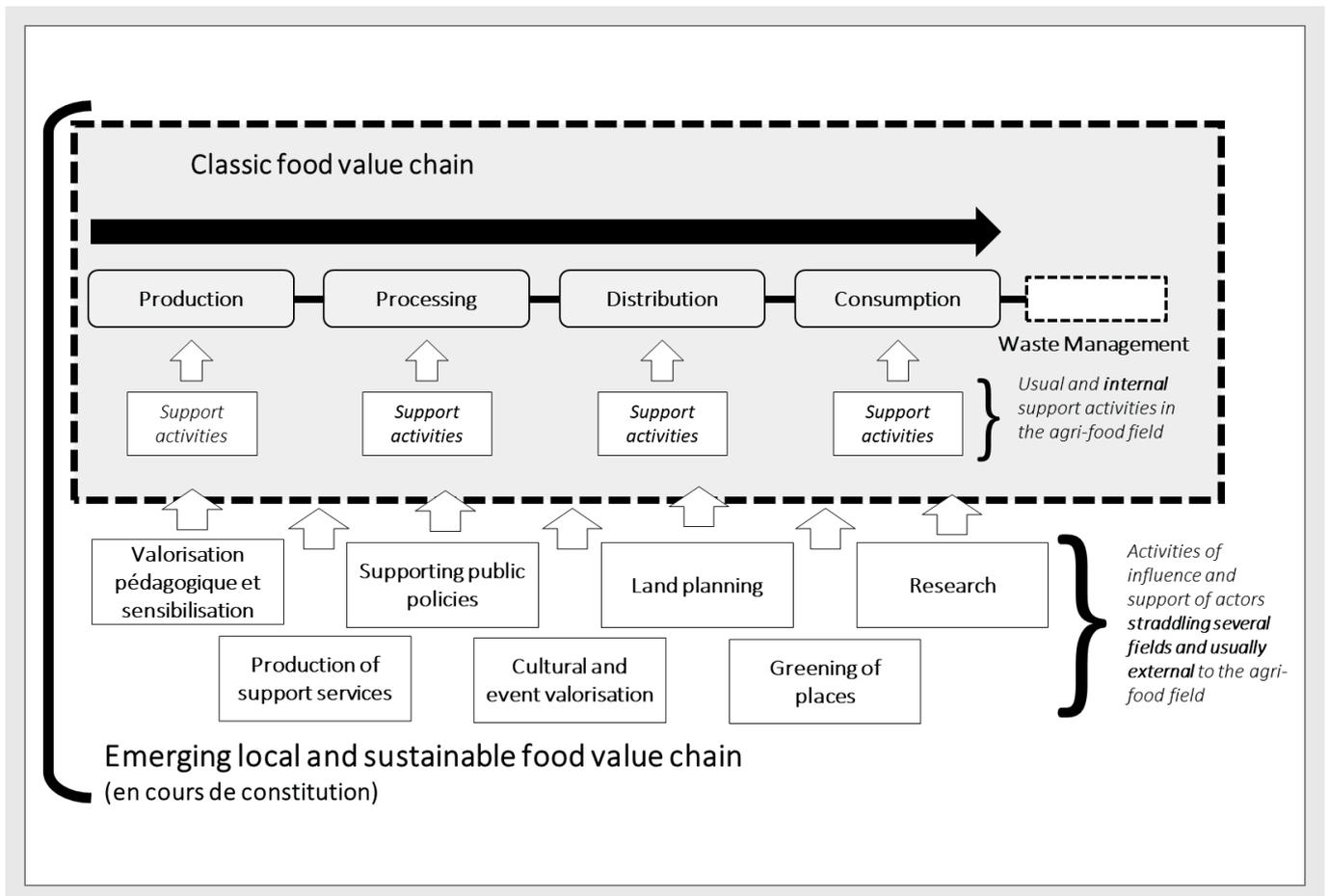


Figure 9 – Transformation of a food value chain

Source: Authors

usually reserved for another link, or products, usually distributed via other sales methods. In this category, we find the purchase of land by *groups of individuals*, *producers'* stores, collective supermarkets developed by *consumers* or even AMAP baskets including *sea-food products*.

Networks also have a great role to play in these innovation processes. They are created when they bring together actors from different links in local food-chains. This is the case for local logistics platforms (supply and distribution platforms) or even “link facilitators” who practice linking several chain links at the same time. They are not purely “logistical” intermediation such as public or civil society actors who contribute to the development of local circuits in their territory through various activities promoting interconnection and inter-knowledge between actors.

In addition, the integration of the recovery of losses and waste is quite frequent in terms of number of

citations (24%). The desire to reduce the impact of human activities on the territories encourages the development of circular processes which can also include innovations. In this context, the accumulation of circular processes between the various links of the local food chains and the will of actors to integrate more circularity in their practices in order to develop proximity circuits, leads in some cases to the creation of real “food value loops” or “food loops”. This is for example demonstrated by the Les Champignons de Marseille initiative. This mushroom producer based in Marseille grows them on coffee grounds collected from local restaurants. The production is then sold to local private restaurants (which supplied the coffee grounds) and other end consumers.

The results of the study therefore show a wealth of initiatives and innovations along the food value chain, which is itself undergoing a marked transformation under the impetus of local actors.

4. INSTITUTIONAL WORK

of AUP actors for local and sustainable food systems

The abundance of innovations revealed in the previous paragraphs is due to transformations in the metropolitan agri-food fields but also to the extremely constrained context in which these take place. Beyond ecological and environmental difficulties, two blocks of obstacles have emerged: economic and managerial constraints and the lack of overall support from the public sphere. However, the latter largely escapes the will of the players in urban and peri-urban agriculture (UPA) studied. The actors choose to act on the first block by developing innovative tools and management methods, in which the collective dimension is essential and where they can act. Consequently, they carry out an institutional which transform the field, as described by Zietsma and Laurence (2010).

Translating this into the agri-food field makes it possible, on the one hand, to a better understanding of the three capacities of the actors identified in the Zietsma and Lawrence's model (transgression, creation, networking) and, on the other hand, to enriching their work with a third work of redefinition: place work.

4.1. Tools and collaborative management methods for resources and skills, spearheading the capacities of AUP stakeholders

To overcome their main constraints, the various metropolitan players have invested in managerial training and learning. In this perspective, it should be noted that most of the managerial solutions that can be considered innovative, are based in particular on mutual or collective learning between actors, between actors and natural environments, but also between different time periods.

4.1.1. Learning and strategic networking capacity

Signing up or creating a network is a choice shared by more than 80% of respondents. Beyond their traditional use as a tool for communication and

development of business opportunities, networks are here an operational, tactical and strategic means, allowing the bartering of skills and the dissemination of more sustainable agri-food models.

Indeed, learning from a collaborative perspective is essential. Exchanges, sometimes intense, of knowledge, know-how and techniques, take place, between peers and/or between different categories of actors. The latter collect, gather, acquire skills via local or transnational networks, for the development of their activities or common projects. They also benefit from managerial tools made available by the network (communication, training, evaluation, feedback, monitoring, etc.). The objective is often to adapt skills to constraints and needs encountered, and thus gain efficiency.

These deeply learning networks also have “decompartmentalising” virtues (Vandangeon and Autissier 2012). They can generate collective projects, combining actors from different spheres and different links in the food chains. In addition, beyond “exchanges of good practices” and the development of common projects, these exchanges can lead to the structuring of short supply chains by strengthening the inter-understanding between different categories of actors in the territories (Guiraud and Rouchier 2016). It is noted that local networks are sometimes part of more global networks and are favourable to the exchange of practices between different countries and regions. Part of this motivation fits well with this search for solutions to the difficulties encountered locally. Half of the respondents believe that these solutions already exist in other territories (national or foreign).

Thus, the relocation of agri-food activities in urban and peri-urban areas does not imply a retreat. On the contrary, it is based on increasing connectivity, the exchange of practices and know-how with others.

4.1.2. The capacity to create sustainable practices through sobriety in the management of natural resources

In addition to membership in networks, the highly constrained context encourages the actors to moderation and sobriety in the management of their resources. This moderation can be chosen by the manager or

imposed by the context. Here, the constraints encouraging sobriety are rather of a financial and economic nature (constant decrease, even absence of public funding, difficulty in developing stable economic models, etc.). Even if the search for greater sustainability in the agri-food system also contributes to it due to current and future environmental constraints (projects that are not very dependent on fossil fuels and costly technologies, for example).

This lack of financial resources, time, access to water, land, etc. promotes the emergence of initiatives that did not exist in the territories. They sometimes rely on the creation of voluntary support communities, including volunteers, and sometimes draw heavily on the material resources available, thanks to recovery, reuse, recycling, multifunctionality and the valorisation of losses and waste (logic of the circular economy) as well as the networking of actors with common interests.

Despite the unresolved question of the continuity of this type of action (in particular the maintenance of volunteers in the long term), they contribute to reflections on sustainable economic models that are less demanding in terms of natural resources. Circularity, moderation and sobriety are central, either because of economic and financial constraints (“do with what you have” or “with what is free or almost free”) or because of ethical principles (“do better with the least impact on the environment and health”). Here we can draw a parallel with frugal innovations under development in emerging countries (Le Bas 2017). These are developing in a context where resources are very limited. They feed sustainability objectives by transforming constraints into opportunities and integrating environmental and social constraints to develop simple and ecological products (Le Bas 2017; Gupta 2010).

4.1.3. Reactivation of ancestral farming practices in the service of the capacity to transgress injunctions for technological innovation

Among the innovations observed to deal with constraints, practices are rediscovered after being forgotten, due to

the mechanisation and intensification of the agri-food system. New concepts and processes, often presented as innovative, have recently emerged (agroecology, edible forests, permaculture, biomimicry, circular economy, etc.). In reality, the practices to which they refer are old: they often designate peasant know-how proven for centuries in Europe, in the Mediterranean or elsewhere, but which have become obsolete, even archaic since the Thirty Glorious Years and doomed to disappear. They are now being rediscovered and updated, because they are considered to be more in line with the challenges of sustainability, the fight against the acceleration of climate change and the achievement of other planetary limits. These “new” traditional practices are based on multifunctionality, interrelationships, a reconsideration of “waste” and a questioning of the “disposable” that did not exist before. Thus, projects are emerging to revitalise peasant know-how and associated production techniques (such as Milpa²³, agro-sylvo-pastoralism, edible forests, etc.). These also have a collective and network dimension, such as mobile processing workshops and collective organisational methods, which had gradually disappeared in the 20th century in the Latin arc.

In this perspective, the work of Gupta (2010) has shown the role of traditional knowledge in India in innovations as a result of a “Grass-roots to global” process. Beyond the bottom-up dimension very present here, innovations in the agri-food field build bridges between the past and the present to fit in with ecological challenges and strong sustainability. Researchers have also conceptualised this phenomenon as “retro-innovations”. These celebrate diversity, locality and seasonality in practices, and promote synergies between different categories of actors (Stuiver 2006: 163). Stuiver insists that if all innovation is based on past experiences, the retro-innovations that she has observed are deliberately different from the dominant regime and do not place technology and economies of scale at the heart of the solutions developed (p. 164). Similarly, the majority of UPA initiatives observed in this research do not fit the sometimes dominant high-tech vision of urban agriculture, but rather contribute to the development of retro-innovations using “low-tech” technologies, as a means, not an end.

²³ A technique to increase the efficiency of production systems by combining the cultivation of squash, corn, and beans that are mutually reinforcing in their properties (permaculture).

Therefore, we observe a significant evolution of the notion of innovation, which, coupled with present and future ecological challenges, also draws inspiration from the functioning of ecosystems and from the past, by retro-innovative dynamics. We can thus include in the means of innovation identified by Baregheh *et al.* (2009): the transformation of constraints into opportunities, so-called “low tech” technologies (less demanding in fossil resources), biomimicry and retro-innovative practices. These elements also influence the *nature* and *purpose* of innovations. The latter, as part of a search for sustainability, include respectively *reactivation* and *mitigation-adaptation* to ecological change.

4.2. Evolution of institutional work in the agri-food field: places at the heart of the challenges

We observe in the studied fields phenomena consistent with the approach of Zietsma and Lawrence (2010). However, we also provide different and complementary elements of understanding.

4.2.1. Simultaneity in capacity mobilisation

The intersection between changing demand, scarcity of resources and sustainability challenges contributes to the emergence of innovative activities in the areas under study, as well as new management tools and practices to carry them out. These processes reveal the mobilisation by actors of their capacities of *transgression*, *creation* and *networking*, which are decisive in cycles of institutional change (Zietsma and Lawrence 2010).

Here again, we observe these phenomena highlighted by Zietsma and Lawrence (2010). However, unlike their work, in this multi-case study, the three capacities are not mobilised successively, but in a more interlocking, therefore more complex manner. They combine and reinforce each other in the service of the evolution of the institutional field cycles.

These three capacities are complementary. Together, they help to change boundaries, to “create new practices” within and around food value chains, as well as to relocate and regain local places. Thus, institutional

work is underway within the field of agriculture and food in order to make it more sustainable.

4.2.2. Towards an institutional work to redefine places: place work

The institutional field of agriculture and food is characterised by the diversity of configurations of actors who perform this institutional work (Zietsma and Lawrence 2010). Some, both internal and external to metropolitan agri-food fields, do an institutional job of redefining boundaries (boundary work) and practices (practice work). However, this work also concerns the redefinition of places, thus broadening the spectrum of institutional work (cf. Figure 10). In fact, in the six territories studied, the practices, boundaries and places in which “conventional” activities usually develop are called into question. This work of redefining places (or place work) helps to relocate the activities of food value chains, and to change the boundaries between fields (previously very compartmentalised) and practices (towards more sustainability).

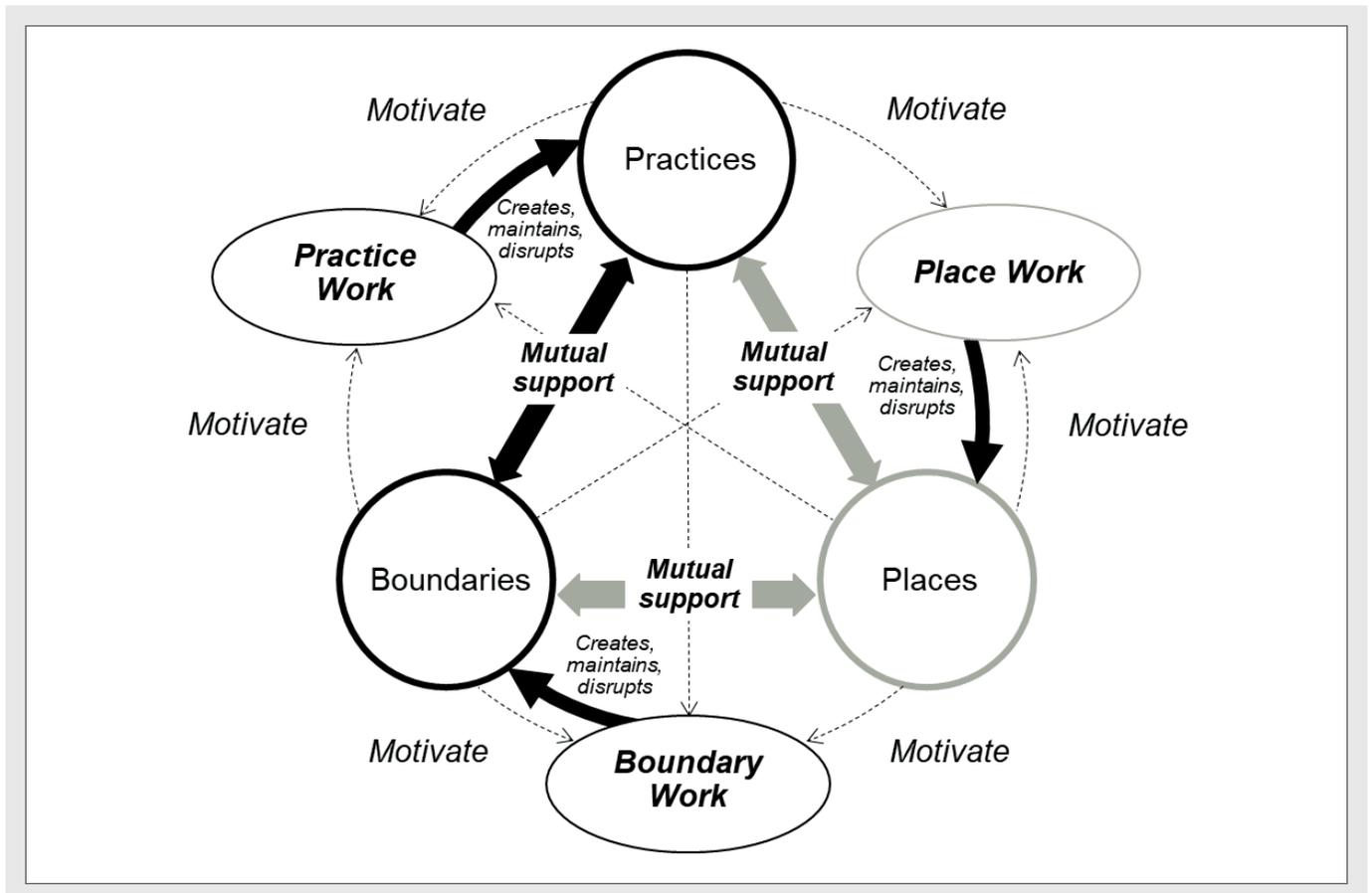


Figure 10 – Institutional work to redefine spaces (Place work)

Source: supplemented from Zietsma & Lawrence (2010)

CONCLUSION

This study covering six metropolitan territories, located in five countries of the Latin arc, specifies and modulates the capacities of the actors. It broadens the spectrum of institutional work by adding a third dimension: that of the work of redefining places, or place work.

Furthermore, this research enriches the understanding of the links between urban and peri-urban agriculture (UPA) and local and sustainable food systems (LSFS). Indeed, the UPA is at the crossroads of different institutional fields. It is deeply heterogeneous and multifunctional. It contributes to making local food issues more visible as well as the multifunctionality of agricultural professions in metropolitan consumption basins. UPA actors maintain links with the urban, peri-urban and rural, and potentially the aquatic environment. They contribute to the relocation of food systems through the institutional work that the actors operate in this field.

In addition, while some agri-food initiatives are including stronger sustainability issues, the management practices that support them are also evolving. Responsible and sustainable food projects tend to more sustainability and disseminate through networking, promoting learning in particular. In this context, “ancestral” practices and peasant know-how are considered as retro-innovations. They are considered so in the current context because they confront the dominant agri-food system. Parachronic, they sometimes appear “out of time” in a context where injunctions for highly technological innovation are increasing. At the same time, constraints are transformed into opportunities to develop tools and management methods that support the search for sustainability and circularity. In turn, some actors also take into consideration (as much as possible) the “rebound effects” (Arnsperger and Bourg 2016) of their activities in other territories. This concern is evident among stakeholders located on the shores of the Mediterranean. This scale thus seems relevant for thinking and building the future of local and sustainable food systems.

The (re)conquest of local places in order to develop sustainable activities seems to be on the agenda of many actors within and around urban and peri-urban food value chains in this area. These food chains are strongly evolving under the effect of local actors activities. However, it should be noted that this conquest of new places by the UPA is limited to terrestrial places. In fact, the aquatic environments are hardly invested by the actors of the sustainable food systems (in the making) of the metropolises studied. Although these are all in the coastal zone (or nearby), and despite the presence of many ports in the territories involved in the MADRE approach, the aquatic environments only welcome one percent of the respondents' activities. They are generally neglected in the UPA while they can be the subject of interesting valuations, like the "Panier de Thau" (Montpellier) which offers seafood products sold via an AMAP-type structure.

Although the land areas for the development of activities related to the UPA are very varied (from farmland to balconies and roofs), the study of the data reveals the existence of significant margins of progress. Indeed, the actors are calling for changes in the regulations concerning the installation of UPA projects. Regulations are sometimes non-existent (for the status of urban farmer), sometimes too restrictive (concerning the roofs), or not restrictive enough (for the preservation of soil and urban and peri-urban land). On this last element, let's not minimise the land-related issues mentioned by the respondents. In fact, they should not be masked by the conquest of new spaces by the UPA, which are essentially urban and sometimes atypical compared to traditional agriculture. Whether it is a question of access to land or its preservation, we are touching here at the heart of the concerns of some of its actors; perhaps because some of the UPA projects are used as a compensatory measure for urban and peri-urban equipment projects. However, the UPA cannot be seen as a simple "band-aid" to the disappearance of land by intensive urbanisation.

Another point to remember are the various visions of the UPA. These can be more or less demanding in technology (low tech/high tech), developed in indoor and outdoor places, or based on on-land or off-land cultivation. This diversity sometimes results in confrontations. Thus the technology used is often the subject of debate, in particular as for the rebound effects

on the natural environment, sometimes difficult to assess and still very little taken into account. Also, note that actors considered to be "conventional" in the agri-food field are also trying to appropriate for themselves the "local", which are also causing controversy locally, as in the case of the FICO project (Bologna).

Moreover, beyond the choice of tools or management practices selected, these initiatives are not always self-evident, because the stakeholders concerned are not necessarily accustomed to collaborating and participating in collective work, in agreement with public actions (Banos and Sabatier 2011; Peltier 2010). Lanciano and Salleilles (2011) have shown the difficulties of local public organisations in working with alternative farmers, who consider that public projects do not respond to their own concerns. These alternative farmers swung between preserving their autonomy and the desire to participate in a local development project, the first concern not to be underestimated by territorial managers.

Finally, this study suggests avenues for future research due to the purpose of the institutional work in progress: mitigating and adapting the institutional field to ecological and climatic changes. Indeed, the practices, which are born in reaction to the negative externalities of the globalised food system, very often aim to integrate more circularity to limit the impact on territories and natural resources. Some of the innovations observed thus seek "to close human activities-end loops in on themselves in order to spare the host biosphere as much as possible" (Arnsperger and Bourg 2016: 101). In addition, "on a horizontal level, the circular economy aims at integrating into its logic all the actors of the territory, in order to facilitate the creation of new virtuous loops" (Lazzeri et al. 2017: 109). Working on boundaries, practices and local places allows, in some cases, the accumulation of circular processes within and around food chains. This is thus sometimes creating local food value loops in the field of agriculture and food. These are a fruitful source for future research.

BIBLIOGRAPHY

- ARNSPERGER, C.; BOURG, D. (2016). "Vers une économie authentiquement circulaire", *Revue de l'OFCE*, 1, p.91-125.
- BANOS, V.; SABATIER, B. (2010). "Les espaces périurbains non bâtis en France: entre publicisation "urbaine" et privatisation "rurale"?", *Articulo - Journal of Urban Research*, numéro special, issue 3 (décembre), p.1-13.
- BAREGHEH, A.; ROWLEY, J.; SAMBROOK, S. (2009). "Towards a multidisciplinary definition of innovation", *Management decision*, 47, 8, p.1323-1339.
- BLANC, J. (2013). "Construire l'alternative agro-alimentaire: ressorts sociaux et politiques du déploiement des AMAP en Île-de-France", *Norois*, 224, 3, p.21-34.
- BONNEFOY, S.; BRAND, C. (2014). "Régulation politique et territorialisation du fait alimentaire: de l'agriculture à l'agri alimentaire", *Géocarrefour*, 89, 1, p.95-103.
- CAPT, D.; LEPICIER, D.; LESEIGNEUR, A. (2014). "Le rôle des territoires de projets infra-régionaux sur l'agriculture et l'alimentation. Le cas du développement de circuits de proximité", *Géocarrefour*, 89, 89/1-2, p.105-113.
- DEVERRE, C.; LAMINE, C. (2010). "Les systèmes agroalimentaires alternatifs. Une revue de travaux anglophones en sciences sociales", *Économie rurale*, 317, p.57-73.
- GUIRAUD, N.; ROUCHIER, J. (2016). *L'observatoire régional des circuits courts à l'aune de la proximité organisée: vers une évaluation du dispositif*.
- GUPTA, A.K. (2010). "Grass-roots green innovations for inclusive, sustainable development", The Innovation for Development Report, Palgrave Macmillan, London, p.137-146.
- HERNANDEZ, S. (2017). *À la recherche du management territorial. Construire les territoires entre idéologie, paradoxe et management*, Presses Universitaires de Provence, Collection Espaces Publics, 166 pages.
- HERNANDEZ, S. (2018). "Paradoxical territorial management: the case of peri-urban agricultural areas", *International Review of Administrative Sciences*, Vol. 84 (Issue 3), p.539-557 (published online in 2016).
- IPES FOOD (2016). "De l'uniformité à la diversité. Changer de paradigme pour passer de l'agriculture industrielle à des systèmes agro écologiques diversifiés", juin.
- JARRIGE, F.; THINON, P.; NOUGAREDES, B. (2006). "La prise en compte de l'agriculture dans les nouveaux projets de territoires urbains. Exemple d'une recherche en partenariat avec la Communauté d'Agglomération de Montpellier", *Revue d'Économie Régionale & Urbaine*, vol. août, 3, p.393-414.
- LARDON, S.; LOUDIYI, S. (2014). "Agriculture urbaine et alimentation: entre politiques publiques et initiatives locales", *Géocarrefour*, vol. 89, 2, p.3-10.
- LANCIANO, E.; SALEILLES, S. (2011). "Le travail institutionnel du mouvement des Amap", *Revue Française de Gestion*, vol. n° 217, n° 8, p.155-72.
- LAWRENCE, T.-B.; SUDDABY, R. (2006). *Institutions and Institutional Work, Handbook of Organization Studies*. SR Clegg, C. Hardy, TB Lawrence and W. Nord. 2006.
- LAZZERI, Y.; BONNET, D.-F.; DOMEIZEL, M. (2017). *Économie circulaire et territoires*. Presses universitaires de Provence.
- LE BAS, C. (2017). "Sustainable innovation and frugal innovation: Exploring the relationships between Innovation and sustainability", *Revue d'économie industrielle*, n°3, p.113-137.
- MILES, M.B.; HUBERMAN, A.M. (1991). *Analyse des données qualitatives: recueil de nouvelles méthodes*, De Boeck.
- MINVIELLE, P.; CONSALES, J.-N.; DALIGAUX, J. (2011). "Région PACA: le système AMAP, l'émergence d'un SYAL métropolitain", *Économie rurale*, 2, 322, p.50-63.
- NAHAPÉTIAN, N. (2017), "Un modèle insoutenable – Produire mieux pour tous", *Alternatives économiques, Manger autrement – Vers une alimentation durable*, Les dossiers n°11.
- PELTIER, C. (2010). "Agriculture et projet urbain durables en périurbain: la nécessité d'un réel changement de paradigme", *Vertigo*, vol. 10, n°2 (septembre).
- PIKETTY, T. (2013). *Le capital au XXI^e siècle*, Édition du Seuil, Paris.
- RASTOIN, J.-L. (2015). "Les systèmes alimentaires territorialisés: considérations théoriques et justifications empiriques", Éditorial, *Économies et Sociétés*, Série "Systèmes agroalimentaires" AG, 37, 08, p.1155-1164.
- SAMAK, M. (2012). "Des agriculteurs contre le marché? Itinéraire d'un mode alternatif de commercialisation des fruits et légumes", *L'Homme et la société*, n°183-184, 1, p.207-224.
- STUIVER, M. (2006). "Highlighting the retro side of innovation and its potential for regime change in agriculture", *Between the Local and the Global*. Emerald Group Publishing Limited, p.147-173.
- VANDANGEON, I.; AUTISSIER, D. (2012). "Les réseaux apprenants comme facilitateurs du changement", *Question(s) de management*, 1, p.57-76.
- YIN, R.K. (1989). *Case study research - Design and methods*, Beverly Hills, CA: Sage Publishing, Rev. Édition.
- ZIETSMA, C.; LAWRENCE, T.-B. (2010). "Institutional Work in the Transformation of an Organizational Field: The Interplay of Boundary Work and Practice Work", *Administrative Science Quarterly*, vol. 55, n°2, p.189-221.