

Territorial agri-food systems: relinking farming to local and environmental stakes to change farming systems

Aurélie Cardona

EHESS GSPR, 131 Bd St Michel 75005 Paris, France.

INRA Eco-Innov, Avenue Lucien Brétignières 78850 Thiverval-Grignon, France.

aurelie.cardona@gmail.com

Keywords: transition, civil society, change in farming systems, "territoire"

Abstract

Many initiatives are launched by the civil society in order to change farming practices; in particular through the construction of territorial sustainable agri-food systems. The aim of this paper is to understand how such initiatives can change farming systems. With this aim, we will focus on a group of residents from a periurban area of Paris, who created an AMAP with a conventional cereal farmer and developed a project of short supply chain for local catering, which involved other farmers. With this case-study, we will show how non-agricultural stakeholders can facilitate changes in farming practices and contribute to the ecologization of agriculture in their "territoire".

Introduction

Criticism against agro-industrial food systems and intensive farming practices is increasing. Policies are implemented to encourage transition to sustainable agro-food systems, such as agri-environmental measures or supports to organic farming. However, in France, these measures are not really efficient (small number of organic farmers, increasing pollution of soil and water...). In this context, alongside public measures, many initiatives are launched by civil society¹ in order to change farming practices; in particular through the construction of territorial sustainable agri-food systems. The aim of this paper is to understand how such initiatives can change farming systems.

With this aim, we focused on a group of city-dwellers from a periurban area of Paris (the plateau de Saclay), who created, in 2003, an AMAP (CSA-type box-scheme) with a conventional cereal farmer. The first objective was to produce local food. It was also to create interdependence between farmers and non-farmers in a context of "break-down of interlinkages" between farmers and the rest of the society (Renting & Van Der Ploeg, 2001). Finally, this initiative aimed at favoring environmental-friendly practices. Thus, with the AMAP, the group of city-dwellers wanted to legitimize the preservation of a periurban farmland threatened by urbanization. A few years later, in 2010, to reinforce their action, the initiators of the AMAP developed a project of short supply chain for local catering. Through this initiative they wanted to involve other farmers of the territory in a process of transition towards sustainable farming, but also local administration and other potential consumers.

¹ Other initiatives are driven by farmers. For future researches, it could be very interesting to compare initiatives launched by consumers and initiatives launched by farmers to find out what distinguishes them, and if one of them can be more efficient to facilitate transition. But this is not the aim of this paper focused on the impact of civic food networks on farming systems.

Twenty interviews were conducted with various associations, public authorities and all the farmers of the area (8) to understand the history of this mobilization, but also the current actions of these actors. During a period of 18 months (2009-2010), I also observed interactions of these various actors.

With this case-study, we will show how non-agricultural stakeholders can facilitate change in farming practices by relinking farming to local and environmental stakes and by developing specific incentives, through the development of a territorial sustainable agri-food system made up by an AMAP and a short supply chain for local catering. Then, we will present the effects of these initiatives on the "territoire"² and on farming-systems, to finally suggest in conclusion a model of change, where various stakeholders (agricultural and non-agricultural) can contribute to the ecologization of agriculture in their "territoire" – in line with the recent works about the emergence of a integrated territorial paradigm (Renting & Wiskerke, 2009 ; Wiskerke, 2009).

1. What incentives to encourage change in farming systems

To encourage sustainable agriculture through the development of an agri-food system, non-agricultural stakeholders use different means. First, they try to relink farming to tangible stakes in order to convince farmers of the importance of change. Second, they develop actions to drive farmers to change their practices.

1.1. Change farming practices by linking farming to various stakes

Non-agricultural stakeholders can play a role in the processes of transition to sustainable farming by linking the necessity of change to various stakes.

First, they link the necessity of change to the preservation of a common surrounding. This stake is very important for the city-dwellers: a high number of them choose precisely this place to live because it was relatively preserved from urbanization. However, this stake is very far from the preoccupation of farmers, who consider the area as a "working tool" that they can abandon – at the beginning of the 2000's, some farmers thought of quitting this area to settle down in another place. With the AMAP and the project of short supply chain for local catering, the common surrounding shared by farmers and city dwellers becomes tangible for all. First, these initiatives relink producers and consumers, who live in the same place. Second, as it was shown by other authors, the commercial relationship established in this kind of systems is the product of exchanges on the mode of production, the quality and environment (Bernard *et al.*, 2006). Third, these initiatives are based on strong partnerships between producers and consumers to share uncertainties (Lamine, 2005). By this way, the group of city-dwellers tries to anchor local agriculture in its surroundings.

Second, non-agricultural stakeholders involved in the AMAP and the project of short supply chain for local catering link the necessity of change to the protection of "common goods" such as water, biodiversity and the "future generations" whose preservation can be achieved by a collective management (Ostrom, 1999). The local order is also linked to the future of the entire planet, in a process of rise in generality common in public debates (Boltanski & Thévenot, 1991 ; Lafaye & Thevenot, 1993). However, we can notice that the defense of these "commons" is linked to tangible or perceptible facts. These facts are then formed into tangible reality principles in that they aim to put a stop to any attempt to relativize (Chateauraynaud, 2004). We find this type of

² "Territoire" means here a space collectively appropriated by people, a space to live where they are involved.

process when non-agricultural stakeholders try to link the necessity of change to the protection of environmental resources such as crude oil: in case of peak oil local population will need local production of vegetables and fruits. If local farmers change their farming systems – from cereal production to vegetables production – they could meet the needs of local population. When non-agricultural stakeholders link the necessity of change to the protection of future generations - a common theme by environmentalists – we are again faced with a rather abstract concept through phrases like "we think of future generations" or "when you have children, it fits in your consciousness, you work for them, for their future, their future too." However, the project to supply the local catering gives some tangibility to this question. Indeed, the provision of school catering can directly ensure the future generations, because it is mainly children who eat in these structures catering. The environmental challenge of the future generations therefore also gains tangibility through this project.

Linking the necessity of change to various stakes can give sense to the processes of transition and encourage farmers to involve themselves in the dynamics. Non-agricultural stakeholders also developed argumentations and actions directly intended for farmers.

1.2.Change farming practice by using classical incentives and developing specific strategies

Then, in order to encourage farmers to change their practices non-agricultural stakeholders can change farming practices and farming systems. Different incentive mechanisms that can be distinguished include: practical examples, the use of "precedent" and "prophecy of doom", economic incentives and involvement of multiple actors.

"Practical example" is commonly used by extensive services to accompany change in agriculture (Henke, 2000). To encourage change, the initiators of the AMAP also use this method. They contact organic farmers in order to give some models to the farmer involved in the AMAP. They organize a visit to an experimental station at National Institute of Research in Agronomy (INRA) in Versailles for the farmer involved in the AMAP. On this occasion, he has the opportunity to discuss with the technician who tests different practices used in organic farming and integrated pest management (IPM).

The group of city-dwellers involved in the change of local agriculture, also use the figure of "precedent", which helps evaluating the plausibility of proposed projects (Chateauraynaud & Doury, 2011). For example, they contact the farmers who create the first AMAP in France in 2001 and use their history as a "precedent". Actually, in this case too, the creation of the AMAP was a way to slow down urbanization. This previous experience suggests that the AMAP can actually be a way of fighting against urbanization. Putting the farmer engaged in the AMAP in front of this "precedent" is a way of convincing him of the relevance of the initiative and pushing him to engage in change. The figure of "precedent" is also used by the group of consumers for setting up the project of supplying catering. Local experiments performed in other regions of France help the group to convince farmers of the plausibility of scenarios of development. At a meeting about the project a member of the group mentioned the case of the town of Pamiers, in Ariège, in the south of France where more of 60% of products supplying the local catering were organic and local products. This case is presented as similar in many points to the plateau de Saclay: "they did not even know the organic sector "(when the project emerged farmers do not practice organic farming)," they do not cook" (as the plateau de Saclay, the town of Pamiers do not have kitchen to cook local or organic product). Based on this parallel (but also on other experimental farms visited), three types of local food supply systems are presented, who would maintain agricultural lands of the plateau, with the aim to convince farmers.

Along the use of the figure of "precedent" which here shows the plausibility of a desirable future, the initiators of the AMAP use another figure: the "prophecy of doom" or "the announcement of disasters "(Chateauraynaud & Torny, 1999). To convince farmers of the importance of a change, the group also uses the register of fear and threat. It is based on global environmental arguments, which lead them to encourage changes in farming practices. For example, the horizon of the "peak oil" is used as a threat for conventional cereal farming systems based on the use of agricultural machinery, petrochemical inputs and long transport.

Members of the AMAP also used economic arguments to change agricultural practices. They put forward the economic viability of pesticide-free production to convince farmers to change their farming practices, by leaning on the horizon of the increasing introduction of organic food in the catering provided by recent laws. Thus, even if these actors do not use financial measures, which can provide direct compensation to the reduction of inputs, the project of short supply chain for local catering can be seen as an indirect economic incentive to encourage changes in agricultural practices.

Finally, the will of the group to involve local public administration in the question of changes in agricultural practices is also a way to encourage change. First, local public administration can guarantee the viability of the project as potential customers for farmers involved in short supply chains for local catering. Then, the local administration involvement can anchor the project in sustainable partnerships. To formalize the involvement of various stakeholders, an association named "Terre et Cité", composed of government officials (local officials), farmers and environmental groups representing civil society was reactivated since 2011. A project manager was hired to animate workshops between farmers and local catering, to formalize the commitment of various stakeholders around the project and implement it. Meanwhile, the group of city-dwellers initiator of the AMAP and the project participate in others local projects and partnerships aimed at promoting "healthy and quality food" for local systems supply the catering. Thus they give legitimacy to the project of local catering and to the importance of change farming practices.

In order to change farming practices and farming systems, various incentives are developed by non-agricultural stakeholder through the creation of a territorial sustainable agri-food system. Let's see now what the changes are.

2. Changes in the "territoire"

In this case-study the objective of non-agricultural stakeholders is to develop environmental friendly farming practices through a local agri-food system. This initiative leads to several changes in the interaction between farmers and non-farmers that favor changes in the farming systems. That's why, I chose to consider changes at the level of the "territoire".

2.1. Processes of learning between farmers and non-farmers

The initiative of the AMAP and the project of short supply chain for local catering emerge in a context where interactions between farmers and non-farmers are very limited. Moreover, when they have interactions they have often conflicting points of view. But through the construction of the local agri-food system, some changes reveal processes of learning between farmers and non-farmers. There is a sort of convergence of views between both kinds of actors. The various stakes, which lead non-agricultural stakeholders to encourage changes in local farming, are often very distant from the preoccupations of farmers.

First, the preservation of “commons goods”, global environmental arguments and the notion of sustainable development are stakes, which do not really concern farmers preoccupied by the economic viability of their enterprise questioned by the threat of urbanization.

“Six years ago [at the beginning of the AMAP], I was not at all interested in sustainable development, organic farming, environmental concerns... The consumers of the AMAP were already very involved in these issues. I had to catch up with them. On their side, they had to understand that a business does not move like that, overnight” (Farmer of the plateau de Saclay)

But after some discussions and the first experience of the AMAP, it appears that producing pesticide-free food for local consumers can be economically profitable and can improve the economic stability of farms. Farmers and non-farmers find a common interest through this commercial relationship. Then, on the basis of this relationship, intensity of interactions between farmers and non-farmers grows. On the one hand, farmers are progressively sensitized to environmental stakes, in particular when they become tangible. On the other hand, non-agricultural stakeholders are sensitized to the constraints of farming (economic viability, use of pesticides...) and adapt their demands of change to what is possible for farmers. At the beginning of the creation of the territorial agri-food system (made up of the AMAP and the project of short supply chain for local catering), non-agricultural stakeholders demanded a transition to *organic farming*. After some meetings with farmers, they learned the constraint of this mode of production and rather than demand organic farming, they choose to encourage sustainable farming, IPM and local farming as an intermediate stage of change.

Then, if for non-farmers the plateau de Saclay was a quiet surrounding and an area of leisure, for the farmers of the area, the plateau de Saclay was only in their words a “working tool”. But with the co-construction of an agri-food system, farmers do not anymore see the plateau de Saclay only as “good land” – they sometimes describe the plateau de Saclay as “the best land of France” – but also as a place where they live and have interactions with local population. Non-agricultural stakeholders have gradually transferred to the farmers their vision of the plateau de Saclay. They are progressively changing the image of the plateau de Saclay, initially experienced by most farmers as a space of constraints. Through the growing interactions between farmers and non-farmers, the plateau de Saclay becomes for everyone a “territoire”, a space collectively appropriated through the development of a territorial and sustainable agri-food system. Thus, this dynamics creates a “solidarity of destiny based on spatial inscription” (Melé, 2008). In these conditions, a growing number of farmers get involved in the preservation of this “territoire” by providing local catering, by developing direct selling and by changing farming practices as we will see now.

2.2. Changes in farming systems

The first changes occur in the farm involved in the AMAP and concern the farming system. First, when the cereal farmer partner of the AMAP accepted to cultivate 3000m² of pesticides-free potatoes, he realized a first diversification. Very quickly, it appears that the AMAP is an excellent source of income for himself, much more profitable per hectare than wheat production and he decided to enlarge the diversification and to produce lentils and wheat on 10 acre in a holding of 586 acres. This diversification is proposed to the farmer at a time when he starts to get tired of being a conventional cereal farmer. For him, the AMAP revalues the farming profession: “it is a very interesting part,” “very complicated”, but also an “enormous satisfaction”. But this “satisfaction” also stems from the fact that he can now consume himself his own production. Thus, his conception of his profession changes and is revalorized. Furthermore, the creation of a short supply chain for local catering gives him the opportunity to realize an ancient project: to purchase

a mill and to establish a bread shop that would provide additional employment on the farm. The mill was purchased and it is now his wife that supports this activity. The bakery, it is now operational and supplies several canteens of the area.

Alongside these changes in the farming system, the intervention of non-agricultural stakeholders also played an important role in changing practice. First, by offering an alternative to conventional practices: to fulfill his commitment with the AMAP, he must change his farming practices. For this, he first simply removed pesticides on crops for AMAP, without changing the agronomic principles. This choice led him to some declines in harvests due to poorly controlled weed problems. After these first trials, the group of non-agricultural stakeholders gave him contacts of organic farmers, who could advise him "as equals" and be some models. Since then, the farmer involved in the AMAP of the plateau de Saclay often calls these organic farmers to implement a particular practice or when he has a problem and he gradually developed an interest in these practices without input. Recently, to provide bread for the supply system of catering in short circuits, he converted 50 acres of his farm to organic farming to produce organic wheat. For him it's a clear commitment to stakeholders of the AMAP, which led him to a transformation of his practices.

With the project of short supply chain for local catering and the involvement of other farmers in the territorial agri-food system, other changes occurs in the agriculture of the plateau de Saclay. The new dynamics created around the project play an important role in the installation of a new farmer: an organic poultry farmer. Given the pressure of urbanization on the plateau de Saclay, the farmer involved in the AMAP gives him a few acres of his farm and provides some food for his cattle. Moreover, the establishment of the organic poultry farmer is facilitated by the group of non-agricultural stakeholders of the AMAP. Actually, they organized and participated in meetings with the agricultural land management services, to convinces them of the interest of a new farm on the plateau de Saclay. Once the production started, in February 2010, the commercialization was organized very quickly via the AMAP, via direct selling from the farm and via the supply of meat for canteens interested.

Moreover, others farmers take part in the local dynamics. For example one farm, which previously only produced cereal crops, developed a production of vegetables on a "great garden", some fruits and eggs from hens kept outdoors. Since 2011, these products are directly sold on the roadside and through the delivery of boxes of fruits and vegetables, which can be ordered on the website of farm. This diversification is here presented as a direct means of action against the urbanization of the plateau de Saclay and for the valuation of agricultural land. It is also related to the fact that for some time "talking about short circuits" on the Saclay. In addition to changes in production, I noticed also changes in practices: reintroduction of tillage, testing for the reduction of chemical fertilizer, IPM on the production of vegetables and fruit develop recently.

Thus, it appears that the mobilization of non-agricultural stakeholders and the construction of a territorial agri-food system led to some changes in the local agriculture. Incentives for change were developed according to various forms. They may have been subject of friction but they were also the basis for interactions between both non-agricultural and agricultural stakeholders and for some changes. Of the eight farmers interviewed, only two are not involved in the collective dynamics because they feel too close to retirement to consider changes and do not feel the need to value an activity that they will soon stop. Thus, through the dynamics of creation of a territorial agri-food system which encourages the diversification of production and the changes in practices, the plateau de Saclay is not only just a "working tool", a space for urbanization or a recreational space, but a lived space, a territory.

Conclusion

This case-study shows us how non-agricultural stakeholders can transform farming systems and farming practices through the development of a territorial agri-food system. It appears that agri food systems can be an opportunity for non-agricultural stakeholders to involve themselves in issues related to agriculture and to change farming systems. Their particularities are to link the necessity of change to various stakes but also to develop various incentives in order to encourage changes: practical examples, the use of "precedent" and "prophecy of doom", economic incentives and involvement of multiple actors. Thus, non-agricultural stakeholders can transform agriculture even if it requires some learning and adjustments with farmers. In the case-study presented in this paper, the creation of an agri-food system leads to a diversification of the production and to changes in practices both at the level of the farm and at the level of the "territoire" – that is why I speak of a *territorial* agri-food system.

Furthermore, if I put the emphasis on the "territoire" it is because it seems to be a level to which actors (farmers and non-farmers) can find some "holdfasts" on the processes of transition. At this level, people are interacting, can exchange about their conceptions and find collaborative solution. That is certainly why the number of agri-food systems is growing. From this assessment, I propose to consider the emergence of a new model of change, which is based on the interactions of various actors in their "territoire"(Cardona, 2012) and which can be a contribution to the understanding of the integrated territorial paradigm (Renting & Wiskerke, 2009 ; Wiskerke, 2009).

Acknowledgements

This research is supported by a Doctoral fellowship from the Region Ile-de-France and by the program ANR POPSY (field crop production, environment, public policies).

References

- Bernard, C., Duvernoy, I., Dufour, A. & Albaladejo, C. (2006). Les relations sociales des agriculteurs périurbains : quelles articulations au territoire ? Cahiers Agricultures 15(6).
- Boltanski, L. & Thévenot, L. (1991). De la justification : les économies de la grandeur. Paris.
- Cardona, A. (2012). L'agriculture à l'épreuve de l'écologisation. Eléments pour une sociologie des transitions. Paris, EHESS, Thèse de Sociologie.
- Chateauraynaud, F. (2004). L'épreuve du tangible. Expériences de l'enquête et surgissements de la preuve. Raisons pratiques 15: 167-194.
- Chateauraynaud, F. & Doury, M. (2011). La portée des précédents. Evénements marquants et procédés argumentatifs. Socio-informatique et argumentation. Hypothèse.org.
- Chateauraynaud, F. & Torny, D. (1999). Les Sombres précurseurs. Une sociologie pragmatique que l'alerte et du risque. Paris.
- Henke, C. R. (2000). Making a Place for Science: The field trial. Social Studies of Science 30(4): 483-511.
- Lafaye, C. & Thevenot, L. (1993) "Une justification écologique ? Conflits dans l'aménagement de la nature." Revue Francaise De Sociologie 34, 495-524 DOI: <http://dx.doi.org/10.2307/3321928>

- Lamine, C. (2005). Settling shared uncertainties: Local partnerships between producers and consumers. *Sociologia Ruralis* 45(4): 324-345.
- Melé, P. (2008). Quels territoires pour l'action? Mobilisations locales et régimes de territorialité. Espaces de vie, espaces-enjeux : Entre investissements ordinaires et mobilisations politiques, Université de Rennes 2.
- Ostrom, E. (1999). *Governing the commons: The evolution of institutions for collective action.*
- Renting, H. & Van Der Ploeg, J. (2001) "Reconnecting nature, farming and society: environmental cooperatives in the Netherlands as institutional arrangements for creating coherence." Journal of Environmental Policy and Planning 3, 85-101 DOI: <http://dx.doi.org/10.1002/jep.75>
- Renting, H. & Wiskerke, H. (2009). New Emerging Roles for Public Institutions and Civil Society in the Promotion of Sustainable Local Agro-Food Systems 9th European IFSA Symposium, Vienna, Austria.
- Wiskerke, J. S. C. (2009). On Places Lost and Places Regained: Reflections on the Alternative Food Geography and Sustainable Regional Development. *International Planning Studies* 14(4): 369-387.