



HAL
open science

Changes in property-use relationships on French farmland: A social innovation perspective

Christine Léger Léger-Bosch, Marie M. Houdart, Salma Loudiyi,
Pierre-Mathieu Le Bel

► **To cite this version:**

Christine Léger Léger-Bosch, Marie M. Houdart, Salma Loudiyi, Pierre-Mathieu Le Bel. Changes in property-use relationships on French farmland: A social innovation perspective. *Land Use Policy*, 2020, 94, 10.1016/j.landusepol.2020.104545 . hal-02502254

HAL Id: hal-02502254

<https://hal.science/hal-02502254v1>

Submitted on 13 Sep 2022

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Changes in property-use relationships on French farmland: A social innovation perspective

Accepted version

Published version:

Léger-Bosch, C., Houdart, M., Loudiyi, S., & Le Bel, P. M. (2020). Changes in property-use relationships on French farmland: A social innovation perspective. *Land Use Policy*, 94. <https://doi.org/10.1016/j.landusepol.2020.104545>

Abstract:

Land issues are a major constraint for resource management, whether it relates to urban planning, environmental protection or agricultural development. There is presently a proliferation of initiatives by a diversity of actors, that produce notable changes in terms of land tenure. A few studies have described some of them in France, without analysing the change mechanisms. Moreover, land tenure is often difficult to understand given its complexity and its multiple dimensions. Here, we propose an analysis of land tenure changes with the lens of property-use relationships (PUR), through a social innovation framework. This allows us to analyse the collective action at the heart of change. The analysis rests upon two case studies selected for their multiscale character, and as two different entries to scrutinize land changes: the “Terre de Liens” movement, a new actor stemming from civil society; and the “rural land lease subject to environmental clauses”, a recent authorized instrument of tenancy contract. These land tenure changes are important although circumscribed because they involve all actors’ spheres and scales and create new frameworks. These changes contribute to express societal demands through new lessor’s management right. Where the parties to the PUR share a common reference framework and the same agricultural development objective, the conditions set out in the PUR seem guaranteed. If they do not, a mutual acculturation process seems necessary – beyond the contractual terms – to enable a compromise between the management rationales of a protected area in one hand, and a farm on the other hand.

Keywords: farmland; bundle of rights; property rights; agriculture; social innovation; collective action

Introduction

Land tenure issues often constitute a stumbling block in resource management. In various urban planning issues, land speculation (Geniaux and Napoléone 2005; Livanis et al. 2006) is difficult to control because urban planning policies are frequently revised (Geniaux, Ay, and Napoléone 2011). On the environmental level, private land rights have emerged as a key element in protecting common resources (Olive and Raymond 2010; Farmer, Chancellor, and Fischer 2011; Sagarin and Turnipseed 2012). From the agricultural viewpoint, the essential economic asset of land is at the heart of competition between farms, this becomes critical when farmers retire or enter farming.

In that context, we are currently witnessing a multiplication of initiatives designed to overcome deadlocks related to land in projects specifically addressing agricultural and environmental issues, whether they are initiated by public or private actors, or by non-governmental organizations (NGOs).

In industrialized countries and in diverse institutional contexts, different forms of land financialization are being developed: corporate financial investment in farmland (Magnan 2015), acquisition of farmland by local governments (Hodge 2007; Munton 2009; Léger-Bosch 2015), decoupling of property rights (Lynch and Musser 2001), creation of associations targeting ownership by private funds (Dissart 2006; Hodge and Adams 2014), and revised contractual arrangements (Hodge and Adams 2012; Perrin and Soulard 2014). Those initiatives all have in common a change in the relationship between owners and users of land, by reconfiguring their respective rights, for example by enlarging the right of the owner to oversee land uses, or by changing the right of the user to transfer land to family or neighbourhood.

Particularly in France, the number of such initiatives is on the rise, changing through very different ways the rights share between holders. However, with few exceptions (Baysse-Lainé 2018), when considering professional agriculture apart from community or private urban gardening (Wekerle and Classens 2015; Mousselin and Scheromm 2015), studies only begin to identify and describe some of the current initiatives. In this literature, the sharing of rights between different stakeholders has been analysed from the point of view of changes in the legislation (Bosc and Doussan 2009; Bodiguel 2011). The emergence of new farmland owners involved in rural development, as the Non-Governmental Organization “Terre de liens” (cf the first study case of this article) (Le Monnier 2013) or local governments involvement (Vargas 2013) has also been described. The water catchments protection by local governments through the mean of land property has also been analysed (Bonfond and Fournier 2013). In this literature, there is still no comprehensive analysis of land changes. Actually, these studies do not allow us to understand and analyse what characterises changes in land ownership, what are the different drivers as well as their material and non-material consequences over time.

The aim of this article is to analyse current agricultural land changes through the lens of the property-use relationship transformation in France¹. To do so, we use the analytical framework of social innovation to understand the drivers of change, particularly based on collective action and its impact on organisations and relationships reconfiguration. We apply the analytical framework on two case studies: the Terre de Liens (TDL) movement and the rural land leases subject to environmental clauses (BRE). The article is organised in four sections. The first one introduces the research issues by characterizing land changes through a property-use relationship lens and the main changes at work in France. In the second section, we demonstrate how a social innovation perspective helps to explore changes in property-use relationships. The third section is devoted to the presentation of our materials and methods. A comprehensive analysis of both case studies is given in the last section underlining the property-use relationship change mechanisms and how they inform social innovation processes. In conclusion, we discuss the added-value of a cross-analysis of both cases to highlight the contributions of our approach.

¹ The material consequences of such initiatives could be analysed in terms of their economic efficiency, although the authors chose another angle in this article. To our knowledge this view is still poorly developed in literature, with the exception of an analysis of the private transaction costs incurred by farmers (Léger-Bosch 2019).

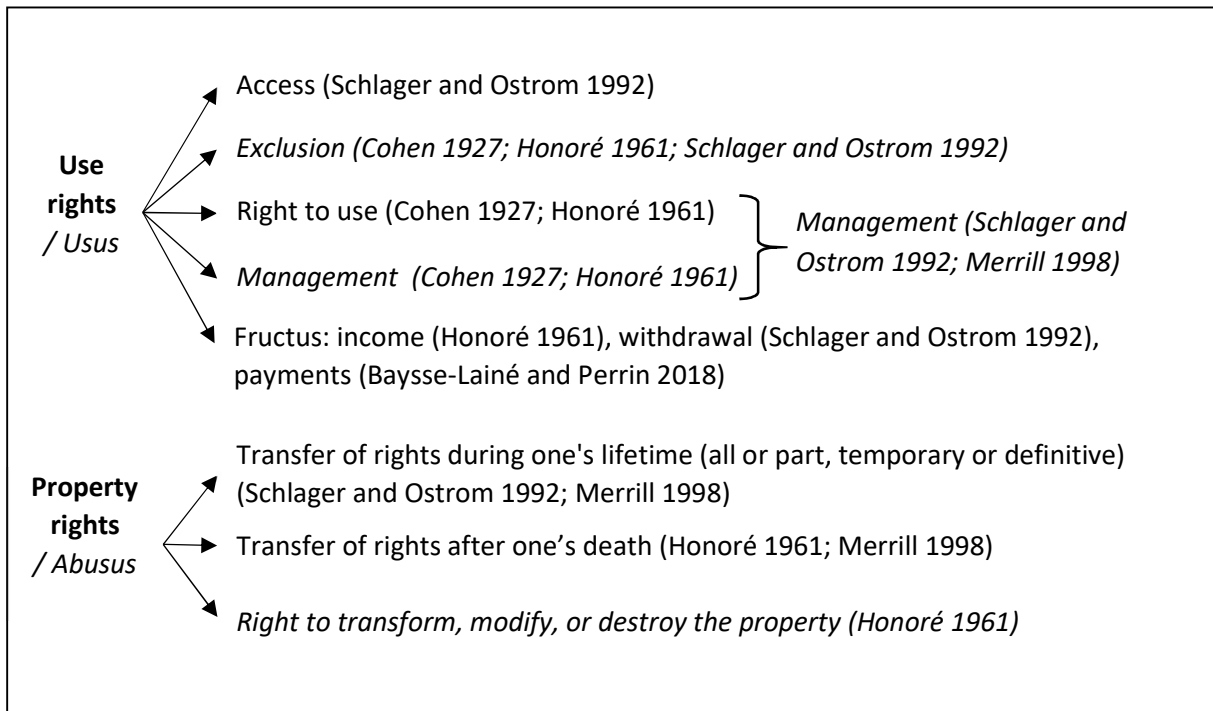
1. Land changes in France: Empirical and theoretical backgrounds

To describe land tenure changes, we follow a relational perspective through the property-uses relationships (PURs). In this section we first outline what is behind the PURs. We then present the French context on land changes and the questions that specifically arise in that geographical context.

1.1. Property-use relationships (PURs)

First proposed by legal theoreticians (Johnson 2007; Baron 2014), an approach of land tenure consists of focusing on the distribution of rights between holders, through the concept of a bundle of rights. This approach shows that property rights, here used according to Anglo-Saxon Common Law without distinguishing "property rights" and "use rights", do not consist of the relationship between their holder and a property, but rather of a set of relationships with other persons in reference to this property. Rights are "sticks" distributed among holders: when one of them holds a right, he or she is effectively depriving the others of it. Following this initial description, several typologies of the rights composing the "bundle" have emerged, notably in the economic literature. They clarify the distinction originating in Roman law between rights of *abusus* (the rights to transfer all or a part of the bundle of rights, such as by lease or sale, the right to destroy the property, or the right to transform the property), rights of *usus* (the right to use the property), and the right of *fructus* (to benefit from the property). The first of these clarifications is made by Cohen (1927), who differentiates different rights of *usus*: the "right to use" in the strict sense, the right to exclude others from the property, and the "right to manage" (Johnson 2007) or "right of management" (Schlager and Ostrom 1992) of the use of the property (e.g. to make decisions such as the choice of crops for agricultural land). Honoré (1961) and Merrill (1998) then distinguish among rights of *abusus* those that extend beyond the right holder's lifetime, so that they can designate who will inherit the property after his death. Schlager and Ostrom (1992) distinguish among rights of *usus*, the right to use the property as such and the right to access it. Last of all, Baysse-Lainé and Perrin (2018) identify the payments rights which correspond to the right to get paid to exercise operational rights, in the European context of the Common Agricultural Policy (CAP). In conclusion, in the literature there are two main categories of rights – use rights and property rights –, with the question of whether some rights belong to one or the other being a subject of debate (Figure 1). For example, the right to transform the property is included by Schlager and Ostrom (1992) and Merrill (1998) within use rights. However, in Roman law and Honoré (1961), it is contained within property rights, i.e., the right of *abusus*. Similarly, the rights of exclusion and of management, which Lavigne-Delville (2010) and Colin (2008) associate with property rights in a category called "administration rights", are categorized by other authors within use rights.

Figure 1. Components of the bundle of rights and distribution chosen for the analysis*



*Rights whose allocation into the two main categories is in dispute are shown in italics.

The context in which the authors establish these typologies could explain the different categorization. For example, a collective management of agricultural production is common in the African context: the user may act as a supervisor with respect to the owner-manager that is village community. There, associating the right to manage with property rights may prove to be relevant (Colin 2008; Lavigne-Delville 2010). Likewise, Schlager and Ostrom (1992) add to their typology the right of exclusion, which manifests the individual and exclusive character of individual ownership. That input has for context their criticism of the theory of the Tragedy of the commons. This belongs to the literature that compares collective and individual property regarding their respective ability to lead to a good environmental and economic management of resources. Lastly, the right to manage and the right to income could be categorized differently in a context in which share-cropping contracts are still predominant.

In this article, we adopt a typology that we believe to be consistent with the context. In Northern countries, the entire territory is divided into land plots, farmland ownership is largely private, community practices to manage agricultural production have been abandoned, and share-cropping remains relatively limited (Table 1). In addition, many contracts may actually be implicit or simply verbal.

We therefore approach legal relationships here in their broader sense, including implicit and oral agreements. We consider use rights to be rights of access, exclusion, use, management, and income and property rights to be rights to transfer and to transform the property (Fig.1). That distinction is drawn from the literature and it will be used to represent a point of reference to highlight variations in the analysis.

Table 1. Characteristics of farmland structure in several Northern countries (Léger-Bosch 2019)

	France	Germany	United Kingdom	Netherlands	Belgium	Italy	Spain	USA
Average UAA ^a /farm (ha) ^{b,c}	58.7	58.6	93.6	27.4	34.6	12.0	24.1	216
Owned UAA, % of total UAA ^{b,c}	38.3%	38.7%	69.4%	58.8%	32.9%	64.9%	61.0%	60%
Leased UAA, % of total UAA ^{b,c}	61.7%	61.4%	30.6%	41.2%	67.1%	35.1%	39%	38%
Share-cropping, % of leased UAA ^{b,d}	1.5%	2.6%	-	34.2%	1.6%	16.0%	18.5%	34.8%

^aUtilized Agricultural Area

^bEuropean data from Eurostat for 2010 and 2013. The rates are corrected for the French case to exclude of leased UAA the case of associates of agricultural group holdings who lease land they own to their own farm (Courleux 2011).

^cUS data from USDA NASS for 2012.

^dUS data from the 1999 US Agriculture Census (Sherrick and Barry 2003).

Finally, considering land tenure as bundle of rights may allow us to take into account: (i) the legal relationships of the parties in both simple and complex arrangements (the rights and duties of each person), (ii) the implicit normative choices in these arrangements, and (iii) the quality of the human relationships that they create (Baron 2014). Thus, this implies to analyse social, economic, institutional (norms, customs), and political (power relations) dimensions of how PURs function and requires the analysis of coordination between actors.

1.2. Farmland changes in France: structures and dynamics

1.2.1. A usual scheme...

In France, the distribution of the different farmland rights is a result of the interrelation between two institutional pillars which are both written into the law and accepted as a social norm. First, private property is one of the founding principles of the French Republic: it is established as a "natural and inalienable right" that is "inviolable and sacred" in the Declaration of Human Rights and the Citizen's Rights (Articles 1 and 17), in the Civil Code and the Constitution. Second, the agricultural lease status, progressively established with successive land policies following WWII², limits private property with respect to farmland, thus reconfiguring tenant-owner relations in favour of the farmer (Boinon 2011; Léger-Bosch 2015).

Users' rights are thus the rights of access, of exclusion, of use, of management, and of income; owners' rights are the rights to transfer the rights on the property and to transform it. Public easements and regulations nonetheless put a strain on these different rights to a greater or lesser degree. In peri-urban areas, urban planning documents frame users' right to use and property owners' right to transform. Users' rights to manage are regulated by the environmental code, the CAP and European regulations, and up until recently, by the quotas policy. The property owner's right to transfer can be reviewed: 1) in the event of expropriation or pre-emption, or in the case of a

² Aiming at modernizing agriculture, governments established a strong farmland control policy for administration of use and property rights. Besides the agricultural lease status, it includes several pillars consisting of CDOAs (Commissions Départementales d'Orientation Agricole), TPBRs (Tribunaux Paritaires des Baux Ruraux), SAFERs (Société d'aménagement foncier et d'établissement rural), and the regulation of farmland prices and rents by prefectural decrees.

declaration of public interest, most often by local or territorial governments, 2) in the event of pre-emption in the context of the regulation of the agricultural market carried out by SAFERs³, 3) and last of all, because the choice of the tenant is regulated by CDOA⁴.

The relationship between users and tenants is regulated by a “standard agreement” that establishes agricultural lease status by default for all market transfers of use rights over farmland⁵, and legally arbitrated by the Agricultural land tribunals (Melot 2014). The value of the lease is indexed by prefectural decree.

In this lease relationship, agricultural users are relatively protected in terms of their company’s access to the essential economic asset constituted by the land. They therefore see purchasing land as an additional production cost that hinders their competitiveness by immobilizing capital that could be invested to increase productivity (Boinon 2011). Leasing is thus preferred to ownership, as demonstrated by the increase in leased UAA, amounting to 61,7% of the total French UAA in 2010 (Courleux 2011). Farmers usually buy land when they find themselves forced to do so because their lessor puts the property up for sale. They remain the owners of the land that they farm on 23.5% of the French UAA. Statistics nevertheless show a correlation between the increase in the size of farms and that of the proportion of leased UAA (Courleux 2011).

The owners of farmland have varying profiles, but the status of being a property owner remains relatively passive, at least for people not involved in any form of agricultural use (Guéringier 2013). Indeed, retired farmers tend to put lands up for agricultural lease without converting their capital into cash; the land is then more of an asset to pass on than a retirement guarantee (Courleux 2011). This is also the case of other property owners, on average relatively old people, who received their land through inheritance and are entrusting decisions about them to the next generation. However, a small number of property owners consider the limited scope of their rights compared to the rights of users unfortunate, and/or wish to convert their capital into income related to urbanization (Ackermann et al. 2013).

In France, other actors “navigate” around PURs. The national government, through its regulation policies, local governments via urban planning, public institutions such as public land agencies, and some organizations such as National Parks and Nature Conservation Areas are involved by imposing easements on certain rights exchanged in the context of this relationship. This is also the case of professional agricultural organizations, which are involved alongside the Ministry of Agriculture in the “co-management” (Keeler 1987; Boinon 2011) of the above-mentioned land policies. Beyond the current sphere of actors involved in PURs, public opinion is nonetheless expressed indirectly with

³ SAFERs (Farmland Ownership Regulation Societies) are non-profit organizations under government supervision. They regulate farmland ownership, in particular through pre-emptive rights and farm transfers, and support local authorities in policy planning (Léger-Bosch 2019).

⁴ CDOA (Departmental Commissions for Agricultural Orientation) adjudicate on the Demands for Prior Approval to Operate that every farmer who intends to sign a farmland lease agreement is required to submit. The colleges of professional organizations, local governments, firms, experts and NGOs make decisions according to a scheme designed in consultation with State services.

⁵ “A lease has a minimum duration of nine years; its tacit renewal is indefinite; and the owner’s recovery rights are very limited. The distribution of benefits between the owner and the user, which takes place through payment in benefits or rent, is regulated. The lessee has pre-emptive rights over the rented lands in the event of sale. The user has complete freedom with respect to management decisions” (Léger-Bosch 2015).

respect to these PURs. Since the 1990s, there has been more and more societal expectations with regard to farming and the environment (health security and transparency, the quality of food products, the environmental consequences of farming, urban-rural relations, etc.). It is conveyed at the local level through public participation in urban planning documents and territorial projects for example, where land issues become a major concern.

1.2.2. ...and different vectors and dynamics of change

Since 2000's, other actors have become involved in farmland management, in several ways.

On the one hand, civil society asks questions and there are strong reactions. With regard to environmental protection first, with the "Grenelle Environment Forum" held in 2007 (Boy 2010) which led to major changes in land law; environment management has been included in specific land lease contracts (see section 4.2.). This has resulted from the involvement of environmental associations in the public debate about nature conservation and from the reaction of the legislator that is to increase regulation of land use. About social justice and sustainable agriculture secondly, with the emergence of new actors such as "Terre de Liens" (see section 4.1.): they become involved in the land market by purchasing land thanks to crowdfunding, and take part in the property use relationships land market as owners. Their initial aim is to alert public authorities on new incomers land access issues, particularly for alternative agricultural models (i.e. small-scale farms, organic production).

On the other hand, and concurrently, state and local governments invite civil society in local governance devices, thanks to decentralization laws and to the participation principle advent. This has led to a multiplicity and a diversity of collective actions at local levels, often related to local food projects. This contributes to a general trend of setting sustainable and local agriculture as a goal for national and local public policies. As an example, in rural development projects, public farmland arising from acquisitions or from putting land reserves to use is becoming more common. Indeed, local French governments have accumulated significant land reserves in the context of long-term urban planning policies. Because certain urban development projects may be abandoned, these unused reserves are conserved and sometimes even forgotten. Whether through one or the other of these means, these initiatives produce for example "communal or inter-communal farms". These are acknowledged as farms where local governments are directly involved in agricultural production, as the owners of the agricultural production unit. Other cases can be seen in the "agricultural test areas" (*Espaces-Test Agricoles* in French), which are business incubators applied to agriculture. A local public or collective actor that owns farmland and intends to support agricultural development can temporarily transfer the land to users wishing to set up a farm. It allows new farmers to develop their project and acquire experience.

Changes are currently happening in PURs in farmland in France as seen through these few examples. Even so, there is yet no clear evidence that profound transformations are taking place. The collective mechanisms and socio-economic issues at play remain poorly understood as studies mainly focus on before and after situations in terms of law (Gourdin, Bertrand, and Doussan 2011; Bodiguel 2011; Doussan, Steichen, Borderon, et al. 2014) or through research monographs (Bonfond and Fournier 2013; Vargas 2013; Le Monnier 2013). Questions remains about the change itself, its origin, how it is built and the PUR change mechanisms at play.

2. Social Innovation as an analytical framework to explore changes in PURs

By addressing land changes as transformation in property-use relationships (PURs), we implicitly focus on stakeholders' relationships: the ones that are established between the holder(s) of property rights – understood as the rights to transfer and transform the property – and the holder(s) of use rights – understood as rights of access, of exclusion, the right to use, rights of management, and of income, in all their legal, social, economic, institutional, and political dimensions, including the implicit power relations, with these rights holders being persons or legal entities. In this sense, a social innovation analytical perspective is relevant to understand these land changes as they may prove to be the first step towards new forms of cooperation and collaboration that respond at a given time to unmet social needs (Mulgan 2006).

Several studies have addressed social innovation processes to understand the significant changes operating within society. Such changes encompass a variety of issues as collective action, public policy or socio-political movements (Moulaert et al. 2013). Neumeier (2012) distinguishes three major approaches to social innovation. An economic approach focuses on the organization in which SIs are seen as new ways of organizing the firm's business practices, workplace or external relations (Schumpeter 1949; Pot and Vaas 2008): these SIs consist of new forms of organization that must lead to new products, including technological innovations. In contrast to this first technological approach emphasizing the efficiency of the process, two other approaches based on sociology and management sciences have been identified by the author. The first one focuses primarily on social change. Here social innovations are seen as societal improvement that change the direction of social change and provide stronger solutions to various issues (Adams and Hess 2008; Pol and Ville 2009). The second one, related to contributions linking SI to territorial development, emphasizes the changes made to the common objectives of a specific group. Here SI is seen as the emergence and implementation of new ideas concerning the organization or the way actors interact. Its goal is not the improvement of society, but the improvement of things such as the action, the organization and the know-how of a specific group of people, measured in terms of the group's experience and therefore based on the already existing know-how and life stories (Mumford 2002; Moulaert et al. 2005). In these last approaches, the implementation of SI is based on the claimed superiority – as perceived by actors – of the foreseen solution compared to solutions that have existed in the past or compared to solutions existing in a different spatial context. Therefore, SI contains a significant temporal dimension (Fontan, Klein, and Tremblay 2004), as its specific phases of creation, adoption, and diffusion pertain to a broader historical context. It also depends on the spatial (Parra and Moulaert 2011; Baker and Mehmood 2015) and territorial context (Valette 2003; Bellemare and Klein 2011; Neumeier 2012), as well as on the social, technical, economic, environmental, political, and cultural resources available on different levels. To study a SI, it is therefore necessary to identify, from among these resources, the ones that individual and collective actors choose to use as a part of collective action, at a specific time and place. Apart from characterizing the features of the SI process, these two dimensions – the spatial and the temporal – are important in assessing the impact of SI, and in particular its spatial impact.

Finally, SI may be characterized by three main criterias that can be seen as so many dimensions of an analytical framework: SI allows us to address the issue of crisis and/or social needs as impetus for innovation (i); it also offers a sense of the trial and error processes inherent to collective action (ii); it allows to identify the products of collective actions as organizational and material changes (iii).

(i) Initial situation and change impetus

Like other innovation processes (technological, organizational, territorial) (Garcia and Calantone 2002; Moulaert and Sekia 2003; Crossan and Apaydin 2010), SI is always triggered by an issue, by a need that has arisen, or by the occurrence of a crisis. However, unlike other types of innovation, this initial impetus first has a social impact. Phillips, Deiglmeier, and Miller (2008) thus define SI as “the process of inventing, securing support for, and implementing novel solutions to social needs and problems”. Moreover, the actors involved in the process of SI evaluate their action and its success on the basis not of market value but of a (social) use value that they share (Le Masson, Weil, and Hatchuel 2006; Fontan 2008). Therefore, this initial momentum corresponds comes from either intent to change an attitude or behaviour, with the actors involved in the SI triggering this process themselves by taking an issue into their own hands, or to basic needs and situations of crisis (Baker and Mehmood 2015). Often, SI is enabled by an impetus (Neumeier 2012), in other words, a lever that is activated or an opportunity that is seized.

(ii) Actors and collective action:

SI has the particularity of being the outcome of collective actions (Baker and Mehmood 2015). An individual alone is not capable of bringing about social innovation. SI is the result of collaborating groups that act within a network of “shared” or “aligned” interests involving a critical mass of civilians, and private and/or public organizations. Some SIs stem from civil society actors and rely on them; in this case these actors are identified as “hubs” within the complex interplay of the interactions between many actors (Swyngedouw 2005). According to Richez-Battesti and Vallade (2009), SI can also develop in the context of activities neglected by the market or the national government. This induces gaps, which can represent innovation spaces that local actors for example can invest through partnerships with territorial governments.

(iii) Non-material and material outcomes

Compared to technological innovation, SI produces changes that are non-material, such as organizational changes. Some authors nonetheless point out that this non-material change can lead to material “outcomes”. With regard to rural development, Neumeier notes that “material outcomes are solely a supplementary result and they focus not on the needs but on asset building” (Neumeier, 2012: 55).

3. Material and method

In order to answer the question of changes in PURs in agriculture in France applying the framework of SI, we choose two case studies that well illustrate in a representative way the current land changes in France. The first case study involves the Terre de Liens (TDL) movement. Its objective is to implement sustainable farming through the collective acquisition of farmland and to provide a fair access to land for new farmers, and also to raise awareness of farmland concerns. This case study is relevant because: 1) It illustrates the way in which collective actors become land owners and implement agricultural projects by using land rights translating their own objectives and 2) it makes a link with land initiatives in other industrialized countries, and particularly the Anglo-Saxon ones like USA, Canada and the United Kingdom. Indeed, Terre de Liens as a civil society movement is derived from the anglo-saxon land trusts. The second case study corresponds to the rural land leases subject to environmental clauses (BRE). This contract model institutes a right for the owner to overseeing on the use of land, which strongly breaks with the classical agricultural lease status. Changes in the law both crystallize and illustrate developing trends, such as the emergence of new public or collective

lessors. We have selected two case studies to show different ways to analyse a social innovation process: a collective actor (TDL) and a public action instrument (BRE). Lastly, both case studies are relevant because of their different spatial and organizational scales. This multi-scalar perspective is important for a comprehensive analysis of changes in PURs.

The two case studies are based on a review of literature and on a set of 32 interviews carried out in 2014, 2017 and 2018 with actors involved in local farmland management, and with farmers in the Auvergne-Rhône-Alpes Region.

More precisely, the first case study concerning Terre de Liens movement relies on: 1) two semi-structured interviews with representatives of the national movement, one representative of the national association and one of the landholding trust; 2) ten semi-structured interviews with farmers leasing lands from the movement, 3) five representatives of a local association and two employees of a local association. The interviews are related to nine of the “Terre de Liens” farms in Auvergne-Rhône-Alpes region.

The second case study of BRE relies on: 1) an analysis of the law and on a review of literature highlighting the evolution of the rural lease status in France through a historical perspective (Léger-Bosch 2015); 2) on semi-structured interviews with four employees of two conservatories of natural spaces (CEN Allier and CEN Auvergne) which implement BRE on land they own and for which they have rights to manage, and on eleven semi-structured interviews with farmers who have the right of use these land and who are the contract second party.

The interviews have been analysed to formalize the PUR that was created in each case in terms of rights repartition, and to fill in all analytical categories of the SIs’ grid to reveal the mechanisms of change. This was completed with elements from the literature review, when needed.

4. Results

4.1. The « Terre de Liens » mouvement

Initial situation and change impetus. The *Terre de liens* (TdL, ‘Land of connections’) movement was born in the context of the expansion of agricultural structures, and the intensification and specialization of production. Since the end of the 1990s, an awareness linked to health (i.e. mad cow disease) and environmental crises (i.e. Intergovernmental Panel on Climate Change report) has challenged the dominant agricultural model. Some civil society organizations were exploring possible alternatives, including RELIER, a popular education association supporting project leaders in rural areas. Among the obstacles to an agriculture renewal based on new farmers’ settlement, land became the focus of attention, as it usually attracts investment at the expense of other means of production (equipment, buildings, etc.). A permanent think-tank emerged within the RELIER association and developed land expertise. The group brought together representatives of the biodynamic movement, the “New Fraternal Economy” (NEF), a cooperative financial company, and other local development stakeholders. It held seminars with agricultural unions, technicians and farmers with feedback from European experiences, and published a guide on access to land. It contains the foundations of the TdL association (Le Monnier 2013).

Actors and collective action:

The Terre de Liens Federation. Created in 2003, the national association relies on a founding charter that stems from a twofold principles: agricultural land is a common property that must be preserved

in order to pass it on to future generations, and access to land weighs heavily on new farm units. On the one hand, the objective is to mobilize citizens, to challenge politicians and to propose solutions, and, on the other hand, to prove by action that the proposed changes are possible; this is achieved by creating financial structures to acquire land in order to make it accessible to small agricultural projects, while protecting it from financial speculation. Then, TdL maintains and extends the partners of the initial group to national networks of organic and peasant agriculture and solidarity finance (Le Monnier 2013). The rapid growth of the movement composed of 22 autonomous legal entities and the subsequent governance problems required in 2011 a statutory reform. It organized the relationship between the national association, regional associations, founding members, associate partners, qualified personalities and financial structures, in order to facilitate the issuance of a united message (Le Monnier 2013). As a result of this evolution, the national association changed its name to "federation" in 2018, bringing together the 19 regional associations and forming with them the movement's⁶ "Associative Network" (Terre de liens 2019).

Foncière Terre de liens. It is the tool for implementing TdL's second objective, namely the implementation of the proposals made. It was created in 2006 with the financial involvement (for a total of 50 000 euros) of 130 members and volunteers to implement the proposals made. It is structured along the lines of the social housing association *Habitat & Humanisme* and based on "solidarity savings" by private contributors who are encouraged to renounce to their financial interests. The first farm purchases were made in 2007, the first public offering took place in 2008, with an initial share price of €100 now worth to 108€ (Le Monnier 2013).

The regional TdL associations (RA). Between 2006 and 2012, 19 RAs were created, ultimately covering the entire French territory. They are at the origin of local projects to acquire TdL farms and are responsible for local support. They receive project leaders, identify farms to be acquired, examine the files to present them to the Foncière, organize the collection of savings and donations, help farmers to integrate locally, raise awareness among citizens and engage in dialogue with local elected officials, and globally implement the strategic project of the Federation TdL (Le Monnier 2013).

The Foundation Terre de liens. Its creation is the result of an old project at TdL. A Foundation cannot sell its assets, unless the *Conseil d'Etat*⁷ decides otherwise: it therefore allows land to be removed from the market and protected from speculation. The 2008 Law on the Modernisation of the Economy, which creates the endowment funds, allows TdL to carry out an intermediate step in order to raise the required initial endowment of €1.5 million. The TdL endowment fund created in 2009 was recognized as a charitable foundation in 2013. The Foundation also makes it possible to attract financing from the public sphere for land investment. It facilitates the contribution of capital through the tax benefits it confers on companies or large fortunes, while allowing donations in kind (e.g. land, agricultural buildings). It welcomes new partners to its board of directors as guarantors of public utility, with the water agency of Seine Normandie, the National Federation of Consultants in Architecture, Urban Planning and Environment, the Federation of Regional Conservatories of Natural Spaces and the French Society of Rural Economy (Le Monnier 2013). The existence of the Foundation allows the TdL

⁶ The rapid growth of the movement required in 2011 a statutory reform that organizes the relationship between the national association, regional associations, founding members, associate partners, qualified personalities and financial structures, in order to facilitate the governance of the movement composed of 22 autonomous legal entities, and the issuance of a united message (Le Monnier 2013). Reflection is still ongoing to deal with recurrent conflicts. This name change is one of the results.

⁷ The primary role of the Council of State is to advise the government, which consults it on a number of acts, including draft laws. Its second role is that of the highest court of the administrative order.

movement to consider complex financial arrangements, combining citizen savings, with private and public funds.

Local groups. The regional association (RA), in close and permanent contact with the Foncière for the legal aspects of land ownership backing, often relies on a local group of members and/or volunteers, sometimes at the origin of the project, who closely guides it. The existence of these local groups varies according to the spatial and temporal contexts. Like the regional association, this group allows investment by local communities and environmental or civic associations, often linked to the popular education network.

Farmers. Sometimes at the origin of the TdL farm project, or present as soon as it emerges, farmers are strongly involved in its organization. They are a very important part of the PUR (the user lessee), and TdL is most of the time their majority lessor (base of the farm's parcels of land, or even buildings).

Non-material outcomes:

A new actor holding rights within the PUR. Within the PUR, the landlord actor "Terre de liens" is emerging and therefore acquiring legitimacy and experience. Its goal is to be a benevolent lessor, its interest largely in line with that of the farmers concerned, mainly because they implement sustainable agricultural uses advocated within the movement's project. From a legal point of view, the lessor is the owner, i.e. the Foncière (or the Foundation), a limited partnership with a share capital. The RA is an operational but informal delegate of the Foncière. It leads and hosts the local group and takes care of the operational set-up of the project, the selection of the lessee when necessary, the collection of funds, the monitoring of the farm and the relations with the lessee. However the right of management and final arbitration is clearly retained by the Foncière, which does not give the RA a mandate to sign the leases (the agent is a notary) or does not include it as a third party "manager" in the rural lease. The Foncière decides with distance to local situations, based on proposals and project management or assistance to the project management by the ATs. The Foncière decision committee's involves representatives of ATs among its members.

New actors in the extended governance of PUR. The extended governance of PUR includes the Federation TdL, its partners (organic farming associations, federations and unions, peasant agriculture, solidarity savings, popular education) as well as the Foundation's partners (SN Water Agency, SFER, FNCAUE, federation of CENs). Citizens' or environmental associations are also invited to take part at the regional level, with TdL placing PUR at the center of local development dynamics. Whether at the local or national level, the TdL movement wants to welcome into this extended governance any citizen who wishes to join, whether in relation to a given territory or not, as a member, volunteer, donor or solidarity saver. Extended governance is therefore very broad, with very significant differences in profile with regard to TdL farms: individuals and legal entities, private and public, as members, shareholders, donors, volunteers, qualified personalities, institutions, partners...

New relationships between the actors. Within the PUR, the farmer is faced with a landlord with multiple components and scales, each pursuing different objectives. It may have to deal with 3 or 4 different legal structures at different levels (Federation, Land, Foundation, RA). At the local level, TdL goes beyond backing by property: it accompanies the farmer in writing the project, in its implementation, it often provides assistance in kind through volunteers and employees, whether administrative, organizational or agricultural. Most of the farmers are grateful for the fact that TdL has made it possible for them to set up, something that was impossible before. Some farmers have ambivalent feelings, like those who are very focused on success, those who dislike an excess of support or a lack of independence and freedom and those who can blame a landlord's lack of experience.

However, the relationship, which takes place in a community of thought, with a common core of references relating to peasant, environmental and social values, is rarely broken. Even if conflicts are inevitable having regard to the scope of the property-use relationship, which often concerns the whole farm, they are generally resolved. However, tensions often remains.

A redistribution of rights. The "TdL" lessor exercises the management right before the contract is signed, through the selection of candidates and the requirement that they share its goals and values. Obviously, this is accepted by the agricultural user, who decides to apply for being a TdL farmer knowing the values and aims of the movement which are public and clearly displayed. Then, the project is co-constructed between the farmer and the various TdL structures, but within an already limited field of possibilities. There are sometimes disagreements during the life of the contract, for example with regard to the management of buildings. Since 2014, TdL also exercises the management right under the BRE, with environmental clauses and the obligation to certify organic farming. However, the control of the proper implementation of the clauses is carried out by the certifying body of the label requested (AB, Demeter, or Nature & Progress). The parties fix the rent according to the local rent market normal value and its evolution follows the index fixed by prefectural decree.

Organizational frameworks. Starting from an associative dynamic, the TdL movement has not ceased since its creation to double its political project with a concrete implementation: the creation of agricultural holdings. This involves a strong economic reality and the assumption of a long-term responsibility towards these economic tools. This requirement to be operational and efficient has led to the professionalization of the movement, which has adopted fairly homogeneous working methods, combining know-how and procedures on the identification of project leaders, farms, their economic evaluation, the drafting of leases, the treatment of specific subjects such as perennial crops or buildings. TdL has also experienced a learning in terms of law. Thus, they have built legal systems in addition to the BRE (see below), adapted to the different situations to which they are exposed, not hesitating to mobilize or divert existing legal tools. Two contracts specific to French law, the emphyteutic lease and the lease with a "*congéable*" domain, are among the adaptations used. The emphyteutic lease is a very long-term, traditionally at low-cost rent. It allows the lessee to make any improvements to the fund, but they will not be compensated at the end of the lease. On the contrary, the lease with a "*congéable*" domain provides that perennial crops or buildings settled by the tenant on the land are compensated by the landlord in the event of termination. Finally, one can note a richness in the various and complementary financing methods, which combine solidarity savings, manual donations, legacies, grants, in-kind donations, etc. The movement has also increased its expertise in order to make them consistent and use them simultaneously. By the accreditation of TdL as an ONVAR (national organization with an agricultural and rural vocation) since 2015, the agricultural ministry institutionally recognized its general expertise on land questions in France.

Material outcomes:

The TdL project is generating strong citizen mobilization, with 200 administrators, 900 volunteers and 4,800 members. It represents a new type of solidarity savings on the financial products market, Foncière TdL, with 13,500 shareholders and more than €65 million. TdL is also positioning itself as a new "work of general interest", the Foundation having received donations and legacies from 10,800 people for €1.9 million. TdL is also a significant employer, with a total of 65 employees in 2018. TdL has also contributed to agricultural development, including that of AB, by owning 4250 hectares and having created or maintained 177 farms. 376 farmers work there, and 247 of them are leaseholders. TdL has local repercussions in terms of economic development and territorial vitality. It is noted that

TdL farms are generally well connected at the local level, and use processing and marketing methods that maintain a link with the inhabitants and consumers of the territory, sometimes even welcoming the public. For example, 53% of TdL farms process their products and 83% of them sell directly. As a result, they contribute to the relocation of food consumption, while increasing the agricultural areas managed and exploited in a sustainable way. RAs also contributes to the support of farm settlement, with 1000 candidates for agricultural settlement recommended each year (Terre de liens 2019).

4.2. The rural land lease subject to environmental clauses (BRE, *Bail Rural à clauses Environnementales*)

Initial situation and change Impetus. The emergence of BREs has taken place in a multidimensional context. First, environmental crises required changes in agricultural practices and land use planning. At the same time, the state was reducing its financial involvement: the Anglo-Saxon model of contract now prevailing in European (agri-environmental measures – AEM – in 1992, Natura 2000 contracts) and national policies (CTE, CAD...) (Cerema 2015). In addition, the agricultural profession was defending the agricultural lease status and the user's right to manage despite the increased concern for environmental issues in the CAP, in legislation, in contracts, etc. (Barthod and Lavoux 2012). At the local level, the actors that had to manage environmental problems considered the contract as the only alternative having regard to the ineffectiveness of the legislation and the State disengagement (Bosc and Doussan 2009). In addition, societal awareness was increasing, including within the PUR, resulting in the termination of rural leases on environmental grounds by landlords. Indeed, because of differences in perceptions of what 'environment' is, it was either the 'environmentally aware' user who was blamed by the landlord for the "poor maintenance" of the fund, or the 'environmentally aware' landlord who blamed the user for environmental degradation. These conflicts of use were brought before rural courts, which gradually developed a body of case law (Bodiguel 2011; Gourdin, Bertrand, and Doussan 2011; Doussan, Steichen, Bouru, et al. 2014).

Actors and collective action:

The emergence of the BRE is the result of a collective action – that ignores itself – over a period of fifteen years. This contains: 1) multiple negotiations between different actors and at several territorial levels; 2) the implementation by the legislator of a succession of amendments to the law.

First, the legislator was influenced by political considerations and the law was a response to the developing case law. The French government was considering extending the contract principle to landowners through conservancy easements using the USA model, and this raised concerns among the agricultural profession (Barthod and Lavoux 2012). In parallel, the case law on environmental grounds in rural lease terminations allowed the legislator to protect the lessor's right to environmental scrutiny in 1995, and to protect the user's right to implement environmental practices in 1999 (Bodiguel 2011; Gourdin, Bertrand, and Doussan 2011; Doussan, Steichen, Borderon, et al. 2014). In addition, the use by some of the actors in charge of drinking water protection, of environmental contracts with farmers revealed the need for effective means of action on agricultural uses (Hellec, Barataud, and Martin 2013). In this context, the premises of the BRE⁸ legally established in 2004 in the Public Health Code have represented an acceptable alternative to a controversial instrument and a consistent evolution

⁸ The article L 1321-2 authorizes communities that own drinking water abstraction protection zones to introduce into leases the need for users to implement "agricultural practices compatible with the preservation of water resources" in nearby areas (Bosc and Doussan 2009).

of the law in integrating environmental issues in the rural code, and a response to actors needs. Then, the model was naturally extended by the 2006 agricultural orientation law (article 411-27) to any protected natural area, and to lessors being local authorities and legal entities with a public service mission. The lessee's failure to comply with his agri-environmental obligations became ground for the termination of the contract by the lessor⁹ (Gourdin, Bertrand, and Doussan 2011).

Based on a broad consultation of stakeholders, the 2007 Grenelle de l'environnement was important moment for the evolution of environmental law in France. It brought together actors from different horizons, particularly civil society, to reflect on all ecological themes. It recognized the need to protect ecological corridors and led to the extension of the BRE on it as well as to Regional Natural Parks¹⁰. In 2014, the legislator¹¹ met the expectations of the actors of Organic Agriculture (AB), who had underlined during the Grenelle process their difficulty in maintaining the AB areas when a change of lessee occurred and had warned of the resulting land market distortions. Thus, the BREs have been opened to private owners - whether being persons or legal entities -, as long as the environmental practices or infrastructures whose maintenance they target are already existing.

We can therefore distinguish two types of BRE: those concerning as lessors public legal entities or entities recognized as being of public utility, managers of natural areas or drinking water catchments (we call them here the "2004-2010 BREs"); and those concerning as lessors private persons or legal entities, resulting from the 2014 reform (we call them here the "2014 BREs"). Having emerged later, this second type of contract is now less developed than the first (38,2% in 2015) (Cerema 2015). On another note, those "2014 BREs" concern in reality mainly one lessor, which is a legal entity: the Terre de liens movement. It is too early to be able to evaluate the implementation of BRE 2014, first in terms of diversity between legal and natural persons, and then as between legal persons. Among the group formed by the "2004-2010 BREs" (61,8% of total BREs in 2015), the most common lessors are the Conservatories of Natural Areas (CEN for "Conservatoires d'espaces naturels") which represent 24.4% of the total BREs in 2015¹². For this reason, we illustrate the following case study through the 2004-2010 BREs that involve CENs as lessors. The CENs are nature protection associations, whose institutional consideration as networked actors in the protection of the environment and water resources has progressively increased from the Law for Nature Protection (1976) until Grenelle laws. The CEN actors are transversal to 2004-2010 BREs as they implement them as lessors, but also as managers on behalf of a public lessor. They therefore act in dialogue with their funders as well as with the actors involved in the creation and management of protection zones (water agencies, departmental councils, State services, local authorities, etc.).

The CENs enlist the services of user farmers for land management, by soliciting them or by receiving their demand when they have heard that a site is vacant. In the case of a new acquisition, the incumbent lessee is maintained on negotiated terms on a case-by-case basis. They operate in territories according to environmental issues that are unconnected to the local agricultural context. They therefore involve farmers who are mainly representative of a general population in conventional systems of livestock, polyculture-livestock and field crop.

⁹ Article L. 411-31, I, paragraph 3 of the Rural Code.

¹⁰ By the 2010 Law on the Modernisation of Agriculture.

¹¹ By the 2014 Law for the Future of Agriculture, Food and Forest.

¹² In front of those of various associations (League for the protection of birds, Foundation for the protection of wildlife habitats..., 12.9%), public institutions (Water Agencies, Eau de Paris for the protection of water resources and the Agence des espaces verts d'Île-de-France, 10.9%), general councils contracting for sensitive natural areas (9.1%), regional natural parks (3.2%) and local authorities (1.2%).

Non-material outcomes:

New actor holding rights within the PUR. BREs introduce new rights holders into the governance of PUR, whether they are public lessors such as local authorities or associations such as CENs, or association managers such as CENs or the League for the Protection of Birds when the BRE is tripartite. In this case, the farmer's contact person is the manager. This manager has to agree beforehand to the landlord to act in accordance with the objectives and the ecological functioning of the area protected. For these actors, agriculture is instrumental in satisfying an environmental objective, and is not an end in itself.

New actors in the extended governance of PUR. The environmental diagnosis and objective documents determine the BRE's clauses and consequently the PUR. All the actors involved in that process participate to the extended governance of PUR. It can be a Natura 2000 area, with broad consultation, including local authorities, chambers of agriculture, water agencies, user associations etc., and led by the decentralized services of the State ; a Sensitive Natural Area¹³, zones created by and managed by the Departmental Council being at the origin of these zonings and managing them, directly or in a delegated manner; a Territorial Contract approved and financed by Water Agency, after a broad consultation of the actors involved in the management of water resources and aquatic environments (mainly environmental actors and local authorities, organized as SAGEs); the public domain (e. g. river freeboards) whose management by the decentralized services of the State can be delegated to a manager.

New relationships between the actors. At the level of the PUR, which comes downstream of the zone's objective document, a new contractual relationship is being established between environmental activists and technicians on one hand, and traditional farmers on the other hand. The parties usually have different frame of reference concerning the environmental issue itself, its importance, the fragility of the environment, the environmental benefit of a lack of human intervention and therefore the course of action to be taken, and lastly the agricultural issues and economic constraints faced by the farmers. Sometimes misunderstandings persist and can lead to mutual ignorance. At other times, a fluid dialogue is established where each party brings its expertise to the service of good agricultural and environmental practices, resulting in a satisfactory compromise. These two extremes constitute a gradient on which cases are distributed. The sharing of frame of reference is extremely rare, a mutual acculturation sometimes takes place. The control of the respect of the lessor's management right rests entirely on the lessor or the manager himself, no reference to a label being made in the clauses, and consequently the use of a third-party certifier being impossible. A control system is set up in the lease with the lessor or the manager (ex: CENs). The lessee has to provide a report on the use he made (dates and practices of grazing, grass reaping, grinding, etc.), during on-farm meetings or in writing. For his part, the lessor ensures the good ecological status of plots through botanical monitoring of indicator species. This aspect also changes the contractual relationship from a working relationship to an authoritative relationship.

A redistribution of rights. A decree¹⁴ specifies the clauses that may be included in the BREs concerning agricultural practices. The lessors are authorized, and somewhere invited, for example to protect and develop ecological infrastructures, to limit fertilization and pesticides, to settle a sustainable use of water and an organic agriculture. The clauses limit the user's right to manage via obligations to "do"

¹³ The Sensitive natural areas, created by the Law for Nature protection (1976), are a national environmental policy implemented by departmental councils that levy a tax dedicated to their management (Jacques 1992).

¹⁴ No. 2007-326 of 8 March 2007 (art. 1 JORF 10 March 2007).

and "not do", and that is a deep change in the agricultural lease status. The lessor establishes the clauses in a more or less concerted way with the farmer. Even in a voluntary agreement, what is at play is land which represents a mean of agricultural production: the farmer may be forced to sign for economic reasons. In CENs' BREs analyzed, the preamble affirms the lease's dominance on any other commitments that the user may have to CAP (e. g. AEM). The objectives document concerning the environmental protection area is cited as the foundations of the clauses establishment. The logic of the contract is then conservative: the land should not be modified, whether in the agricultural sense or toward an environmental direction. Thus, in addition to controlling agricultural practices with environmental consequences (cattle density, cropping permanent grasslands, cutting hedges and trees, etc.), the lessor reserves the right to set up ecological infrastructures. He deals with the agricultural practices inasmuch as it has no environmental repercussions¹⁵. The lessor sometimes takes back the right of access to the land, or, from the user's point of view, deprives him of the right of exclusion included in the agricultural lease status. In this case, the CEN undertakes to inform the lessee. The objective is environmental land monitoring and potentially research or environmental education. The lessor sets the rent according to the context at the time of agreement (new farmer entrant, ecosystem type, institutional ownership context, etc.). It is nothing in half of cases, or reduced by half in the other cases.

Organizational frameworks. The lessors or managers who are in charge of BRE seem to establish routines and a legal framework to draft environmental clauses, such as CENs whose network have established a more or less common lease model. This is the case for the BREs analyzed where the CENs or the Foncière Terre de liens are lessors. And as seen earlier, TdL has continually adapted the BRE with other legal systems to adjust to specific situations as for perennial crops or buildings with emphyteutic lease or the "congeable" domain one. These innovations are responses to issues as well as local adaptations of the contract, which are then integrated in the organizational framework that the common model of BRE constitutes.

Material outcomes:

In terms of material results, we can mention the CEN as a network managing 3,249 natural sites covering 160,689 ha managed in nearly 3,000 municipalities. In 2012, CEN Auvergne declared that 10% of its managed areas, or 59 hectares, were under BRE (Cerema 2015). On the Terre de liens side, almost all of the 4250 ha are now under BRE. If the TdL BREs guarantee a use in conformity with the AB certification¹⁶, the implementation of the clauses issued by actors such as CEN is less certain. Indeed, the difference between the landlord's and the lessee's standards can induce the latter to: 1) a margin of interpretation of the clauses and their mandatory nature; 2) in some extreme cases, a non-adherence to the management program that the landlord has set for himself, potentially leading to an intentional non-compliance with the clauses, depending on the aversion to the risk of having the farmer's contract terminated. Another material result is the opening of some of the previously strictly agricultural areas to the public, supervised by donors such as the CEN, for environmental education.

¹⁵ Categories relating to agricultural production per se (harvesting methods, diversification, organic farming, agroforestry (Categories n°3, 4, 5, 9, 11, 12, 15 and 16 identified by decree n°2007-326 of 8 March 2007).

¹⁶ The compliance to AB principles only represents a part of the clauses, the compliance to the other part is not controlled and its implantation is based on trust.

5. Discussion and conclusion

From a methodological point of view, this article offers an original view of land changes, by treating the complexity of land issue with the lens of property-use-relationships, and by analyzing the change mechanisms through a social innovation framework. Based on a bundle of rights approach, we provide a precise definition of PURs, granting them significant legal and economic dimensions. Through concrete analytical categories, the proposed SI's framework applied to PUR has the advantage to differentiate the determinants from outcomes of social innovation. Thus, we characterize the study cases by identifying the origin of their emergence; first by describing the needs and crisis that became an impetus for change, second by detailing the actors involved and their coordination in relation to each other within a collective action. The SI's outcomes are detailed as material and non-material outcomes. The latter include the emergence of new actors as right holders within the PUR, or as stakeholders in the extended governance of PUR, of new relationships between the actors, the redistribution of rights between their holders and the settlement of new organizational frameworks as financing mechanisms, procedures or contract models. In other words, applying the SI's framework to PURs enables us to characterize innovation within land changes according to their social, political, economic, or legal dimensions. The latter one is particularly important as it makes possible approaches to new distributions of rights within PURs.

Applying the SI's framework to PURs allows us to compare two contrasting case studies, from the point of view of the stakeholders, the issues addressed by PUR and the mechanisms at work: the TDL movement on the one hand and the BREs on the other.

The first contribution of this cross-analysis is the emergence of elements of analysis and discussion regarding land changes on French farmlands, in particular from the point of view of the greater or lesser ease of establishing the relationship between owners and users. Thus, a clear difference appears between both cases in the exercise of the - newly re-appropriated - right of management by the lessor. In the first case (TDL), the lessor is only interested in the area under consideration in the user's exploitation and the agricultural reorientation takes part in an agricultural development intention. In the second case (BRE 2004-2010), the lessor manages natural areas without taking into consideration the users as farm holdings, whose perimeters are other and which work under economic constraints. The agricultural reorientation is instrumental, in the service of environmental management.

From this standpoint, TdL as a lessor and because of its objectives, understands the place and importance of the leased fund as an economic tool, which leads the lessee to accept the exercise by the lessor of his reappropriated management right. Perhaps an additional effort in this direction from BRE 2004-2010's lessors could facilitate the adherence of their lessees to the environmental protection measures they impose on them. In addition, the PUR seems to be facilitated if the audit of compliance with the lessor's management right is entrusted to a third party, and based on an enforceable standard. Thus, the construction of a real partnership relationship between the lessor TdL and the lessee seems to be facilitated by the fact that TdL does not assume the authoritative role conferred by the control of clauses and relies for this on the organic agriculture certifying bodies. These two statements are consistent with those of Grolleau and McCann (2012) in their comparison of environmental contracts with farmers on water catchments of Munich and New-York.

However, these statements must be balanced by a significant difference in the implementation of the PUR between the BRE (excluding the TdL BRE) and the TdL farms. Indeed, if these changes in the PUR in France come from and aim above all at a better consideration of societal expectations in the

agricultural use of space, then from this point of view our two case studies show two levels of different ambition. On one hand, it is a question of recruiting "compliant" users and giving them access to land, which produces a new use; on the other hand, it is a question of "convincing" existing users and leading them to change their practices, by seeking an evolution in use. PUR takes place in the first case in a community of thought that facilitates the contractual relationship, in the second case an acculturation is hoped for but communication must be developed.

The second contribution of the cross-analysis of two contrasting case studies concerns the way to highlight innovation on land issues in a given country. The systematic application of the different dimensions of the SI grid confirms that land change is based on interactions between different levels of organization. In other words, the current land changes are deep and appropriated "at the bottom" as well as controlled "at the top". Thus, some elements of each of the two cases highlight the strong links between the SI and the local, in particular, as Neumeier (2012) points out, through networks of actors, forms of social relationships, and the social capital existing on the local level. In both cases, however, the 'local' dialogues with the national level in the SI processes. In the case of Terre de Liens, SI results from activist, intentional and coherent action within the same movement, with coordination between private, collective and associative actors organized at local and national levels. In the case of the BRE, the SI is built on the basis of a succession of coordination of actors who, without knowing it, co-construct over time an action mechanism (the BRE). It includes the institutional evolution of national legislation and inherent public policies, and feedback from local actors. Finally, from the point of view of the emergence of the SI and the expression of the formulation of new societal expectations, we are on the one hand in a bottom-up process (TdL) and, in the other case, a rather more institutionalized one (BRE). In this last case, even if dialogue exists at the top and if local issues and actors express themselves, it leads afterwards to a top-down process towards local assimilation. It is also interesting to note that this results in different PURs in terms of the organization of decision-making between owners and users: a kind of partnership-based relationship in the case of TdL, and a more hierarchical or at least distant relation in the case of BREs. The rent fixation highlights in an interesting way that difference, which rests upon a very contrasted approach by the lessors of the agricultural holding existing beyond the "user".

All of these results are finally in line with different recent works (Murray, Caulier-Grice, and Mulgan 2010; Franklin, Kovách, and Csurgó 2016; Klein et al. 2016; Neumeier 2017) which emphasize the links between local IS processes and the national level (through the State for example). The cross-analysis therefore confirms that social innovation can lead to institutional change, especially decisive for land issues that are strongly rooted in law.

Institutional change is the subject of the field of institutional economics, which could find an interesting analytical tool in SI, whose short timeframe makes it suitable for the analysis of collective action leading for instance to the emergence and the transformation of PURs. Actually, the seminal authors, J.R. Commons and T. Veblen, and later D. North, conceived institutional change as an infinite feedback loop between individuals and organizations on one side, and institutions¹⁷ on the other, granting a decisive role to social interactions in this process. On the one hand, institutions determine the actions of individuals and of collective organizations within a space of opportunities and legal constraints, and therefore economic constraints. On the other, individuals and organizations produce institutions by means of appropriation and learning, shining light on their shortcomings (North,

¹⁷ Both formal institutions (contracts, law, etc.) and informal ones (customs, social and cultural norms, etc.).

1991: 109), adopting habits that become social norms (Veblen 1914), and orienting laws in the context of representative democracy (North 1994). The origin of institutional change is therefore found in that of the social compromise (Commons 1934). However, the creation of that social compromise remains a black box for institutional analyses. Their long-term timeframe does not seem compatible with the analysis of this “trial and error” activity of individuals and organizations.

In further researches, we could explore the complementarity of those two conceptual frameworks. Thus, we could understand how the new organizations implemented are modulated by historicized local customs (contractual practices, eating habits, etc.), and which of them can constitute development potential as local resources. Moreover, it allows us to understand all of the dynamics at play, before they pass through the filter of the constraints of the institutional matrix, and therefore without being limited to those that effectively contribute to the creation of the social compromise and institutional change. This reflection could lead to fruitful developments by combining the economics of institutional change with conceptual frameworks for social innovation. In terms of public action, this comprehensive analysis of opportunities for change could prove to be useful to stimulate or direct institutional changes by identifying the institutional constraints blocking them, as shortcomings or inappropriate legal frameworks.

Acknowledgements

The authors would like to thank all the people who contributed to this research. They also acknowledge the three reviewers for their constructive and valuable comments.

Funding: this work was supported by the PSDR Program (Auvergne Region/INRA/IRSTEA) [PSDR4 USUS 2016-2020].

References

- Ackermann, G.; F. Alavoine-Mornas; A. Guéringier; C. Léger; and R. Melot. 2013. Propriétaires et agriculteurs périurbains: pratiques contractuelles et stratégies contentieuses. In *Terres agricoles périurbaines: Une gouvernance foncière en construction*, ed. N. Bertrand, 219-234. Paris: Quae.
- Adams, D. and M. Hess. 2008. Social innovation as a new public administration strategy. In *The 12th Annual Conference of the International Research Society for Public Management, 26-28 March 2008*, 1-8. Brisbane.
- Baker, S. and A. Mehmood. 2015. Social innovation and the governance of sustainable places. *Local Environment* **20:321-334**.
- Baron, J.B. 2014. Rescuing the bundle-of-rights metaphor in property law. *U. Cin. L. Rev.* **82:57-101**.
- Barthod, C. and T. Lavoux. 2012. La question des servitudes contractuelles environnementales en France. In *9ème conférence "Droits de propriété, économie et environnement"*, 21-23 juin 2012, 10. Aix-en-Provence, France.
- Baysse-Lainé, A. 2018. Terres nourricières ? : la gestion de l'accès au foncier agricole en France face aux demandes de relocalisation alimentaire. Thèse, Géographie, Dir: Delfosse, Perrin; Université de Lyon.
- Baysse-Lainé, A. and C. Perrin. 2018. How can alternative farmland management styles favour local food supply? A case study in the Larzac (France). *Land Use Policy* **75:746-756**.
- Bellemare, G. and J.-L. Klein. 2011. *Innovation sociale et territoires. Convergences théoriques et pratiques*. Presses Universitaires du Québec.
- Bodiguel, L. 2011. Les clauses environnementales dans le statut du fermage. *Revue de Droit Rural*.
- Boinon, J.-P. 2011. Les politiques foncières agricoles en France depuis 1945. *Economie et statistique* **444:19-37**.
- Bonnefond, M. and M. Fournier. 2013. Maîtrise foncière dans les espaces ruraux. Un défi pour les projets de renaturation des cours d'eau. *Economie rurale. Agricultures, alimentations, territoires:55-68*.
- Bosc, C. and I. Doussan. 2009. La gestion contractuelle de l'eau avec les agriculteurs est-elle durable? Approche politique et juridique. *Économie rurale:65-80*.
- Boy, D. 2010. Is France's Grenelle de l'Environnement a Political Innovation? *Revue française d'administration publique:313-324*.
- Cerema. 2015. Le bail rural à clauses environnementales et le paysage « agro-environnemental », 93. https://www.cerema.fr/system/files/documents/2017/07/BRE_Document_Juin_2015.pdf (accessed 18 July 2019): Ministère de l'Ecologie-Ministère de l'Agriculture.
- Cohen, M.R. 1927. Property and sovereignty. *Cornell LQ* **13:8**.
- Colin, J.-P. 2008. Disentangling intra-kinship property rights in land: a contribution of economic ethnography to land economics in Africa. *Journal of Institutional Economics* **4:231-254**.
- Commons, J.R. 1934. *Institutions: Its place in political economy*, 648. Madison: University of Wisconsin Press.
- Courleux, F. 2011. Augmentation de la part des terres agricoles en location : échec ou réussite de la politique foncière ? *Economie et statistique:39-53*.
- Crossan, M.M. and M. Apaydin. 2010. A multi-dimensional framework of organizational innovation: A systematic review of the literature. *Journal of management studies* **47:1154-1191**.
- Dissart, J.-C. 2006. Protection des espaces agricoles et naturels: une analyse des outils américains et français. *Economie rurale. Agricultures, alimentations, territoires* **291:p.6-25**.
- Doussan, I.; P. Steichen; S. Borderon; M. Bouru; C. Danna; G.C. Giorgini; A. Guesmi; J. Malet; M.-A. Ngo; and K. Ilchev. 2014. Chronique de droit privé et de droit économique de l'environnement. *Revue juridique de l'environnement* **39:665-687**.
- Doussan, I.; P. Steichen; M. Bouru; and e. al. 2014. Chronique de droit privé et de droit économique de l'environnement. *Revue juridique de l'environnement* **39:665-687**.

- EU. 2013. Farm structure survey 2013 - main results ed. Eurostat. Available at [http://ec.europa.eu/eurostat/statistics-explained/index.php/Farm_structure_survey_2013 - main results](http://ec.europa.eu/eurostat/statistics-explained/index.php/Farm_structure_survey_2013_-_main_results), accessed May 2017.
- Farmer, J.R.; C. Chancellor; and B.C. Fischer. 2011. Motivations for using Conservation Easements as a Land Protection Mechanism: A Mixed Methods Analysis. *Natural Areas Journal* **31:80-87**.
- Fontan, J.-M. 2008. Développement territorial et innovation sociale: l'apport polanyien. *Revue Interventions économiques. Papers in Political Economy*.
- Fontan, J.-M.; J.-L. Klein; and D.-G. Tremblay. 2004. Innovation et société: pour élargir l'analyse des effets territoriaux de l'innovation. *Géographie, économie, société* **6:115-128**.
- Franklin, A.; I. Kovách; and B. Csurgó. 2016. Governing social innovation: Exploring the role of 'discretionary practice' in the negotiation of shared spaces of community food growing. *Sociologia Ruralis* **57:439-458**.
- Garcia, R. and R. Calantone. 2002. A critical look at technological innovation typology and innovativeness terminology: a literature review. *Journal of Product Innovation Management* **19:110-132**.
- Geniaux, G.; J.S. Ay; and C. Napoléone. 2011. A spatial hedonic approach on land use change anticipations. *Journal of Regional Science* **51:967-986**.
- Geniaux, G. and C. Napoléone. 2005. Land rent and anticipations in Peri-Urban areas. *Economie et Prevision* **168:77-95**.
- Gourdin, N.; N. Bertrand; and I. Doussan. 2011. Baux ruraux environnementaux. *Les Focus PSDR3-Projet AMEN:4p*.
- Grolleau, G. and L.M. McCann. 2012. Designing watershed programs to pay farmers for water quality services: Case studies of Munich and New York City. *Ecological Economics* **76:87-94**.
- Guéringer, A. 2013. Propriété et propriétaires en espace périurbain, ou la gouvernance foncière à l'épreuve des logiques privatives. In *Terres agricoles périurbaines: une gouvernance en construction*, ed. N. Bertrand, 37-54. Paris: Quae.
- Hellec, F.; F. Barataud; and L. Martin. 2013. Protection de l'eau et agriculture: une négociation au long cours. *Natures sciences sociétés* **21:190-199**.
- Hodge, I. 2007. The governance of rural land in a liberalised world. *Journal of Agricultural Economics* **58:409-432**.
- Hodge, I.D. and W.M. Adams. 2012. Neoliberalisation, rural land trusts and institutional blending. *Geoforum* **43:472-482**.
- . 2014. Property institutions for rural land conservation: towards a post-neoliberal agenda. *Journal of Rural Studies* **36:453-462**.
- Honoré, A.M. 1961. Ownership. *Oxford essays in jurisprudence:107-147*.
- Jacques, J.-C. 1992. Rural conservation in France. *Land Use Policy* **9:219-221**.
- Johnson, D.R. 2007. Reflections on the Bundle of Rights. *Vt. L. Rev.* **32:247**.
- Keeler, J.T.S. 1987. *The politics of neo-corporatism in France. Farmers, the State and the agricultural policy-making in the fifth republic*. Oxford University Press.
- Klein, J.-L.; A. Camus; C. Jetté; C. Champagne; and M. Roy. 2016. *La transformation sociale par l'innovation sociale*. Presses Universitaires du Québec.
- Lavigne-Delville, P. 2010. Sécurisation foncière, formalisation des droits, institutions de régulation foncière et investissements. Pour un cadre conceptuel élargi. *Revue des questions foncières* **1:5-34**.
- Le Masson, P.; B. Weil; and A. Hatchuel. 2006. *Les processus d'innovation: Conception innovante et croissance des entreprises*. Lavoisier Paris.
- Le Monnier, J. 2013. Terre de liens: histoire de convergences. *Pour:289-296*.
- Léger-Bosch, C. 2015. Les opérations de portage foncier pour préserver l'usage agricole: une analyse par les coordinations, les transactions et les institutions. Thèse, Economie, dir. : N. Bertrand, Université Grenoble Alpes.

- . 2019. Farmland tenure and transaction costs: Public and collectively owned land vs conventional coordination mechanisms in France. *Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie* **67:283-301**.
- Léger-Bosch, C. 2019. Farmland tenure and transaction costs: public and collectively owned land vs conventional coordination mechanisms in France. **67:283-301**.
- Livanis, G.; C.B. Moss; V.E. Breneman; and R.F. Nehring. 2006. Urban sprawl and farmland prices. *American Journal of Agricultural Economics* **88:915-929**.
- Lynch, L. and W.N. Musser. 2001. A Relative Efficiency Analysis of Farmland Preservation Programs. *Land Economics* **77:577-594**.
- Magnan, A. 2015. The financialization of agri-food in Canada and Australia: Corporate farmland and farm ownership in the grains and oilseed sector. *Journal of Rural Studies* **41:1-12**.
- Melot, R. 2014. Droits de propriété et d'usage sur la terre. Une étude statistique des recours contentieux en matière de fermage. *Économie rurale*:**69-85**.
- Merrill, T.W. 1998. Property and the Right to Exclude. *Nebraska Law Review* **77:7**.
- Moulaert, F.; D. MacCallum; A. Mehmood; and A. Hamdouch. 2013. *The international handbook on social innovation: collective action, social learning and transdisciplinary research*. Cheltenham, UK: Edward Elgar Publishing.
- Moulaert, F.; F. Martinelli; E. Swyngedouw; and S. Gonzalez. 2005. Towards alternative model (s) of local innovation. *Urban studies* **42:1969-1990**.
- Moulaert, F. and F. Sekia. 2003. Territorial innovation models: a critical survey. *Regional studies* **37:289-302**.
- Mousselin, G. and P. Scheromm. 2015. Vers une mise en politique des jardins collectifs urbains. Approche comparée de deux trajectoires municipales à Montpellier et à Lisbonne. *Articulo-Journal of Urban Research*.
- Mulgan, G. 2006. The process of social innovation. *Innovations: technology, governance, globalization* **1:145-162**.
- Mumford, M.D. 2002. Social innovation: ten cases from Benjamin Franklin. *Creativity research journal* **14:253-266**.
- Munton, R. 2009. Rural land ownership in the United Kingdom: Changing patterns and future possibilities for land use. *Land Use Policy* **26, Supplement 1:S54-S61**.
- Murray, R.; J. Caulier-Grice; and G. Mulgan. 2010. *The open book of social innovation*. The young foundation - NESTA.
- Neumeier, S. 2012. Why do social innovations in rural development matter and should they be considered more seriously in rural development research?—Proposal for a stronger focus on social innovations in rural development research. *Sociologia Ruralis* **52:48-69**.
- . 2017. Social innovation in rural development: identifying the key factors of success. *The geographical journal* **183:34-46**.
- North, D.C. 1991. Institutions. *Journal of economic perspectives* **5:97-112**.
- . 1994. Economic performance through time. *The American economic review* **84:359-368**.
- Olive, A. and L. Raymond. 2010. Reconciling norm conflict in endangered species conservation on private land. *Natural Resources Journal* **50:431-454**.
- Parra, C. and F. Moulaert. 2011. La nature de la durabilité sociale: vers une lecture socioculturelle du développement territorial durable. *Développement durable et territoires* **2**.
- Perrin, C. and C.-T. Soulard. 2014. Vers une gouvernance alimentaire locale reliant ville et agriculture. Le cas de Perpignan. *Géocarrefour* **89:125-134**.
- Phills, J.A.; K. Deiglmeier; and D.T. Miller. 2008. Rediscovering social innovation. *Stanford Social Innovation Review* **6:34-43**.
- Pol, E. and S. Ville. 2009. Social innovation: Buzz word or enduring term? *The Journal of socio-economics* **38:878-885**.
- Pot, F. and F. Vaas. 2008. Social innovation, the new challenge for Europe. *International Journal of Productivity and Performance Management* **57:468-473**.

- Richez-Battesti, N. and D. Vallade. 2009. Économie sociale et solidaire et innovation sociale: Premières observations sur un incubateur dédié en Languedoc Roussillon. *Innovations*:**41-69**.
- Sagarin, R.D. and M. Turnipseed. 2012. The public trust doctrine: Where ecology meets natural resources management. In *Annual Review of Environment and Resources*, 473-496.
- Schlager, E. and E. Ostrom. 1992. Property-rights regimes and natural resources: a conceptual analysis. *Land Economics*:**249-262**.
- Schumpeter, J.A. 1949. *Change and the entrepreneur: Postulates and patterns for entrepreneurial history*. Cambridge, MA.: Harvard University Press.
- Sherrick, B.J. and P.J. Barry. 2003. Farmland markets: historical perspectives and contemporary issues. In *Government policy and farmland markets. The maintenance of farmer wealth*, ed. C.B.M.A. Schmitz, 27-49. Ames, Iowa: Iowa State Press.
- Swyngedouw, E. 2005. Governance innovation and the citizen: the Janus face of governance-beyond-the-state. *Urban studies* **42:1991-2006**.
- TerredeLiens. 2019. Le réseau associatif. <https://terredeliens.org/le-reseau-associatif.html>.
- USA. 2012. Farms and Farmland, ed. USDA/NASS. available at https://www.agcensus.usda.gov/Publications/2012/Online_Resources/Highlights/Farms_and_Farmland/Highlights_Farms_and_Farmland.pdf, accessed May 2017.
- Valette, E. 2003. Pour une approche géographique de l'innovation sociale. L'exemple des territoires ruraux périurbains de la garrigue nord-montpelliéraine: Université Paris-Diderot-Paris VII.
- Vargas, L. 2013. La ferme intercommunale des Maquis. *Pour*:**163-171**.
- Veblen, T. 1914. *The Instinct of Workmanship and the State of the Industrial Arts*. New York: Augustus Kelley.
- Wekerle, G.R. and M. Classens. 2015. Food production in the city:(re) negotiating land, food and property. *Local Environment* **20:1175-1193**.