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The quality of territorial governance: an assessment of institutional arrange- ments. The case of the Serrano cheese production in the Campos de Cima da Serra, Southern Brazil

Carine Pachoud

Institute of Geography, Innsbruck University, Innrain 52f, 6020 Innsbruck, Austria, carine.pachoud@student.uibk.ac.at
CIRAD, UPR GREEN, Univ Montpellier, CIRAD, F-34 Montpellier, France

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Abstract

Territorial governance is of growing interest in an endogenous development perspective, in which organizational and institutional arrangements are supplied by the actors themselves to ensure coordination. This study was carried out in the Campos de Cima da Serra in southern Brazil, where the Serrano cheese is produced. It is an informal production. In fact, new consumers' preferences for young instead of matured cheese, and national hygiene standards that are incompatible with small-scale and artisanal production make the legalization of the sales impossible for the producers. The aim of the study is twofold. First, it brings forward the territorial and value chain governance approaches from French- and German-speaking literatures. Second, based on the analysis of institutional arrangements, it assesses the quality of territorial governance processes. For that end, the institutional arrangements implemented in the states of Santa Catarina and Rio Grande do Sul, in the Campos de Cima da Serra, were analyzed. Results show that two different strategies are adopted: In Santa Catarina, there is a strong coordination between all municipalities, whereas in Rio Grande do Sul, municipalities are acting independently, leading to less effective governance. However, institutional arrangements in both states are facing a lack of dynamism. They suffer especially from little mobilization of producers and little involvement of local authorities. The extension services are the central actors of the collective action, following a top-down model. Thus, the achievement of collective action would require more participatory governance through the integration of the different actors in the process, as well as support from the larger institutional environment.

Zusammenfassung

Regionale Governance ist im Hinblick auf eine regionale Entwicklungsperspektive von wachsendem Interesse. Um eine Koordinierung zu ermöglichen, werden organisatorische und institutionelle Arrangements von den Akteuren selbst geschaffen. Diese Studie wurde in der Campos de Cima da Serra Region in Südbrasilien durchgeführt, wo der Serrano-Käse hergestellt wird. Dabei handelt es sich um eine informelle Produktion. Aufgrund der Präferenzen der Konsumenten für jungen statt reifen Käse sowie aufgrund neuer nationaler Hygienestandards, die mit der Produktion kleiner und handwerklicher Betriebe unvereinbar sind, wurde der Käseverkauf für illegal erklärt. Diese Studie verfolgt zwei Ziele. Erstens werden die Ansätze zur territorialen Governance sowie zur Governance in Wertschöpfungsketten der französischen und deutschen Literatur vorgestellt. Zweitens bewertet sie die Qualität der territorialen Governance-Prozesse auf der Grundlage der Analyse der institutionellen Arrangements. Dazu wurden die umgesetzten Arrangements in den Bundesstaaten Santa Catarina und Rio Grande do Sul auf den Campos de Cima da Serra analysiert. Dabei zeigen die Ergebnisse, dass zwei verschiedene Strate-

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gien verfolgt werden. Während es in Santa Catarina eine starke Koordination zwischen allen Gemeinden gibt, arbeiten die Gemeinden in Rio Grande do Sul unabhängig, was zu einer weniger wirksamen Governance führt. Jedoch sind die institutionellen Arrangements beider Staaten mit mangelnder Dynamik konfrontiert. Sie leiden insbesondere unter geringer Mobilisierung der Produzenten sowie geringer Beteiligung lokaler Behörden. Beratungsdienste sind nach einem Top-Down-Modell zentraler Akteur der kollektiven Maßnahmen. Der Erfolg der kollektiven Maßnahmen würde somit eine stärkere partizipative Governance durch die Einbeziehung der verschiedenen Akteure in den Prozess sowie eine Unterstützung des weiteren institutionellen Umfeldes erfordern.

Keywords territorial governance, institutional arrangement, mountain cheese, Brazil

1. Introduction

Globalized and production-oriented agriculture often leads to spatial inequalities and the exclusion of peripheral rural regions (Torre and Vollet 2016). Rural mountain regions, where cheese production is significant, are particularly affected by this phenomenon. Indeed, rural mountain areas are generally less provided with infrastructure, difficult to access and far away from political decision-making. These areas can hardly compete with urban and more developed rural regions concerning generic resources (e.g. labor and infrastructures) (Colletis and Pecqueur 2004). However, globalization offers new paths of development for these territories through endogenous development based on local resources, cultures and identity, in order to propose specific and differentiated goods and services (Pecqueur 2001). This process depends on the ability of the local actors to act collectively to valorize the resources of the territory (Torre and Vollet 2016).

On the one hand, the value chain approach is a common approach to describe the sequence of activities implemented from the conception until the marketing of a product. It is mainly based at the global level and sets the local in a perspective of adaptation to globalization (Gereffi et al. 2005). On the other hand, the notion of territorial governance is of growing interest in an endogenous development perspective. Territorial governance refers to horizontal mode of coordination between local actors, but also integrates vertical relationships between different administrative levels (Pasquier et al. 2007). This concept considers new issues related to public action, such as the participation of local actors which involves cooperation between all types of actors to achieve common goals (Fürst 2001: 1; Pasquier et al. 2007: 58). Spatial concentration of activities and social interactions based on geographical and social proximities are the key determinants

of territorial governance (Torre and Rallet 2005). Localized institutional arrangements aim at gathering around territorial issues and supporting and securing a framework for collective action (Muchnik et al. 2007).

The analysis was conducted in the Campos de Cima da Serra region in southern Brazil, where the Serrano cheese is produced. In this region, small-scale cheese production became the backbone of the economy. Today we are observing a growing demand for this cheese. However, the production has become informal partly due to new expectations of consumers. Indeed, consumers look for young cheese of less than thirty days of maturation but the Brazilian legal framework does not authorize the selling of raw milk cheese with less than sixty days of maturation. Moreover, national hygiene standards are incompatible with conditions of small-scale and artisanal production. Nonetheless, since the last decade we have observed an increase of collective actions through the implementation of localized institutional and organizational arrangements aiming at recognizing the Serrano cheese and legalizing its sales. The production area is, though, located between two states: Santa Catarina and Rio Grande do Sul. These two states have different political and institutional contexts, thus leading to different arrangements.

The aim of this article is twofold. First, it compares German- and French-speaking literatures on value chain governance and territorial governance. Indeed, French-speaking literature is usually rarely translated and thus hardly accessible, although this perspective appears interesting for the study. Second, it analyzes the way in which localized institutional and organizational arrangements generate better territorial governance processes in excluded mountain rural areas. There is a lack of assessing methods of gover-

nance processes as previous studies mainly focused on describing governance modes based on an outcome approach (Fürst 2007). The present article will complement this research by enriching the reflections on territorial governance processes through a comparative analysis of institutional and organizational arrangements implemented in both states.

The article is structured as follows: the initial section outlines the conceptual framework which puts into perspective the notions of territorial governance and value chain governance. Then, the third and the fourth section present the case study and the methods respectively. After that, the fifth part brings forward the results. Last, the sixth section outlines the conclusion.

2. Theoretical framework

In French literature, the concept of territorial governance is of growing interest to analyze coordination processes among actors producing goods or services in a given territory (Torre and Vollet 2016), whereas in German literature the notion of value-chain governance is more widely used. In this section, the different concepts will be outlined and put into perspective.

2.1 The relevance of territory to analyze governance

In German literature, the term of *region* is mainly used to characterize local governance (Fürst 2007), whereas in French literature, we see a renewed interest in the concept of *territory* since the 1980s, especially in social geography (Di Méo 2016). By contrast, *territory* in German literature is considered predominantly as a political space, similarly to the notion of *region* in French literature (Di Méo and Buléon 2005). According to Di Méo (2016), territory is a social construct which combines individual and collective dimensions. It is not only the space of our everyday life that includes a material dimension, associated with practices, but also refers to the ideal dimension of representations (e.g. symbols). It is also the framework for collective action with particular governance structures. Indeed, the geographical and social proximities between actors favor the mobilization of actors, encourage cooperation around common projects and best articulate public action to local characteristics (Pasquier et al. 2007).

Territorial governance has been defined by Rey-Valette et al. (2010: 4) as “a dynamic process of coordination between actors that are geographically close but with multiple identities (e.g. public, private) and asymmetrical resources (e.g. power, status) around territorialized issues. Territorial governance aims at the collective construction of objectives and actions by implementing multiple arrangements that are based on collective learning and participate in institutional and organizational reconfigurations/innovations within the territories”. Territorial governance is understood as a horizontal mode of coordination between different actors. Nonetheless, it also integrates vertical relationships with upper decision-making levels (Pasquier et al. 2007: 58). Participation of the various actors involved (not only productive) is a central principle and includes many dimensions, for example equity and empowerment (Davoudi et al. 2008). Also, territorial governance considers power relations and their resulting conflict dimension (Torre and Beuret 2012: 64).

Institutional arrangements refer to the set of codified rules, including monitoring and sanctioning mechanisms, and to formal collective organizations (Ostrom 2007). Institutional arrangements (including organizational arrangements) constitute the dynamic architecture of territorial governance (Lardon et al. 2008). They depend on local specificities (Gilly and Wallet 2005). The challenge of institutional arrangements is to organize the discussion and the coordination between the various actors involved in order to agree on common objectives (Polge 2015: 46). For this purpose, they need to adapt and readjust permanently to ensure the diversity of actors, their representativeness, their independence and the equality in terms of participation and access to information (Lardon et al. 2008). The success of collective action is therefore highly dependent on the institutional arrangements supplied by local actors themselves (Ostrom 1990).

2.2 Perspectives on territorial and value chain governance

The value chain approach that is largely used in German-speaking geography (Dannenbergh and Kulke 2014), provides information on the structure of production systems and the relationships between key actors. It corresponds with the sequence of activities implemented from the conception until the marketing of the product. Research on value chains has become

relevant especially at the global level (Gereffi et al. 2005; Henderson et al. 2002). Furthermore, agro-food industries have been a fertile ground for empirical applications of the value chain approach (e.g. Dannenberg 2011; Neilson and Pritchard 2009). The approach has benefited from many contributions of the Filières analysis, developed by French economists in the 1970s (Lenz 1997). The concept of value chain governance has significant involvement with regard to the control of the production process and to the capacity for appropriation of the value created along the chain (Henderson et al. 2002). Gereffi et al. (2005) developed five modes of governance, determined by the power relations between firms: governance by the market, modular governance, relational governance, captive governance and vertical integration. These patterns are mainly based on three factors: the complexity of the knowledge and the extent to which this knowledge can be codified as well as the capabilities of the suppliers.

Value chain and territorial governance provide different perspectives of analysis. On the one hand, the value chain approach focuses on the sequence of complementary activities involved in the design, production and marketing of a product. Mainly based at the global level, this approach takes into account structural constraints emerging from globalization and set the local in a perspective of adaptation to these global processes (Gereffi et al. 2005). Furthermore, many recent studies have analyzed how small-scale farmers are integrated into large-scale value chains (see e.g. Dannenberg and Kulke 2005). On the other hand, the territorial approach gives a relevant reading of the role of local synergies in development dynamics. Territorial governance offers new forms of collective action based on geographical and social proximities (Torre and Rallet 2005) and above all aims at promoting local development (Torre and Vollet 2016). Also, this implies a redefinition of the notion of quality, principally linked to the origin (Marsden et al. 2000; Pecqueur 2001). In territorial coordination, actors who influence the organization of production systems, such as institutions or consumers, play a central role (Marsden et al. 2000; Torre and Vollet 2016). Moreover, the territory allows agricultural activity to be conceived beyond its material production alone and to give it back its cultural and social dimension (Muchnik et al. 2007).

The demand for Serrano cheese is growing (Cruz 2012). However, cheese production is still largely informal, because of administrative constraints and consumer preferences, which prevents the farmers to find a niche for larger-scale markets. Indeed, face-to-face relations between producers and institutional actors (e.g. extension services) as well as between producers and consumers predominate. In this sense, the notion of territorial governance seems to be more appropriate for the present case study and, therefore was chosen for the analysis.

3. Case study

In this section, the first part presents the characteristics of the Serrano cheese production, the extension services and the regulation systems. Then, the second part brings forward the question of governance in rural territories in Brazil.

3.1 The Serrano cheese production

3.1.1 Characteristics of the production

The Serrano cheese is a traditional raw milk cheese, produced as a by-product of beef cattle farming in the Campos de Cima da Serra region. This region is located in two different states: Santa Catarina, which gathers eighteen municipalities and Rio Grande do Sul, which regroups sixteen municipalities (see Fig. 1) (Vieira and Dortzbach 2017). The region is isolated, with low infrastructure development and a low population density (10.2 inhabitants/km²) (Ambrosini 2007).

Livestock farming is the main economic activity in the region. More than 90% of the farms are small-scale family breeding systems (Ambrosini 2007). It is estimated that more than two thousand families produce Serrano cheese (one thousand families in each state). In doing so, for most of them cheese making is the principal economic activity on the farm (more than 50% of the revenue) (Ries et al. 2014). The most common production system is an extensive mixed dairy-beef livestock system. Production is low: the average cheese production per farm per day is about 10 kg (Ambrosini 2007).

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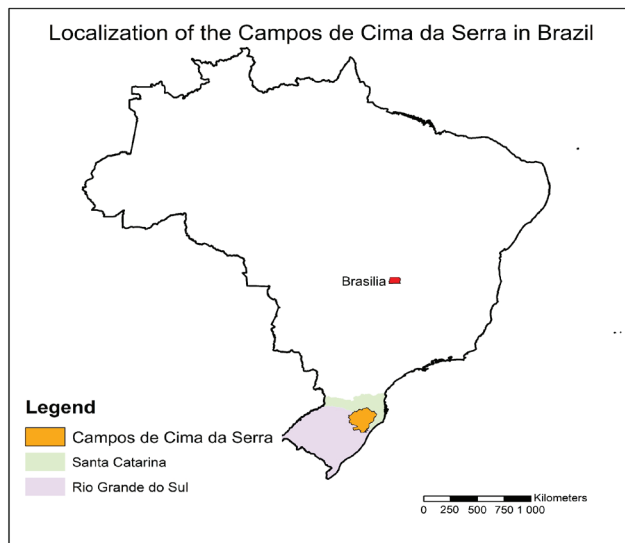


Fig. 1 Geographical area of the Campos de Cima da Serra. Source: own elaboration based on IBGE (2018)

3.1.2 The extension services

In Santa Catarina, the EPAGRI-SC is the public Company of Agricultural Research and Rural Extension. It is linked to the Secretary of State for Agriculture and Fisheries and was created in 1956. There are two regional offices and every municipality has its own office. At the regional scale, one extension agent coordinates a group of eighteen extension agents (one in each municipality) working especially on the Serrano cheese production.

The EPAGRI-SC signed agreements with the Ministry of Agriculture, Livestock and Food Supply (MAPA). In 2008, the first one was signed in order to implement projects with the objective of promoting the historical recovery of the Serrano cheese. It also aimed at registering and training producers, analyzing the physical, chemical and microbiological characteristics of the cheese as well as describing production and manufacturing processes. In 2013, the second agreement aimed at obtaining the label of denomination of origin *Campos de Cima da Serra*. This designation of origin allows for protecting the Serrano Cheese and valorizing the typicality of this cheese through the recognition of the region of production and the know-how of production and processing (Vieira and Dortzbach 2017).

In the Rio Grande do Sul, the EMATER-RS is the Company of Technical Assistance and Rural Extension, created in 1955. This institution is private and has no agreements with the MAPA to implement joint projects with the EPAGRI-SC. There is one regional office and all municipalities have their own office with one or several extension agents working directly with the producers. At the EMATER-RS, there is no group dedicated to the Serrano cheese production. The extension agents have to deal with all activities led by the services and all kinds of productions.

3.1.3 Legislation and regulation systems

The Brazilian legal framework does not authorize the selling of raw milk cheese with less than sixty days of maturation since law n°1.283 came into force in 1952 through regulation n°30.691 (*Presidency of the Republic of Brazil* 1950, 1952). The majority of Serrano cheese producers do not respect this restriction. As consumers prefer young cheese over matured one, producers sell their product within less than thirty days. This makes their sales illegal. Moreover, the san-

itary norms in Brazil for dairy products do not consider the specificities of artisanal production. Instead, artisanal production is subject to the same sanitary standards and facilities as big dairy industries. Thus, high costs of adaptation make it impossible for small scale farmers to comply with the requirements (Cruz 2012).

Today, there are two kinds of certification authorizing the marketing of Serrano cheese but only for mature cheese, ripened for more than sixty days. First, the certification delivered from the municipal inspection service (SIM) authorizes the marketing of Serrano cheese within the area of the municipality. The inspection veterinarians employed by the prefectures of the municipalities control the health of the herd and the adequacy of the infrastructures. Only eighteen families have the SIM certification within the region. Second, at the state level in Santa Catarina state, the law for authorizing Serrano cheese sales has been signed in September 2016 (Law n° 17.003/2016) and the decree in July 2017 (Decree n°1238/2017) (*State of Santa Catarina* 2016, 2017). In the state of Rio Grande do Sul, the law n°14,973 which legalizes the commercialization of Serrano cheese, was approved in December 2016. The decree n°54.199 was approved in August 2018 (*State of Rio Grande do Sul* 2016, 2018). However, no producer has yet obtained the state certification. At the federal level, there is no legislation authorizing the Serrano cheese sales in the country.

In this context of informality, the majority of Serrano Cheese is sold locally. Consumers usually come to the farms to buy the cheeses, but producers also take the cheese to the market, and even intermediaries buy the cheeses on the farms to sell them in bigger cities (Cruz 2012).

3.2 Governance in rural territories in Brazil

From the 1960s, the development of rural areas was associated with the process of agricultural modernization through the substitution of factors considered to be outdated. Thereby, technical innovations from research were diffused to rural properties by agricultural extension services. This process called 'green revolution' was led by actions of the government and international institutions (Schneider 2010). The green revolution also called 'conservative modernization', which involved especially large agricultural exploitations and maintained the structure of the agrarian system in place (latifundium vs. minifundium) (Coy and Neuburger 2002).

Nonetheless, the 1988 constitution provided new opportunities for civil society participation (Grisa and Schneider 2014; Polge 2015: 48). In fact, since the 1990s, a change of focus and understanding about rural development has gained ground in Brazil, revitalizing the theme and generating new approaches. Discussions about family farming and its potential became a political and social category, recognized by the Brazilian government in the mid-1990s. This recognition was strongly linked to the re-organization of social movements and organizations that had been repressed during the military dictatorship and now returned to the political arena. The process of re-emergence of the debate on rural development and of the recognition of family agriculture in Brazil resulted in the growing influence and action of the government and the formulation of public policies. First, the National Program for the Strengthening of Family Agriculture (PRONAF) was created in 1995 to support the agrarian reform settlements and give credits to family agriculture. The PRONAF also triggered the emergence of other differentiated rural development policies (i.e. food security policies, land regularization, support to indigenous peoples) (Schneider 2010). Second, the Ministry of Agrarian Development (MDA) was created in 1999 to represent family agriculture. The MDA stood as an alternative and an opposition to the notion of agribusiness that produces commodities mainly for export, represented in turn by the MAPA. In 2006 the Family Agriculture Act was implemented, which recognized the social category, defined its conceptual structure and started to standardize public policies for this social group (Grisa and Schneider 2014).

However, policies concerning family farmers are still insufficient to promote territorial development. Indeed, there are great challenges for local actors to become protagonists of development processes and make their own decisions (Polge 2015). Moreover, we are witnessing a regression regarding the debate and recognition of family agriculture since 2016, including the abolition of the Ministry of Agrarian Development and the reduction of the budget allocated to family agriculture.

4. Methods

This section presents the methods used to collect the data and to qualitatively assess territorial governance.

4.1 Data collection

The data for this contribution has been collected through semi-structured interviews with local actors during three sessions of field work. The first field work was conducted in February 2017, the second one in August and September 2017 and the third one in March 2018. A total of sixty-seven producers and extension agents, inspection veterinarians and secretaries of agriculture were interviewed in eight municipalities of the Campos de Cima da Serra region. In addition, one interview was realized at the head office of the EMATER-RS and two at the regional office of the EPAGRI-SC. Finally, one interview was conducted with a deputy at the Rio Grande do Sul state assembly, involved in the defense for the legalization of the Serrano cheese.

The questionnaire used with the producers refers to the qualitative study of the relations between the actors (i.e. the degree of trust, description of conflicts). It also concerns the degree of involvement in collective organizations (e.g. frequency of participation in associations) and the main difficulties that these organizations face according to the interviewed actor.

The questionnaire used with the extension agents, inspection veterinarians and secretaries of agriculture also refers to the qualitative study of the relations between actors (i.e. the degree of trust, description of conflicts). Besides, it is related to the description of the operation of different institutions and collective organizations (extension and inspection services, associations, federations, etc.) and the main difficulties that they face.

Furthermore, legislative texts (laws and decrees) and legal status of associations were analyzed.

Finally, we participated in four monthly meetings of producers' associations and in one technical meeting with the group of extension agents of the EPAGRI-SC dedicated to the Serrano cheese, in order to better understand the functioning of the institutions and the relations between actors.

4.2 Qualitative assessment of territorial governance

The assessment, based on eight indicators, of territorial governance was realized by means of the quali-

tative evaluation of the institutional arrangements implemented in both states. These indicators are adopted from a method developed in 2009 by the Secretariat of Territorial Development (SDT) of the Ministry of Agrarian Development (MDA). This method was created to assess institutional arrangements in Territórios da Cidadania (Territories of Citizenship), which are projects of development in disadvantaged rural regions and were implemented by the government through the SDT/MDA (MDA/SDT 2014; Piraux 2014; Piraux and Caniello 2016). The eight indicators are the following:

- available institutional services;
- involvement of local authority;
- management of conflicts;
- capacity of mobilization;
- dialogue with the state;
- improvement of social and cooperative relations;
- capacity of exchange of experiences and knowledge;
- technical capacity in relation to projects.

The assessment was based on three scores: good, average and bad according to the analysis of the institutional arrangements that have been realized previously.

5. Results

In this section, the first part presents the analysis of the institutional arrangements implemented in the two different states of the Campos de Cima da Serra. The second part outlines the qualitative assessment of the territorial governance, derived from the results of the first analysis.

5.1 Institutional arrangements implemented in Santa Catarina and Rio Grande do Sul

5.1.1 Santa Catarina

In 2009, the Consórcio Intermunicipal Serra Catarinense-CISAMA was created under the incentives of the Association of Municipalities of the Serrana Region-AMURES, which regroups the eighteen municipalities of the Campos de Cima da Serra in Santa Catarina. The CISAMA links together different institutions involved in the value chain (secretaries of agriculture, extension services, inspection services,

etc.) and allowed for the creation of the municipal inspection services in each municipality and the standardization of the norms between them. There is one technical responsible for the inspection services at a regional level, who unifies the information and gives guidelines to the SIM. Until today, six families received the SIM certification and twenty-four others entered the process of legalization. However, some municipalities show a low involvement in the development of the Serrano cheese production and do not employ an inspection veterinarian, thus preventing the producers from entering the process of legalization.

Furthermore, the producer association APROSERRA, grouping the eighteen municipalities of Santa Catarina state, was created in 2013 under the incentives of the EPAGRI-SC. The objectives of the association are the qualification of the Serrano cheese and the legalization of its sales. Today, more than seventy families are members of the association. Meetings are organized monthly to exchange information between members. Members can also participate in courses given by the extension services to improve the hygiene of milking as well as the cheese fabrication. Through the existence of the APROSERRA, the state government contributed to 50% of the construction costs of thirty-two dairies in 2016.

Last, the association allowed the creation of six Clubs of Integration and Exchange of Experiences (CITES). They are smaller groups of producers between different municipalities. The aim of the CITE group is to regroup producers in order to strengthen their technical knowledge and increase the interactions between different municipalities as well as to improve the quality of production. This method was developed through an agreement between the EPAGRI-SC and the MAPA. There is a monthly meeting to exchange experiences on the farms with a presence at least of one extension agent of the EPAGRI-SC for technical support.

5.1.2 Rio Grande do Sul

The Association of the Municipalities of Campos de Cima da Serra – AMUCSER – regroups municipalities in Rio Grande do Sul, based on the model of AMURES in Santa Catarina. However, AMUCSER joined only eleven prefectures of the sixteen municipalities producing Serrano cheese and there is no consortium that allows a standardization of the SIM between municipalities. This has resulted in a difference of norms re-

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quired for the legalization of dairies. Moreover, like in Santa Catarina, not all municipalities have inspection veterinarians because of a lack of investment of the prefectures. Today, twelve families have certificated dairies, and many are in the process of legalization.

In Rio Grande do Sul, three associations of producers were created under the EMATER's incentives in order to strengthen the legalization of the cheese. The first association, called APROCAMPOS, in the municipalities of São José dos Ausentes and Bom Jesus was created in September 2010. There are currently forty-two members. Thereafter, APROJAC was created in 2012 in the municipality of Jaquirana. In 2017 the municipality of Cambará do Sul decided to join the association because of the difficulty to recruit new members. Actually there are twenty-six member families.

Lastly, APROSAOCHICO was created in 2016 in the municipality of São Francisco de Paula and today includes only six producer families. Even though Rio Grande do Sul was pioneer in the creation of associations, until today only five municipalities created an association.

Through the Program FEAPER, the state Secretariat for Rural Development, Fisheries and Cooperatives allowed a rural credit to fifteen families, members of the different associations for the construction of small dairies. It funded different projects as the building of the head office of APROCAMPOS. In addition, the Banco do Brasil Foundation offered, via APROCAMPOS, a financial support of 80% of the construction costs for nine small dairies. *Figure 2* presents the different institutional arrangements implemented in the Campos de Cima da Serra in Brazil.

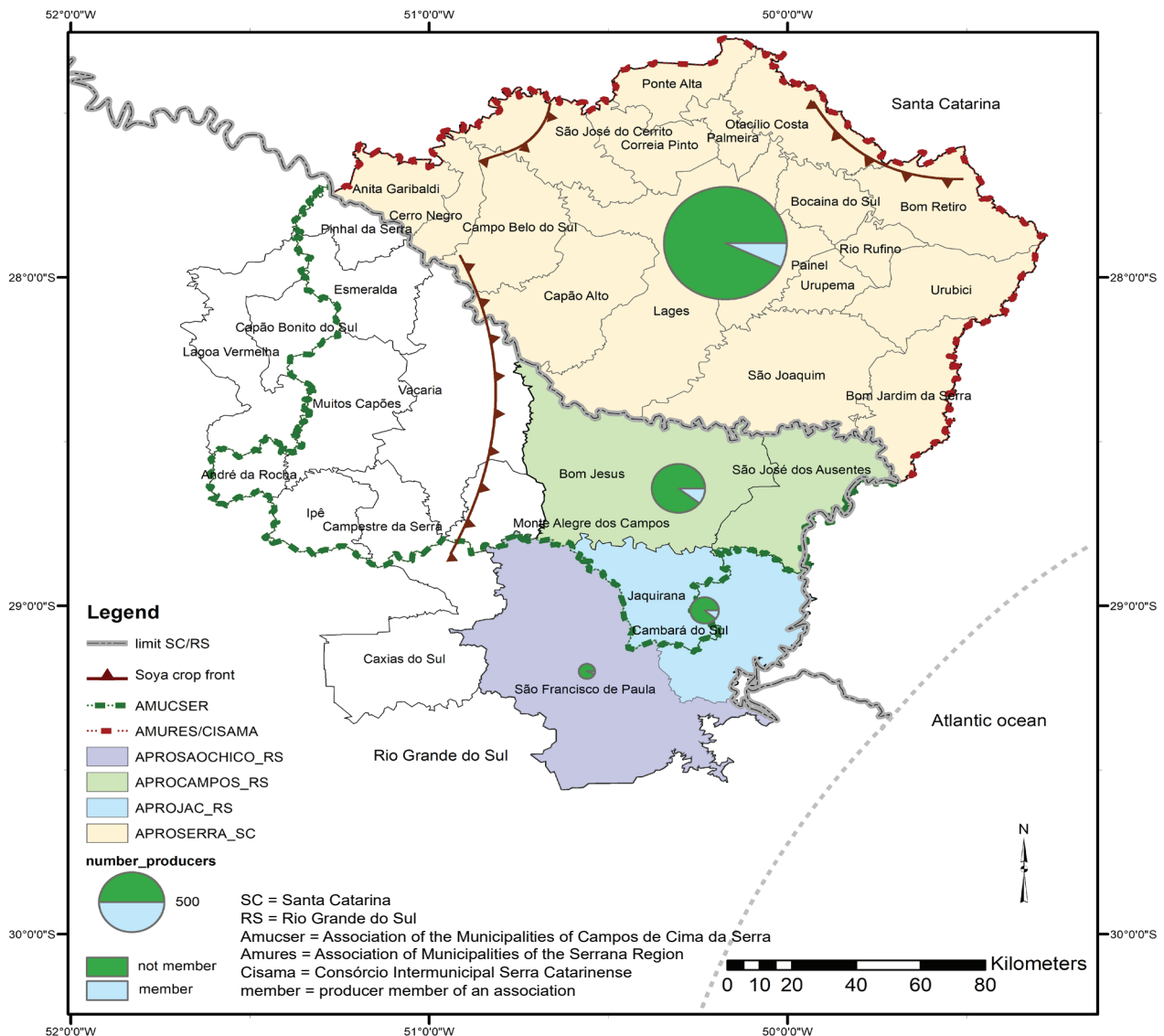


Fig. 2 The different institutional arrangements implemented in the Campos de Cima da Serra. Source: own elaboration

5.1.3 Toward cooperative relations in the whole Campos de Cima da Serra region

The federation FAPROQAS, which gathers the four associations of the region, was created in 2017. It represents the first official partnership between two different states and gathers six producers of Santa Catarina and six of Rio Grande do Sul, all members of the board of directors of different associations, as well as some extension agents. The APROSERRA coordinates the Federation. The federation was a prerequisite to request the designation of origin at the National Institute of Industrial Property (INPI) in 2017.

Since 2012, the Interstate Symposiums of Serrano Cheese between all municipalities are organized every two years by the EMATER-RS and the EPAGRI-SC. The symposium is an important space for discussion among producers, technicians and public authorities on issues related to the production and to the legalization at the municipal, state and national level.

5.2 Qualitative assessment of the governance

The description of the institutional arrangements between two different institutional and political contexts allows assessing the quality of territorial governance processes. This qualitative assessment for both states is based on eight indicators taken from the method developed by the SDT/MDA in 2009 and exposed in Table 1.

Table 1 Qualitative assessment of territorial governance processes in the Campos de Cima da Serra based on eight indicators taken from the method developed by the SDT/MDA in 2009 (MDA/SDT 2014; Piraux 2014; Piraux and Caniello 2016)

Indicators*	Santa Catarinal	Rio Grande do Sul
Available institutional services	+/-	-
Involvement of local authority	-	-
Management of conflicts	+/-	-
Capacity of mobilization	-	-
Dialogue with the state	+/-	-
Improvement of social and cooperative relations	+	+/-
Capacity of exchange of experiences and knowledge	+	-
Technical capacity in relation to projects	+	+/-

* + = good score; +/- = average score; - = bad score

The first indicator corresponds to the ‘availability of institutional services’ (i.e. extension services, inspection services). In both states, there is at least one extension agent available in each municipality. Regarding the inspection services; in Santa Catarina, a municipal inspection service was created in every municipality through the action of the CISAMA. However, some municipalities do not employ an inspection veterinarian. In Rio Grande do Sul, not all the municipalities have a service of inspection or employed an inspection veterinarian. This issue, due to a lack of investment from the prefectures, impedes the legalization process of dairies in the concerned municipalities.

After that, ‘the involvement of local authorities’ in institutional arrangements is small in both states. For example, they rarely participate in collective organizations, such as associations, or, as described beforehand, they do not always employ an inspection veterinarian.

The third indicator concerns the presence of structures to resolve conflicts. In Santa Catarina there is a consortium that gathers the different actors together and standardizes the norms of legalization. In this sense, the structure allows limiting conflicts, especially between inspection veterinarians. Besides, a regional coordination of the extension services limits the appearance of conflicts through a better dialogue between the different municipalities. In Rio Grande do Sul, such structures are not present. Moreover, many municipal extension agents reported the deficiencies of the management in the regional office as well as conflicts between the regional direction and the municipal offices, resulting in a lack of dialogue.

The indicator ‘capacity of mobilization’ concerns the number of actors involved in institutional arrangements and the frequency of meetings. We observed that there is a lack of dynamism within the associations, with little engagement from the producers. Indeed, there are still few members within the associations (Fig. 2) and many producers do not participate regularly in monthly meetings. The extension services are central for the functioning of the associations and for taking initiatives and decisions. Also, the creations of the state laws, as well as the request for the designation of origin were enabled by the actions of the extension services. Thus, they are the drivers of collective action, however, following a top-down model.

Concerning the indicators 'dialogue with the state' and 'technical capacity in relation to projects', Santa Catarina has a better ability to communicate with the state, as the EPAGRI-SC is a public institution. It can easily receive financial support from the state through agreements to conduct the project. In addition, the dedication of eighteen extension agents on Serrano cheese production and the fact that extension and research are linked together allows for giving more attention and weight to the development of the cheese production and to have a greater political strength. Nonetheless, concerning inspection services we observed a lack of dialogue between the municipal inspection services with the state inspection services in both states. Many producers, veterinarians and extension agents complain about the norms imposed at the state level being too strict and not complying with small-scale and artisanal production.

After that, in both states there was an improvement of social and cooperative relations between the producers after the creation of the associations. Indeed, before the creation of the associations there was no formal exchange between the producers. In Santa Catarina, cooperative relations between institutional actors of the different municipalities were established through a strong coordination, whereas in Rio Grande do Sul we saw a lack of cohesion between the municipalities. AMUCSER does not include all municipalities of the production region. Moreover, there are only three associations in five of the sixteen municipalities and there is no coordination between the associations. Indeed, the associations are developed in municipalities located in the East because on the West side cheese production is less important. Here, commodity crops, especially soya developed due to more favorable pedo-climatic conditions, representing up to 46% of the municipality area. To a smaller extent (until 8% of the municipality area), the advance of soya crops can also be observed in the West and North of the region in Santa Catarina (IBGE 2017). In this sense, the advance of soya crops seems to inhibit collective action emergence for the defense of Serrano cheese. Moreover, Italian immigration has been more important in the East side of the region, where Serrano cheese production is not part of their culinary identity. This also explains the lower proportion of Serrano cheese producers (Fig. 2).

At the Campos de Cima da Serra region level, communication and exchanges between the two states are mainly realized by the extension services. These

exchanges are based on official meetings in order to define the research lines and organize the interstate symposium, as well as on local events like cheese competitions, municipal fests, etc. However, there is little exchange between the inspection veterinarians of the two states. Subsequently, the interactions between producers began to develop after the creation of the FAPROQAS. Notwithstanding, interactions between producers' leaders of the collective action, are still very isolated.

Finally, concerning the indicator 'capacity of exchange of experiences and knowledge', the associations in both states and the CITES in Santa Catarina represent important areas of discussion between producers and extension agents. Additionally, the technical group of the EPAGRI-SC dedicated to the Serrano cheese production as well as the coordination between the inspection services in Santa Catarina allow more exchanges between technicians and also a better technical capacity in relation to projects compared to Rio Grande do Sul.

6. Conclusion

The Campos de Cima da Serra, where the Serrano cheese is produced, is located between the states of Santa Catarina and Rio Grande do Sul. The two states have different political and institutional contexts, which allows for drawing a comparison between the institutional arrangements implemented in both states in order to qualitatively assess territorial governance. On one hand, in Santa Catarina, the project of valorizing and legalizing Serrano cheese sales is implemented at a regional scale by a strong coordination between the municipalities, whereas the process is independent between municipalities in Rio Grande do Sul. Also, not all the municipalities carry out projects of cheese valorization in Rio Grande do Sul. It is important to note that where soya crops are expanding, especially in the Southwest of the region, there is no form of collective action for cheese valorization.

The quality of governance processes depends on the integration of the different actors (Pasquier et al. 2007). However, we showed that the extension agents of the municipalities were drivers of collective action, following a top-down model. This leads to a low level of initiative and participation of the producers in collective action. Many findings have already demonstrated that top-down models are rarely efficient

and successful for collective action (Darré 1996; Ostrom 2004). Local actors need to build in common institutional arrangements in order to master their own model of development. This is why they require a more participatory governance framework, based on horizontal coordination (Pasquier et al. 2007). Also, coordination between the two states appears instrumental for common initiatives in the whole production area. Thus, success of collective action is highly dependent on the institutional arrangements constituted by local actors in a self-governing process. Implementation of multiple layers of nested organizations (e.g. associations and federations) at the local level is a central condition for achieving governance robustness. Nonetheless, governments are also important in potentially performing collective action (Ostrom 1990). In our case, the lack of legal frameworks for cheese production constitutes a major blocking factor to local initiatives. Complementarity between localized institutional arrangements embedded in a larger institutional environment is therefore instrumental for long-enduring governance.

Furthermore, the establishment of cooperation with other territorial actors, related for example to the growing tourism, increases the complexity of territorial coordination but appears important for a better valorization of the cheese (Pecqueur 2001). The combination of these elements is crucial to meet quality standards and qualification of the Serrano cheese and, in a larger extent, to the development of the territory as a whole.

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