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# Territorial Governance and Social Innovation: The Cases of San Pedro Capula's Artisanal Cheese and the Rice (*Oryza Sativa*) of Morelos, Mexico

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**Abstract:** Over the last thirty-five years, Mexico has maintained a trade liberalization policy which has depressed food production and has reconstructed the structure of the agri-food sector; this has generated a higher food dependence and insecurity. In order to face this structural change, new organizational and socio-productive dynamics have emerged in communities, which take into consideration food diversity, heritage and cultural conditions of rural areas. In this paper, we use the theoretical approach of Localized Agrifood Systems (LAFS) and the operative concepts of governance and social innovation to analyze and understand the efforts that at the base of society are created to grant development of productive systems. Therefore, we present the results of an investigation based on the exploration of two LAFS cases; in these cases, different strategies to achieve development have been established: the elaboration of artisanal cheese in the state of Hidalgo, and the production of rice in the state of Morelos, Mexico. Research results show the importance of concepts such as Social Innovation (SI) and Governance within the framework of localized agri-food systems in rural studies, this, in order to identify the needs and potentials of family farming and producer's groups inside the new contexts generated by globalization and market liberation process.

**Keywords:** territory development; governance; social innovation; LAFS

## 1. Introduction

Searching for the country's development in the current context, we find poverty conditions that are not easily overcome. In Mexico, during 2016, 43.6% of the population was classified as poor, 36.5% of this percentage was in poverty and 7.6% in extreme poverty. On the other hand, 24% of the rural population expresses conditions of greater vulnerability, 61% is poor and 40% of this percentage is in a situation of poverty, and 21% in extreme poverty [1].

It is sufficient to say that in México there are no signs of inequality being diminished; 30% of households with the highest income concentrate the 63.3% of total income, meanwhile 30% of households with the lowest income participate with only 9% of the total income. That is to say, that the tenth decile of households concentrates 21 times more income than the first decile, which is the lowest [2].

Public policies that have prevailed to face the poverty situation of people are mostly welfare and are not aimed to stimulate the value generation of the productive activity, which may allow the development of poor and most disadvantaged populations.

Under these conditions, the poor has had one way to face this problem which it has been emigration. In Mexico, emigration has increased greatly, in 2010, 11,828,349 people have emigrated and in 2015 this number increased to 12,339,062 people. However, there are experiences interesting enough

that would represent great solution efforts with social responsibility from the local communities and from civilian society.

In this research, we focus on a very important problem, poverty in rural areas and a basic need: food. Our point of view comes from creating value in food production to increase local development. We present an analysis based on understanding the efforts that exist at the base of society and that enable productive systems development, we use the localized agri-food systems (LAFS) approach and the concepts of social innovation and governance in territorial studies in order to analyze social actors that are involved in a local system in their search for development, also, this theoretical proposal allows us to identify the key elements for a public policy suggestion to stimulate and support productive activities. The empirical labor has the study of two cases of agri-food systems in which rural territorial development strategies are used: the production of artisanal cheeses in the state of Hidalgo and the production of rice in the state of Morelos.

Although the processes of markets globalization, and the concentration of production, have benefited industrializing, marketing and distributing food groups, it is observed at the same time that the valorization of local space products generates development opportunities when social innovations is incorporate in activities carried out by groups of producers, who are organized in a mostly unfavorable institutional framework, this enable them to create a quality recognized product and even to obtain a certification to enter the market. Thus, the generated innovation created by more unprotected social groups is fundamental to discuss problems with local development initiatives.

The terms in which is expressed the economic globalization have generated an oligopolistic dairy market in Mexico, with a high productive concentration of large national companies and globalized international firms on one side, and a process of marginalization of small producers in family agriculture on the other side.

The same process has happened in the rice market; we have observed in the last decade an accelerated decrease in rice production in Mexico, a condition that has required greater quantities of rice importation to satisfy local food needs, which has created high food dependence from abroad. Thus, to face this difficult situation, organizations such as the producers that are presented here, continue to generate new forms of governance that enable them to maintain a national market presence and achieve institutional advances such as the appellation of origin (DO, for its acronym in Spanish Denominación de Origen), obtained in 2012.

The essential question of this work is: Could LAFS approach contribute, through the study of social innovation and governance, to public policies formulation that helps overcome the onslaught of generalized crisis and the opening of commerce in rural areas?

In this research, it will be examined the theoretical approach of governance and social innovation in the LAFS, as a useful and adaptable approach to study vulnerable territories; Secondly, for the empirical analysis, two case studies were conducted with this theoretical approach, one of them will be the description and analysis of the activity of indigenous artisanal cheese producers, considering the family productive strategies extended to the locality to obtain benefits from use of natural resources. The rice producers from the state of Morelos in Mexico is the second study case we focused on to understand the cooperation and negotiation process that made possible the rice Denomination of Origin. Finally, the conclusions will provide elements to deliberate around the consistency of this theoretical approach, as it will also allow us to provide systemic knowledge about social actors, collective actions, social innovation and governance characteristics in underdeveloped countries. With these elements, we dare to suggest some public policy proposals that could support rural development.

## 2. Materials and Methods

This research was based on the context in which every studied case was developed, also to establish this context statistical and documentary information was used; field study was essential to record the behavior of social actors and to analyse the actions taken by the institutional actors.

Another important element on this research was the application of interviews to key informants, mostly with the rural producers. This paper examined information and documents of the municipality, as well as bibliographic documents for the study of the focused territories; lastly, the trajectory of the producers' organizations and their strategies to achieve territorial development was explored. Also, we documented fundamental elements that strengthen family collective action and local governance in the indigenous women association that aggregate value to cheese production.

Likewise, in the rice agri food system of the state of Morelos case were identified fifteen key actors, such as public and private organizations and normal population, which are considered part of the system; also these actors explain the obtaining of the rice appellation of origin, which was accompanied by an increase in productivity as a result of constant innovations, with positive effects in the regional development.

### 3. Theoretical Framework and Organizing Concepts

The nineties were a decade of great changes in the ontological and epistemological conceptions of various social disciplines around new ways of shaping social and economic activity and its importance in the territories transformation [3,4].

The theoretical background of clusters, industrial districts, and local productive systems, established relations of cooperation and trust importance as key elements for territories development, this, to create benefit from the geographical agglomeration, the labor division and an institutional environment that regulates the socioeconomic relationship between different agents located in specified spaces [5–8]. Therefore, in the middle nineties, the Localized Agri-Food Systems (LAFS) notion emerged in France. LAFS opened the door to new proposals for territorial and development analysis based on the food products with territorial linkage valuation.

LAFS are considered as the spatial concentrations of agrarian holdings, companies and network institutions specialized in the agri-food sub-sector, which undertake a collective organization option in a local level of the agri-food activities and have in common a whole series of specific assets that are intrinsic of a territory [9]. This was considered to be an innovative approach for the analysis of rural and local development since it contributed to understand the specific shapes and dynamics of production and organization that from the correlation between territories and food were originated. Hence, the LAFS emerged as a response to the public policies of standardized massive food production; in which consumption and supply saturation, enhance the return of specific food products from local territories [10].

The LAFS concept has evolved from its origins, incorporating in the debate various working concepts such as “... the food culture, collective action, rural agro-industry, the development of capacities, local knowledge and innovation networks, quality certification of products and the public policies for regional and local development” [11] (p. 71).

In order to get a complete analysis, in this paper we rescued the concept of social innovation as the organization of groups producers in vulnerable localities, which combine new forms of carrying out their activities considering the creation of value as their primary goal, this to achieve resolution of local problems. In these situations they are the main beneficiaries and head toward a territorial development.

The concept of governance is recovered and understood as a political and institutional element which has a close relation to the internal problem of the territories; these concepts will be presented in the following sections.

#### 3.1. Social Innovation

The conditions of rural poverty in the underdeveloped countries have greatly deepened in recent years, this due to structural crisis of the world economy, food crisis, and the environmental degradation. The institutional structure in charge of agri-food policies and the operation of the agrifood system itself does not offer an adequate solution to these issues, so it's necessary to identify the local efforts performed by the rural producers, in order to find the potential to face the effects of globalization

and trade liberalization policies. Hence, we consider that to study this problem in current context, it is necessary to include emerging approaches and new concepts to propose strategies to amend these issues and confronting the needs of the population.

The concept of social innovation, as a tool of analysis, allows us to add positive elements to the strengthen of organization and collective actions, so the knowledge and organizational experiences accumulation of producers is privileged, also is rescued the potential that represents the natural and cultural heritage of rural territories as a way to face adverse conditions using new innovative proposals to develop new activities to attend social and economic problems of local populations in rural territories, this tends to create a sustainable and inclusive rural development.

Thus, we consider that “innovation is a social process that involves knowledge-learning relationships in the valorization process, despite productive heterogeneity where primary producers play a fundamental role among with agro industries, research institutions, governments, and policies, this while incorporating new knowledge including local tacit knowledge” [12]. The concept of social innovation enriches the rural studies with the analytical approach of the local agri-food systems, which turns out to be an important tool to identify and register the collective activation of resources to face the poverty conditions in underdeveloped societies.

The approach of this concept has begun from the Ricardo Méndez’s work [13], who proposes the concept of innovative territory with a more comprehensive view beyond the concept of technological innovation as a business concept, according to Schumpeter; this concept of innovative territory considers factor such as social innovation, cooperation, and governance, so that the results include not only effects of competitiveness and markets position, but also contemplates the intangible effects such as the valorization of territorial capital, strategic planning and diagnosis, the emerge of local initiatives, welfare, social equity and environmental improvement.

In recent years, the concept of social innovation has had contributions from several institutions and some other authors, who establish that social innovation is a driving force for development [14] because of its creative potential. Thus, we find authors who make contributions to the concept, such as Leadbeater [15], Mulgan et al. [16], Mumford [17], Gardner, Acharya and Yach [18]. These authors highlighted social innovation while seeking for new solutions to current social needs, considering ideas for achieving social goals; this is based on the idea that people is able to identify their own problems and solve them. These authors consider the SI is an accumulative process in which ideas are shared and exchanged, applied and developed. They also agree that interactions of social nature could lead to generating social institutions.

Authors such as Murray, Caulier-Grice and Mulgan [19], rescue the concept of social innovation as a process and they summarize it in six stages. First, the situations that motivate the generation of innovations are presented; second, proposals and ideas are generated expanding the range of options that can be supported by formal methods; third, prototypes and pilot are develop in order to test the ideas; the fourth stage is to achieve its possible sustainability, the idea is applied in practice and refine, also incomes that provide financial viability for the company, or social organization are identified. The next step is the scaling and diffusion of the innovation through various strategies and, finally, the systemic change, where there is an interaction of elements such as social movements, business models, laws and, data is searched. It is important to point out that for Mulgan, social innovation it is not a linear process but rather a spiral model in which every stage has a feedback loop that generates that same spiral, which allows returning to any point of the process to review the elements of innovation.

Geoff Mulgan himself [20], in an interview in Medellin, Colombia, maintained that SI could be considered as a concept greater than technological innovation. Technological innovation appears in the nineteenth century, but by the end of the eighteenth-century innovation was known as new ideas, new ways of life, new religions. This concept, for Mulgan, integrates the SI concept in broader terms and is valid given the current technology, social life and politics conditions.

Given the socio-economic problems of the Latin American region, the Economic Commission for Latin America (ECLAC) has developed the social innovation concept as “new ways of doing things, new forms of management about the state of art in the region, to achieve better results than traditional models, that were cost efficient and, very importantly, that promote and strengthen the participation of the community and beneficiaries themselves, turning them into real actors of their own development, and therefore, strengthening citizen awareness and democracy of our region” [21] (p. 8).

Following the initial approach in this paper, the SI is a way to confront the globalization of markets, especially because in rural territories strategies oriented towards rural development are applied with transformations in production processes such as: obtaining differentiated products with added value, links among research entities, and proposals for social transformations in the institutional sphere that includes the creation of policies and programs.

The territorial approach allows us to take advantage of food diversity potential, integrated from the natural and cultural heritage of rural territories. Also, this diversity strengthens the links upon by the territory and typical or specific foods; especially with those foods related to the physical, social and human environment which include know-how, local techniques and processes of social construction. Hence, the concept of social innovation enriches the rural studies in underdeveloped countries and constitutes an important element to analyze the localized agri-food systems toward identifying social cohesion elements through new forms of governance that are geared to social welfare [12].

### 3.2. LAFS y Gobernance

LAFS proposes new forms of development and territorial analysis based on the valuation of food products with a territorial character, whose quality is given due to socio-territorial and cultural particularities of the different local spaces. Thus, the LAFS approach is presented as an innovative analysis to address both rural and local development, since it allows understanding the concentration of companies, activities of organizations and association around food products of specific territories [22,23].

Therefore, by analyzing different organizational and associative dynamics that are developed in several scales around typical food products, not only are the resources immersed in the territory identified, but also the institutions and governance processes, which are strongly consolidated in a continuous process.

At the local level, forms of coordination developed through the relationships between different actors could be appreciated, this forms of coordination perform specific activities around a particular production process and could be titled as: vertical coordination and horizontal coordination; each one defines different types of territorial governance.

On one hand, vertical coordination “is the basis of the organization in the system by integrating the chain of production and marketing that construct its own structure”; this type of organization is characterized by having a leading hierarchical structure among companies and actors [24] (p. 182). On the other hand, horizontal coordination constructs a horizontal governance which is the result of collective actions such as cooperation and competition and learning, which enable a more inclusive cooperation network while allowing the regulation of economic transactions [25,26].

In this matter, horizontal coordination creates territorial governance which makes possible “... the process of building agreements to increase well-being by coordinating socio-economic processes in a specific environmental context, with local institutions and social actors at the micro level (territory), meso (region) and macro (global economies or world economies), that articulate the action in relation of value appropriation of unique and characteristic products of a territory, or the welfare expectations generated by the valorization of that product” [27] (pp. 74–75).

Although, within the framework of localized agri-food systems, the concept of governance is relatively new, it has gained importance because it allows the proper understanding of different organizational processes among actors and decision makers around the use of specific resources of the territory.

Therefore, governance could be considered as a political and institutional element that provides the coordination and negotiation of local actors to generate dynamics for value appropriation. Considering the governance of local actors, various mechanisms of institutionalization are observed in some of these forms of coordination or negotiation such as collective trademarks, geographical indications and appellations of origin “ . . . the latter has been a reference point in the organization of producers and strategic alliances with authorities and local research institutes in countries such as Mexico, although not all of them have been a success” [28] (p. 10).

Territorial governance enables the coordination and negotiation of local actors, this is a dynamic process that is constantly changing and can be consolidated through several institutions of different scales.

#### 4. Results and Discussion

##### *4.1. Social Innovation to Face Poverty and Scarcity of the Territory. The Case of Cheese Production by Indigenous Women in San Pedro Capula, Hidalgo*

San Pedro Capula is located in the indigenous region of the Mezquital Valley, in the municipality of Ixmiquilpan, in the state of Hidalgo, here Hñähñús population have settled; they have consolidated a group identity due to the history of their cultural correlation. San Pedro Capula’s peculiarity is that in this area, more than 60% of the population is poor and only about 29% have access to nutritious food [12]. These conditions have generated an intense men emigration, leaving women, as heads of the family, the responsibility of obtaining incomes and in this case, preserving the patrimonial resources as part of an “ejido” (rural property for collective use).

The organization under study is an Association of innovative cheese maker women, which started its activities by participating in a government program which allowed them to finance the idea and the project to extend their dairy activity, expand their infrastructure for the production of new products, take advantage of their primary milk production resources and add value with the production of artisanal cheeses. The idea arose during a period of time when migrant farmers returned home, these migrants participated in the family activity with the resources of the remittances, and they also contribute with their work and knowledge, beginning along with their wives the production of typical artisan cheeses in the cheese factory in Mexico.

This activity gave them identity and allowed them to get a higher income and to learn a new form of collective organization based on the knowledge of new productive processes; along with their forms of cooperative organization that they have already practiced as “ejidatarios”.

The association was initially formed in these conditions: 24 people, 12 women, and 12 men, regularly couples, produce several types of cheeses according to the demand; especially “Oaxaca” type cheese. They have registered a brand “N’a r’ay’o hyat. SI” (which means new dawn); they have sales strategies such as selling in their own buildings or in a nearby market where their product quality is recognized. To face a growing market, they have increased their production; actions that have enabled them to bring benefits to their communities by expanding the number of natural milk suppliers, this have become and income improvement for the local residents.

Inside the group that integrates the Association, empowering a group of producers to face adverse conditions, has brought family benefits and learning, which is a result of direct activity and of bonding with institutions and other producers, thus initiating a network that stimulates its activity supported by governance, which is strengthened by SI. Remarkably, the empowerment of women, who are directly responsible for carrying out the project, enables them the opportunity to maintain their child’s education and their own self-growth.

Thus, the fundamental learning of this case lies in the SI, and the form the organization of this social group since they managed to put an idea into practice, this project has allowed them to take advantage of local potentialities, natural resources and the work of local producers, which is a learning process insider the production area, diffusion, environment care and marketing strategies. Under this perspective, it is important to establish that to finance their activities they have used government

programs along with their own resources that come from remittances. These potentialities become capacities, giving the opportunity of development to benefit the producers as well as the community. It should be taken into account that this type of SI is repeatable.

Facing new contexts such as those currently happening at the national level with changes in the neoliberal policy, such as the NAFTA renegotiation, it is necessary to generate public policies that improve sustainability of successful rural projects, which is why it is important to identify and rescue the lessons observed in research to propose policy elements, such as:

- Support the rescue of knowledge in the production of traditional foods and direct their efforts to the population in need.
- Stimulate the development of actors' production's capacities with programs that provide them with infrastructure to increase their work efficiency and facilitates linkage with knowledge institutions.
- Promote cultural transformation of institutions, organizations, and groups, to ease agreements between community initiatives and innovative processes that consider local knowledge.
- Promote the participation of social actors, by recognizing them and making sure they receive the information of programs relevant and facilitating the access as well.
- Related to the programs directed to family rural producers, it is important to consider the needs and resources communities already have in order to impulse their own development, autonomy and participation in territorial development.
- For projects like this to be sustainable, external support is; in this regard, a recommendation derived from the study is the importance of linking to research centers, to strengthen responses to needs in conditions of permanence and development of these productive efforts.

#### 4.2. Morelos State Rice

To discuss the rice case of the state of Morelos, and particularly the importance of its local actor's organization, it is necessary to establish its historical context.

In 1986, with the entry of Mexico into the General Agreement on Tariffs and Trade (GATT), the fall of the agri-food sector began, mainly due to the trade restrictions and export taxes [29] elimination. From then on, several productive sector crisis were originated, grain sector was one of them. Then, the rice production suffered severely due to the lack of credit, high prices of sowing and harvesting process, these costs were translated into low profits for the producer who was most affected by the increase in imports, losing their food self-sufficiency in the early eighties [30,31].

The dependence of rice grain abroad was consolidated with the signing of the North American Free Trade Agreement (NAFTA) in 1994 since the processed rice import (which is rice that through an industrial process has had its shell removed) went from 23% in 1980 to 81.8% in 2015. According to national consumption average, the percentage of imported product to meet domestic demand during 2016 was 85.6% [32].

Unfortunately, Mexican rice has no way to compete price-wise with the imported grains that arrive, whose prices range between \$12.00 and \$19.00 Mexican pesos per kilo, unlike domestic rice, which ranges from \$11.00 to \$15.00 and \$16.50 a \$22.00 rice denominated "rice from the state of Morelos" [33].

But, why was the price gap so big? The type of rice we study is produced in the state of Morelos; a state that is located in México's central region where the sowing of the seedlings, transplant, fertilization and weeding is still done by hand; a productive process producer of the region have been transmitted over time creating an identity and historical heritage that has been reproduced since 1836, the date on which the grain was planted for the first time in the region [34]. The production process that has differentiated the production of this type of grain with unique agronomic and culinary characteristics compared to other rice grains. Also, the rice of the state of Morelos is characterized by a visible accumulation of starch that differentiates it both in yield at the time of cooking and in flavor; these characteristics have received nationally and internationally recognition [34].

Morelos's rice has the highest percentage of yield per hectare nationwide (10.10 tons per hectare), mainly due to the close relationship established by the producers and the National Institute of Forestry, Agriculture and Livestock Research (INIFAP in Spanish) in Zacatepec and due to the genetic improvement program this institution has carried out over the years.

The link upon by INIFAP researchers and rice farmers has enabled them to find quick and accurate solutions to crop problems; researchers have also been working on new technological innovations to reduce the costs of cultivation, which are usually high.

It is a fact that the close link between actors has enabled Morelos state to remain on the rice map since the area sown has decreased by more than 70% in recent years as a result of:

- Low profits farmer obtains, which make him switch to grain with greater profits
- The growth of the urban spot, not only because of the good climate and the recreational activities that characterize the region but also due to the proximity to Mexico City.

Although the situation is not as favorable for the rice producers of the state of Morelos, they have taken advantage of the grain benefits and its specificities, as well as the network cooperation with the INIFAP researchers, who helped them to obtain the Appellation of Origin for the Rice of the State of Morelos in 2012, this, as part of the institutional arrangements generated in the local space.

The appellation of origin of the rice of the state of Morelos is an outstanding case of territorial governance. Between 1996 and 1998 the producers began to organize in order to differentiate the rice of Morelos from others that were offered in the market; for that reason, they requested help from the local government and the INIFAP for the case to be presented to the Mexican Institute of the Industrial Property (IMPI in Spanish) to obtain the appellation of origin.

The first problem they faced was the product packaging due to the existence and registration of a brand of rice "Morelos", the flagship product of one of the most important rice importers in the country. With this situation at hand, between the years 2000–2006 the producers, along with government institutions, created a collective brand called "Tradición Agrícola de Morelos", which failed due to lack of marketing impact on the consumer; these consumers kept on buying the "Morelos" rice brand. However, the rice producers of the San José's rice mill, encouraged by the Zapata rice mill (which are 2 of the 4 rice mills in Morelos State) pushed INIFAP authorities to help them draft a Mexican Standard for polished rice [35]; the norm NMX-FF-035-SCFI -2005, which specified the differences of rice Morelos quality from other states rice grains.

With this document, that endorsed the quality of Morelos rice grain, negotiations with the local government continued to write the application for Appellation of Origin of the IMPI. This institution requested the delivery of evidence and historical documents regarding the particularities of the quality of the rice and all its background in order to grant this certification.

The president of the board of San José rice mill at that time provided historical documents of the production of the entity, particularly the history of "Jagüey", a region in the southern part of the state, which is one of the most profitable in the area.

INIFAP provided important documents and research results that endorsed the agronomic and milling quality of the product, as well as morphological studies regarding the nutritional, functional and culinary quality of rice. Thus, on 20 June 2011, the application was signed by the governor and the active representative of the rice farmers of Morelos in the San José rice mill was delivered to the IMPI; four months later the application for a declaration was published in the Official Gazette of the Federation (DOF in Spanish). The appellation of Origin announcement for the "rice of the State of Morelos" was made February 2012 in the Official Gazette of the Federation.

Producers continued working with the INIFAP, to whom they requested in 2016 the elaboration of the Mexican Rice Standard of the State of Morelos [36] (NOM-080-SCFI-2016), this norm gives technical support to the appellation of Origin and enable producers to legally demand that another product in the market does not stand the name Morelos.

In the local space, a governance process was carried to obtain the Appellation of Origin of the State of Morelos, this was the result of the organization of the main actors of the Agri-Food System: producer

associations, local government, educational institutions and research centers, and the subsequent generation of a cooperation network between the various agencies and institutions that gave life to the network of processes in which the same appellation of origin is framed.

This process of territorial governance generated important institutional arrangements that enable new organizational patterns such as the creation of the Rice Regulatory Council that is in constant dialogue with the State Government who promoted the Plan for the Promotion of Rice Cultivation in the state of Morelos 2014–2018.

From 2012 until the end of 2017, producers have been perseverance in the search for new market niches as well as innovations and new technologies to reduce production costs in the field. They are trying to access gourmet market by taking advantage of the demand for products differentiated by their quality and nutritional value.

At a national level, the Morelos rice continues positioning itself as one of the most demanded by the consumer, despite the supply of foreign or domestic grains that seek to supplant the original Morelos rice at lower prices; this also means that the mechanisms for acquiring and selling grain from the mills are still effective and functional.

The organization of the “Morelenses” producers did not pass unnoticed by the Federal Government who began to design adequate financing schemes and programs to boost productivity, as well as the restitution of rice tariffs to promote competitiveness [37].

However, if the economic policy of indiscriminate commercial opening is maintained, despite producer’s efforts and proposals from the federal government to improve agro rural conditions, the future of the rice farmers of the state of Morelos will be uncertain.

Therefore, social innovation and horizontal governance processes generated in the local space will be diminished if support received from federal government and research institutes is not enough; although both actors could be considered external figures, they are important for the development of rice localized agri-food system.

In this sense, it is important to:

- implement product import tariffs that enable domestic producers to place the grain on the market at a reasonable and competitive price.
- make federal farm programs attainable to small producers.
- subsidize research to properly attend the several diseases of rice grain, promoting strategies to face crop changes due to climate change.

## 5. Conclusions

Both case studies revealed the capacity of producers to identify the potentialities that are based on their historical and cultural differentiation, as well as to find an alternative path to diminish economic issues.

It is important to identify not only the needs and challenges that markets impose but also the innovative practices and governance that have taken place in the different local spaces and also observed those activities that were supported by those actors who design and manage public policies in order to meet the specific needs of the various producers.

Therefore, designing and implementing public policies according to the socio-productive, economic, geographical and cultural characteristics of the territories is vital; the LAFS approach contributes to the identification and formulation of potentialities in the local space: therefore, we consider that the research question that guided this work affirmatively answered.

This paper’s results revealed that SI and governance exercises contribute to the empowerment of productive groups, giving the communities the opportunity to continue with the learning processes to contribute to rural development.

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