

Local Innovation Ecosystems to Strengthen Agroecology in Colombia: The Preliminary Case of LabCampesino of Tierra Libre

Juan David Reina and Julián Ortiz 09 January 2019

Summary

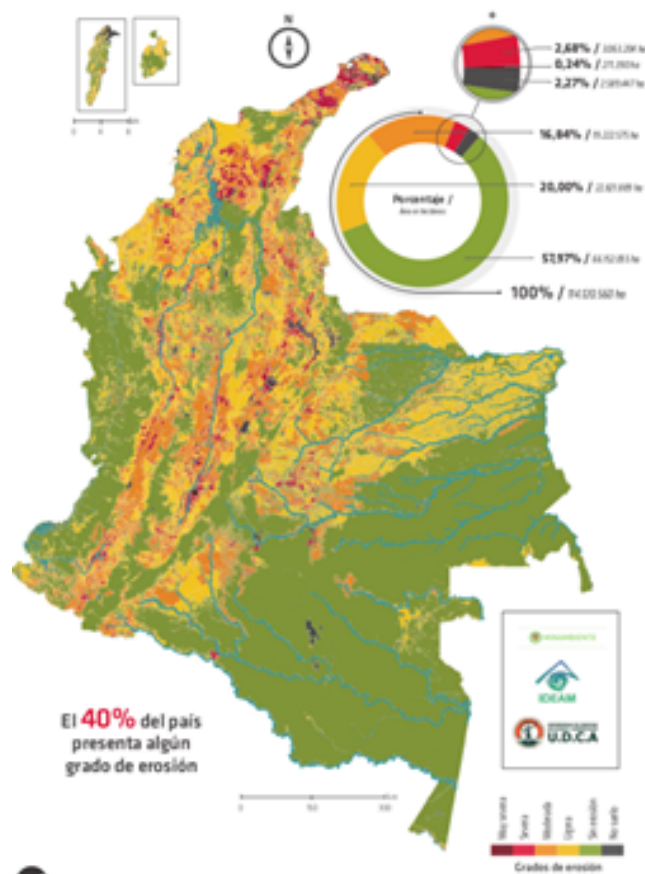
This article aims to share the preliminary experience of the Laboratorio Campesino for the transition to the Agroecology (Lab Campesino) of Tierra Libre in the municipality of Fusagasugá, Republic of Colombia. Particularly, the use of the concept of the local innovation ecosystem in the territory as a framework to identify the actors, interrelations, and elements of these decentralized innovation networks, to generate strategies for their collective realization. To this end, a series of questionnaires were applied to determining actors from various social sectors related to Tierra Libre and its action in agroecology. The objective was to identify the values, policies, knowledge, infrastructures, and the natural environment that sustain communal innovation processes. The results of this analysis allow us to understand the

opportunities and challenges faced by the actors to promote innovations in agroecological practices in the territory of the province of Sumapaz, Cundinamarca.

Introduction

According to Colombian environmental authorities about 40 percent of the country's soil presents some degree of erosion (IDEAM U.D.C.A. 2015). Climate change, and in particular the soil situation, is not only a local problem, it is global in scope. Worldwide, 3.2 billion people are being affected by land degradation (IPBES 2018). This problem represents a progressive loss of soil fertility, biodiversity, and the ability to retain water and nutrients. In Colombia, the expansion of the agricultural frontier, the impulse of the green revolution paradigm, migration, and armed conflict have been some of the main factors that have influenced soil erosion (see Figure 1).

Figure 1. Percentage of soil erosion in Colombia.



Source: IDEAM-UDCA (2015)

In response to the critical situation of the soil (among other elements), rural communities have begun to create strategies for the recovery and preservation of the soil and its mode of existence, involving ecology and traditional knowledge. One of these strategies is agroecology, an alternative rural life with social, political, and economic implications. This materializes as a method of agricultural production seeking to understand the dynamics of the various elements of the natural environment to use them as allies in the struggle for climate change adaptation and food sovereignty (Altieri, 1999). In the words of the Declaration of Small-scale Food Producers, Agroecology is:

"A way of life of peoples in harmony with the language of Nature. It is a paradigm shift in the social, political, productive, and economic relations of our territories to transform the way we produce and consume food and re-establish a socio-cultural reality devastated by industrial food production. Agroecology generates local knowledge, builds social justice, promotes identity and culture, and strengthens the economic viability of rural and urban areas" (Via Campesina 2018, pt. 1).

Agroecological peasants are working to build networks of trust in their territories. In this context, it is necessary to promote local innovation ecosystems with the objective of increasing the complexity of interactions and the transition to agroecology in the community. It is important to refer to the local culture, public policies, infrastructure, values, epistemology, and ontology of communities as an essential part of this assembly of actors and relationships. However, the above elements are often not taken into account in traditional innovation systems at the national or regional level. It is precisely in this context that the proposal is circumscribed by a laboratory of peasant innovation at the local level, which delves into relational, communal, and collective creation dynamics in regions such as the province of Sumapaz. Therefore, this document describes how a peasant organization such as Tierra Libre can take advantage of its network of actors to co-design and collaboratively manage a local innovation ecosystem to drive the LabCampesino initiative

(Laboratorio Campesino para la transición a la agroecología) in the province of Sumapaz, Colombia.

Tierra Libre and the Laboratorio Campesino as an IDDS Initiative

Tierra Libre is located in the towns of Fusagasugá and Pasca, near the city of Bogotá (Capital of Colombia). The organization has worked in the territory since 2005 on the empowerment of peasants and the autonomy of the rural population. They have developed different projects around agroecology with communities of seven villages in the province of Sumapaz. They also have a network of 10 community "biofactories" for the production of organic biofertilizers and a farm/school in Pasca where they generate popular education processes in the region supported by a diversity of crops and animals (chickens and sheep).

The Free Land LabCampesino initiative seeks to empower small agroecological producers through open access technologies and collaborative creation dynamics in the municipality of Fusagasugá. This municipality is the third most populated in the department of Cundinamarca after Bogotá and Soacha, and the 45th in the country. It was founded on February 5, 1592 and is located 59 km southwest of Bogota, on a plateau bounded by the Cuja River and Chocho, the hill of Fusacatán and Quininí that make up the valley of Sutagaos and the plateau of Chinauta. In this territory the main economic activities are agriculture,

livestock, trade, and services, especially tourism. Among the main crops of the region are corn, blackberry, potato, vegetables, and peas in the high-altitude lands, and coffee, bananas, and fruits in the low-altitude lands.

The LabCampesino has its origins in the International Development Design Summit (IDDS) in 2017. IDDS is a diverse and intense space for practical learning at the collective level, where processes of co-design of low-cost solutions to collective problems and aspirations are carried out. It was created in 2007 by Amy Smith at the Massachusetts Institute of Technology and since then there have been about 25 meetings in Asia, Africa, North America, and Latin America thus initiating the Innovation Network for International Development with more than 1,000 members from about 70 countries.

In Colombia, this program has been developed since 2015 with the leadership of the National University of Colombia, in addition to other organizations. Each year a meeting has been held in a different region of the country, addressing a diverse theme. In 2015, the first IDDS, called Zero Waste, was held in the city of Cali together with the Universidad del Valle and local recyclers' associations, with a focus on waste management. The second meeting in 2016 focused on primary education, which was developed with the support of C-Innova, the Bogota Workshop School, and the Circus School for All. In 2017, the IDDS Adaptation to Climate Change is organized in the municipality of Fusagasugá with the support of C-innova

and the University of Cundinamarca. This time the theme is Adaptation to Climate Change. This last meeting took place in conjunction with six peasant and fishing communities of the province of Sumapaz and Alto Magdalena in Cundinamarca. One of the results of this meeting was a free digital hardware kit to monitor the humidity and temperature of biofertilizers .

In this sense, the use of digital technologies based on free hardware to contribute to agroecology may in itself be a sufficiently innovative idea. However, it is the process of social appropriation of science, technology, and innovation in the rural sector and particularly from the rural or peasant population that creates conditions of rupture with traditional practices of technology transfer. Therefore, this article presents the progress and opportunities of Tierra Libre and especially the initiative of LabCampesino to strengthen an ecosystem of local innovation and promote agroecological practices by farmers in the province of Sumapaz.

This study exposes the need to understand the interrelations between the actors, as well as the opportunities and challenges for innovation present in the territory, in order to suggest strategies for the activation of the Laboratory of the peasant organization. The content of the text will then be presented. The second section describes the concepts of innovation and defines Local Innovation Ecosystem as a means to create and disseminate innovative solutions to the local challenges of

a community. The third section explains the methodology used in the study and the scope of the project. The fourth section describes the local innovation ecosystem for Tierra Libre, its opportunities and challenges in the province of Sumapaz. Finally, the last section presents the conclusions and main lessons learned for the Laboratorio Campesino as a platform for the co-design of open and free agroecological technologies by the rural population.

Theoretical and Conceptual Foundations

Innovation as a process of creating new artefacts (technologies) and/or ways of acting in the face of a situation (social processes) has been studied since the middle of the 20th century. However, it still has a strong emphasis on economic development focused and led by large industries and universities (Reina-Rozo 2018). However, in recent decades, areas and concepts of innovation have emerged that go beyond this traditional framework and seek to create plural conceptions of science, technology, and innovation, particularly from users from a social dynamic. Elements such as Base Innovation (Gupta et al. 2003), User Innovation (Von Hippel 2005), and Citizen Innovation (Camaño and Pascale 2014), are some of the examples that can be observed among many others.

In this sense, the literature on innovation in rural environments or peasant innovation is limited when it comes to understanding the processes from the users,

that is, from the peasants. The area of work and action of innovation is concentrated in urban environments, institutions of higher education, the metropolis, and industry. It is therefore pertinent to create frameworks of thought and action for rural environments and peasant populations (including settlers, Afro-Colombians, and indigenous peoples). Some efforts have focused on the generation of agricultural innovation systems, thought from a top-down perspective from the State, its dependencies, universities, and agricultural industries, but leaving aside the traditional inhabitants of the countryside.

In this way, it is crucial to generate concepts and modes of action at the local level that go beyond the paradigm of market-focused innovation towards an innovation that seeks collective well-being. In this sense, Reina-Rozo (2018) suggests the concept of Communal Innovation as a collaborative, autonomous, and free innovation process among individuals, collectives, and organizations at the local level, to achieve their aspirations and face their shared challenges. From this point of view, an innovation based on place and generated by the users themselves strengthens collaboration. This aims to focus differently on the quality of interactions and on a higher objective such as collective well-being.

Innovation is a social phenomenon that involves the knowledge, abilities, skills, relationships, networks, and work of a group of people. In the literature on innovation, it

has been stated that it is an individual creation of the innovator. However, here this affirmation is questioned, to add other invisible actors and thus understand this dynamic, adaptive, and complex process. Therefore, the bet is to go from a systemic vision towards an ecosystem that allows articulating the complexity of natural environments and the interrelations of the actors. This idea is based on the ecological analogy in management studies, initially developed by Moore (1996).

Within this framework, Wulf proposes the idea of the ecology of innovation as the "set of interrelated institutions, laws, regulations, and policies that provide an infrastructure for innovation involving education, research, fiscal policy, and intellectual property protection, among others" (2007, 1253). This notion allows the articulation of the science and technology studies with those of innovation, in order to understand in a holistic way, the relations and actors, their environment for their promotion and strengthening towards the needs of the future (Wulf 2008). Thus, emerges the concept of Ecosystems of Innovation (EI), as a conceptual framework to describe and analyze the environment of creation of innovation processes.

In the last decade the concept of innovation ecosystems has had relevance in the scientific and management literature. Around this, Koslosky, Speroni, and Gauthier (2015), Gomes et al. (2016), and Ferasso et al. (2018) have conducted literature reviews, finding multiple

definitions and frameworks for action. The objective was to describe the historical path, scope, and limitations of this emerging concept for innovation studies. One of the recent definitions, from the economic point of view is provided by Gomes et al. (2016, p16).

"An innovation ecosystem is configured for co-creation, or the joint creation of value. It is composed of an interconnected and interdependent network of actors, which include a focal organization, customers, suppliers, complementary innovators, and other agents such as regulators. This implies that members face cooperation and competition, and an innovation ecosystem has a life cycle, which follows a process of co-evolution".

At the literature level there are several criticisms of the construction of Innovation Ecosystems by Oh et al. (2016). However, there are other academics who defend this framework for action and suggest its potentialities such as Ritala and Almpanopoulou (2017). Next in Table 1, following Gomes et al. (2016) are the main characteristics of innovation ecosystems which provide a way to analyze them.

Table 1. Characteristics of Innovation Ecosystems.

- | It is composed of a network of interconnected and interdependent actors, which include a focal organization, clients, suppliers, and complementary innovators.
- | Some roles of the actors are initiator, specialist, and shaper.
- | It is sometimes led by a key leader, who provides a common platform, a set of goals and is responsible for the health of the ecosystem.
- | They are built on a platform which is composed of tools, services, and technologies.
- | Members face cooperation and competition.
- | It has a life cycle which follows a process of coevolution. Moore (1993) proposes four phases: birth, expansion, leadership, and self-renewal.

Source: Author (based on Gomes et al (2016))

In the field of Agricultural Sciences, Pigford, Hickey, and Klerkx (2018) develop the concept of Agricultural Innovation Ecosystems, as a broader framework than traditional innovation systems, which creates innovation niches multi-actor and across diverse sectors to support transitions to agroecology. For the present analysis, two reference cases are taken into account, which are the first to analyze the dynamics at the local scale. The first of them is Siqueira, Mariano, and Moraes, (2014), who present an example of microcredit case in Brazil, and on the other hand Coque, González-Torres, Lopez-Mielgo, and Vázquez, (2014), who present an example of the interaction of the academy with its environment in the region of Gijón, Spain.

In the local scenario, innovation processes are developed in a more particular way, with actors and relationships that traditionally are not taken into account. Community organizations, small businesses, workshops, and local authorities are determining elements on this scale. For

Hoffecker (2018), local innovation ecosystems are communities of place-based actors who interact committed to producing innovation and supporting innovation processes, along with the infrastructure and enabling environment that enables them to create, adopt, and disseminate solutions to local challenges. For its part, the International Development Innovation Network (IDIN), a Local Innovation Ecosystem is "the enabling environment and infrastructure that enables people to engage in iterative innovation and problem-solving processes to generate solutions to local challenges and deliver them to the people who need them" (IDIN 2017).

In other words, a local innovation ecosystem should...

- "... involve diverse stakeholders, from educational institutions to grassroots groups to government and business."
- "... include resources for people to acquire the skills/knowledge they lack. It should also consist of a set of resources for all to access."
- "... understand relevant and innovative interventions, involving beneficiaries and all stakeholders necessary to maintain their sustainability."

Methodology

In the framework of the first class of D-Lab Peasant Agriculture of the Massachusetts Institute of Technology, the idea of working with peasants from the province of

Sumapaz in the department of Cundinamarca, in central Colombia, originated. The methodological approach is qualitative, integrating a research-action perspective with which the people surveyed exercise agency over the research process, making it cyclical. In addition, the methodology has a descriptive and analytical approach. In this sense, the model of local innovation ecosystems developed by Hoffecker (2018) was used as an analytical research tool (Figure 2):

"in this sense, the definition of local innovation ecosystems developed by Hoffecker (2018) is used as an analytical research tool. This definition has five categories of analysis, which are interdependent with each other. These make up the environment where the dynamics of the EIL are developed. These are Policy, Institutions, Natural Patrimony, Infrastructure and Knowledge. Therefore, these categories are fundamental to understand the relationships between the actors in the innovation processes."

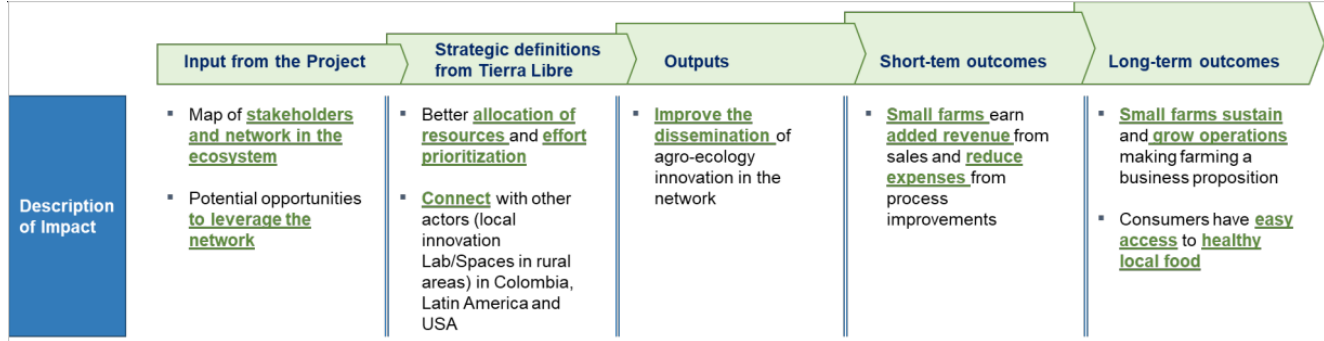
Based on the above, a questionnaire was designed based on the work of the Local Innovation Research Group of the D-Lab (Annex 1). During the first semester of 2018, it was applied in a virtual way to four organizations present in the territory of the province of Sumapaz and that have worked with Tierra Libre previously. In this way, four answers to the instrument were obtained as input to build the local innovation ecosystem and generate the subsequent analysis. The methodology developed in this inquiry is

composed of nine steps shared below:

1. Bibliographic review on communal innovation and local innovation ecosystems.
2. Review on agroecology and the territory of the province of Sumapaz.
3. Formulation of research questions.
4. Creation of the questionnaire and interview protocol.
5. To carry out the pilot interview.
6. To carry out the questionnaire to representatives of organizations that work with the focal organization (Tierra Libre).
7. Analyze the qualitative data.
8. Visualize the Local Innovation Ecosystem.
9. Create the strategy and recommendations for Tierra Libre and LabCampesino.

In this sense, it is stated that the methodological process was applied in all its phases with the objective of testing it with the organizations and within the framework of this emerging framework of analysis. Figure 3 shows the expected impact of this analysis in the short and long term, and the implications for the peasant organization. The results of this process support the prioritization of efforts in the organization to strengthen the connection with other ecosystem actors and improve the adoption of innovation practices in the region.

Figure 3. Impact of the analysis of the local innovation ecosystem.



Source: Author

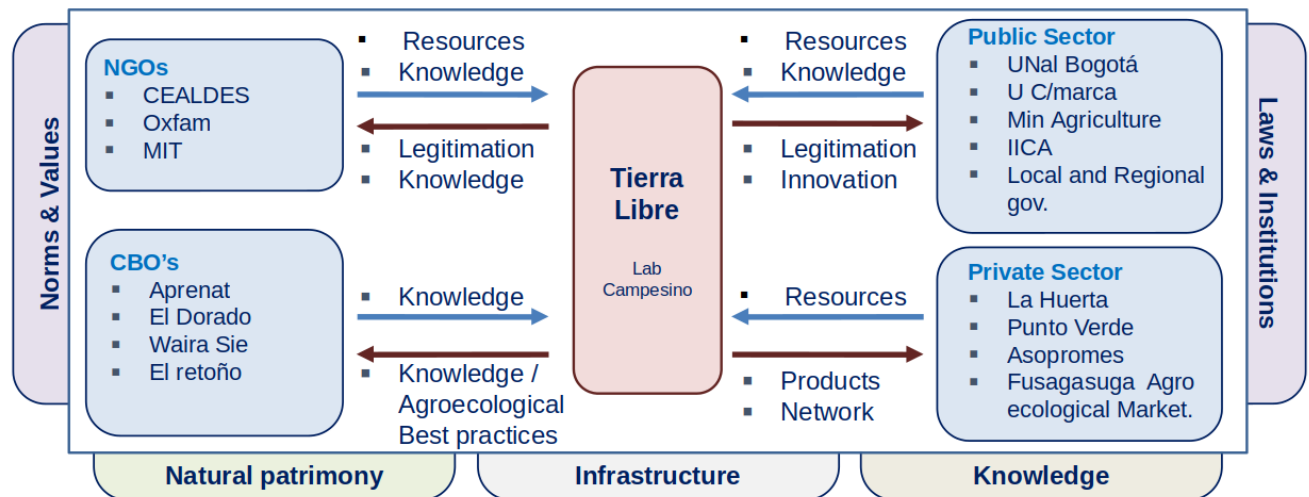
In the short term, it is expected that the Laboratorio Campesino, as a platform to encourage innovation in the territory, would help farmers to obtain greater income from new sales and reduce costs with better practices based on the design of new solutions. In the long term, small farms could sustain and grow operations, making agroecological agriculture a future proposition for younger generations in rural areas, and we, as potential consumers, could have access to healthy local food in Bogotá.

Results and Analysis

Based on the questionnaire sent to the representatives of the organizations that have collaborated with Tierra Libre, the results and their corresponding analysis will be shared. According to the qualitative data collected, it is identified that the ecosystem has been dynamic, as it has allowed the creation of new relationships between the actors, making their interactions with the future of time more complex. In this sense, the knowledge of the actors that are currently related to Tierra Libre is relevant,

especially around agroecology in order to foster communal innovation. Therefore, the identified stakeholders are associated in four groups of different interactions (Figure 4):

Figure 4. Local innovation ecosystem for Tierra Libre and LabCampesino



Source: Author

- Non-governmental organization (NGO): Oxfam (International NGO - UK), Massachusetts Institute of Technology (International University - USA), CEALDES (Local NGO). These actors potentially share knowledge and resources with the organization, while Tierra Libre provides them with legitimacy and practical knowledge.
- Community-based organization (CBO): Aprenat (Tibacuy local organization), El Dorado (Fusagasugá local community), Wayra Sie (Silvania local community), Organiverso (Fusagasugá local

community), El sprout (Silvania local community), La Red Kunagua (Collective Network). CBOs provide knowledge based on experience to create agroecological solutions, while Tierra Libre provides them with the tools, infrastructure, and innovation methodologies to co-design these innovations.

- Public sector: National University of Colombia (National Public University based in Bogotá), University of Cundinamarca (Regional Public University of Fusagasugá), IICA (Inter-American Institute for Cooperation on Agriculture (IICA), Ministry of Agriculture (state organization that develops all agricultural public policy), local government (Mayor and council of Fusagasugá). These actors provide resources, knowledge, and public policies to promote Tierra Libre innovation in the LabCampesino.
- Private Sector: Tierra Libre and the consulted actors identify two subgroups along the food value chain: Input Suppliers, such as the market in Fusagasugá, and transportation, sales, and commercial partners: such as Cooperativa La Huerta, Asopromes (local association of organic producers in Fusagasugá), Punto Verde, and the Agroecological Market of Fusagasugá. These actors articulate and generate a market for Tierra Libre's products and innovations in exchange for economic resources.

As for the roles of the actors in the ecosystem, the

following is proposed:

Tierra Libre as a focal organization in the ecosystem and the Campesino Laboratory is consolidated as a platform for promoting communal innovation processes with an agroecological orientation.

Meanwhile, the role of the universities and institutes should be that of facilitators in the innovation process, providing knowledge and infrastructure to enable these dynamics. As for other public entities, they should be the regulators with the objective of generating incentives and public policies that allow the development of innovations. On the other hand, the role of NGOs should be that of promoters of these efforts through the initial financing of these efforts for their sustainability. On the other hand, CBOs should be the primary users of this ecosystem where their knowledge and knowledge can be used to co-design solutions. Finally, the role of private actors, especially the Cooperativa La Huerta, should be to channel the commercialization of agroecological products and the innovations created.

However, the environment that allows the generation of conditions to encourage innovation processes or that can in the same way limit them is presented below. First, the upper part of the ecosystem represents the most abstract elements of it, that is, in an ecological analogy can represent the atmosphere. Here we find the shared norms and values that are identified collectively, among them are

collaboration, community, sustainability, love for the land, autonomy, experimentation, curiosity, solidarity economy, associativity, and good living. At the other extreme we find the policies that create a space for innovation, among them are identified: intellectual property laws, rural education policy, quality standards of product seal, certifications for marketing, and the policy of free trade agreements. Also, support programs for agricultural production, such as the SNIA (National System of Agricultural Innovation), programs to promote research COLCIENCIAS, departmental programs of the secretariats of agriculture, and entrepreneurship programs of regional corporations.

On the other hand, in the lower part, there is the base or soil of this ecosystem that sustains the actors and their dynamics. Some of these elements are the natural environment, infrastructures and talents, and knowledge. As far as the natural environment is concerned, this ecosystem is particularly situated in the environment of the Paramo and its area of influence. In particular the Sumapaz moor, the largest in the world. On the other hand, at the level of infrastructures, there are secondary and primary roads that cross the territory, as well as some shared infrastructures (communal collection center), farms (living laboratories), classrooms in educational institutions, and private processing plants. Finally, in terms of knowledge and knowledge, knowledge or tacit knowledge is made visible in the territory by its

inhabitants, in terms of crops, practices, climate, experiences, connections, and appropriation by the territory.

At the level of analysis, it is proposed that for now there is a low level of interference by peasants as fundamental actors of the ecosystem, without the mediation of any institution, therefore it is necessary to directly involve the rural population, especially youth, in these processes. On the other hand, there are no actors or projects that maintain and share knowledge in a systematic way, in the sense of a collective management of traditional knowledge. Therefore, it is necessary to foster more relationships between other actors and structures that can play an articulating role of innovation in the ecosystem, particularly in knowledge management. This is an explicit opportunity for the Laboratorio Campesino to promote and manage innovation processes through open platforms (digital or analog). Taking into account the words of one of the consulted comments:

"The greatest challenge is to generate sustainable mechanisms, in the dimensions (technical, economic, social, and environmental) of innovation that materialize concretely at the level of properties, sidewalks, municipalities, and region. This requires articulating many people with few resources looking for common and constant scenarios. The greatest opportunity is that community agreements can be made from the innovations generated, which allow an environmental,

community, and productive ordering of the territory”.

Another crucial element of the ecosystem is the notion of the collective through the values shared by the actors and which must be transversal to future actions. Likewise, the regulatory framework related to agroecology, its commercialization and research are a shared opportunity for organizations. This must be a connecting element to close the gap with the private and public sectors, and by connecting with more actors in the ecosystem, Tierra Libre and especially Laboratorio Campesino could be a platform to dynamize innovation in the territory in an interrelated way with the actors and spread them openly in the region. Likewise, it is necessary to generate other types of relationships with the present actors, in addition to seeking to provide greater diversity of organizations, promoting new alliances.

Conclusions

The first conclusion is related to the concept of local innovation ecosystems as an emerging research niche in social innovation studies. Since it creates a space for reflection and action around the interactions of ecosystem actors. It also allows us to understand the constituent elements of the ecosystem, such as formal and informal institutions, values and norms, the natural environment where it flourishes, infrastructures, and finally, the knowledge and knowledge that allow its greater complexity. This generates greater knowledge of the

relations between the actors, beyond a simple link or exchange, aims to make visible the complexity of the interrelations and common interests that promote local innovation in the territory. In this sense, the main opportunity for LabCampesino is to take advantage of the relations with the current actors, to diversify these links so that innovations can be disseminated in the region and a better management of knowledge can be generated together with the organizations.

On the other hand, there are several relationships between Tierra Libre, NGOs, and CBOs in the ecosystem. First, most of the main source of funding and resources for Tierra Libre comes from NGOs. As a result, the organization has a dedicated team looking for opportunities for local and international collaboration (e.g., grants, knowledge, etc.). In addition, over the years Tierra Libre has created various connections with community-based organizations, weaving a network in several municipalities of Sumapaz province. In addition, Tierra Libre takes advantage of community organizations to access a better distribution network and reach a wider set of farmers. Therefore, the LabCampesino must systematize, analyze, allow, evaluate, and share the different initiatives in order to promote the co-design in the ecosystem of local innovation with the farmers of the rural area of Sumapaz.

On the other hand, it is recognized that there is an opportunity to strengthen the relationship with local and

national governmental actors in Colombia. There have been isolated efforts in the past with the Minister of Agriculture or the Local Mayor's Office, however trust has been broken and only the Academy has been able to maintain a successful relationship with Tierra Libre. In particular, the universities of Cundinamarca and Nacional de Colombia have been collaborating. In this sense, the strategy is to look for new public actors in the region and rethink the relations with those currently contacted.

The greatest collaboration gap within the ecosystem is with the private sector. Stakeholders affirm that the lack of integration among players in the value chain has been the greatest challenge to commercialize the products of peasants. In addition, the only commercial channel that has Tierra Libre is with Eco-shop La Huerta. Therefore, there is an opportunity to take advantage of the multiple commercial network in the towns of the province of Sumapaz and also in the capital city, Bogotá. In this way, it is a priority to generate new commercial links with private actors, such as solidarity networks and cooperatives that share the same values. Likewise, to create commercial relations with other non-traditional sectors.

Finally, LabCampesino's role as a Tierra Libre initiative is to be a platform for co-designing communal innovations (both technological and organizational) at the rural level. The opportunities with all sectors, both public and private, NGOs and grassroots organizations that legitimize the work of Tierra Libre are enormous. In this sense, it is

concluded that the strategy for the LabCampesino must be oriented to connect the actors, through processes of collective innovation taking into account the propitious environment to continue co-evolving the ecosystem in relations, actors, actions and dynamics.

Annex 1

- Questionnaire for actors of the local innovation ecosystem.

Personal Information

Name

What is the mission and objectives of the grassroots/commercial/community organization?

What is your role in these goals?

1. Ecosystem Actors

Which are the different key actors your organization interacts with in the framework of Agroecology? Please separate them with a comma.

What kind of role do these actors have in the local innovation ecosystem -- agroecological based? Identify each previous actor with the role they have.

Which are the key actors that for you are not yet involved in the ecosystem?

2. Interactions

How is the type of interaction with each of these key players?

How intense is your organization's interaction with each of these key players? Rank from 1 to 5, where 1 is a weak relationship and 5 is a strong relationship.

3. Ecosystem Opportunities and Challenges

What are the greatest challenges and opportunities to work with each of these organizations?

What is the greatest challenge and opportunity for the local innovation ecosystem in general?

Is there any potential organization or actor to interact where Tierra Libre can play a key role in the local innovation ecosystem?

How do you see these new/potential collaborative relationships? What are the areas of greatest impact in which Tierra Libre can play a role?

4. Local Innovation Ecosystem Environment

What are the collective values, norms, and objectives that you perceive in the agroecological innovation ecosystem?

What are the laws or public policies that affect the local innovation ecosystem?

What kind of shared or individual infrastructures, ecological assets and/or human talent does the ecosystem account for?

5. *Something Additional*

Is there anything additional that you perceive critical for the development of the project that we have not considered in this questionnaire?

Final notes

1 Co-design refers to the inclusive process of collective creation between different actors with a common goal. This generates dynamics of power distribution, joint decision-making, and collective prototyping (among others).

2 For more information about LabCampesino consult: terceravia.mx/2018/07/

3 For more information on this innovation consult: agenciadenoticias.unal.edu.co/detalle/article/

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