

Participative Agri-Food Projects in the Urban Bioregion of the Vega of Granada (Spain)

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1 The Vega of Granada: A Threatened Landscape with Great Historical and Cultural Value

In Granada, as in many other European cities, the traditional irrigated land close to urban areas is an extremely important symbol. Specifically, the important cultural character of the landscapes of the Vega and its contribution to food supply make it especially interesting as an indicator of territorial sustainability. However, its value in intangible, productive, heritage and food supply terms is being put at risk by the contemporary urban model. The Vega of Granada, which is the most important bioregion in the province, is a good example of the challenge of managing traditional forms of agriculture as strategic elements to ensure food sovereignty and quality of life in the twenty-first century. It is considered one of the most relevant of the few remaining agricultural systems of this type in Europe.

The Vega of Granada comprises irrigated agriculture, which forms a corridor linked to the river Genil and its different tributaries, with an extensive surface area of 87,230 hectares, of which 3.5% is within the capital (Calatrava 2014; Fernández 2010), and it also has approximately 16,000 hectares of irrigated crops (Matarán Ruiz et al. 2014). The heritage value associated with the historic construction of the hydraulic system is also indisputable (Castillo Ruiz et al. 2014). Its historic irrigation system is based on a structure of irrigation channels which are over 1000 years old and give life to lands, which boast great fertility in a territorial context marked by the

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Fig. 1 The Vega of Granada (Source: Created by the authors)

advance of the semi-arid landscapes associated with less fertile soils than those of the plains. Its environmental value is also essential both for the maintenance of the largest aquifer of the region (1000 hm³), which is mainly filled with the surplus water from irrigation, and for its scenic values which are an essential juncture between the National Park of the Sierra Nevada and the rest of the territories (Fig. 1).

Nevertheless, for decades, the deterioration and the accelerated disappearance of a large part of the traditional agricultural landscape of the Vega of Granada have happened, as in many other Spanish cities. This is a consequence of the general agricultural crisis (Menor 1997, 2000, 2001), which includes, among other things, the intensification of industrial crops and the abandonment of traditional systems. This is also the result of the processes arising from the diffuse conurbation or 'urban sprawl' (Naredo 2009; Yacamán 2015), which has meant a radical transformation in both the operation and spatial organisation of the Vega. The location of the Vega within the urban agglomeration of Granada¹ (hereinafter UAG) with its major

¹We must clarify that the area of the UAG does not exactly coincide with the agricultural region of the Vega of Granada. Despite presenting similar dimensions, the UAG includes those municipalities which show a clear functional urban connection with the city and its surroundings, but do not necessarily contain spaces regarded as plains within the majority of their expanse. In the case of the UAG, its municipal composition is institutionally defined, while the limits of the Vega are imprecise; they may extend to the west along the Genil Valley towards Loja, or not. They may

Table 1 Evolution of the population of the city of Granada and its metropolitan area. Source: Created according to censuses from the National Institute of Statistics, 2014

Año	Granada	Other UAG	Total UAG
1981	249.821	123.158	372.979
1991	257.580	152.065	409.654
2001	243.341	197.437	440.778
2005	236.982	236.732	473.714
2007	236.207	254.207	490.414
2008	236.988	263.481	500.469
2010	239.157	278.769	517.923
2011	240.099	283.746	523.845
2013	237.818	291.860	529.678

economic dynamism – currently made up of some 530,000 inhabitants over a surface area of 1500 km², divided into 34 municipalities² – is having to face the pressures from excessive land occupation, energy voracity, the concentration of contaminating agents, consumption of non-renewable resources and social polarisation. The metabolism of the metropolis and its ecological footprint represents one of the major factors that threaten to permanently alter the bioregional characteristics which have defined *the identity of the Vega of Granada* (Zapiani Aizpuru 2011).

The rapid transformations caused by the processes of metropolisation, which have been occurring since the middle of the twentieth century, and their particular dynamics regarding the hinterland have been modelling and configuring the current territorial model. This has been happening without an adequate limiting urban growth, where competition for the use of land and the change in the classification of agricultural land to urban land has been excessive, especially on those lands which have a strategic location regarding the city. Similar behaviour to other metropolitan areas can be seen (Nel-Lo 2006; Feria 2018), with the first stage of population concentration and economic activities in the central city (1970–1980), to be followed by another phase of population dispersion and urbanisation towards the peripheral municipalities (1990–2013) (Cañete et al. 2014) (see Table 1).

The phenomenon of urban sprawl can be explained, as we argue, from a weak planning framework and weak territorial management at the metropolitan scale, which has converted the municipalities on the periphery into suburbs, generating a territorial system which is wasteful of energy and natural resources, and dependent on the widespread use of private mobility. The central city has spread, without any apparent limits, into the agricultural land, invading landscapes with important cultural and food services. The most immediate consequences are the reduction of

contain some municipalities with part of their surface area on the mountainside, or not, according to the perspective of the different authors and subject matter (Calatrava 2014).

²Albolote, Alfacar, Alhendín, Armilla, Atarfe, Cájar, Cenés de la Vega, Chauchina, Churriana de la Vega, Cijuela, Colonera, Cúllar Vega, Dílar, Fuente Vaqueros, Las Gabias, Gójar, Granada, Güevejar, Huetor Vega, Jun, Láchar, Maracena, Monachil, Ogíjares, Peligros, Pinos Genil, Pinos Puente, Pulianas, Santa Fe, Valderrubio, Vegas del Genil, Otura, Víznar and La Zubia.



Fig. 2 Urban fringe in the UAG (Source: Created by the authors)

food security and loss of urban resilience, mainly resulting from the growing artificialisation and fragmentation of agricultural land. The subsequent increase in the transport infrastructure needed to ensure the commute between residential and work areas has decisively contributed to this and has been designed without considering the functional values of the Vega, marginalising rural roads and encouraging the urban speculation around primary and secondary residencies (Puente Asuero 2013).

This massive urbanisation process in the territory reached its peak during the period between 1990 and 2006. Specific studies indicate a 40% increase in the surface area of urban fabric and 30% of the surface area for commercial areas, infrastructure and industrial areas in the UAG (Feria 2018). That is to say, in less than 20 years, the artificial surface area has increased by 70%. The severity of the data invites reflection on the paradox which the current metropolitan growth model presents, consisting of the historical transformation of a landscape and territory which have been cultivated by small scale farms and endowed with organic wealth and exceptional productivity for thousands of years (Fig. 2).

Despite the problems resulting from the advance of urbanisation and the incorporation of agroindustrial crops, the Vega of Granada has preserved a major part of its fertile land and its traditional productive identity, characterised by polyculture (vegetables, fruits, silk, flax and hemp, among others) and smallholders (more than 90% of the plots measure less than 1 hectare). In recent decades, we have been witnessing a clear acknowledgement on part of the society of Granada (Torres Rodríguez et al. 2016), which has been endorsed by various studies and actions in defence of the Vega, led by territorial networks and by a local population which is

increasingly active (Matarán Ruiz et al. 2014). This diverse and critical movement has taken on the challenge to activate and preserve the values on a bioregional scale and the opportunity to construct alternative food policies around them, challenging the traditional manner of addressing agricultural spaces on the urban peripheries through classic territorial urban planning (Mata 2018).

Consistent with renewed approaches, the role that the alternative food networks are playing stands out regarding the relocation and reterritorialisation of the urban food system (Matarán Ruiz, 2013). Thanks to this, in the last few decades, we have been experiencing an upsurge of traditional crops close to Granada and an increase in the demand for the consumption of fresh, local and seasonal products. There has been an increase in initiatives regarding short food supply chains³ on a bioregional scale (consumer groups, farmers' markets, organic grocer's, etc.), which seek to reconnect the peri-urban fertile land with the city. This means a new opportunity to preserve allotments and for the restructuration and survival of small scale farms in the Vega.

The immersion of this social and political process in the UAG is being consolidated as a counterweight to the contemporary territorial model, widely responsible for the serious agricultural crisis and environmental deterioration of the Vega. In the face of the defeatist discourse on the serious impacts associated with the current process of population concentration in large cities and the devastating consequences for peri-urban agricultural landscapes, alternative urban initiatives are multiplying. These consider the proximity of the urban market as an opportunity to improve the permanence of small agricultural holdings which show a commitment to continue managing allotments and the landscape of the Vega through agroecological practices. According to an estimation carried out by Calatrava (2014), the annual expenditure of UAG inhabitants on food is around 1000 million euros, of which 73% is for homes, 25% for the HORECA channel (hotels, restaurants, catering, etc.) and 2% for institutions. The previous study has carried out an analysis of consumption by food type: *'50 millions Kg of fruits, 30 millions Kg of vegetables, 15 millions Kg of potatoes and 7 millions Kg of processed fruits and vegetables'* (Calatrava 2014). These figures show the great opportunity which is represented by locally supplying this demand through urban and peri-urban production from within the same bioregional area.

2 Agri-Food Processes in the Vega of Granada

Addressing the issues raised in the previous section, we will go on to carry out a description of the different participative processes undertaken by the research team of the 'PLANPAIS' project. The integration of the landscape into the planning

³Short food supply chains are understood as those strategies and initiatives which arise in order to articulate new geographical relationships of proximity between production and demand using paradigms which reinforce food sovereignty (Yacaman Ochoa et al. 2019).

process (2010–2015) was carried out in the Urban Planning Department of the University of Granada. Our objective is none other than that which could serve as a reference for the activation of other territorial self-sustainability processes and the development of agri-food policies in other urban bioregions.

The PLANPAIS project started a participative process in the Vega of Granada, from the reconstruction of the cognitive cultural relationships and productive relationships between active members of the bioregion. The understanding and activation of the Vega of Granada as a common good and its later decodification for the reconstruction of new meanings through the collective reappropriation of the landscape has had a considerable impact on the creation of new agri-food initiatives, which continue today; for example, the creation of the *Ecomercado (organic farmer's market)*, the reallocation of power back to the producers and consumers through new box schemes including community-supported agriculture, and the articulation of local agroecological networks (Matarán Ruiz et al. 2014).

During all the stages of the participatory action research, there was an attempt to improve the exchange of information with citizens, while reinforcing the collective reappropriation of the cultural landscapes from a food and heritage perspective. The main accounts which were dealt with were from small agroecological farms and especially those who are rethinking and developing alternative agri-food experiences. As Magnaghi (2011) states, reconstructs a caring relationship with the land, food quality, local cultivation, the environment and the landscape implementing trade with the city (Fig. 3).



Fig. 3 Active citizenship in the Vega of Granada. (Source: Created by the authors)

2.1 *Methodology: Participative Action Research*

The pilot actions, which were developed in the framework of the PLANPAIS project, are based on the use of techniques associated with the Participative Action Research (hereinafter PAR) and structured in different phases to address the complexity of pressures and opportunities which appear in the Vega of Granada. The PAR can be defined as a method for study and action which seeks to obtain reliable and useful results to improve collective situations, basing research on the participation of the same collectives which are being researched (Alberich 2007). Therefore, the PAR is distinct from other qualitative methodologies, because it is focused on causing the move from the 'individual' to the 'collective' or from the 'interviewed individual/receiver-object' to the 'participant-subject', considering the research subject as the leading subject of change. The PAR is a spatial, temporal methodology which, encouraged by methodological experts, helps the local actors to define their needs and seek satisfaction for these, which generates a process of exchange and the collective construction of knowledge which can cause actions for change. Therefore, the PAR is a methodology that not only can help the transformation of material requirements but can also create a process in which people can collectively transform within political, economic and social contexts. Consequently, participants are not subjects of research, but rather, active contributors to research who participate in all phases of the process (Kelly 2005).

The 'return to the subject' of the research, with all of its complexities, was essential for the research team, since it deals with research spaces where it is necessary not only to have knowledge (though, how can we understand without the subjects who produce knowledge?) but also to encourage dynamics for change. In this way, the subjects are active in making informed decisions and understanding the problems and social needs of the rest of the participants, for the primary purpose of imparting social change and specific actions as the final goal (Macdonald 2012). Therefore, the role of the researchers is to set the appropriate techniques for the objectives of each phase, such as how to continuously provide systematised information, which provides feedback for the reflection processes and decision making by the community (Matarán Ruiz et al. 2014). In this way, PAR allows the researcher to be a committed participant, facilitator and learner in the research process, which fosters militancy, rather than detachment (Macdonald 2012).

To set up the PAR process, the research group used the three main phases identified by Montañés Serrano (2009). The first step was designing the process: definition of the objectives (general, specific and operational) to be worked on by the community, and that would ensure the active participation of the local actors. Second, knowing the territory and mapping the existing social and environmental issues they want to change. Third, creating awareness of the community resources (both human and economic) that can be mobilised to assure self-reliant development. This means, the promotion of agreements and processes is to develop better practices for peri-urban landscape management to ensure food safety and to improve the quality of city life.

For the conceptual framework, the research group used the City Region Food System (CRFS) approach, because it allowed different processes and flows to be integrated from a comprehensive and holistic perspective, as a base to improve the dynamic of the bioregional food system (Blay-Palmer et al. 2018).

2.2 Participative Diagnosis and Public Consultation: Combine Scientific Knowledge with Contextual Knowledge

Taking into account the fact that the participative process must be adapted to the circumstances of each place as well as the participatory action research methodology, a summarised description of the most relevant phases developed in the Vega of Granada by the research team of the PLANPAIS project will be carried out.

To begin, the research group contacted the relevant stakeholders of the community food system (producers, consumers and distributors), defined as those who actively manage the territory and who have strong and direct interests regarding the study area. This phase was necessary to get to know the involved actors, in order to establish a climate of mutual trust among the stakeholders, involving subjects who are able to take an active part in the process – both during and after (PAYS.MED. URBAN 2011). Once the relevant stakeholders were identified, a first phase based on participant observation was put forward, from that which is not structured (spontaneous) to reach that which is structured (planned). Various methods were used for data collection to know how the active actors are affected by the territorial transformations, in order to be able to understand the most important dynamics of change which affected them.

During this stage, the application of qualitative sample criteria was opted for using the sampling technique known as ‘snowball’, in which the individuals interviewed act, in turn, as informers of other experiences which are considered to be part of the group of relevant stakeholders. The main criteria used for the sample was heterogeneity, accessibility and strategic representation (Valles Martínez 2002), which allowed the design of semi-structured interviews. As has already been mentioned, this first contact was mainly carried out with small scale farmers and with associations and social collectives linked to the Vega. Conflicts directly related to the agricultural peri-urban landscape and territory were identified and classified. Ongoing agroecological experiences related to local sustainable food systems were also identified.

Once the study and the objectives were defined, and the stakeholder identification concluded, a series of focus groups and interviews with the relevant stakeholders who had activated agroecological experiences in the territory were carried out. This first step was essential because (among many other things) it allowed individual needs and problems to be mapped, thus increasing different points of view as a result of the discussion and dialogue between technical and popular knowledge.

Second Phase of the PAR: Activation of Agri-Food Processes

New objectives were set for the second phase of the participative process considering the results obtained up to this point, mainly the fact that most of the difficulties and opportunities detected had a relationship with the development of the food system on a bioregional scale in the UAG and its dynamisation by the local food networks.

For this purpose, a strategy was defined to improve and facilitate the distribution and selling process of local products, linking it to the growing demand from citizens for organic and locally produced food.

To complement the strategies defined by the stakeholders, the research team defined some partial objectives which are summarised as follows:

- Support the experiences which, from diagnosis, require some type of advice.
- Promote and accompany the creation process of the new urban and peri-urban agroecological initiatives which have arisen in reply to the crisis detected in the diagnostic phase.
- Collaborate, from a technical point of view, in solving problems collectively and participatively among the different stakeholders involved.

The process of the second phase of the PAR was located in two different areas of the UAG with stakeholders representing a different profile: (i) in the southern area of the Vega, the key stakeholders were a small group of farmers; (ii) in the northern metropolitan area, they worked with a group made up of associations of unemployed people who had recently started agroecological projects based on the creation of community gardens for social purposes (subsistence and self-employment).

In the southern area of city, the PAR process mainly focused on improving the short food supply chains for the organic production coming from a group of producers. This process finally led to three other different participative processes: the creation of a consumer group,⁴ '*Como de Graná*', the development of a production and consumer network '*Red Agroecológica de Granada*' (Agroecological Network of Granada) and the launch of a new alternative to sell local products within the city, the '*Ecomercado de Granada*' (*Organic Farmers' Market*).

Simultaneously, another PAR experience in the northern area of the city took place, which was focused on bringing advice and technical support from the research group to help consolidate small producer initiatives. As in the PAR of the southern Vega, special attention was paid to the improvement of distribution through the short food supply chains, including a certain level of interaction and replication processes in the southern case: (i) the creation of a consumer group '*Como del Norte*', (ii) a production and consumer network '*Ecored Norte de Granada (Eco Network of the North of Granada)*' and (iii) the participation of this last group in the Ecomercado.

⁴Self-managed group of like-minded people to group their alternative, organic and supportive consumption with the rural world (Vivas 2010). It works with orders that are made directly to the local organic producers at a fair price. Generally, the orders are on a weekly basis and they are delivered to a delivery point located in the neighbourhood or village where the consumers live (being a local initiative, the location of the delivery point is normally close to where the products originate from).

The PAR in the Southern Sector

In the PAR process started in the southern Vega, a motor group was created and was made up of people dedicated to organic agricultural production. This group was always accompanied by the PLANPAIS research team, who encouraged the activation of the process through pre-existing contacts with the people interviewed during the previous phases of the project. Throughout the meetings held, a first participative diagnosis of the problems which affect the farmers in this area was carried out, in order to later propose strategies and solutions in a participative way and to be able to spark transformative action on a local regional scale. Following the same logic as in the interviews, the distribution and selling process was the first issue presented, which considered that organic production, both in the southern Vega and in the rest of the bioregion of Granada, is far from reaching its productive and commercial potential, needing to introduce substantial strategies to scale up short food supply chains.

Given the strategic character of the methodology based on PAR, in the case of the southern Vega, the creation of a consumer group located in the South of Granada called *Como de Graná* was supported in November 2012. This initiative led to the creation of two other initiatives: another consumer group in a nearby neighbourhood in September 2013 and another replicating this one in the northern area of the city called *Como del Norte* in November 2013, which, in this case, was linked to the network of producer groups in the area.

Among the most notable results derived from the dynamisation process was the creation of a Participative Guarantee System⁵ to support and legitimise local organic practices (Cuéllar Padilla 2009). Second, said consumer groups were the seed for two organic canteens for pupils of the schools in the southern area, '*Donde comen los monstruos*' and '*Donde comen los cocos*',⁶ created and self-managed outside the educational centres; and finally, two sales spaces were created in the Ecomercado of Granada, one for *Como de Graná*, from the south, and another for *Como del Norte*, in which the producers of the Ecored Norte sell their products.

⁵It is a way of supporting producers who still do not hold official organic certification, and it responds to the consumer interest in knowing the origin of their food and the people who produce it. It is a synergic way to establish relationships with the surroundings and the people who care for the territory through their work.

⁶The school canteen "Donde comen los monstruos" is an initiative that arose in a central neighbourhood of the city of Granada (in the Realejo), and according to the definition of its members, it consists of a group of families interested in healthy food and/or eating in the best way we can, that is to say, food made on the same day, from fresh local, organic and seasonal products. As families who have fed ourselves in this way for several years, we have enough experience to be able to offer varied and balanced menus on this basis. Various interests come together in this project such as supporting local organic agriculture, caring for the environment, food sovereignty, local economy, healthy food, etc. The canteen "Donde comen los monstruos" replicates this initiative with certain particularities, which include running it in a way which is more focused on decision making by the people who manage the initiative. Subsequently, in 2018, a third example, the canteen "A Fuego Lento" was opened in another neighbourhood of the southern area.

The PAR in the Northern Area

The initial phase of participative diagnosis of the PAR process carried out in the northern sector of the UAG threw up a joint vision on the dynamics and the main networks of this part of the territory of Granada and its Vega. The researching made visible (among other findings) the emergence of new agroecological initiatives. These initiatives are promoted by collectives of unemployed people, who started to organise themselves in social projects to get land to cultivate which is close to their area, and finally, seeking support from local public administrative bodies.

Before beginning to describe the experiences, it is relevant to make specific reference to the particular social context of the northern sector⁷ of the capital and nearby municipalities. During the boom, 30% of the active population in the peripheral area of the city of Granada was unemployed, and later, with the crisis, this reached figures of 80% of the total. As a consequence, social collectives were created and the organisation of 'Asociaciones de Parados' (Association of the Unemployed) (hereinafter AU), with the northern area of the city and the northern metropolitan area being the centre point where these associations acquired the greatest amount of representation over time, both in number and in the number of people in them, reaching the proposal for the creation of the 'Federación de Asociaciones de Parados de Andalucía' (Federation of Associations for the Unemployed in Andalucía) encouraged from Granada by the pioneering experiences of the Casería de Montijo AU and the Peligros AU, and some later groups such as Parque 28 de Febrero AU, Nueva Granada AU and Albolote AU (among others). The main objective would be to join forces to alleviate the crisis and unemployment, and one of the means which almost all of them have used self-consumption agriculture.

As in the case of the southern Vega, working the land (Sabino 1995) was, from the beginning, understood as a transversal cycle within the participative process and continues the course marked out by the dynamics of experiences, where participation has been the base of the PAR. During this phase, different points of view, knowledge and findings were collected, worked on and linked using different tools and applied on participative techniques in the continuous meetings, which have been of both a spontaneous and programmed nature (workshops, technical visits, etc.).

Logically, as with the PAR in the southern sector, a first participative diagnosis was carried out of the problems of agriculture in the area, and they defined the prioritised actions to work on. The main issues which came up were the following:

- The need to count on technical specialist advice for the particular circumstances of the experiences
- Selling products through short food supply chains
- Lack of training in agroecological practices

⁷The northern sector of Granada brings together the most underprivileged neighbourhoods of the city in its district, including Almanjáyar and Casería de Montijo, two of the areas where our case studies take place, the organic allotments, Nortelanos, La Madraza, and the organic community allotments of the Río Beiro.

Addressing these considerations, along with the proactive character of the process of the PAR and the experience of the actions undertaken in the case of the southern Vega, it was decided to channel these efforts in the following projects in the northern area:

- *Experiences of urban and peri-urban social allotments:*

The technical backing of the urban and peri-urban social allotments involved in the process.

- *Networks and production and consumer groups:*

With interest focused on boosting the short food supply chains in this area (practically non-existent when the PAR was activated). In November 2013, a consumer group was organised and the delivery point was located in the northern sector of Granada, including the producers of the northern sector which have been previously mentioned.

- *Training courses:*

Taking advantage of the synergies and resources available, different types of training courses given by the experts that collaborated in the monitoring of this process have been made available to farmers. These have mainly come from the Institute for Research and Training in Agriculture and Fisheries and the Department of Agriculture, both institutions of the Junta de Andalucía (Regional Government).

The PAR of the Ecomercado of Granada

The experiences promoted from PLANPAIS come together in the third process of the PAR: the Ecomercado of Granada. Furthermore, it would be another tangible result of the capacity to develop successful collective projects through participation.

In this case, promotion did not come from the research group PLANPAIS, as in the case of the southern Vega, but from regional administrative bodies which called together the groups linked to agroecology, both in production and sales, and the rest of the administrative bodies, and the PLANPAIS research team, to design a subsidy order for short food supply chains, which finally was not put together. The best thing is that these group meetings resulted in a PAR process in which the basis of the Ecomercado was created.

This process started with the creation of a participative diagnosis of the existing short food supply chains. In this participative process promoted by the PLANPAIS research group, the first result obtained was a list of specific problems: very few accessible sales spaces, restrictive regulations, distortion caused by large-scale distribution, lack of awareness by those who consume, lack of visibility of existing experiences, lack of coordination between collective actors involved in the short food supply chains and low variety supply capacity.

Table 2 Table of problems of the short food supply chains in Granada and proposals developed in the participative process

Proposals	Coordination	Varied supply logistics	Visibility/Awareness
Professional coordination structure	X	X	
Areas for exchange		X	
Open-air market	X		X
Transformation to affordable price		X	X
Awareness campaigns			X
Adaptation to regulations		X	
Participative guarantee systems	X	X	X

Source: Created by the authors

Continuing with the participative process, and using brain storming, a series of proposals which allowed some of these problems to be worked on were defined in Table 2.

Subsequently, new brain storming took place linked to the creation of a project on street markets and exchange spaces based on the following key issues: direct sales, the generation of a stable customer base, the promotion of consumption and an increase in the visibility of the whole package, and the detection of the needs of those who produce and those who consume; in line with these priorities, the defined objectives for the Ecomercado would be sales, marketing, awareness, product exchange, creation of a meeting place for leisure, environmental education and public awareness; and finally, those who must participate are defined, considering that they have to be groups or people who produce in the local context, and following organic methods certified by a third party or through participative guarantee system; the fact that there is a need for those who consume to have an active role in the project was also put forward.

At a later point, it was decided to work on the proposals depending on the resources available and to develop the projects proposed from this point. In this case, the proposal of open-air markets, resulting in the Ecomercado of Granada, was worked on. It started in 2013 on a monthly basis in a central area of the capital with 20 stalls selling organic products from across the whole province, but mainly from the Granada bioregion. It was an unparalleled success, demand overtook the most optimistic forecast, and the public response was extremely positive, going beyond the sale of local and organic projects. Furthermore, the Ecomercado has converted itself into a meeting point for people interested in agroecology and sustainability.

The process is being rapidly consolidated, following various strategies which include the extension of the Ecomercado to other districts in 2018, the involvement

of institutions in a project which has arisen from a social base and without any public financing, and finally, the creation of the Red Agroecológica de Granada (Granada Agroecological Network) with all of the collectives which organise the Ecomercado, and which represent the vast majority of the collectives linked to agroecological production and distribution in Granada. This includes both the groups of the south and the northern metropolitan area with those who set up the PAR, such as the current PLANPAIS research team, which accompanied and supported the Ecomercado process until the end of the project in December 2015.

3 Conclusions

This chapter sets out to explore the implications of participatory action research (PAR) as a method that helps the empowerment of the local community to take part in social change. As we have shown, the contemporary policies of the metropolitan areas have promoted a territorial model that causes historical agrarian landscapes to reduce their capacity to supply fresh food to the city. These landscapes are necessary to ensure city-region food supply. A radical change is needed to address the complex pressures which prevail on the urban–rural border and, in particular, in fertile spaces close to cities. As a part of the solution, the PAR approach provides a useful tool for empowering local stakeholders, and especially alternative food networks, from the perspective of food sovereignty and the transition towards more democratic and sustainable food systems, which is fundamental to build localised agro-urban initiatives aimed at re-connecting consumption and production and to improve food security for vulnerable communities.

Based on the experience analysed, we have seen the importance of using the CRFS approach, or in other words, the bioregional food system approach for building up the resilience of cities and sustainable food systems. It allows the catalysation of the visions of multiple agents and the creation of new food networks. The bioregional scale allows other issues to be incorporated, which in many cases go beyond the limits of the administrative city limits, such as renovated country–city relationships, food self-sufficiency and the economic viability of traditional agriculture in metropolitan areas. The bottom-up process at this scale is fundamental because, furthermore, it allows the generation of other multi-level territorial policies that can set the foundation for the implantation of future initiatives of protection and management of food corridors which help to improve food sovereignty in metropolitan contexts.

The experience analysed also shows the interest in using a bottom-up approach because it facilitates community processes that make it possible to face the degradation that prevails over many peri-urban agricultural landscapes. It also allows the development of specific solutions aimed at supporting small-scale producers and the increase of experiences around short food supply systems.

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