Food and Rurality in Europe

Economy, Environment and Institutions in Contemporary Rural Europe

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Introduction

It is becoming more and more evident that the reconfiguration of food systems will be decisive for ensuring the economic, environmental and social sustainability of our societies. For decades the sector that links producers, processors, distributors and customers has been off the public agenda. However, recent increases in food prices and the tensions generated have highlighted the growing economic, environmental and social importance of the agri-food industry. This situation has led to new concepts, such as safety, sovereignty and food crises (Lang, 2010; Ploeg, 2010) which have become part of geopolitical debates. At the same time, there has been an increasing disconnection between agricultural products and foods products (Langreo, 1988), and the decision-

[1] This paper is the outcome of an ongoing research project titled "La produccion de calidad: nuevas estrategias rurales para nuevos consumidores" (I+D CSO2010-22074-C03-01). Ministerio de Ciencia e Innovación y Fondos Feder, and for the Research Group TECUDE (P.A.I. SEJ-418). Junta de Andalucía. We appreciate Ignacio L. Moreno's contributions to the first version of this text.

making has moved from producers to processors and finally to distribution networks. This dynamics has had a strong impact on rural development and can be noticed in the current struggle between agricultural policies, territorial management and implemented development models.

In Europe, agriculture and food disconnection has coincided with the design of a new rural space. This model -supported by the Rural Development Policy- has developed an economic diversification of these areas through the activation of forgotten or underestimated endogenous resources. This model has drawn a new dynamics on these rural areas and explains the progressive specialization towards high quality goods production, landscape and nature, as well as leisure activities (Ploeg, 2000; Marsden, 2003). This process has coincided with a change in the environmental policy approach regarding previous positions. In the past, Protected Natural Areas (PNA) were understood to be sacred redoubts to be preserved in isolation, whereas new understandings redefine the PNA as the outcome of the interaction between the local population, the territory, and the surrounding ecosystems.

According to Halffter (1996) and Toledo (2005) conservation of natural resources is closely associated with the preservation of the socio-economic, cultural, political and demographic features of the territory. To achieve this kind of objective, they recommend the creation of bioregions in order to maintain a proper balance between three fundamental axes:

Biosocial axiom: conservation of these areas should be associated with the development of societies that live in this environment.

Biocultural axiom: it is impossible to raise the question of the preservation of biodiversity without regarding the conservation of culture and vice versa (Toledo, 2001).

Bioproductive axiom: it is highly related to the other two - implementing activities to promote sustainable resource management for a better conservation of the biodiversity.

Rural development strategies based on high quality production - like LAS[28] (*Localized Agrifood Systems*) - have been proved to be one of the most viable for this context. This concept –LAS- emerged in the middle 90's to analyse the transformation of rural areas, new dynamics of the food sector and food consumptions. It is defined as:

> *"Organizations and service production (farms, businesses, agro-business enterprises, restaurants, etc.) associated with specific territory characteristics. The environment, the products, the people, their techniques, their behaviour, their networks are all combined in an area producing a specific way of food organization in a given area "*(CIRAD-SAD, 1996; Muchnik and Sautier, 1998).

Facing the emergence of globalized production and consumption methods, this approach seeks to strengthen the development of integrated production systems based on local networks of companies and supported by regional processes and institutions; creating strong links between product quality, territories and innovation (Requier-Desjardins, 1998). This approach is relevant for our focus, since food safety and environmental protection converge on this problematization, as well as the demands for new models of agricultural and territorial approaches. The LAS perspective allows us to analyse the direct relationship that

[28] *Localized Agrifood Systems* (LAS) is a synonymous of the French term *Systèmes Agroalimentaires Localisés* (SYAL).

food-processing industries have with natural resources and the impact they have on the use of biodiversity (Requier-Desjardins, 2007; Muchnik *et al.*, 2008), which refers to the sustainability and future viability of the PNA.

This article suggests a further contribution to this approach. It goes beyond the conception of LAS as the concentration of rural agro-industries and understands it as a process of territorial qualification based on the different elements that compose it (Requier-Desjardins, 2008). That is, not only paying special attention to the productive processes that contribute to adding value to products and know-how, but also to particular natural resources and ecosystems. This dynamics pays special attention to the convergence between the different spheres of sustainability (economic, social, cultural, institutional and environmental) in order to propose new management models for territories.

Organic farming has been analysed, from this perspective, as a collective strategy whose aim is to establish a quality sign that is not tied to territorial origin but is linked to sustainability, understood broadly as economic, environmental, social and cultural sustainability. In this line, analyses have been developed on the different processes of organic product territorialisation (Deberdt y Roche, 2003; Mutersbaugh, 2003; Roche *et al.*, 2004) as well as the synergy created by the promotion of this activity in territories with different environmental values, such as Protected Natural Areas (Lozano, 2007, Lozano y Aguilar, 2010; Mudarra y Alonso Mielgo, 2006). It is an activity that is the basis for the preservation of resources and is therefore inserted into a line of promotion for sustainable development (Requier-Desjardins and Rodríquez-Borray, 2004; Muchnik *et al.*, 2007).

From this theoretical framework, the purpose of this paper is (1) to analyse the potential of organic production to make the protection of natural resources compatible with socio-economic strengthening in the Natural Protected Areas, (2) to assess whether the implementation of these initiatives can offer a way of involving local people in managing natural resources (3) to analyse whether

this strategy will overcome the reluctance of people to accept nature protection figures, often perceived as blocking elements for their territorial development, (4) to discuss this case of sustainable territorial development using the LAS concept. In order to illustrate this process we have studied the case of an organic agriculture experience which has been taking place in the Natural Park of Sierras de Cazorla, Segura y Las Villas for the last 20 years. This area is the largest PNA in Spain, and one of the first Andalusian territories in which the environmental protection policy was implemented. As this area has specific experience in the field of natural resource protection and in the promotion of organic production, this will allow us to discuss the relevance of the LAS concept, used to refer to a process of sustainable territorial development.

This matter is of the utmost importance in Andalusia -the southern region of Spain- because over 20% of Andalusian territory (1.8 million hectares) and a significant percentage of the Andalusian population is included in one of its 153 PNA. This situation has generated a debate about what kind of new management methods can be sustainable from an ecological standpoint, and conducive to economic and social development. In addition, this region is producing 7.175 and 582.745 has. of agriculture and livestock production, which accounts for 60% in the area and a third of the Spanish certified producers (Dirección General de Agricultura Ecológica, 2007). At the same time, half of the Andalusian area certified as organic is located in one of the PNA in the region (Consejería de Medioambiente, 2006).

Methodology

This research is based on a primarily qualitative methodology. By confronting an analysis of reality in which the "object" of study is at the same time a "subject", we needed to understand the processes from within and learn the perspective that social actors have of this dynamics. The methodology that we

have implemented is a combination of documents, analysis and fieldwork, the semi-structured open interviews and the participant observation being the fieldwork's core.

Figure 1. Profile of social actors interviewed and number of interviews in each phase of the research

PHASES	PROFILE	SOCIAL ACTORS INTERVIEWED
1 phase	Key informants (10 interviews)	- Technical development agents. - Relevant organic producers. - Organic processor managers.
2 phase	Organic producers (30 interviews)	- Agriculture (crops and municipalities). - Livestock. - Poultry farmers
3 phase	Social actors of the territory (53 interviews)	- Economic actors (conventional farmers, agri-food companies, tourism companies, entrepreneurs' organization). - Institutional actors (local politicians, members of regional administration, representatives of territorial institutions). - Social actors (members of cultural associations, women's associations).

We have interviewed 93 people. In a first phase, we interviewed 10 key informants - technical development agents, organic producers and organic processor managers- who informed us about the origins and evolution of organic production in the territory as well as the main problems and potentialities of

the sector. In a second phase, 30 organic producers were interviewed. We made a first selection among these producers according to the activity they carried out: agriculture, livestock and poultry farmers. Nevertheless, as most of them were farmers, we established two new variables: the crop they cultivated[29] and the municipality where they developed their activity, so we could find out more about the area. The 53 remaining interviews were to a range of actors with different relationships with this initiative: entrepreneurs, members of associations, conventional farmers, local politics and members of regional administration. Our aim was to assess the degree of knowledge that local people have of organic production experiences developed in the area, as well as the image they have of organic production and the Natural Park.

Sectorial vision of the development and its impact on territories

The design of Natural Protected Areas and the appropriation of nature

For many years, development has been considered a one-way street in which the inevitable consequence was the decline in environmental quality and the radical transformation of the environment. From this perspective, the logical corrective action was to conserve these lands considered virgin and natural. However, this approach did not take into account that, in most cases, these protected areas had been preserved intact because of the marginal or isolated

[29] As we will see later, most of the organic production in this area was focused on olive grove. That's why we decided to include other crops in our sample, despite the lack of quantitative relevance, in order to offer a complete overview of the different strategies developed in the territory.

area in which they were located. As these were territories where high-yield agricultural production or industries were difficult to establish, they had been left behind in the modernization process.

Spain was one of the first countries to put into practice the nature protection guidelines, declaring the first National Parks of Covadonga and Ordesa in 1918. In the mid-80's environmental concern was incorporated into the government agenda establishing different types of natural protection areas with different objectives: scientific, recreational, landscape or preservation; and also with different degrees of protection. One of the most interesting areas is the Natural Park because it was designed to facilitate the idea of social environment. With this objective in mind, *The Natural Park of Sierras de Cazorla, Segura and Las Villas* (NP-SCSV) was created in 1986. Located in the northeast of Andalucía, in the province of Jaen, it has a total of 209,920 hectares (Fig. 2). This is a large area distributed among 23 densely-populated municipal districts, represented by a total of 87,744 inhabitants.

Figure 2. Location of the Natural Park of Sierras de Cazorla, Segura y Las Villas in Spain

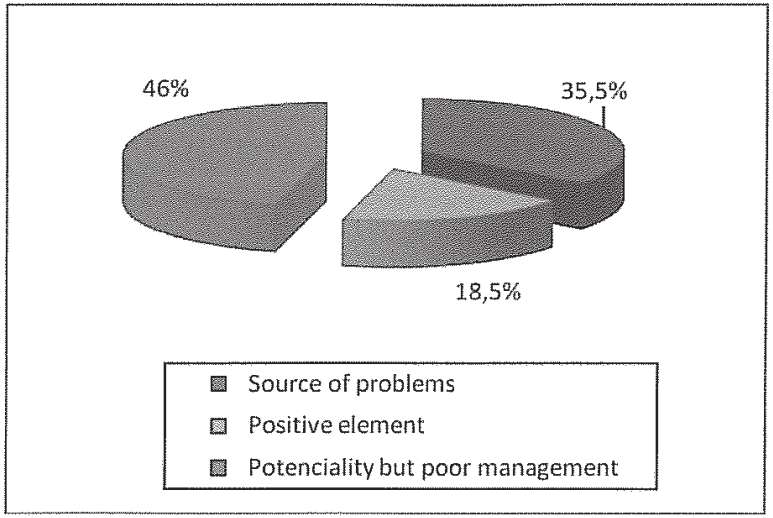
Although Natural Parks were designed to encourage an appropriate balance between conservation and development, in this area the protectionist orientation was dominant. This implied that some productive activities were forbidden in some areas of the Park and the implementation of most of these was subject to the state of conservation of the natural resources. Logically, this restrictive policy caused considerable apprehension in the area that still persists today. The results of the research (Lozano, 2009) carried out show that 35% of the sample has a negative image of the Natural Park. It is perceived as a source of problems and an obstacle for the region's development; inhabitants think that its implementation has hardly any advantages (see Figure 3). As the president of a women's association in the area pointed out:

> *"As far as economic activity is concerned, it has been negative, very negative, because it has been used as a method of repression, to scare people (...) The Park should be helping us to live better, not complicating our lives so much that we can't even live here".*

This negative image does not fall so much on the Natural Park itself, which many regard as an underexploited potential asset, but rather on the mismanagement of the environmental authorities involved. 46% of our respondents think that the social conflict between the local population and environmental management could have been avoided with measures to compensate people for the difficulties created by the application of nature protection in their economies. In other words, this protectionist policy has led to a process of alienation of the population towards their environment. The Natural Park is perceived as something different and not as a fundamental component of their identity, their history and culture (Lozano, 2008). This situation has created a climate of hos-

tility towards any kind of initiative of an *environmental character*, which, as we shall see later, has badly influenced the development of organic agriculture in the Natural Park.

Figure 3.Assessment of the local population regarding the impact of the Natural Park in the territory.



The impact of the European agricultural model in the territory: the intensification of the olive grove

As we have seen, this conservative environmental policy has co-existed with an intensive agricultural model for many years, at least in Europe. The model

implemented by the Common Agricultural Policy (CAP) aimed at the intensification and industrialization of agriculturebased on chemical inputs, genetic innovations and mass mechanization of farming. In a short time, this model generated various problems -unsustainable tax burden, surplus, increase in inter-regional inequalities, environmental problems- which were difficult to solve.

In Andalusia, the application of this model has produced two types of processes. On the one hand, the diffusion of technology and highly standardized production systems and, on the other hand, the increasing marginalization of traditional production, linked to local varieties, with the pursuant impact on environment and landscapes (Aguilar, 2007; Aguilar and Lozano, 2008). Our observational unit is a paradigmatic example of both tendencies because there has been a gradual shift from the traditional agricultural system, based on the interplay between agricultural and forest activities, to a new system focused on a single crop: the olive grove.

Olive production has an extensive background in the area, but during the last two decades there has been an expansion driven by subsidies from the European Union. Nowadays, this crop occupies 78% of cultivated land in the territory. The intensification of this activity has had environmental consequences, like the contamination of groundwater due to the indiscriminate application of chemicals and synthetic processes, changes in the landscape, an increase in erosion processes and a reduction in biodiversity.

These kinds of problems are therefore the consequence of implementing sectorial policies with divergent objectives in a single territory. These actions have been contradictory in many cases because intensification of agriculture is not compatible with natural resource protection. However, with the introduction of the sustainability concept and the consolidation of the territorial approach for development (Esparcia and Noguera, 1999), as we will see later, the

situation has begun to change. Indeed, these two changes have supported the development of organic farming in the Natural Park.

The origins of organic farming in the territory.First steps of a LAS

Organic production, also known as *ecological* or *biological*, is a management system for agriculture and food production that seeks to promote the preservation of natural resources, the generation of biodiversity, the respect for animal welfare, and to obtain food without chemical and / or synthetic wastes (Lampkin *et al.*, 1999). Following the model of territorial approach for development, this production method has become an essential tool for reconciling conservation and development in the Protected Natural Areas (Kaltoft, 1999).

The origin of farming in this area is related to a strategy of quality production in this territory. First of all, the organic olive oil production was linked to the *olive oil PDO Sierra de Segura* -obtained in 1979 and the first olive oil PDO in Andalusia-.This organic agricultural experience was conceived as a step further in the qualification process of olive oil and as a way of certifying the territorial linkages of an organic product. Secondly, the initiative was designed to connect with the National Park Sierras de Cazorla, Segura y Las Villas, created in 1986, as organic agriculture was perceived as sustainable management, consistent with the environmental values of this Protected Area. On the other hand, organic agriculture was raised as a strategy that would allow the oil to be competitive in world markets and would improve farmers' incomes. It should be noted that the intensification process of olive trees in this area has been much lowerthan in other areas of Andalusia.This is because the olive trees are on slopes, making mechanization difficult and thus affecting profitability due to reduced production and increased costs. This was, therefore, an attempt to stimulate a marginal territory facing serious problems of

depopulation, aging and masculinization, like in many Spanish mountain regions.

In 1986, farmers from a cooperative in Génave -one of the municipalities located on the northern slope of the Park- decided to start up organic olive production. To do so, they eliminated the use of chemicals and synthetics and introduced innovations in the management of olive groves: fertilization, soil management, pest and disease control (Pajarón, 2007). It should be noted that these producers were pioneers because, at that time, there was no law to support this production system and to protect the differential qualities of organic oil, despite the fact that Spain was one of the first European countries to regulate this activity in 1989 through the adoption of the Regulation and Control Board of Organic Agriculture. It should also be noted that in the late 80's, the CAP had not yet included rural development or agri-environment measures among its primary objectives. Besides thechanges in practices, innovations were introduced in the manufacturing processes, marketing and oil sales (Marbán, 2003). They enlarged the mill, began to bottle the oil and created their own brands.

As a result of the difficulties in selling the product and the fall of profitability in olive groves, in 1987 the cooperative decided to give up organic production. A group of 45 producers with 400 hectares of olive trees determined that they wanted to continue with the project. To do this, they created their own cooperative, "SCA Sierra de Génave" solely made up of organic olive farmers. Although the beginnings were hard, these farmers started to sell their organic PDO oil in bottles. This objective was achieved due to the creation of the Second Grade Cooperative "SCA Olivar de Segura" in the territory, as the role of this cooperative was to bottle and market the olive oil obtained by the cooperatives integrated in the PDO (Lozano, 2010).

Therefore, this territory was not only the first to implement a collective experience around organic olive growing but the project also focused on the territorialisation of such certification. That is, the connection of this organic oil with

specific values of the area, and more specifically, with the label demonstrating this relationship: the oil's PDO. These social actors were able to identify a specific resource in their territory, value its potentiality and turn it into an asset.

Over the years, organic farming has expanded and so has production diversification in this territory. When we started this research in 2004, the sector had 157 producers from different municipalities in the area. Most of them had been enrolled since 1996, encouraged by the European subsidies for organic farming. There has also been a diversification in production. In 2004 we could findwoods and pastures, horticultural crops and fruit production in the region. However, most farming continued to be olive grove which occupied 56% of the 2,500 hectares that existed at the time. The importance of the sector can also be perceived in the number of industries. Out of the 8 organic industries that existed in 2004, 5 were mills and 1 was a cooperative of oil-bottling and marketing.

These organic producers, averaging 50.6 years old, were younger than the conventional farmers who averaged 53.2 years old (Lozano, 2009). This data shows that organic farming has had a greater incidence among the younger population. This finding offers a hopeful picture, not only for the future of organic farming in the area, but also to achieve a reduction in the percentage of young people leaving the area in search of work. Regarding the level of education, it should be noted that most of those interviewed, except the eldest, had primary education, and many of them secondary education.This shows that the level of education of members of the organic agriculture sector is relatively high, especially when compared to the data regarding the qualifications of the rest of the territory's population. We should also note that 35% of the sample has university education, which may indicate that this activity has had a greater development among people with a higher educational level. According to Pugliese (2001) this factor may have been decisive for the incorporation of innovations required in this production method. These aspects also offer good

prospects for dealing with territory issues, especially for rejuvenating the agricultural population and for maintaining generational replacement in this activity.

On the other hand, for a significant number of these producers, organic farming is not their main activity but rather a supplement to their economy. This is, however, a general feature in the agricultural sector in the area because of the preponderance of smallholdings. Although most of the population has olive trees, they do have not enough land to live off this activity. This trend towards pluriactivity is, according to some authors (Kinsella *et al.*, 2000; Ploeg *et al.*, 2002) a new way of redefining the relationship between rural and urban. Pluriactivity is a strategy that is allowing small producers to survive and encouraging a significant proportion of the population to remain in rural areas. The presence of these part-time farmers may have a role in the reorientation of agriculture and the development of new activities. As Caballer (1982) points out, the farmers who develop this activity because they inherit family land and do not live off farming exclusively, are more likely to integrate technical innovations and, above all, organizational innovations.

According to 54% of our sample, environmental concerns were the main motivation for starting up this activity. Within this group there are two main concerns, the awareness of the impact of an industrialized agriculture model on the environment, and the use of chemicals and synthetic products. In second place is the economic motivation, which was essential for 34% of producers, meaning that many of them had became organic farmers as a strategy to give added value to their production, which could barely compete with the major olive producing areas in Andalusia. This pioneering initiative was reinforced in 1992 with the establishment of the CAP agri-environment subsidies oriented towards compensating farmers who voluntarily introduced agricultural environmental-friendly practices (Buttel, 1993). However, most farmers advocated a balance between the interests in creating pollution free farms and promoting

biodiversity with the development of an activity which allowed them to obtain a minimum profit.

Therefore, when we started our research in this area, we found an incipient LAS in which there had been a structural collective action (Boucher and Requier-Desjardins, 2005). That is, through the setting up of certain collective actions, links have been established between the different dimensions of organic farming. In the production area, a significant proportion of organic farmers in the area were organized around two cooperatives. One -that is, the first organic cooperative in the territory- was made up of organic producers exclusively. The other mill had different machinery for producing organic and conventional oil.

Furthermore, the organic industries in the area have established cooperative relations. 3 of the 6 mills certified in 2004 were integrated into the Second Grade Cooperative *Olivar de Segura*, which bottles and sells the oil under two brands: *Oro de Génave* and *Sierra de Génave*; a strategy that enables them to face the challenge of bottling and marketing organic oil. The link between organic farming and the territory has remained but it has changed. SCA *Sierra de Génave* left the PDO some years ago because, as they had to supply the increase in demand, they had to import olives from territories that were not integrated in the PDO. The other cooperative, on the contrary, has joined the PDO. In addition, most of the mills in the territory are trying to link their product with the Natural Park, through formal links, such as the Natural Park of Andalusia label, and through informal links with a PNA reference on the product.

There have also been interactions established between this sector, regional institutions and the local population. Since 1997 this has been done through the Mediterranean Conferences of Organic Olive Grove and Ecology of Olive Oil, better known as ECOLIVA. The design and implementation of this conference,

held every two years, has promoted the establishment of a formalized network of social actors in the territory interested in promoting organic olive grove.

In short, we can see that the organic oil sector in the PN-SCSV was coordinated through a wide range of formal and informal partnerships, linking producers with producers; producers, processors and marketers; industries with industries, and the entire sector with the institutions and the territory's population.

Organic production in a Natural Park. Potentialities and contradictions

Despite the impact of organic production in the generation of biodiversity and the development that this activity has experimented in the Natural Park over the past 20 years, links between agrarian and environmental policies in the area have barely emerged. The original idea was to link ecological olive growing with the values of the newly created Natural Park, but the environmental management has shown no interest for such initiatives. Furthermore, while these producers were compensated financially for the development of their practices through agro-environment subsidies, the Governing Board of the Nature Park was only concerned about implementing the conservation guidelines to preserve the natural resources. It might even be said that environmental protection has blocked the development of organic agriculture and, above all, of organic livestock in the territory. This has happened in spite of the potential offered by this sector for conversion, due to its extensive nature, the adaptation of local breeds and the type of management developed. The reason for this paradox is that most of the Park's forests are public. The registration of the land as organic is therefore the responsibility of the Regional Government.

Another factor that has blocked the development of this activity has been the poor image the local population has of the Natural Park and of any initiative to

protect natural resources. This intense hostility has shifted towards organic production, which is seen as another attempt to restrict the territory's economic activities in favour of wild life protection.

One of the factors that has led to this negative image has been the opposing attitudes of organic and conventional farmers, -and basically two different ways of conceiving the relationship between agriculture and environment- regarding the systematic aerial spraying of crops. It should be emphasized that the use of pesticides by air to combat the pest of the olive fruit fly is a widespread treatment in Andalusia[30]. In 2005, various groups of organic farmers and ecologists got together to eliminate these treatments, at least in the catchment area of nature reserves. The aim was not only to protect organic farmers' holdings from contamination, but above all, to implement effective conservation of natural resources in these territories.These claims have been perceived by conventional farmers as a new "threat" to the productivity of olive groves in favour of guidelines for nature conservation.

The confusion between the terms *ecológico* -used to designate organic producers- and *ecologista* –used to designate environmentalists-, has also contributed to these circumstances, although there are organic producers who also belong to environmental organizations. Organic production tends to be associated with the conservative approaches of the advocacy nature groups and with the restrictive environmental policy, as an institutional agent points out:

> *"There are some people here who say that it should be renamed and then it would expand further. Organic has connotations... often negative because it tends to be associated with environmental policy and how they work, which is just fining people".*

[30]Its extensive use has led to cases of accidental contamination of organic farms. However, it has also affected fauna and flora, water resources and has even fallen on people in the fields.

Therefore, despite the synergies that could be derived from the location of different production and processing experiences of organic products within this Natural Park, the fact is that, for decades, attempts to associate environmental protection and organic production have produced sterile, counterproductive results, to say the least. In this dynamic, as we have discussed, the sectorial conceptualization of development and the prevalence of the conservationist vision in the management of the Natural Park has had a strong impact.

Organic production in Natural Parks as a LAS model?

In recent years, however, the situation has begun to change, making way for a territorial development model. The new model emphasizes that these spaces are not isolated, but have a continuous and smooth relationship with the surrounding ecosystem. It also recognizes the importance of maintaining the socio-economic and cultural elements for proper conservation of these resources (Lozano and Aguilar, 2008). A new concept of natural areas is beginning to appear, more in line with the expectations of the population that live within its boundaries. A concept that is consistent with the development model that favours a territorial approach instead of sectorial and isolated actions.

This change is related to the consolidation of the rural development policy as the second pillar of the CAP. It has meant a shift from a conception of the countryside as a predominantly agricultural area, whose purpose was to produce food for society, to another that conceives it as a multifunctional space whose main asset is the development of its natural, cultural and economic resources.

This change in perspective from the conception of territory as a support for activities to the consideration of it as a resource (Esparcia and Noguera, 1999) explains the importance acquired by quality products, in particular, the so-

called *produits du terroir*. This distinctive quality food has consolidated in recent years as a viable strategy to reduce stocks, boost less competitive, marginal regions socio-economically, and provide small farms with a distinguishing tool with which to compete in global markets.

A dynamic that coincides with the process of agriculture greening (Moyano and Paniagua, 1998) that is, with the introduction of the CAP in 1992, a set of environmental measures aimed at promoting environmentally-friendly farming practices. Among these measures, organic farming is one of the options that has been most welcomed by farmers, encouraged by the subsidies perceived to offset the economic losses of the conversion period. There has been a shift in the EU principle of <<polluter pays>> to the other of <<preserver earns>> (Garrido, 2002), trying to give the farmer a new legitimacy based on the social enhancement of his role as guardian of the environment.

On the other hand, following the guidelines of territorial development, environmental policy has begun to realize that these areas are deeply modified and that human action has been and is essential for the conservation of these resources. That is, aiming for a sustainable development model, including economic, social and cultural, and also natural dimensions. In this context we can understand the strategy carried out in many of these territories and especially in the Andalusian Natural Parks. A strategy oriented towards the promotion of quality food production because of its potentiality to make the creation of incomes and employment compatible with the conservation of natural resources and landscape.

These changes became visible in Andalusia with the design of a set of Sustainable Development Plans for the Andalusian Natural Parks to establish specific strategies for each of the territories, according to their needs and resources. The purpose was to end the problems of depopulation and abandonment of activities that are affecting many of these protected areas. The plan for the NP-SCSV was passed in 2003 and gave great importance to promoting

organic agriculture and organic livestock production, considering the evident effect that these initiatives have on improving the sustainability of a local production system. This means that for the first time, there is a proactive stance - through environment policies- towards organic production in the Natural Park and, above all, towards organic stewardship promotion.

It's interesting to point out that this first shift coincided with the creation of the General Direction of Ecological Agriculture in 2004, the agency responsible for the management and promotion of organic farming policies in Andalusia. The promotion of this kind of agriculture and livestock production in Natural Parks was one of the fundamental axes of action, not only because the implementation of this activity is easier in these areas, but mostly because of the positive synergies that this initiative could generate for the areas in the way of new incomes and jobs. We understand that the confluence of interests and objectives of both administrations has been the breeding ground for the growing number of acres, producers and processors in Andalusian PNA's.

Due to its experience in this area, the Natural Park of Sierras de Cazorla, Segura and Las Villas has been one of those which has received more attention. The starting point was the coordination of various policy areas (agriculture, environment, employment, health, etc.), as well as the various administrative levels working in the area. For the first time, a forum has been established for dialogue between local people and representatives of the Natural Park, two traditionally antagonistic groups. They have agreed on a common strategy for the development of organic production within the protected space (Lozano, 2009). This forum has also helped environmental management to understand the demands of local farmers, certifying public forest pastures as organic, which was one of the main obstacles for this economic activity in the Natural Park.

From this common agenda, several initiatives for production and marketing have been created. First of all, in order to develop the organic production sec-

tor in this territory, it was considered necessary to adopt a holistic perspective, trying to act simultaneously on all stages of the process. Different measures were designed to increase its productive capacity, but mainly, to promote the diversification of activities and crops. The aim was to broaden the range of products in the area so that an internal market could be created. This meant that local consumers would have access to a wide variety of foods[31] throughout the year, without having to bring them in from other parts of Andalusia.

Secondly, in order to strengthen the sector, coordination has been encouraged between the different sectors: livestock, grain and oil production, horticulture, etc. A strategy designed to reduce dependence on products from large phytosanitary companies and the acquisition costs of these inputs. For example, grain producers could supply livestock farmers with feed grains, thereby making the region self-sufficient in grain-based feed stocks. In return grain farmers who have faced difficulties in finding an outlet for their produce could find a market. In addition, to overcome the doubts and stereotypes that a large proportion of the population of the area have towards this production system, various employment workshops have been set up on horticulture and the manufacture of canned vegetables. The objective of this initiative is to generate new employment alternatives and promote the creation of companies related to organic production.

With regard to the marketing and sale of organic products, a campaign has been launched to promote domestic consumption through different ways. The first experience was the location of a *Biopunto,* that is a sales centre in the weekly main street markets in the different municipalities of the territory. The strategy has been oriented mainly towards the organization of horticulturists because their products are more difficult to market due to their perishable nature and low volume outputs. Similarly, it has encouraged coordination be-

[31]The main factors that block the commercial development of organic production are: the limited offer of organic products, limited distribution, and problems found by consumers in markets.

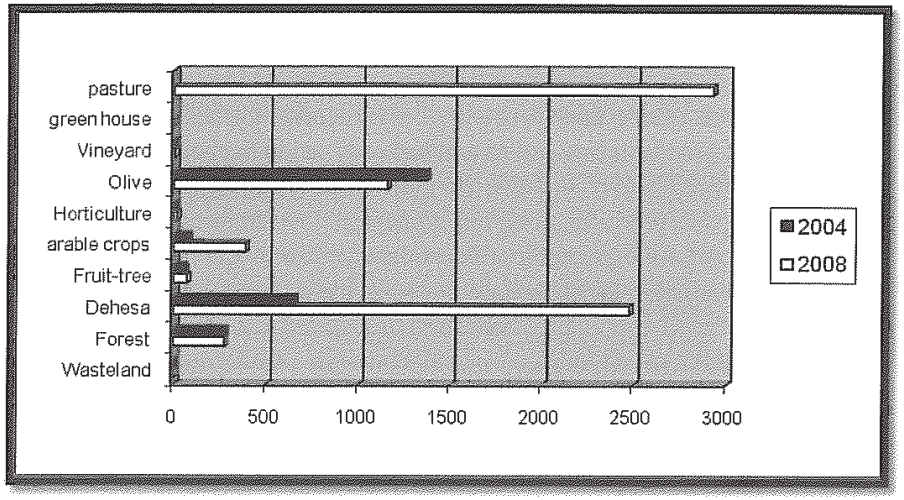
tween them regarding the choice of crops, in order to offer local consumers a wider range of products and a steady supply throughout the year. The second experience has focused on the promotion of social consumption. This program was launched in Andalusia in 2005 to promote healthy-balanced eating among the school population and to sensitize school children, parents, teachers and chefs about the qualities of organic production and its positive impact on the environment, health and rural development. In 2007, this experience began to be implemented in PN-SCSV and has led to the introduction of menus prepared with organic foodin some schools and kindergartens in the area and in the local hospital.

All these measures have achieved an important double purpose: to make the products visible, and to distribute them among the local population to overcome the resistance and negative stereotypes towards this production system. This double objective is important because encouraging consumption and increasing demand for this kind of food would solve one of the main problems of the organic sector: marketing and selling, and could also lead conventional farmers towards conversion. From the convergence of all these projects, an association of producers and consumers has emerged in the area called *Segura-Ecológica.* This initiative seeks to promote a territorial structure, a meeting space for organic producers, organic processors, consumers and technicians. That is, a space for the promotion oflocal consumption and a point of reference for peopleinterested in the subject.

This structure is enabling coordination among the various producers in the area, especially horticulturalists. The association is positioning itself, not only as a support network to exchange experiences, but also as a strategy for the coordination of crops and activities so as to offer the widest possible range of fresh products to consumers. Similarly, a direct relationship with consumers is not only a guarantee for consumers, who can get to know the producers and their farms, but also constitutes a source of pride and satisfaction for the farmer. One of these producers talked to us about this:

"One of the factors that has encouraged me to convert is the existence of this association. Not only because it enables you to market the production, but because you are given encouragement. You're encouraged by other producers who have gone through the same experience and you're encouraged by consumers. They give you strength because it's hard (...). We coordinate the planting of different varieties of potatoes, for example, so consumers can have a wider range of products".

Figure 4.Comparison of surface of organic production in the Natural Park in 2004 and 2008



The results are clear. Despite the short experience of the project there has been a dramatic increase in the certified area, which has enlarged from 2,455.31 ha

in 2004, to 7,316.6 ha in 2008. Among these figures, the most significant have been in the area of pastures and meadows, which never existed before and now represent 40% and 33.8% of the total certified area (2,925.31 and 2,475.63 ha respectively). In the same way, the land dedicated to herbaceous has expanded from 82 ha in 2004 to 388 ha in 2008. Finally, the support of environmental policy for the ecological certification of public pastures has allowed a group of 15 livestock farmers, grouped in a cooperative, to join the organic sector, bringing the number of producers to more than 175. These actions also represent a step forward in the active integration of farmers in the management of natural resources and the recognition of the importance of the sustainable management of livestock for promoting biodiversity, wild plant reduction and fire prevention.

These experiences are enabling the consolidation of a LAS in the area. Whereas in the previous stage, most collective actions were centred on the olive sector, in this phase there has been a strengthening of backward linkages, that is, the direct relationship between farmers, livestock, processors and consumers. In this process, the aim of the latest initiatives is to boost local consumption through the establishment of short marketing channels (Lozano and Aguilar, 2010). Even though the *Biopuntos* experience has only been supported for several months, some producers have actually continued with the project by themselves, keeping their stalls of organic products in the weekly street markets in some municipalities. The maintenance of the Social Consumption Program is having a similar impact in the area, successfully introducing the new generations to these products, especially fruit and vegetables.

In short, we could say that this strategy and these initiatives have led traditionally opposed social actors to a new path of rural development whose main outcome is the promotion of organic agriculture and livestock in this NPA. This fact means we can speak of an emerging <<Natural Park of Sierras de Cazorla, Segura and Las Villas' LAS>>. Our case makes it clear that the key factor has been the establishment of networks between the different local ac-

tors. The involvement of organic operators -and particularly their internal coordination with other social actors of the territory- has been essential for the consolidation and development of organic production. This can be regarded as an example of functional collective action (Boucher, 2004), that is trying to locate a generic label through the incorporation of the Natural Park values.

Conclusions

This article has analysed the reorientation process of environmental policy from conservation guidelines, to other positions closer to the new territorial approach for development. This new framework has explained the expansion of organic agriculture and livestock production in Protected Natural Areas in Andalusia, specifically in the Natural Park of Sierras de Cazorla, Segura and Las Villas.

First, it has highlighted the impact that the implementation of a conservation policy has had on the territory and especially the hostility of the local population towards the figure of the Nature Park. We have referred to the consequences of this implementation in the development of organic agriculture. The causes have not only been the passive attitude of the environmental agency but also the negative image of organic agriculture which has emerged due to the restrictive policy of this association.

Secondly, the paper highlights the potential that has been generated with the reorientation of environmental and agriculture policy.Active involvement of these administrations in promoting organic agriculture in the territory has been one of the factors which has led to the growth in the number of hectares and producers in the Natural Park. In addition, these actions involve the recognition of the role of the local population in the construction of the territory and how they have tried and are trying to integrate them in the management of resources. This initiative is also an example of the potentiality of the bioregional

model and its understanding of biodiversity conservation as an action that must integrate the social, economic, cultural and environmental conditions of each territory.

Thirdly, the promotion of organic production in the protected natural areas is, as we have seen, one of the best strategies to promote the axioms of the bioregional paradigm. That is, it can be a way of providing new content to the agricultural activity, more in line with the environmental role played by the territory and the demands of consumers; an experience that would attract the younger population and would allow the creation of generational replacement for an aging farming population. As we have seen, organic agriculture can contribute to reducing some of the demographic, social and economic problems that these territories face. It can be a viable alternative to traditional production, as this sector is composed of a younger population, with higher education and greater entrepreneurial skills. Organic producers have positive attitudes to innovation and are proud of being farmers, as they contribute with their activity to promoting sustainable environments. Similarly, the techniques used in organic farming contribute to the conservation of biodiversity and can help to reduce agrarian pollution and to counteract some negative impacts such as erosion and landscape degradation.

Fourthly, and closely linked with this bioregion concept, is the consideration of this experience as a *Localized AgriFood System* (LAS) due to the various collective strategies that have been developed to link this generic certification with the natural and socio-cultural characteristics of this territory. A regional development strategy has been encouraged to give popular support to this activity by means of the incorporation of the differential values of the territory and, above all, by means of the application of an integral management model. This association has also been positive for the Natural Park, whose image of sustainability has been reinforced by the connection with the positive environmental externalities that organic production generates. This orientation towards quality has required, as we have seen, the incorporation of many inno-

vations in products, processes and techniques, and in the organization established among actors. Such innovations have been closely linked to the recovery of practices and know-how which had remained in the area, despite the gradual intensification of agriculture.

Finally, the element that seems most interesting in the LAS perspective is the emphasis given to the role of local actors and the collective action in the generation of these processes. As we have seen, one of the key elements of the consolidation of the LAS *"Natural Park Sierras de Cazorla, Segura y Las Villas - Organic Agriculture"* has been the establishment of networks between different actors in the territory. On the one hand, networks have been created among organic producers, and between these producers and organic industries, in order to strengthen internal coordination. On the other hand, links have been encouraged between organic operators and institutions and, above all, closer ties have been promoted between producers and consumers by developing short marketing channels.

In short, we consider that the analysis of this case has given us the chance to study the LAS concept in more depth, and to propose new elements of study related to the potential of this approach for sustainable development models and the generation of territorial qualification dynamics.

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