‘LOCAL’ LEVEL ANALYSIS OF FNS PATHWAYS IN SPAIN

Exploring two case studies: New initiatives of peri-urban agriculture and Food and Nutrition Security in remote rural areas

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‘Local’ level analysis of FNS pathways in Spain

About TRANSMANGO:

TRANSMANGO is an international research project that aims to explore diverse transition pathways to a sustainable and food secure food system. It is funded by the European Commission and runs for four years, from 2014 until 2018. The Transmango consortium consists of 13 partners from nine European countries and Tanzania. For more information, visit our website: http://www.transmango.eu/.

About this Document/Disclaimer:

This report is part of Work Package 6 of TRANSMANGO which is focussed on ‘local’ level analysis of FNS pathways in Europe. This report is based upon ‘D6.1 Case-study selection and methodological guidelines for local level analysis of FNS Pathways’ (transmango.eu). The guiding research questions for the Work Package 6 ‘local’ level analysis were:

1. To what extent, and how, do the selected FNS practices / pathways reflect novel responses to FNS concerns in specific settings?
2. To what extent are these novel practices / pathways promising and successful?
3. To what extent do involved stakeholders explore up- and out scaling potentials?
4. How do stakeholders characterize their interaction with institutional settings?
5. How relevant is EU level policy making in this interaction with institutional settings?

This report is focussed peri-urban agriculture and food and nutrition security remote rural areas in Spain. This report presents the interpretations of the researchers, and does not necessarily reflect the views and nuances of the initiatives and respondents themselves. In total there are nine separate ‘local’ level analysis reports from ten consortium members and they will feed into the ‘D6.4 Syntheses report on FNS pathway-specific drivers, potentials and vulnerabilities’.

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List of abbreviations
AE Agroecology
CAECV Comité de Agricultura Ecológica de la Comunidad Valenciana (Ecological Agriculture Committee of the Valencia Community)
CSA Community Supported Agriculture
OF Organic farming
RCG Responsible Consumption Group
SFSC Short Food Supply Chain
SPG Sistema Participativo de Garantía (Participatory Guarantee Systems)
1. INTRODUCTION

This report contains the results of the two local case studies

- Main case study: Interlinking new initiatives of peri-urban agriculture with neighbouring urban consumers in Valencia (Spain)
- Satellite case study: Food and Nutrition Security in remote rural areas

Interlinking new initiatives of peri-urban agriculture with neighbouring urban consumers in Valencia (Spain)

Last 5-7 years have witnessed the proliferation of new agricultural initiatives in the horticultural peri-urban space (called l’Horta in Valencian language or La Huerta in Spanish) around the city of Valencia that are challenging the mainstream production regime. Although they are about different profiles, their promotors share some common features: they look for new forms of proximity and direct selling pathways with urban consumers, adopt agro-ecological farming and most of them actively participate in social movements which defend this worthy historical and cultural space and claim for a deep transformation of the dominant food system.

To tackle this case study, a two-fold analysis is being carried out inspired by Hargreaves et al. (2013), which combine Multi-level Perspective and Social Practice Theory:

- From the production side: how production and marketing practices do condition and are conditioned by current regimes governing access to water and land, dominant market channels, quality certification systems, etc.?
- From the consumption side: how do everyday consumer family practices condition and are conditioned by their participation in this new (niche) way to access fruit and vegetables?

This case study is relevant with regard to the TRANSMANGO ambitions in a number of ways:

- It has become an outstanding issue in the local and regional social and political agenda in the last years. From the very beginning, as stated above, actors involved in these initiatives have also been actively involved in socio-political movements advocating the protection of this agricultural landscape, threatened by urban and infrastructure expansion in a period (particularly 2000-2007) when the Spanish economic growth was specially linked to the boom of the construction sector. Later, from June 2015, the new local (city of Valencia and metropolitan centres of population) and regional governments stemmed from the elections, rapidly included the protection of l’Horta and the promotion of this kind of agricultural initiatives in their respective political agendas.

- Finally, in the long run, this is a valuable productive system, heir of a long socio-cultural tradition (for instance regarding the rules governing water access) and responsible for providing other ecosystem services, which will be particularly hit by climate change. Indeed, as it will be explained below, involved actors are aware about medium and long term constraints to keep producing fruits and vegetables in this intensive-irrigated agriculture.

In short, several dimensions of FNS are somehow involved in this case study: it is about availability as it relates to food production, it is about access since it also deals with the way some consumers are been able to access to food stuff not easily accessible through conventional retailers operating in the city, and it is about sustainability, since we are focusing farming practices that aim to recover and preserve peri-urban natural resources and intangible assets that can play a role to confront future vulnerabilities. Moreover, for involved actors, these initiatives are also about agency, i.e. as a way to take control over their food relationships.
This case study deals with several of the debates that arose in the previous analysis carried out for WP2 national reports and which identified the main FNS discursive frames in Spain (Ortiz-Miranda et al., 2016). In particular: the constraints for the development of organic farming, the challenges for the setting up of young farmers, the socially constructed image of ‘return to the land’ as refugee for unemployees, urban planning models and sustainable cities, the access of small producers to food markets dominated by large operators or the role of this kind of ‘alternative’ initiatives in providing sustainable and healthy diets to urban dwellers.

**Food and Nutrition Security in remote rural areas**

The aim of this case-study is to analyse food physical access in remote small mountain villages. The study area is the Chistau Valley, Central Pyrenees (Aragón, Spain). The area suffered an intense demographic deterioration from mid-20th century. Currently there are 600 inhabitants (1500 in 1950) with high masculinisation and ageing rates. This trend aggravated in disseminated small villages (15-30 dwellers during winter) located in mountain slopes, where there is no permanent food retailing and where aged population have mobility constraints. In this context, the main way to access food is through periodical visits of traveling retailers who supply these villages.

The research questions that have been addressed in this satellite case study are:

- How food access organization has changed throughout the last decades in parallel to the demographic decline?
- Which social practices are currently securing food access? Which is the role played by these networks of traveling retailers?
- Which is the long term viability of these model?
- Are these practices, which are carried out by private actors, supported by any kind of public policy?

The concept of ‘food desert’ –i.e. both urban and rural areas with limited, if any, retailing to provide diverse and healthy food- has gained momentum in the last years, though it has received more attention in the USA than in Europe (Beaulac et al., 2009). However, ‘food desert’ situations have also been reported in European rural areas as a consequence of population decline (e.g. Shaw, 2006). Nevertheless, unlike the main case study, which deals with a number of topics that have received social and media attention in the recent years in Spain, much less attention has been addressed to the problem of physical access to food in remote areas. Although rural depopulation is still a recurrent issue, in particular in some regions –like Aragón, the FNS implications have not been tackled per se.
2. MAIN CASE STUDY REPORT

Introduction
One of the European landscapes defined in the 1995 Dobris Assessment on the state of the environment1 was the “Huertas”. Its landscape is defined as irrigated, fertile valleys on Mediterranean coast; its vegetation consisting of intensive horticulture and permanent crops (e.g., fruits). Huertas are among the most important agricultural systems in Europe, where only six examples of these spaces remain, one of them being the “Huerta of Valencia”. (Stanners, David; Bourdeau, Philippe 1995)

The irrigated agricultural space around the city of Valencia is called the “Huerta of Valencia”. Its spatial morphology, the density of its historical constructions and the cultural traces accumulated within it over the centuries make it a complex historical landscape. The Moorish people created its spatial morphology in the 8th century by constructing eight complex hydraulic systems, that took and distributed water from the Turia river through a set of main channels, that branched in the form of irrigation ditches (acequias) which, following the contour lines, distributed water to the farmhouses and rural villas (barracas and alquerías) located along its layout. Simultaneously, a rural-road network connecting those scattered population centres was being created. Both were the vertebrating axes of the landscape where agricultural parcels adjusted to fit. This irrigated landscape was based in specific criteria of social organisation and collective rights on water allocation and their proportional distribution among users.

Main cultures in the Huerta have been changing importantly over centuries, and hence altering its landscape. Thus, main cultivation of bread cereals and vineyards and reduced parcels of vegetables and fruit plants was the norm during late middle ages. From the fifteenth century, mulberry trees extended to supply a flourishing silk-making local industry. It is during the nineteenth century that mixed vegetables farming was progressively increasing for a bigger urban market, and it is in the twentieth century, with the small-scale family farms crisis and partial-time farmers, that groves monocultures have extended largely in the Huerta and beyond. Strictly speaking, the Huerta of Valencia is the territory limited by the maximum perimeters of the medieval Muslims’ acequias. At the beginning of twentieth century it reached a maximum extend of about 13,200 hectares plus other 4,700 hectares of old marshes, which today has been reduced by a third because of urban sprawl (there are 40 different municipalities in the area). Beyond the Huerta, an irrigated space extends in the metropolitan area of Valencia and surrounding comarcas (counties) that have taken its name “l’Horta-nord” (the northern Huerta) and “l’Horta-sud” (the southern Huerta). Traditionally farmland was rain-fed, but it was transformed into irrigated since the end of nineteenth century with the arrival of steam and electrical engines and the construction of dams. (Guinot 2008)

There are several confluent processes that threaten the future of the historical Huerta of Valencia: a decrease of cultivated land, pollution, infrastructure plans, urban sprawl, profitability loss, low guarantee of generational renewal and abandonment of material heritage. The conservation of the Huerta would require a territorial planning at the appropriate scale, where a new culture of water, territory and landscape is considered, and a management at the metropolitan level. (Romero and Melo 2015)

In short, the Huerta of Valencia has not only been an agricultural space but, also, a peri-urban space where urban and rural confluenced and influenced each other for centuries. Nevertheless, the gradual deterioration of l’Horta, the decline of its agricultural system and the urban food habits contributed to weaken that meeting space of peri-urban/rural/agricultural actors and practices. The new agricultural initiatives tackled in this case study also aim to reconnect all these dimensions.

1 Commissioned by the European Environmental Agency, the Dobris Assessment report covers the state of the environment in a Europe of nearly 50 States. One of its parts provides an overview of the values and functions that characterize cultural landscapes.
The following two figures illustrate the peri urban territory of Valencia and its typical farm structures.

**FIGURE 1 THE CITY OF VALENCIA AND NEIGHBOUR TOWNS SURROUNDED BY THE HUERTA**

**FIGURE 2 TYPICAL LAYOUT OF THE PLOTS IN THE HUERTA**
2.1. Research questions

Before going to the research questions that have guided the analysis, it is necessary to better define what has been the object of the case study, i.e. what we have referred as new peri-urban agricultural initiatives in Valencia. First, instead of focusing on a concrete individual initiative and analysing it in-depth, we have adopted a more ‘meso’ approach. Indeed, in spite of being a lot of individual initiatives that are sometimes connected, that consolidate or disappear, that present a diversity of modalities of business structures and strategies, they need to be approached as a collective process, as a system which aims to construct an alternative local food system. Second, this system approach is justified because many of these initiatives are connected in several ways (see below) and because they share common traits:

- Producers adopt agro-ecological and/or organic (i.e. legally certified) farming. In addition, they are about small-scale initiatives, though some of them can grow as they consolidate their business models.
- Producers look for new forms of proximity and direct selling pathways with urban and metropolitan consumers. They do so by integrating in consumer groups, in farmers’ markets, in-farm or home delivery direct selling, through local-specialised stores, etc.
- Most of these new farmers are actively engaged in the socio-political movement of defence of the Huerta of Valencia, which aims to recover and preserve this high cultural value agricultural space.

What makes this case interesting for this analysis is that there has been a rapid spread of initiatives of this kind in the last years. Although there is not an official census or inventory, there have been several attempts to quantify and classify the initiatives that have been making up this process. For instance, many of the interviews mentioned the calendar that the initiative ‘Fem L’Horta Possible’ publishes annually, which lists most of the initiatives, business and projects that made up this phenomenon, as a good indicator of its magnitude. In this regard, there were less than 10 initiatives in total when the first calendar was published about 7 years ago, while the calendar of 2016 lists nearly 50 of them only in Valencia and neighbouring areas.

From these clarifications, the research questions are the following:

- What is the profile of people involved in these initiatives? What are their motivations? What are their assets to initiate this activity?
- Which needs/obstacles do they have to overcome? How do they confront them?
- How do they gain access to land? To what extent is this access related to ongoing processes of farmland abandonment? How do they gain access to water?
- Which modalities/formats do these initiatives adopt? Individual/collective, legal entity they adopt…
- Which marketing channels/networks do these initiatives access/create?
- Which production practices are adopted and what is produced?
- What is the relationship between these new initiatives and the surrounding agricultural community (neighbour farmers, collective actors like existing cooperatives and irrigation associations)?
- Which local, regional, national and EU regulations condition their activity? E.g. land planning, health regulation, quality labels
- Which policy initiatives are aimed to facilitate these initiatives?
- Which are the main vulnerabilities these initiatives have to confront in the short and long term?

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2 “Fem L’Horta Possible” is a co-operative initiative of several civil organisations that promotes the consumption of local organic products.
Research methods

Four basic techniques of qualitative social research were used: semi-structured interviews, discussion group, participatory workshops and participatory observation. To supplement the data, secondary information sources were also revised.

Secondary data sources

Several secondary sources were consulted to complete the information acquired from primary sources. These include, among others, online magazines focused on local organic agriculture, internal social organisation documents and public institutions press releases.

Interviews & choice of interviewees

22 semi-structured interviews were conducted with key actors of different backgrounds, namely: 9 local producers, 5 from different Administration levels, 4 from the consumers’ context, 2 social organizations and 2 experts. Anonymity was guarded and interviewees were referred with a code that can be found in Annexes 1 and 2. The interviews lasted between 31 minutes and nearly two hours, with a duration over 50 minutes for the majority of them. Interviews aimed to acquire an understanding of the different social imaginary in the reference groups. Interviews allowed to reach the saturation of the information collected regarding the key issues tackled.

The interviewees were initially selected on the basis of our own knowledge of the case of study. From there, the sample continued to build up alternatively through snowball sampling from an experts driven selection and direct contacts on places such as farmers’ markets or specific information talks and working days attended by producers. Annexes 1 and 2 present the characterization and identification code for the producers & processors interviewed.

Discussion group

A recent SFSC project called “Cistella responsable” (responsible basket) was analysed in detail through a script of semi-structured questions to better understand both the participants’ motivations and how these practices may influence different consumer’s habits. A complete analysis of this activity is explained in Section 2.2.4.

Workshops

Two participatory workshops were organized and a complete description of procedures, and results for both of them can be found in the workshop report. There were 23 people attending the first workshop coming from five different groups, namely: producers, consumers, administration, civil society organizations and experts. Representing the same five groups, 19 people participated in the second workshop.

Participatory observation

Participatory observation was widely used. Initially, we attended a series of talks related to this research, e.g. “Prospects for the Huerta of Valencia. Traditional values and innovative uses”, held on October 2015, where experts and municipality policy makers contributed. We participated in the working day “Menjant València” (Eating Valencia) on sustainable food and peri-urban agriculture, organized, last January, by the Justicia Alimentaria Global-VSF association in collaboration with the Valencia city Council, that brought together some 70 people from 45 groups (institutions, associations, companies, parent’s associations, etc.) where the Valencia city council presented its plan for the promotion of agricultural space activity. Also in January, we attended the “De l’horta a la plaça” (from the huerta to the square) day, with the support and promotion of the city council. Market stalls were improvised in the Valencia city hall square to show the diversity of economic and social activities based in the Huerta and influenced area. It was a great attendance success and, judging by the comments made on the spot by many visitors and by the feedback from some organizers, it seems that there would be a potential growth for farmers’ markets within the city. In the same vein, two other local farmers’ markets were also visited (Godella and
Alboraia). We also conducted a complete participation process through several working days alongside a producer for a full crop cycle. Those days considered the plantation, watering, ecological pest management, harvest and preparation of the products prior delivery using the multiproduct-box format (see Section 2.2.4). This was a very useful experience to better understand which are the working conditions and the everyday practices for a producer. To comprehend how participatory multidisciplinary working groups operate, we attended a session of the working group on collective catering supplied by small local producers (see paragraph 2.2.5. Advocacy). A member of the research team belongs from its origin to the initiative Cistella Responsable which has been also analysed as an experience from the demand side (under section 2.2.4.). More recently, in July we also attended the presentation of the starting process of a food council following the Milan Urban Food Policy Pact signed by the Valencia city council in October 2015. The table below lists the information gathering process carried out in this research.

**TABLE 1 INFORMATION GATHERING PROCESS**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviews: Administration, social movements and consumers (under Annex 2) 5 key public administration personnel, 2 social movements members, 2 parents of students’ associations, 2 experts, 1 RCG member, 1 e-commerce consumers-producers’ platform manager.</td>
<td>December 2015- February 2016</td>
</tr>
<tr>
<td><a href="http://www.coitavc.org/cms/site_0001/comunicados/cartel.pdf">http://www.coitavc.org/cms/site_0001/comunicados/cartel.pdf</a></td>
<td></td>
</tr>
<tr>
<td>Participation process through several working days alongside an agroecological producer for a full crop cycle.</td>
<td>October 2015- June 2016</td>
</tr>
<tr>
<td>Attendance and participation: <em>Menjant Valencia</em> (Eating Valencia) seminar (sustainable food and peri-urban agriculture)</td>
<td>January 2016</td>
</tr>
<tr>
<td>Attendance: <em>De l’horta a la plaça</em> (From the huerta to the square) day</td>
<td>January 2016</td>
</tr>
<tr>
<td><a href="https://www.valencia.es/ayuntamiento/tablon_anuncios.nsf/vDocumentosWebTablon/DE16404D017EB88EC1257F41003AC1A5?OpenDocument&amp;lang=1&amp;nive">https://www.valencia.es/ayuntamiento/tablon_anuncios.nsf/vDocumentosWebTablon/DE16404D017EB88EC1257F41003AC1A5?OpenDocument&amp;lang=1&amp;nive</a>...</td>
<td></td>
</tr>
<tr>
<td>2 Participatory Workshops</td>
<td>March and May 2016</td>
</tr>
<tr>
<td>Attending the workshop and not being interviewed: 3 participatory action researchers, 4 administration key personnel from the Organic Production, Innovation and Technology Service (Regional Ministry of Agriculture, Environment, Climate Change and Rural Development), 1 <em>Cistella Responsable</em> manager.</td>
<td></td>
</tr>
<tr>
<td>Visit to Alboraia and Godella municipalities local farmers’ markets</td>
<td>Several times during the year</td>
</tr>
<tr>
<td>Participation on the working group <em>on collective catering supplied by small local producers</em></td>
<td>June 2016</td>
</tr>
<tr>
<td>Conference: <em>Organic Agriculture and school canteens</em></td>
<td>May 2016</td>
</tr>
<tr>
<td><a href="http://www.caecv.com/docs/Cartel_vd%201.pdf">http://www.caecv.com/docs/Cartel_vd%201.pdf</a></td>
<td></td>
</tr>
<tr>
<td>Discussion group <em>Cistella Responsable</em> (under Section 2.2.4)</td>
<td>June 2016</td>
</tr>
<tr>
<td>Attendance and participation: Presentation of the process for the creation of a Food council in the Valencia city council.</td>
<td>July 2016</td>
</tr>
<tr>
<td><a href="http://www.cvongd.org/va/agenda/2016/7/13/3245">http://www.cvongd.org/va/agenda/2016/7/13/3245</a></td>
<td></td>
</tr>
</tbody>
</table>
2.2. Research findings

2.2.1. Beginnings

Motivation

Obviously, the beginnings for each particular initiative have been driven by its own reasons and motivations. However, there is a certain common ideology prevailing on most of these initiatives, which is more pronounced on the smaller ones. Their promoters will resort to agroecology and food sovereignty arguments, distinguishing both from organic agriculture and food security. The following quotes illustrate some of the motivations behind these initiatives.

“My case itself is a commitment to the environment, but I do not know if this is true for other young people. (...) to be able to work hard you need to have some ethics, to become enthusiastic and move forward.” (Bellón, Jóvenes agroecólogos siguen en la brecha July 2014)

“I spent a year locked up at home, reading and thinking. Some friends started working on a small huerta belonging to the father of one of them. I interacted with them, and I began to realize that agriculture is a huge driving force to transform the world, (...) the scenario that I had long sought for began to take shape: the agricultural labour for land conversion and social transformation, the transformation of the territory.” (Bellon, Ecollaures-SPG July 2015)

The economic crisis would have been an important trigger for those new initiatives to originate. According to local NGO experts, at family level there are still many people who own some land in Valencia. It is usually the case where the grandparents were small farmers and their children abandoned farming looking for better opportunities. But nowadays, their grandchildren, confronted with precarious circumstances, have returned to the field. The younger generation, often with a college degree, decide to return to agriculture and work again on those familiar lands. This would have been the case for some of the new initiatives that have emerged.

“For ten years I have been working as a light technician (...) until I lost my job. I was forced to make a change in my life. But the agricultural feeling has always been latent. My relationship with the land has been strong through the family. And things in life had made that latent reserve to appear when something intervenes such as an economic crisis, which in this case is more a crisis of values than an economic one, it is a social crisis.” (Bellon, Vicent Gil, de "l'Hort sostenible" de Náquera May 2014)

When the same expert was asked why these new young farmers would focus on agroecology farming instead of conventional farming, she made reference to that ideological baggage.

“Personally I think that, unlike their grandparents, young people who choose to return to work in the land are more aware of their decision. They are usually people who have an environmental sensitivity and who probably already were in environmental movements or fighting for their territory and thus a return to the land implies organic farming. These movements often struggle against social injustice which involves talking about agroecology.” (Mov.-2 2016)

Initial resources

Those people coming from former farmer families initially have a better chance to succeed on their personal initiative. Usually they already have access to means of production such as land, farming machines and basic equipment. They also know the traditional marketing channels used by their parents or grandparents and, fundamentally, they have an agrarian culture even if the philosophy is different and new techniques require to be learned. This traditional background seems to be perceived as an important strength:

“We are children of the huerta, we know the marketing channels to reach people (...), there is a spirit of very great sacrifice, because this is not achieved with only 8 hours [of work] a day and today is Sunday...
this is what farmers used to do, they had no hours, lived in the huerta. All these things are very strong to allow us to achieve success.” (Producer-3 2016)

On the contrary, newcomers usually lack both the means of production and the traditional background on agriculture, making it much harder for them to settle.

**Land**

Valencia Region land prices are the second highest after the Canary Island in 2014\(^3\). Overall, highest average prices correspond to areas highly valued as orchards or irrigated land, but also with the possibility of developing uses other than agricultural, particularly urban. In this sense, prices for some areas are related to speculation processes connected with urban sprawl. In the same upward trend as the rest of Spain, in the Valencia Region the price of land has undergone a steady increase, reaching its peak in 2007 with a price increased over 120% the price of 1997. From that year, which correspond to the beginning of the financial crisis and the burst of the real state bubble, prices started to decrease and in 2014 (20.271 Euros/ha) they were still higher by 37% from 1997 prices (MAGRAMA. Statistics General Sub-directorate 2014).

Generally, those who might choose to buy land, especially young farmers, will not do it because of its high price in comparison to its average return. However, land would not be necessarily a restricting resource for these new initiatives. Indeed, according to some of the interviewees, there is still some land availability, though it is about small scattered plots owned by inheritors who do not wish to cultivate or from old farmers that do not cultivate any longer\(^4\). Usually, with no family land to move in, newcomers will initially have to rent the plot (or several scattered plots) and later on and once they are more consolidated they will think in owning the land. To move to a different municipality with a lower agricultural land price is the option chosen by some of the new young farmers.

“I was sharing a rented plot with a friend in Picanya [municipality located 7 Km away from Valencia city centre] (...). It was a disaster (...) the cost of the land was very high, about three times the price of the best field you can find in Llíria [a municipality nearly 30 Km away from Valencia city centre].” (Producer-6 2016)

Some municipalities attend the land access claims and offer disused plots.

“These plots […] are affected by a PAI [Integrated Action Programme]\(^5\), and belong to banks or to private owners who bought them for speculation; and the municipality of Pobla de Valbonna took the initiative to allow the occupation of these areas. You know many people, virtually all organic farmers in the area, and most of those in the province and the Valencian Region. That's how I heard about this possibility, which is near my house, something very important.” (Bellón, Jóvenes agroecólogos siguen en la brecha July 2014)

Some peri-urban municipalities have created municipal land banks. A “land bank” is the term used to designate the administrative public land registration created with the aim of facilitating contact between productive-capacity land owners and people interested in farming. The land offered can be found either in

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\(^3\) Last year with available data from the Land Prices Survey from the Ministry of Agriculture, Food and Environment (MAGRAMA).

\(^4\) The drop of the price of citric products –the crop that dominated an important surface in the study area- also contributed to farmland abandonment.

\(^5\) A change in the land law granted building rights to local authorities, enabling them to approve integrated action programs (PAI) to unlock urban-developable land. The intended initial purpose of reducing land prices was completely distorted and PAIs were massively used as legal instruments for urban sprawl.
a situation of abandonment or in production, and it is offered mainly for lease agreement to people interested in cultivating land. There is a demand for this banks to exist and work, but, currently, the two managing bodies for the bank of lands, Pactem Nord Consorcio and the Mancomunitat, which comprises several municipalities, are not working on a practical level. The main obstacle would be the legal issues in intermediation between municipalities and between owners and renters.

“It is a supra-municipality institution, which complicates the process (…). A greater administrations involvement to advice and to help overcome the reluctance of ownership in the formalization of contracts and to mediate disputes, has been missing (…). Administrations should press taxing idle lands (…). There is now considerably demand for land in areas with availability of water for irrigation.” (Administration-1 2015)

An additional requirement for organic certificate farmers when looking for a land to rent, is the need for a minimum rental time, enough to amortize the conversion period of transition of switching from conventional to organic farming. The transition period varies between three to four years depending on the crop.

Water
The Valencia region is characterized by a semi-arid climate consisting of irregular rainfall (generally involving a lack of rainfall in July and August, at the moment of maximum irrigation requirements) and recurrent droughts. Water resources are scarce and under increasing pressure due to competition with other agricultural, urban, industrial and environmental uses.

The irrigation system of the Huerta of Valencia has traditionally used surface water from the Turia River. In the last decades, integration of groundwater and treated wastewater has become increasingly important to the farmers of the Huerta for drought management. These additional resources are used together with surface water during drought periods increasing the guarantee of supply (Ortega Reig 2015).

Access to surface water would not be a limiting factor as it is always linked to access to land (land use rights automatically gives rights over surface water). Nevertheless, access to irrigation wells for auxiliary irrigations is not always possible. In times of drought (very frequent in Mediterranean regions), not having access to auxiliary watering is a problem and may constrain the type of crops that can be grown. A large gap on prices can be found for irrigation rights, especially for groundwater. Generally speaking, water price depends on the depth of the water nap. On the contrary, irrigation rights for surface water are much lower. (Expert-1 2016)

For some farmers, water price can be a problem important enough to be worth changing to a new farmland: “… I had problems in the farmland (...) the price of water was raised, doubling the price in three years. That was unsustainable for me.” (Bellón, Jóvenes agroecólogos siguen en la brecha July 2014)

There is a traditional and highly efficient - in terms of use of the water- system of order of turns for irrigation. The general rule for water distribution is “from upstream to downstream.” Before the cycle begins and depending on the Water Users Association (WUAs) to which the plot belongs to, every farmer must write their name on a blackboard located at the head of the channel/ditch, or must arrive at his field before the next downstream farmer begins to irrigate. The irrigation turn involves for the farmer to express their intention to exercise his right, go to look for the water, wait for it to come and conduct it up to the field. The irrigation turn can be more or less predictable. In certain areas, it is common that the farmer may not know when his turn will start, it could be during the night and extends in the early hours of the morning. Traditional farmers are used to this system, but it may interfere with the newcomer’s life style they are used to. Irrigation is a highly-visible, public activity were neighbouring farmers are routinely able to observe each other to irrigate, and also to watch the work of the water distributor and thus helping to
create a highly transparent system. For newcomers, a lack of awareness of the WUA rules on water distribution, irrigation turns or maintenance of canals is not unusual. Not to follow those rules creates dispute with the neighbour farmers, which in the majority of cases is sort out with a rebuke from veteran farmers or from the “acequias (irrigation channels) guards”. Although unusual, ultimately it could reach the “Tribunal de las Aguas”\(^6\), responsible for overseeing the area’s norms concerning the irrigation water and maintaining peace in the community. (EXPT1 2016)

Despite the higher prices, some organic farmers find it necessary the use of groundwater, if they fear that the surface water assigned to their plot is not clean enough to meet the organic certificate requirements regarding the quality of the irrigation water.

In sort, despite not having suffered yet from intense water shortages due to changing environmental conditions, producers involved in these initiatives shown to be very concerned about climate change potential impacts\(^7\). See section 2.2.6 for further details.

**Equipment and skills**

Situations among new producers are diverse, not being possible to generalize beyond the obvious better chances that producers coming from traditional farming families have when compared to newcomers without any link to agriculture. In the former case, they might count on existing farming facilities (e.g., greenhouses, warehouses, machinery and tools). Those which do not have the farm machinery, they may need make use of the agricultural contract services available (e.g., tractor). An additional difficulty shared by all organic producers is the access to organic agricultural inputs. This can be especially challenging for organic compost, since there are not organic neighbouring animal farms. Usually, **producers will have scant financial** resources making it common to reinvest in their projects and work without any return during the first few years.

In relation to the skills and knowledge, some new producers (especially newcomers) usually lack both when they start, they do neither have previous experience nor agricultural training. As remarked by veteran organic producers, they probably have read a lot, but they still do not know how to produce or how to fight local plant pests. They might not even know the crops.

“To be an organic farmer you need to know a lot about agriculture and, in addition, you also need a specialized know-how of what is happening in the field, why it happens, etc. Those [conventional] farmers who may want to convert to ecological lack the technical part. However, newcomers, they are in a worse situation because they lack both.” (Producer-3 2016)

This weakness makes many initiatives to fail or leads these newcomers to look for alliances and support from other producers to overcome initial knowledge constraints. See Section 2.2.3 for further details.

**2.2.2. Organic agriculture**

Organic agriculture in the Valencia Region is controlled by the Regional Organic Agriculture Committee (CAECV by its acronym in Spanish) as supervisory body. CAECV’s primary mission is the implementation in the region of the control system established by the European Community Regulation No 834/2007\(^8\), as well as the promotion of organic farming. The certification of conformity of the organic products is granted by the CAECV to applicants that have demonstrated compliance with the current regulations on organic production after having been subjected to the control and certification system. Only those producers

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\(^6\) The “Tribunal de las Aguas” (The water tribunal) is the oldest jurist court in Europe. Ensures the observation of water rules and coordination among irrigation Water Users Associations. In 2009 it was placed on UNESCO’s list of Intangible Cultural Heritage of Humanity.

\(^7\) This became particularly evident along the foresight exercises and scenario workshops.

grant the certification of conformity are allowed to label their products with the organic logo and describe them as organic or in similar terms such as eco or bio.

Nevertheless, despite practicing agroecological farming, only a minority of the new initiative have the organic certification. CAECV’s role raises a number of criticisms.

An important criticism is that the organic logo would be leading to confusion. The logo makes reference to Valencia Region, but what this really means is that the product has been packaged, not produced, within the region. Producers complain that any processor or retailer certified in the Valencia Region can buy raw material in any other place (including other countries), package it locally and sell it with the identification “Valencia” in the logo. Consumers could hardly distinguish the difference and could not identify the origin of the product they are buying. (Producer-2 2015)

Other criticisms are addressed to the certification costs. Some processors called it a “revolutionary tax” because they disagree with the idea of having to pay (with an annual renewal) for the certification control. Also, there were generalized complaints with regard that the certification process makes no distinction between a big processing industry and a small artisanal maker. Certification cost could be the same for both while, for example, the audit work and the documentation review would take far less time. “The cost of certification for your company or product line is the same regardless of whether you make 200,000 units per month or only 200.” (Producer-8 2016) Another complaint mentioned from the manufacturer's side regarded the time lapse since application is done to receive the certificate for a new product, which could take several months.

These points, together with other ideological reasons (see below) have led many producers to not certify officially as organic producers. This has led to the creation of a Participatory Guarantee Systems, which makes a distinction between agroecology and organic farming. Participatory Guarantee Systems (PGS) definition, as given by the International Federation of Organic Agriculture Movements (IFOAM), are “locally focused quality assurance systems. They certify producers based on active participation of stakeholders and are built on a foundation of trust, social networks and knowledge exchange.” It further develops this definition and explains that PGS represent an alternative to third party certification, especially adapted to local markets and short food supply chains, enabling direct participation of producers, consumers and other stakeholders in: (i) the choice and definition of the standards, (ii) the development and implementation of verification procedures, (iii) the review and decision process to recognize farmers as organic. 9

SPGecollaures is the PGS operating in the Valencia Region, it originated in 2012 and has been growing ever since, incorporating more initiatives. People involved in the SPGecollaures include producers and Responsible Consumption Groups but also NGOs, advocacy groups working on food sovereignty and anyone who may be interested. Currently there are over 30 initiatives registered (mostly producers and about 6 manufacturers) although there are around 20 actively participating. There are two Responsible Consumer’s Groups and three NGOs and social movements: CERAI (Centro de Estudios Rurales y de Agricultura Internacional), ISF (Ingenieros Sin Fronteras) and Per l’Horta.

Producers perceive the PGS as a tool to contest the dominant production and growth-oriented agro-food regime. AE would have a political and social goal (e.g., to reach food sovereignty, defence of family farms or short food supply chains) which is considered to go way beyond OF.

10 This is the term used for Community-supported agriculture (CSA) initiatives in the study case.
“From a coherent agro-ecological perspective it is not just about buying organic products but, for us, what is truly transformative is buying local organic products and, to the extent possible, buying directly from the producer or through short food supply chains; because as farmers, we are the ones that with our daily work of the land, assure food sovereignty of our peoples and the survival and vitality of natural, rural and agricultural areas of our territories.” (Bellón, Un punto áspero de sabor May 2016)

SPGEcollaures organizes regular visits to their members’ plots where both, producers and consumers participate and record any issue that might arise. Also, each initiative has its own guide for self-assessment to complete. This process is defined by its members as being very enriching, since it is not just about tracking the projects but also to create social fabric. Consumers provide valuable perspectives during the visits and the converse is also true. They refer this process as “mutual learning.”

“We do not aim to be an alternative to the organic farming label (...). But it is true that some inevitable comparisons arise with third-party certifications, such as CAECV. These certificates ensure that the product has been made in a particular way, i.e. without the use of certain pesticides, that is all good, but it is still pure delocalized market far from generating local economy or social fabric, they forget all the context surrounding the product, which is fundamental for us. Third party certification bodies, in our view, do not go deep enough into the characteristics of who produced it, not consider an inconvenient all kilometres travelled before reaching the consumer, if the producer is a small producer or if employees have produced it under decent working conditions. I’m not saying that it is the case, but the third party labels do not give this information (...) the SPG supports these social criteria and the short food supply chains, and that endorsement is made by the society living in a given territory, in this case the Valencian society.” (Bellon, Ecollaures-SPG July 2015)

Only those producers and processors who want to export or access more conventional market channels have the organic certification.

“We are certified with SPGEcollaures, but we are planning to get certified by the CAECV because that would allow us for instance, without losing our philosophy which is food sovereignty, to sell to very committed distributors (...) although we are still very critical of the official certificate. Very well, you keep the word organic, we keep our spirit. I’m not interested in how you name the label, for me, selling [here] a kiwi coming from New Zealand is not organic.” (Producer-4 2016)

Regardless that only those producers and operators certified by the CAECV can legally sell their products as organics, not everybody interviewed in this study considered the “participatory certification” as a valid system that enables their members to say that their products are organics. One of the small processors certified by the CAECV took a very critical view on PGS, considering that they were both judge and judged at the same time, and consequently undermining their credibility.

2.2.3 Evolution of initiatives and collective strategies

The individualistic nature of farmers in the Valencia Huerta and their unwillingness to associate has been a recurring commentary or reflexion in the interviews. The fact is that nowadays there are no successful stories of farmers' cooperatives within the area. There were bad former experiences, and pessimistic farmers want to avoid similar experiences in the future; and this seems to be a big strain to progress in building a collective strategy. Therefore, irrespective of the age, when you ask a producer why not to associate in order to reduce costs and working hours, it is not surprising to listen comments that refer to that individualism in the Valencian agriculture and the prevailing spirit of competition. A further reason for not doing it, and of greater importance for new producers, would be the precarious situation in which they usually find themselves. Precariousness does not allow them to change towards what is seen as a risk. Before moving forward, they want to establish themselves and be self-sufficient and confident in their personal projects.
"It is complicated [to associate] when it comes to small-size farms projects. If it is already difficult to make ends meet, you cannot ask yourself, what if we unite and instead of producing 20 products [each one] we produce 10? Some fatal problem may arise. I am now master and slave to my production and clients. If I get into a larger project, we must first have the basis of this very project assumed by its members, because, if it fails somewhere, you get exposed. And there is also that individualism deeply rooted in the idiosyncrasies of Valencian agriculture, the Huerta is full of small farmers. That is why it is so difficult to take that step to work in a larger whole." (Bellon, Vicent Gil, de "l'Hort sostenible" de Náquera May 2014)

There exist, however, informal networks in place among producers, and relations of mutual assistance are also frequent. Such short-lived associations may originate to complement their own production to be able to serve an order; to exchange products or seedlings usually through a bartering system; to work "a tornallom"11; to place a grouped order, for example to get organic compost, which is not easy to obtain; to pick up others producers inputs (e.g., seedlings) when someone goes to collect theirs. Also, it is not unusual that more experienced producers help novel ones. Some producers decide to move forward and forge together a kind of partnership, either in couples or in reduced groups. These links are frequent and allow them to coordinate their production and sometimes also to share equipment and machinery (e.g., a tiller). However, splits are also frequent and there is not a unique reason for that; sometimes, different views and perspectives are the mentioned cause, or that the moment was not the appropriate to get together. As it was expressed separately by two former partners: "It's a very nice idea, but very complicated" (Bellon, Vicent Gil, de "l'Hort sostenible" de Náquera May 2014) or in similar terms, "It's like love, very nice but very complicated." (Producer-5 2016)

Economic sustainability is an essential requirement for new producers. Some decide to give up after working very hard but not being able to consolidate. Usually, as a consequence of this precariousness, there is not a division of responsibilities, small producers need to do everything by themselves in order to reduce costs of middlemen. Hence, they produce, develop the commercial activity, prepare the order, deliver, go to the market, make their bookkeeping, etc., not to mention they also need to reconcile work and family life. A distribution of activities could free the producers to focus on production while at the same time may reduce costs. There are several calls asking to progress in this direction, for example, the use of the same shipment for those producers sharing a similar delivery route, or sharing markets stalls and alternate the attendance.

The initial common first step for many of the new producers, would be to overcome the precarious situation. The own farmers pointed out, in the course of interviews, a number of ways to try to confront this: certain producers look forward to improve their production quality and consolidate customers; some would like to buy land, which is especially important for new producers that may need to plant fruit trees, ameliorate the hedge or install a tool booth in the plot, all of them requiring a certain investment and the certainty that it is going to last at least for a certain time; for some others working together, a step further is to get a legal status (e.g., establish themselves as cooperatives, corporate entity, etc.); to install a manufacture workroom in order to start product transformation; etc.

An important milestone has been the establishment of Ecollaures, an association of agroecological producers, where there is an attitude of mutual assistance and sharing of experiences, in a non-competition relationship. It has done an important job, for example, setting minimum selling prices. It is also from Ecollaures, together with social movements, that the participatory certification PGS arose. As their members state, self-management of the group is slow, because producers always run out of time.

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11 A local colloquial expression defining mutual support among farmers, when one works on someone else farm for which the return will be in the form of assistance in a forthcoming work, for example in peak workloads as harvesting
Next step should be to coordinate crops and harvest. Producers themselves recognize the need for that to be done, but when trying to coordinate on a larger scale, such as Ecollaures would be, difficulties are acknowledging. Mainly, to assume others’ mistakes: if his cultivation goes wrong you fail your customer; but also fairly balance the produced quantities. Possible solutions offered, were to do some planning pilot experience between farmers’ crops –this could be particularly interesting when they are located in different areas, where growing the culture that is best suitable for that area- and planning by cultivated surface area and not by product quantity.

"We have tried [a common organized production between individual producers], this is the eternal debate. The problem is that however much we talk, no matter how many times you say: no need for you to grow the leak, I’ll do it, and I won’t grow the carrot because you will do it, always one will produce his portion of leek and his portion of carrot, always." (Producer-4 2016)

Nevertheless, only some kilometres away there is a cooperative which is referenced by some interviewed producers as a model to be followed. While it is specialised in vegetables for exportation, which would go against the spirit of many new producers, it is an example of a successful small-size farms cooperative, able to overcome the challenge of common crops coordination. Thus, on its website they state: "We have taken advantage of the smallholding idiosyncrasies that characterizes the Valencian horticulture. Through organizing and programming crops, we have specialized in the production and commercialization of oriental vegetables, and other Mediterranean crops that require a high degree of specialization." (Perelló n.d.)

A veteran producer especially well settled, forecasts a horizon of expansion coupled with “casualties along the way” for the organic agriculture within the area. A rationalization in organic farming, resulting in appropriate-size and grouped farms still would need to be done. (Producer-2 2015)

Regarding the relationship between the newcomers and the traditional conventional farmers, some producers stated that it is frequent in the beginnings and early stages to have bad experiences that usually improve over time, once synergies are created. Conflicts may arise for example because of the inexperience of newcomers when watering (traditional irrigation turns and norms are not obvious), the cleaning and maintenance of the plot or planting perimeter hedgerows, necessary in agroecological production but that might partly shadow the neighbour plot. These conflicts resolve with conviviality and meeting the local ordinances. On the other hand, organic producers may be affected by the offsite pollution caused by spray drift from their neighbours’ phytosanitary treatments. Several interviewed producers expressed their wish to have other organic neighbours around. An initial disbelief towards their new organic neighbours is widespread on the veteran conventional stablished farmers, some may well even tell them not to waste their time. Over time and once they find that newcomers operate and are able to harvest, these initial prejudices may turn round, “… however when I tell them [conventional neighbours] the selling price, they open their eyes in amazement and comment: well, after all maybe it is worthwhile.” (Producer-6 2016)
2.2.4. Marketing channels

In this section, we describe a number of (often interwoven) marketing channels that coexist in the study area. They illustrate the diversity of modalities that both consumers and producers have shaped in order to better integrate l'Horta and the city through food exchanges.

Short food supply chains

“There are more and more of us committed to direct selling through short food supply chains, for many reasons: for decent prices for the producer, for the autonomy and own control of the productive and commercial project, to encourage native varieties, to ensure safekeeping of the territory and the defence of the Huerta. We constitute mostly as small and medium scale family-based farms. Shortening both ends of the food chain between production and consumption we reduce intermediaries benefiting both sides: often reducing the final price of the product and dignifying the work of producing making farms profitable, generating environmental and socio-economic local sustainability”. (Bellón, Un punto áspero de sabor May 2016)

Some of the common direct selling pathways explored by the new production initiatives are the Responsible Consumption Groups, farmers’ markets, farm gate sales, box-schemes, restaurants and grocery shops.

Multiproduct box-scheme

Most of newcomer’s producers mainly use the multi product box\(^{12}\)-scheme to reach the final consumer, on the contrary those bigger in scale and more veteran producers claim the box-scheme is not economically viable in the Valencian context. With the odd exception all producers selling boxes are very small. For them to succeed it would require many more people willing to buy. Those bigger initiatives found, had also started their business through the same box-scheme but then worked on other selling pathways and renounced to it. They argue that projects based on the multi product box-scheme have low feasibility while requiring hard work. The main reason is that urban consumers are not aware of the local producers’ reality and also find uncomfortable the box-scheme (usually they cannot choose what to get and there are only seasonal products), so that demand is low and irregular and lacks customer loyalty, which prevents to reach economies of scale. The price is another aspect that make some consumers back down.

Producers are then forced to work with a big list of potential clients, and work hard on their tracking. Usually, box sales follow the school calendar and thus holiday’s seasons means a dramatic decline in sales to the extent that some producers are forced to almost halt their production. However, this problem became an opportunity for a new young producer who began by working on the box-scheme and after some difficult times now is happily working on homemade vegetable preserves, using as raw materials its own production and also those from other producers, allowing them to get their production flowing during the holidays seasons.

One of the current bigger and more veteran producers working on the multiproduct box-scheme has seen his sales reduced from 130 to 80 box per week. According to a local informant (a well-known current producer and distributor who started twelve years ago working on the box-scheme and selling up to 120 boxes per week), the economic viability threshold would be around 300 boxes. This box-scheme would be working well and is much more developed in other European countries, and illustrates it with the

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\(^{12}\) We use either multi product box or basket to refer to those cases in which consumers buy a closed combinations of products prepared by the own farmers. Farmers prepare these boxes/baskets mainly with season fruits and vegetables so that the consumer usually has no option to decide how to make up the combination.
examples of producers in Germany, France and Denmark selling 5,000, 12,000 and 20,000 boxes weekly respectively. He also points out that the 30-50 boxes on average sold by most of the new producers leads to discouragement, associations and splits among them. Finally, he suggests the newcomers to specialize in a single product.

Generally, multiproduct boxes contain no less than eight different seasonal fruit and vegetables products. Farmers may provide boxes in one single size or offer a choice of two different sizes. Some producers offer the option to add products or to increase their quantities over a standard box. It is not usual but there are also examples of a “make your own box” approach, where the consumer can choose all products and quantities if placing a minimum order. Orders are placed on a specified day, and then the producer harvest, cleans the products and prepare the boxes usually the day before the delivery day, but it can also be done in the same day. Prices depend mainly on the box size and the delivery distance, and may range from 10 euros up to 32 euros.

Consumers usually order on the internet and then depending on each producer, there may be alternative paths to get the box. Either they receive their box directly at home or have to collect it themselves and, in such cases, the collecting point may be in a neighbourhood shop collaborating with the producer, such as herbalist shops, at a Responsible Consumer Groups premises or the customer directly picks up the box at the farm gate.

**Responsible Consumer Groups**

From the consumer’s point of view, the consumption of organic food is a strong motivation for participating in Responsible Consumer Groups (RCG), however, reasons go further than a change in diet and the desire to promote social change is present in all of them. Conclusions drawn from a Participatory Action Research (IAP) study with RCG in Valencia, conducted through 2012 and 2013 by ISF (NGO Ingeniería Sin Fronteras) and the multidisciplinary participatory research network Útopika, show that essentially, RCG in the city of Valencia have a socio-political project, the common element being the struggle for food sovereignty which synthetizes in returning to society the ability to decide on their own food. Ecological and local (which would mean also seasonal) were the common consumption criteria shared by all RCG. Other mentioned criteria although not necessarily shared by all groups were: Agroecology farming products; from small-scale producers; a trusting relationship and a direct contact with the producer; fair prices for both farmers and consumers; cooperative organization with proper working conditions; from producers involved in “interesting” projects (e.g., defence of the Huerta, recuperation of native varieties). Organic certification is not a prerequisite for the supplied foods.

Regarding the way of operating, most orders are “open” and placed weekly, only a few use the “closed box” format and in this case orders are placed fortnightly. Usually, each producer supplies only to a single RCG. This happens mainly on those RCG located within Valencia City, and would suggest that distribution problems are important for producers. On the contrary, each RCG is supplied from various producers for their vegetables and fruits. The two oldest existing RCG in Valencia were established about ten years ago and their origin was driven by producers. Most of the existing RCG were consumer driven and were established quite recently, between 2010 and 2012, and would have emerged from the neighbourhoods’ assemblies arising from the mobilizations of the “15-M movement”\(^\text{13}\). The average group size was about 30 units of consumption (family, group of friends, co-workers, etc.), and the number of people per unit of consumption ranged between 2 and 7 people. The internal organization and decision making vary between groups. Most groups hold meetings with less than two months’ intervals and almost

\(^{13}\)The 15-M movement or the Indignants’ Movement was a citizens’ movement created from the demonstrations on 15 May 2011 against unemployment, traditional political parties and austerity measures.
all groups operate with working committees, which commonly are related to economic management, relationship with producers, communication or logistics of collection and distribution of food orders.

RCG can provide an important support in the early stages for new producers, when a network of customers still needs to be developed. For some veteran producers, sales to RCG would represent up to 25% of their total income. Sometimes RCG are unaware of certain attitudes that adversely affect the producers. In this sense, some producers alert about the volatility of RCG's demand (Producer-1 2015). Sudden drops in demand or an increase of the number of suppliers, even when the demand remains the same, creates uncertainty for participant farmers.

**On-line food platforms**

“The beehive who said yes!” (Translated from the original French “La Ruche Qui Dit Oui!”) is defined as a social and collaborative company; originated as a start-up developing an e-commerce platform that connects local producers and consumers in what is called a beehive. It originated in France in 2011 spreading rapidly through the country. Today there are more than 800 hives in operation or under construction, not only in France but in neighbour countries. In Spain there are above 40, and 5 of them are located in Valencia.

The mode of operation is simple. It is for the producer to determine the selling price and then consumer decides if he is interested or not. Producers also establish a minimum sales volume to achieve before attend the hive. The goal is to eliminate intermediaries, although there is a 16.7% of cost that goes to maintenance of the operational platform and to the person responsible of the hive.

In contrast to the RCG where consumers seek a real civic engagement and promote a social change, these on-line platforms are a flexible option for those consumers who do not want or cannot commit, but still want to buy from organic local producers. For example, urban pressed consumers interested in a healthier diet or handmade products, would be potential customers to a hive. In any case, both circuits would be contributing to the development of short food supply chains. As with RCG, organic certification is not a prerequisite for the supplied foods in hives.

Since the first hive in Valencia opened scarcely over one year ago, it is still too early to tell if this is going to be another regular marketing channel for the new initiatives. Nowadays there are only a few of them using this pathway. One of the small-scale manufacturers that has been using this channel since the beginning sees in it a great potential for growth, and last November opened one for himself becoming the last hive operating in Valencia. Currently they have between 10-15 regular consumers.

**Food shops and restaurants**

This is an important selling channel for those manufacturers interviewed and also for bigger producers, which need food stores to sell an important part of all the volume produced. These shops are usually herbalists and stores specializing in organic, vegan, or fair trade based products. Although it is less frequent, some producers also sell through grocery shops and restaurants.

Producers interviewed rely on a multiple points of sell system, comprising for each one more than 20 food shops. Distribution may be handled by external services or carried out by themselves, which considering the limited human and material resources is not a simple task.

Although unusual, there are also producers having their own grocery shop. For these producers, the shops are also a sort of ambassadors of the Huerta, i.e. visible links between urban dwellers and local producers, which raises consumer awareness (e.g. on the food aspect) while selling local products.
Conventional retailing
External conventional retailing is not a common practice among producers. Not everybody is willing to use it as a way to sell their products. Only those more veteran and bigger were using this channel where volumes need to be larger. The CAECV certificate is a prerequisite to sell them as organic. One of these producers, who is currently exporting and accessing other national wholesalers and retailers, commercialises products from other local producers.

Farmers markets
There are only a few farmers’ markets in the Valencia Region. Many of them are located in southern municipalities near the coast, where many European citizens –possibly more sensitive to local products from small-size farms- reside and become regular customers. The municipality of Godella, located 10 km away from Valencia city centre, was the first stable agro-ecological and artisans’ products street market in the area. It started in 2011 with 12-15 stalls and has increased its number to over 20. It is now a consolidated weekly market held every Saturday. There is in place an internal conduct regulation for the stalls, and producers have implemented several working groups representing the variety of interests (fresh and processed foods and craft products) which are responsible for the general good functioning and the decision-making. One of the producers’ commitment is to sell what they produce. Different activities and workshops aimed at children are programmed weekly, attracting many local families to the market (e.g., storytelling, recycling workshops, batucada or concerts) but also a lot of customers arrive from nearby municipalities. Prices are a little bit higher than in supermarkets and buyers enjoy a certain purchasing power.

There were several favourable circumstances which made it possible for the Godella market to succeed: There was a proposal supported by the local council, there were local and nearby agroecological farmers interested in it, and the population was prone to ecological consumption. Godella’s market has become an important local market and serves as a pilot experience and a reference for similar experiences that need to replicate, since a single market once a week is not a sustainable selling pathway for producers. That, in effect, is what is happening today. New markets are slowly emerging with more or less success. Some markets are integrated into conventional traditional markets, in some cases it would rather be a product exhibition, operating in a monthly basis, than a real market. But, as some producers acknowledge, these may be a necessary first step in order to raise public awareness. Most of the producers attend these farm markets. For them, sales in these markets –despite its discrete size- can be an important share of the total income. Also, this extra income may allow them to reorganize their selling pathways, for example adjusting the number of box-scheme users.

The initiative Cistella Responsible (Responsible Basket)
In order to have a more comprehensive view of these initiatives, the study case has also focused them from the demand side, i.e. from the consumers’ perspective. Namely, the initiative that has been analysed has been ‘Cistella Responsible’ (Responsible Basket).

*Cistella Responsible* was initiated in the spring of 2015 by the consumers’ group ‘*Cami de Vera*’ which groups a number of members of the *Universitat Politècnica de València* (UPV) (professors, researchers, administrative staff, post-graduate and students). This self-managed group had been operating since 2010 in direct contact with local and agro-ecological producers to get access, within the university campus, to organic food (mostly fruit and vegetables). The consumers’ group led, together with the university (Vice-rectorate for Corporate Social Responsibility) and CEDAT Foundation, the project.

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14 This is the name of the address of the UPV campus in Valencia. For further information: [http://grupconsumvera.webs.upv.es/?page_id=118](http://grupconsumvera.webs.upv.es/?page_id=118).

15 CEDAT is a foundation that employs handicapped people to carry out some services within the university campus (e.g. the delivery of internal mailing). [http://www.upv.es/entidades/CAD/index-es.html](http://www.upv.es/entidades/CAD/index-es.html)
Cistella Responsible to face mainly two challenges: a) to support local producers through short food supply chains (being the main objective of decreasing the number of intermediaries); b) to provide employment for all CEDAT workers.

The way the project works is relatively simple: It offers to the staff of the university two formats of baskets (big: 18 kg.; small: 12 kg) containing seasonal organic vegetables (sometimes some fruit) produced by peri-urban small farmers. This is a weekly service, so that consumers can order until Sunday evening in the initiative website and the basket is delivered on Wednesday (either in the consumer’s own office or in a specific delivery point). There is no obligation to order, which makes the number of baskets very fluctuating.

The usefulness of this case for our study is that it is about a very common marketing format for the kind of initiatives analysed in this report, particularly in the first stages of their trajectories. In order to get information about the consumers’ perspective, a focus group was organised, with participants having different profiles (gender, age and frequency of orders). Next subsections unfold the main outcomes of this analysis.

Motivations

Participants acknowledged a number of motivations to be involved as consumers. Most of them (some irregularly) were already consumers of organic food (particularly vegetables). So what this project mainly offered was comfortability to access organic vegetables, compared to other options (specialised stores or other basket initiatives).

Interestingly, participants also pointed out solidarity or social awareness to explain their willingness to participate in this concrete initiative. And this is so not only because the CEDAT foundation hires disable people to provide the service of delivery, but also because it allows small-scale farmers to sell at a fair price, allowing them to keep being farmers. This aspect is an important ‘image’ that also explains participants’ motivation.

Adaptability to consumers’ demands

One of the most controversial aspects of initiatives like this one is that consumers get a standard basket, so that they cannot choose in advance what and how much (apart of the big/small modality) the basket will contain. Furthermore, participants acknowledge that they did not know in advance that content. A number of positions arose around this along the discussion:

- For some, it was comfortable not to need to decide what to choose. Moreover, the ‘obligation’ to eat what they receive is, for some, an advantage, since they have been ‘forced’ to consume different products and even to learn how to cook them. Actually, some qualified this as an opportunity, as they argued that if they would be given the possibility to choose the products, maybe they had never chosen some of these vegetables, instead they had been reproducing their ‘traditional’ purchase options. It is precisely the ‘obligation’ to consume what there is in the basket which leads to taste new products and try new recipes.

- However, some participants (even those who were happy with the standard basket) acknowledge some inconveniences. On the one hand, consumers need keep buying the same products through other channels, since they are not allowed to select the quantity they receive. There was a common demand to make this more flexible (even with the creation of a store with the same products within the campus) to adapt the quantity to their family needs. On the other hand, the inability to modulate the quantity (it was too much) or select (they did not like) the products have led almost all of the participants in the group to waste occasionally some of the products.

Intersection with everyday practices
The participation in this initiative have led participants to adapt some everyday practices. Furthermore, everyday practices also conditions, and sometime constraints, the decision to order or not a concrete week.

- **Transport.** As consumers receive or pick up a 12/18-kg-basket at the university, they need to transport it to their homes. For this to be done, some people who use to go to the university by bike or public transport, need (that Wednesday) to go by car. According to the participants, this would be preventing some potentially interested people to also become consumers of the basket.

- **Contrariwise to the products got in other more conventional channels, vegetables in the basket need to be prepared, cleaned and (in some cases) precooked to preserve them. Organic products deteriorate more rapidly and sometimes they arrive with dust and bugs. Therefore, participants need to spend some time to do these tasks, and, although some participants qualify this time as a relaxing moment, this requires to have time availability. Actually, some participants declared they had not ordered some weeks because they knew in advance they would not have time that day to carry out this preparation.**

- **The access to the basket has partially replaced or conditioned other purchase habits. This is an important issue. As most participants were already accessing vegetables in specialised organic or small-scale neighbourhood stores, and much less frequently in conventional large retailers, there would not have been a ‘radical’ transition in food purchase habits, but an adjustment to a more comfortable option. This would raise some questions about the transformative capacity of an initiative like this one.**

*The role of knowledge*

Finally, the focus group brought to light the relevance of knowledge in this initiative, and the multiplicity of ways it conditions its performance and perspectives.

- **There is a clear high relation between taking the most from the basket and the level of knowledge about cooking options (brining, canning, use of non-eatable parts of the vegetables, i.e. to prepare seasonings). In short, the less the knowledge, the bigger the part of the basket that risks to be wasted, and the lower the frequency of the orders. Actually, participants made a general demand for the initiative to attach proposals of recipes to better use the products. Furthermore, sometimes the basket contains products that most consumers do not know and, more importantly, they do not know how to cook or prepare.**

- **This is a challenge but also an opportunity to learn. Indeed, some participants agreed that ‘the basket’ could be also considered a new knowledge ‘vector: they had discovered new vegetables they did not know previously and obliged to find new recipes, and even they and their families were recovering the knowledge about which is the ‘traditional’ season of each product. Nevertheless, at the same time, as some participants stated, the need of knowledge (recipes, products, preservation) acts also as a barrier for potential new consumers.**

In any case, participants also complained that the information provided about the products that the basket contains is not easily accessible. In general, the communication policy of the project could be improved. Participants agreed that it would be positive to get periodically information about the functioning and performance of the initiative (how many participants/baskets, how many producers and handicapped workers involved...). We cannot forget that participants expect their involvement of the project will have some (especially social) impacts, so they would need to be accounted for this.
2.2.5. Advocacy

As stated above, it is not possible to understand the process of appearance of these agricultural initiatives without considering their embeddedness into the social movement for the defence of the Huerta and the promotion of a change in the local food system. Probably, the most well-known actor is “Per L’Horta”\textsuperscript{16}, which defines itself as a social movement heir of the first Popular Legislative Initiative (which was dismissed by the Regional Government at the time) on the protection of the Huerta of Valencia in 2001. It is organized as a platform, bringing together different groups and individuals who have in common the protection of the Huerta, highlighting its landscape and its agricultural, historic and water-related heritage. Since its origin they have been lobbying through very visible rallies, campaigns and protest marches, but also through press releases and disseminating reports or studies supporting their objectives. Also, members of this movement are currently present in strategic positions (e.g., serving in local administrations, working as advisors to political parties or being part of them) from where they are influencing the new local and regional policies. Another reference is the “Plataforma per la Sobirania Alimentària del País Valencià” (Platform for the Valencia Region Food Sovereignty), which brings together producers, consumers, initiatives, organizations (Per L’Horta is one of its members) and groups working towards food sovereignty in the Valencia Region.

Producers need to perform many tasks and play different roles in order to make their projects viable (produce, sell, distribute, sensitize and lobbying) they cannot cover everything. Sometimes due to the lack of time they are unable to make use of opportunities and resources offered. This is something that needs to be taken into consideration when defining actions, proposals or incentives. They ask to be heard and to take an active part in the process since they are best placed to explain what their situation is.

In this regard, social movements and platforms, to which producers belong, play a relevant role for these farming initiatives since they can get public grants to financial aid for support these initiatives; have a managerial capacity; enhance visibility or carry out external actions to support them. (Mov.-2 2016) A good example of this is the PGSEcollaures, which is being supported, amongst others, by CERAI and ISF, both are NGOs specialized in sustainable rural development and members of the Plataforma per la Sobirania Alimentària del País Valencià.

A frequent claim and complaint raising from producers and related social organisations is about short food supply chains (SFSC). In some European countries, local food systems have become key links in the strategies of development of the area, promoting local economic development and allowing social rapprochement between producers and consumers. However, in Spain there is not a specific public regulation governing SFSC, beyond the provisions of the Community regulations\textsuperscript{17}. Although each Member State can make its own adaptation to European standards, it is scarcely developed in Spain and there is a need for adaptation (Ministerio de Agricultura 2013). There are a few Spanish regions that have developed specific legislation on SFSC and Valencian local organisations struggle for the same to be done regionally. In this context, the Plataforma per la Soberanía Alimentaria del País Valencià, reflecting the claims being made by many of the small-scale producers and manufacturer initiatives, has recently put forward a proposal on SFSC and related legislation, which is currently being evaluated by Regional Government departments. The proposal defines the scope of application and what SFSC are in the Valencian context (there is no clear and simple definition of “local food” or “SFSC”). According to this proposal (P. p. Valencià 2015), the SFSC would cover not only direct selling (producer-consumer) but also the existence of one single middleman between them. Some specific claims regard:

\textsuperscript{16} Per l’Horta is an organisation that unites several civic associations and organisations to defend this agricultural space against the menaces of urban sprawl. See http://perlhorta.info/.

Legal procedures, health registration and good hygienic practices, prioritising actions to be undertaken on: facilitating clear and simplified information on procedures and requirements; developing guides of good practices enabling the homogenisation of inspection criteria (today, depending on the inspector's professional judgement, requirements differ, as highlighted by artisanal processors interviewed); guides to good hygiene practices as a sufficient condition for small-scale producers.

Health registration: establish a minimum production threshold (variable depending on the type of production) for a health registration to be required; multifunctional health registrations for shared production facilities (allowing for various different activities to develop at the same location).

Flexibility on small producers e.g. home production; self-employment fee according to the production volume; taking into account the special characteristics of rural areas; reviewing the packer status (today, a farm preparing multi product boxes to distribute is considered a packer); adaptation of public facilities for collective use.

Support and promotion of SFSC initiatives (farmers’ markets, RCG, facilitating local networking).

Another major line of action where social actors are fundamental part is collective catering supplied by small local producers. There is an ongoing working group were some NGOs (CERAI and VSF-Justicia Alimentaria Global), local producers, catering services business and parents' association from several schools work on the following specific areas: normative and specific administrative clauses for public tenders; institutional relationships; public awareness and a central purchasing body. The council of the nearby village of Godella is also actively present in the collective catering working group. For several years now, the council has been working on developing local agriculture while bringing it closer to urban citizens (e.g., through the first permanent local farmers market) and they can be regarded as a reference for others institutions. As they remark, to enable a real change to take place, it is not enough individual actions arising from a few administrations, but rather different administrations at different levels need to go hand in hand. (Administration-2 2016)

In this sense, the new regional Government and municipalities resulting from the Regional and municipal elections of 2015, seems to observe a substantially greater sensitivity towards the Huerta. An example would be the Valencia city council, where for the first time there is a specific department for it, i.e. the Councillor for Agriculture, Huerta and Villages of Valencia, which is integrated into the Sustainable Economic Development area. The city of Valencia has signed the Milan Urban Food Policy Pact, for the development of food systems based on sustainability and social justice, and has recently presented an action plan for the promotion of agricultural space activity in the Huerta. This plan has several guidelines which are focused on the generational turnover in agriculture; promotion of SFSC; diversification of production and markets (e.g., developing a brand for Huerta products and strengthening Participatory Guarantee Systems); defence of the environment and health (e.g., promoting organic farming); territorial planning; improvement of infrastructure and services and networking. At the same time, the creation of a Food Council including all the food chain players is being considered. (Administration-1 2015)

This change in mentality can also be clearly seen in the new Regional Government were an increased awareness about the Huerta degradation is in place.

“We are definitely facing a new period that requires different policies based on our territory and in the development of our genuine and distinguishing real potential. We do not want more speculative economic models that destroy the territory and its environmental and cultural values.” (Generalitat Valenciana_Conselleria de Vivienda 2016)
Two main instruments for protection and regeneration are currently being developed: (i) a PAT: Plan de Acción Territorial y de Ordenación y Dinamización de l’Horta de Valencia (Territorial, Planning and Revitalization Action Plan of the Huerta of Valencia) and (ii) a Law of the Huerta. PAT differentiates categories and levels of protection and land use of agrarian land, also defines biological and functional connecting elements. It also proposes measures on public use and tertiary activities compatible with the agricultural production for the producer to obtain additional revenues to the principal activity. For its part, the Law of the Huerta would aim to stimulate agricultural activity and reactivate the recovery of degraded areas in the Huerta, implementing a model of local agriculture. A management structure is proposed involving diverse actors (administrative bodies at different level, water uses allocation, agriculture associations, collectives who advocate for defence of the Huerta, etc.).

In substitution of the former Ministry of Agriculture, Fisheries, Food and Water of the Valencian Region, the new regional Ministry of Agriculture, Environment, Climate Change and Rural Development (the title itself shows a declaration of intentions) includes an Organic Production, Innovation and Technology Service (SPEit). It is from this Service that has been launched the first Valencian Organic Production Plan, for the period 2016-2020. Interestingly, some of the key designers of this Plan belonged to the association “Llavors d’aci” (seeds from here), active in the advocacy for the promotion and conservation of local agricultural biodiversity and integrated in the Food Sovereignty Platform. This shows that the movement is undergoing a new momentum with the new regional administration.

FIGURE 3 ABOVE, INFORMATIVE AND CLAIM POSTERS FOR THE HUERTA DEFENCE AND PRODUCERS MEETINGS FROM SOCIAL MOVEMENTS; BELOW, PROMOTIONAL BILLBOARDS AND POSTERS FOR LOCAL MARKETS FROM THE VALENCIA COUNCIL
2.2.6. Foresight Workshop

The scenario workshops provided several outcomes: (i) the adaptation of 4 of the 8 EU scenarios (4 main and 4 secondary scenarios) to the local case study, (ii) the visioning of a desirable future for these initiatives to identify a number of objectives to strengthen their role in providing FNS and (iii) the identification of a number of actions to be undertaken to achieve these objectives under alternative scenarios. Table 2 shows the 4 scenarios that were adapted and obtained in the first workshop (a more detailed descriptions can be found in Annex III).

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. SUMA Y SIGUE (SO ON AND SO FORTH)</td>
<td>Adapted from ‘Fed up Europe’</td>
</tr>
<tr>
<td>B. LA HUERTA ROBOT (THE ROBOT GARDEN)</td>
<td>Adapted from ‘Retrotopia’</td>
</tr>
<tr>
<td>C. DECRECIMIENTO FORZADO Y TRANSFORMADOR (TRANSFORMING AND FORCED DEGROWTH)</td>
<td>Adapted from ‘The price of health’</td>
</tr>
<tr>
<td>D. CONSCIENTES PERO ESTRESADOS (CONCIOUS BUT STRESSED)</td>
<td>Adapted from ‘Too busy to cook’</td>
</tr>
</tbody>
</table>

The visioning gave rise to the 4 objectives (see Annex III for a more detailed information) that were used for the back casting exercise.

<table>
<thead>
<tr>
<th>Objective</th>
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</thead>
<tbody>
<tr>
<td>The revalorisation of the producer</td>
</tr>
<tr>
<td>Development of short food supply chains</td>
</tr>
<tr>
<td>Sustainable management of natural resources</td>
</tr>
<tr>
<td>Rising social training and awareness</td>
</tr>
</tbody>
</table>

The participatory foresight analysis allowed to identify what stakeholders consider to be the key drivers to explain the different potential trajectories for these initiatives, and to what extent these drivers had different states in different scenarios. These drivers are:

Access to innovations. Scenarios introduce some challenges that can constrain the performance of these initiatives. In this regard, participants explored the innovation potential allowed/foreseen in each scenario to identify the way new technical developments could allow to cope with this constraints: in scenario B, the low availability of labour (in an agriculture that is labour-intensive) was tackled by means of micro-scaled adapted robotisation to carry out farm operations; in scenario C, the strong innovation allowed to confront water shortage through new agrarian practices (crop diversification, water conservation techniques); in scenario D, new transportation modalities (drones) and TICs would give rise to a logistic model that could allow these small-scale production and processing initiatives to adapt the demand of consumers who have to time to move to buy or to cook. What is common in all these scenarios is that innovations need to be both accessible and adapted to small-scale business. This is a relevant point; in scenario D the requirement to access these logistic and TICs innovation was perceived as a barrier for the emergence of new initiatives of this kind.

Consumers’ awareness about their diets. Due to the productive orientation of this agriculture (organic vegetables), stakeholders agreed that the future of these initiatives will be very depending on consumers’ willingness to buy this type of food. In two of the scenarios (A and B), the weak awareness of consumers about their diets’ health implications was perceived as a major limitation for these initiatives, limiting the
organic market to a small upper-class (A), and making the organic production almost incompatible with a food system dominated by large processors (B). On the contrary, the increase of consumers’ awareness was perceived as an opportunity in the other two other scenarios, expanding the possibilities of short supply chains and even the creation of a new territorial quality label. However, this also would raise some potential problems for these initiatives. In scenario C, which envisages a future where production for self-consumption would be easier, this could result in a de-professionalization of farming. In scenario D, the growing interest of consumers would also attract large retailers which would compete directly with these small initiatives.

Structure of the food chain. The level of concentration in the food chain—that participants directly correlated to the degree of trade liberalisation—was also perceived as a major risk. This is particularly evident in scenario A.

Apart of that differences, it is worth to pay attention to the commonalities. In all the scenarios, the future productive constrains derived from climate change received particular attention. Participants coincided to point out the foreseen reduction of water availability for agricultural uses in the study area as a main driver of change. In addition, participants perceived as an opportunity for these initiatives the perspectives of progressing towards more restricting and demanding environmental legal frameworks. Indeed, 3 of the scenarios foresaw, precisely because the evidence of the impacts of climate change, that environmental policies regulating agricultural production and the use of resources would become more constraining and with higher environmental standards. This could allow to mainstream the more environmentally-friendly practices already carried out by these initiatives.

In the same vein, the process of filtering, through the lens of the scenarios, the action plans for the achievement of the objectives has allowed to identify required actions in the frame of different futures. We highlight four main aspects that arose during the workshops.

- As stated above, the environmental constraints of agricultural production have been a constant concern in the two workshops, particularly regarding future water shortages due to climate change impacts in Mediterranean regions. This has led participants to insist in the necessity to promote farmers’ training, research and—in particular—technical innovation to adapt farming to climate scenarios. There would be a challenge, according to the participants, to make compatible technical and agronomic innovation with the principles of agroecology, which pays also attention to the recovery of traditional knowledge and farming practices.

- Participants also insisted on the necessity to strengthen and extend the collaboration and exchange networks where the promotors of these farming initiatives are embedded. As explained above, the interviews conducted had insisted on the role of embeddedness as a mechanism of resilience for the people undertaking these agricultural initiatives. The foresight workshops went further in this idea, so that stronger networks could give rise to a more efficient use of resources and sub-products18.

- The future of these initiatives and their potential impact on FNS is also associated to the adoption of regulatory changes at several scales and in several domains. Participants clearly pointed out this and the need to lobby and interact with policy-makers to achieve these changes. In this regard, the most common demand was that of tailoring the regulatory framework to the size of activities. A common complaint was that current legal requirements (health, environmental, bureaucracy) of food-related activities (production, processing and retailing) are the same for these activities regardless their dimension, so they become a major constraint for small- and micro-business.

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18 Interestingly, participants used terms like cooperation, participatory economy or collective management, but no that of ‘circular economy’ despite its current presence in the media.
Finally, the necessity to work on the field of education and to raise public awareness were a transversal issue in the workshops. In this sense, a common idea was that it was needed to analyse and communicate the economic implications –particularly in terms of public expenditure– of unhealthy diets. Most participants agreed that this information would be a powerful argument to counteract the risk of reduction of public financial support for these food initiatives.

2.3. Summary and Reflection on Transformative Capacity

From the analysis of this main case study, we can extract some concluding reflections that tackle the transformative capacity and constraints of these agricultural initiatives. The analysis of the new agricultural initiatives in the peri urban area of Valencia has shown the relevance and the role played by the ideological component of involved actors. Indeed, the marked ‘food sovereignty’ and ‘agroecology’ discourses of promotors are key to explain the decision of setting up a new activity and the capacity of these farmers to overcome initial constraints. This makes that most of these initiatives start also with a ‘transformative’ goal, i.e. it is not merely a business option, for most of these people it is also a contribution to the transformation of the conventional local food system and a way to defend the future of this agricultural space. However, it is also worthy to mention that, as some of these initiatives consolidate and grow, their ‘business dimension’ becomes more important: some opt to parallel alternative with more conventional (even export) food chains.

It is not possible to explain and understand the phenomenon of proliferation of these initiatives without considering its relationship with to defence movement of the Huerta. This social phenomenon has operated for several years as a contestation against local and regional public policies that favoured urban sprawl and menaced the preservation of this agricultural and cultural heritage. Nevertheless, the elections of May 2015 led to new local and regional governments whose agenda clearly coincides with these demands, so that these organisations and actors had to shift their role: from social resistance to be invited to policy-making involvement. And this has provoked some problems, as this involvement requires new forms of organisational and representative structure which is not easily attainable.

The references to the regulatory frameworks as a set of constraining factors for the setting up, the multiplication and the expansion of these kind of initiatives has been constant along the research process. Some examples are the limitations and burdens of the official organic certification system, the inadequately tailored health and environmental legislation, the land-market distortions introduced by the land planning regulation or the requisites of public procurement. These ‘dysfunctions’ are well identified and defined by actors.

There is a consensus that transformative capacity requires strong collective action. Cooperation has been found to play a key role in allowing newcomers to set up and in creating alliances between producers and consumers. Interviewees and participants in the workshops agreed that collective action is the only way to scale-up and consolidate the local food system to which all of them aspire. However, there is also a general perception that this needs to be improved. For instance, some claim for the creation of cooperative organisations to provide adapted farm services or for a collective planning of production –as it is taking place in other locations. There mutual support between producers, but this often occurs at the individual level and in the frame of informal relationships. When it comes to try to institutionalise and expand these cooperation relationships, obstacles seem unsurmountable.

The gradual appearance of new peri urban agricultural initiatives and a diversity of alternative local food supply chains, as part of a social movement which has as global referents those of food sovereignty and agroecology, and as local cohesion element that of the defence of the Huerta, has found which seems to be an enabling policy framework. Indeed, regional and local governments have included into their policy agendas many of the approaches and concerns of these actors, and have initiated participatory planning processes that should concretise the regulatory changes to be implemented. These policy processes will
be an opportunity for this kind of initiatives to scale-up and consolidate, but also to check their real transformative capacity, constrained by their own limitations and weaknesses. Moreover, these processes could also make more visible and explicit the role to be played by other ‘conventional’ food actors. We have very exiting years to come.
3. SATELLITE CASE STUDY REPORT

3.1. Research questions & Methods

The research questions that have been addressed in this satellite case study are:

• How has food access organization changed throughout the last decades in parallel to the demographic decline?
  ➢ The process of depopulation has led to the closing down of local groceries and the decline of local food production, this has been parallel to the diffusions of new (more modern) food habits. There is a need to better understand the changes in the organisation of food access.

• Which social practices are currently securing food access? Which is the role played by the networks of traveling retailers?
  ➢ The aforementioned changes have given rise to new social practices to access food at the household level. Among these practices, we find networks of traveling retailers that operate differently depending on the food goods they provide, the scale of the area covered and their business strategies. This needs to be tackled to understand the role and dynamics of this food supply model.

• Which is the long term viability of this model?
  ➢ As the demographic decline goes on, the future perspective of this model of traveling retailing would need to confront a gradual decrease of the demand which could lead companies to stop providing this service.

• Are these practices, which are carried out by private actors, supported by any kind of public policy?
  ➢ The maintenance of population in remote rural areas is an explicit policy objective, particularly in the region of Aragón to which the study area belongs. Food supply would be expected to be a crucial component of this goal, so the role of policies in this regards needs to be explored.

The research method has combined:

- Official statistics to analyse the demographic trends in the study area along the last decades, as well as the structure of population (ages, gender) and other demographic indicators.

- Literature review to contextualise the historical background of the study area, as well as to put in context the primary information obtained along the fieldwork.

- Fieldwork to obtain primary information. Indeed, two group interviews were conducted with dwellers of these villages and three in-depth individual interviews with traveling retailers supplying different products at different geographical scales. Fieldwork was carried out in August and October 2015. Interviews were recorded and transcribed.
3.2. Research findings

3.2.1. Chistau Valley and its access.
Chistau Valley is a small valley in the Pyrenees, in the North of Huesca Province, flanked by wider valleys, Bielsa and Benasque, and limited to the North by the Aure Valley in France.

The narrow valley of Chistau is crossed by the Cinqueta River and surrounded by peaks exceeding 3.000m in altitude (Posets, 3.369m; Cotiella, 2.912m; Punta Suelas, 2.972m). Villages located at the bottom of the valley (Saravillo, Plan, San Juan) are at an altitude of around 1.000m, while on the slopes we find villages at altitudes close to 1.400m (Gistain, 1.378m; Serveto, 1.306m). In terms of land cover, high prairies prevail, sometimes with steep slopes, and are combined with forest areas.

![FIGURE 4 LOCATION AND ACCESS OF CHISTAU VALLEY](image)

Traditionally, the valley had access problems from the South, and most of their connections (goods trade, population displacements) were developed more easily with the northern French valleys, which could be accessed riding through mountain passes. Communications with the rest of Huesca Province were not opened until the beginning of XXth Century, driven by hydroelectric projects. The perforation of the Enclusa tunnels, which provide access to the central part of the valley, started in the 1930s, although the works were not concluded until 15 years later, once the Civil War had finished. In 1952 the road reached Plan, the main village in the valley, but it took a few more years for the upper settlements in the valley to have road access: 1965 to Gistain, end of the 1960s to Sin, and 1971 to Serveto (Ortega et al., 1999).

Today, access to the villages on the slopes of the mountains is still challenging, with narrow steep roads which need frequent maintenance. Conservation has improved on the road network in recent years, mainly to prevent the frequent landslides on some sections.
FIGURE 5 ACCESSES TO SIN AND SERVETO

The economic activity of the remaining permanent population in the valley, particularly those resident in the higher altitude villages, remains dominated by livestock farming, mainly cattle. Services employ most of the working population in the villages at the bottom of the valley, Plan and San Juan in particular. There has been a moderate tourism development, different to the one in neighboring valleys in France and Spain where ski resorts were set up.

3.2.2. The population in the valley. Demographic trends.

The distribution of population amongst the different settlements conforming the municipalities of Chistau Valley, according to the registration data in 2014, is shown in the following table:

<table>
<thead>
<tr>
<th>Municipalities &amp; Villages</th>
<th>Total Population 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gistain</td>
<td>143</td>
</tr>
<tr>
<td>Gistain</td>
<td>143</td>
</tr>
<tr>
<td>Plan</td>
<td>314</td>
</tr>
<tr>
<td>Plan</td>
<td>183</td>
</tr>
<tr>
<td>Saravillo</td>
<td>100</td>
</tr>
<tr>
<td>Serveto</td>
<td>31</td>
</tr>
<tr>
<td>San Juan de Plan</td>
<td>147</td>
</tr>
<tr>
<td>San Juan de Plan</td>
<td>147</td>
</tr>
<tr>
<td>Tella - Sin</td>
<td>75</td>
</tr>
<tr>
<td>Sin</td>
<td>46</td>
</tr>
<tr>
<td>Salinas</td>
<td>29</td>
</tr>
<tr>
<td>Chistau Valley TOTAL</td>
<td>679</td>
</tr>
</tbody>
</table>
It is important to realize that official registration figures do not represent the number of people that actually live in the different settlements on a permanent basis. As an example, in Serveto (Plan Municipality), the registered population is 31 while in winter only 15 to 20 people remain living there. Historic trends of the valley’s population show the decline in the past century:

![Population Trends](image)

**FIGURE 6 HISTORIC POPULATION TRENDS IN CHISTAU VALLEY 1900 – 2011**

**SOURCE:** POPULATION CENSUS 1900 – 2011, INSTITUTO ARAGONÉS DE ESTADÍSTICA (INE - IAEST), 2016

Although the population decrease began earlier, the community’s memory identifies the exodus that started in the 1940s - 1950s and culminated during the early 1970s, corresponding to the establishment of road access to all settlements (Serveto in 1971) and the closure of schools in the smallest villages, like Sin and Serveto in 1973.

Figure 6 shows a significant decline in the valley’s population between 1940 and 1981, with a 52.7% drop of the total residents. The data illustrate a more dramatic fall in Plan Municipality, with a 62.7% drop for that period, with a particularly sharp fall in the 1970s, when it lost 40.7% of its population. Tella – Sin Municipality, for example, show a more average residents’ loss of a 46.9% over the 1940 – 1981 period.

The exodus in those decades is remembered as a dramatic experience for both, those who remained and those who left. Entire families emigrated, with few years’ gaps between the different members. First would go some of the younger members of the family, to search for work in the largest towns in the region (Zaragoza, Huesca, Barbastro, Lérida), where they found the support of networks built up by people from
the valley that had migrated previously. After 2-3 years, once they had work for other family members and they could buy a flat, the rest of the family would move to town and they would close the family house in the village.

When asked about the drivers for the exodus, the people interviewed point out some specific circumstances\(^\text{19}\), but they all agree on the need to leave the valley (“we had to emigrate”). The following narration from one of the participants in the interview in Serveto describes the circumstances well: “There were too many people, and there was not enough work or resources for everyone to live…They could subsist, as they had done so far, but things were starting to change, people started to see different things… And work here was too hard and thankless. There was a need to improve, and the only way to do so was to leave” (Belén, from Escuain House, 24\(^{th}\) August 2015).

The family structure, the inheritance system based on the preservation of the family “house” assets, and the role of women in this system also conditioned the intensity and composition of the migration. Non–inheriting sons, who could remain in the family house but keeping a secondary and subordinated role, were the first ones to leave. Toughness of the role and tasks of women, also subjected to the patriarchal authority, fostered that the exodus was more intense amongst women, while many single men remained in the valley (the “tiones”). This feature can still be seen in the demographic structure of the population today.

From the analysis of data for the period 1996 to 2014, shown in Figure 7, we can observe more stable trends in population variations in recent years:

![Population 1996 - 2014](image)

**FIGURE 7 RECENT POPULATION TRENDS IN CHISTAU VALLEY 1996 - 2014**

**SOURCE:** RESIDENTS MUNICIPAL REGISTER 1996 - 2014, INSTITUTO ARAGONÉS DE ESTADÍSTICA (INE - IAEST), 2016

\(^{19}\) A specific case is Señes, a small settlement located between Sin and Serveto, where housing problems due to landslides on the slope where the village is placed added to the generalised drivers for migration, more reasons to leave. The settlement was completely abandoned in the 1960s.
During the 2004 – 2008 period there was a slight growth of residents in the valley, following a similar trend to the rest of Spain. This raise was linked to the general economic growth, and particularly to the expansion of the building sector, which was also noticed in the valley to a certain extent. According to some of the local sources, in that period the valley received some immigrants from other regions in Spain (i.e. Galicia), who moved there with their families to work in the building sector, particularly in the villages of Plan and San Juan de Plan, where tourism mostly developed. There was also the return of some youth, originally from the valley, who moved back from cities and settled in some of the villages, creating families and having children.

However, from 2008 trends go back to a general gradual decline, derived from the demographic structure of the valley’s population (see Table 5):

<table>
<thead>
<tr>
<th>Source: Residents Municipal Register on 01/01/2015, Instituto Aragonés de Estadística (INE-IAEST), 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Masculinity Rate</strong></td>
</tr>
<tr>
<td><strong>% population ≥65</strong></td>
</tr>
<tr>
<td><strong>Ageing Index</strong></td>
</tr>
</tbody>
</table>

The marked ageing of population that these data show, as well as its masculinization, arises some doubts regarding the social sustainability of these settlement, particularly in the upper villages of the valley.

### 3.2.3. The traditional food system and its transformation

The exodus and the reach of road access between the 1950s and 1970s radically transformed the food system and access, particularly in the valley’s small and most remote villages.

Before that transformation, the food system was based on self-consumption of agriculture and livestock products from family farming, with limited external exchanges. There was a commercial structure in every little village but with a limited offer and demand, as most of the food “was made at home”.

The vegetal staples were potatoes, pulses (mainly beans, lentils and peas) and home-made bread with wheat milled at Plan’s mill. Meat also came from the family farm, obtained and processed during autumn’s slaughter, a large communal work and party event that grouped together various families. They slaughtered pigs, but also few goats and sheep, using salting as a preservation technique. There was

---

Masculinity Rate: \( R \text{ masculinity} = \frac{M}{F} \times 100 \)

Ageing Index: \( I \text{ ageing} = \frac{P_{≥65}}{P_{0-19}} \times 100 \)

This section and next are mainly based in the group interview carried out in Serveto. Therefore, they mainly reflect the food system and its transformations in the higher villages in the valley, Serveto and Sin in particular. Basic features of the traditional food organisation are essentially the same as those described in general for the whole valley by Ortega et al. (1999).
also self-consumption of eggs and milk, while fruit and vegetables came from the little gardens in the valley.

**FIGURE 8 SERVETO (ON THE LEFT) AND SIN**

Complementary food that could be bought in the local shops were salted cod and sardines (the only fish consumed), sugar, rice and oil (not very used, normally they cooked with pork fat). A separate important product was wine, which was purchased collectively from Somontano, a nearby producing area.

Besides the basic livestock commercial production in the valley (calves for fattening), other agriculture products such as potatoes, eggs, some cheese and butter, together with some artisan products (socks) were carried down on pack animals from the upper villages to those at the bottom of the valley (Plan, Saravillo), to be sold or exchanged for other products.

This food system changed as a consequence of the exodus. On the one hand, as a result of the drastic population decline, craftsmen such as builders, carpenters or blacksmiths who provided services in small villages also emigrated. The same reason took grocery shops to close in small villages: in Serveto it closed in 1969 and in Sin a bit later, in the late 1970s.

On the other hand, agriculture and livestock local production, which so far constituted the population`s staple food, also declined, particularly in those families remaining in the valley that were gradually ageing. This way, although some practices like the annual slaughter were maintained in certain families, it became more and more common to “go to Plan to buy meat”. Collective practices such as wine purchase, which used to secure access to certain food products, also gradually disappeared.

In return, road access expanded commercial exchanges and progressively disseminated new food habits in the valley. Innovation of refrigeration and frozen food cold chains (first the fridge and then the freezer, which was not widely used in these villages until the 1990s), modified the food preservation patterns. These new systems allowed longer preservation of both their own products (goods from the annual slaughter and vegetables) and those bought externally.
3.2.4. Food systems in use today
The food access structure in the upper valley’s villages at present is the result of the described transformations. It has maintained some features of the traditional system (importance of self-consumption), but two new ways to access food have appeared. Food consumed by residents in these remote villages comes from three sources:

- Own production, from the family livestock and agriculture farming.
- Purchase in groceries and supermarkets located in the villages at the bottom of the valley (Plan) and in the capital of Sobrarbe, Aínsa, travelling there in their own vehicles.
- Purchase from travelling retailers who regularly visit all the villages in the valley selling products frozen (fish, some meat products, vegetables), refrigerated (yogurts, dairy) or fresh (fruit and vegetables). Bread delivered from the bakery in Plan to all the villages twice a week (daily in the summer) is also included here.

The proportion of use of these three sources varies significantly depending on the family profile and whether they live in the valley permanently or just seasonally. The latter are usually retired couples originally from the valley that migrated to towns but in the summer they stay in their house in the village for periods between 2 and 5 months.

Agriculture and livestock own production has consolidated as a basic food source in the area thanks to progress in cold chain technologies for food preservation, particularly the availability of freezers in the household. There are many “home” products consumed as always, but “now they are better preserved”. Freezing capacity also allows better planning of meat production (slaughtering) and a more diversified consumption (“We do not need to eat only one product until it is finished anymore, as we used to do”).

Nevertheless, the weight of consumption of own goods differs greatly between the different families. Livestock farming families with young members are completely self-sufficient for meat (pork, lamb, beef, chicken, rabbit) and almost sufficient for milk, eggs and vegetables. The fruit production in the valley only covers demand for few months in autumn.

In more aged families, self-consumption is significantly less. Own meat production is lower (just some chickens and rabbits bred at home), the same as milk. Only the little kitchen gardens are the generalized source for vegetables, even for the seasonal residents, who grow their own vegetables during their stay in the village.

Purchase of food in grocery shops or supermarkets in the “lower villages” is another way of accessing food. In the interviews carried out, there is a generalised opinion that there are no significant differences between families in terms of their capacity to “drive down for shopping” in Plan or Aínsa, they all have their own vehicle and do these trips. But it is interesting to bring in the clarification brought up in one of the interviews by a travelling retailer, who sells frozen goods and has been “going up” to these villages for 20 years. When asked about the importance of the service he provides, particularly to those families with less travelling capacity, he said: “Today people get out a lot; they do not depend so much on the service. They all have cars, even if they are small. But they (elderly people) do not go down unless someone gives them a lift” (Antonio, Bel.loc d’Urgell, Lleida, 30th October 2015). For seasonal residents, all of them retired and some of them quite aged, provision from shops is less of a problem, as their children living in towns usually visit them in the summer weekends, bringing fruit and other products.

---

23 Chistau Valley is in the Sobrarbe Comarca, an administrative level between the province and the municipality, similar to a county.
For younger families, who do not have problems to make these trips, the dilemma is different, as shown in this reference to a usual conversation between two women in Serveto, brought up during the interview: “We should go down to the shops, but if you do not go, you can be one month without going. And if you go down, you end up spending money in things that you do not need” (interview in Serveto, 24th August 2015).

The alternative is to buy from travelling retailers who drive up to the villages offering a range of products that complement these families’ own production. This food access model is analysed in more detail in the following section, but we can advance that the variations in behaviour patterns between the different families (whether they buy more or less from these retailers) is related to their general food supply strategy, but also to the personal relations with the retailers, built up after many years of them “going up to the village”, or to their own assessment of quality and price of the offered products.

In order to quantify the relative importance of the different ways of food access, the following estimation, mentioned during the interviews, can be useful: for a large family with young members, the monthly expenditure in food is split in 60-70% on purchases from the travelling retailers (including the baker) that go up to the village, and 30-40% on a large shopping done in the supermarkets of Aínsa, the capital of the comarca, usually every month and a half. This distribution is also subject to seasonal changes, such as more purchases from the fruit retailer travelling to the village in winter.

Variations in the expenditure distribution shown by this estimation do not only depend on the family’s capacity to travel, or on their ability to produce their own food. The food habits also condition the allocation of resources. Unlike young families, that introduce more “modern” food into their diet (e.g. processed and frozen products), elderly families keep more traditional diets, and the preference for the same as ever food. A 90 year-old retiree in Serveto who only spends two months a year there in the summer says: “In terms of food, at home we follow the same diet as in the old times, but improved. We still eat “recao” (potatoes and beans with some bacon or meat)”. And he insists on the value of eating the meat from making broth, that “the youth do not want” (Ángel, from Sallán House, 24th August 2015).

### 3.2.5. The travelling retailers’ model

With all the different variations mentioned, one of the elements that stand out in the food system is the important role of the food range offered by retailers who regularly visit the villages in Chistau Valley.

The spread and importance of this food access model is not singular to this valley in the Pyrenees. Data collected in the interviews with retailers that travel and provide their service in this valley shows that these same retailers, or some of their colleagues, have networks covering most small remote villages in the Pyrenees’ central area and the foothills. Other informal facts (not recorded in the related literature) point out that there are similar systems in western areas of the Pyrenees, in Navarra Region. Moreover, some press records describe similar services provided by a company in mountain areas in Soria Province (Central Spain), although in this case it is linked to a supermarket chain in the capital of the province. The company present in our case study area, Congelados Egea, initiated its activity in mountain areas in Asturias, and has now branches doing this type of retailing in areas other than the Pyrenees, such as Asturias, Cantabria, Madrid’s Sierra and La Rioja. This is then an expanding commercial model in remote rural areas in Spain.

Going back to the analysis in Chistau Valley, we are first going to identify which are the travelling retailers with activity in the valley:

- **Bakery.** The baker in Plan travels to all the villages in the valley. He goes to Sin and Serveto “since the road opened”, “first it was the father, and now the son, always from the same family”.

He goes up twice a week in the winter and daily in the summer. Besides bread he offers other bakery products and feed for domestic animals (the latter by order).

- **Independent frozen food retailer.** An independent self-employed entrepreneur who has been selling in the valley for 23 years, and goes up once a month. He lives near Lérida, 170 km away from the valley. He offers frozen products, mainly a large variety of fish, and some other products.

- **Frozen food company, Congelados Egea.** It started selling in the valley three years ago, and the staff goes up to the villages twice a week in the summer and once a week in the winter. They travel from their headquarters in Barbastro, 105 km away from Chistau Valley. They sell diverse frozen and refrigerated products, including yogurts and other dairy.

- **Fruit retailer.** He has been selling in some villages in the valley, like Gistain, for 10 years, and in others like Sin or Serveto for 6 years now. He goes up to all the villages once a week all year round, travelling from his hometown in Lérida Province, 140 km away from Chistau. He sells fresh fruit and vegetables, depending on these products’ seasonality.

They all acknowledge variations in the composition and volume of their demand between winter and summer, with more weight of summer products, like ice-creams, and also as a consequence of the presence of the seasonal residents. They also offer flexible offers, adapting to specific orders made on the phone and including special orders for the villages’ festivities.

The routes covered by each one of them are wide, reaching most of the eastern Aragonese Pyrenees, part of the Catalan Pyrenees, as well as lower areas at the foothills of the mountain range, and even rural areas close to two main towns, Lérida and Huesca. They usually trade in small villages scattered in these rural areas, but occasionally they also do so in larger villages, where there is some commercial structure.

There were three retailers interviewed during the research: the fruit retailer, the frozen food independent retailer and the employee of Congelados Egea in charge of the route that reaches Chistau Valley all year round. They all agreed that their routes evolve. “*We take and drop villages*” (Miguel, 31st October 2015) for diverse reasons, mainly whether the clientele in the village consolidates or not (“*There are villages where, for whatever reasons, you do not fully enter*”, Antonio, 30th October 2015), but also taking into consideration the whole route where the specific village is included, as well as the general planning of each retailer’s routes. They are, in the end, market niches used by one or other depending on their possibilities, which are larger in the case of the frozen food company that has an expansive policy to enter new areas, and more modest in the case of independent self-employed retailers who need to adapt to their work capacity.

In terms of competition on routes and customers between retailers, some variability is observed. While the fruit retailer keeps good relationships with other colleagues, also selling fruit, and they share or exchange villages and routes, the competition between frozen food retailers is much harder.

Travelling retailers also draw strategies to compete with grocery shops in larger villages like Plan, where residents of close small villages also go shopping. On this issue, travelling retailers go for quality strategies, like the independent frozen food retailer, or compete in price, like the fruit retailer.

Approximate estimates on the number of clients per travelling retailer in the whole Chistau Valley are around 20-25 families for each of the frozen food retailers, and 40-45 families for the fruit retailer, both figures referred to clients in winter, which raise in the summer. In any case, they all agree that this route is still "worth doing"; they can cover costs and make some profit.

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25 Before there were other fruit retailers serving these villages.
When asked whether they have had to close any route due to the lack of people in the village, they say they have not. They keep going up to provide the service even with only one or two families left in a village. But they also acknowledge the demographic decline and the fact that every year few of their clients die.

One element of this activity, which is repeatedly brought up in the interviews, is the close relationship developed between retailers and villagers. All the traders highlight that they are good clients, "they always buy", although sometimes they say "I do not know what to buy, but I feel bad not buying anything off you". Friendly relations repeated week after week or month after month, also make clients in the villages give retailers eggs or game occasionally, or invite them home “for a drink”, although they cannot always accept if they have to complete the route.

Mutually, retailers also make favours to village residents. The fruit retailer describes how he delivers fruit to 90-95 year-old people’s home who cannot get out of the house. And the independent frozen food retailer even cleans the freezers for those elderly clients who are unable to do the de-freezing and cleaning of the appliances by themselves.

Except in some exceptions as described, the activity of travelling retailers is not a home delivery sale. The vendor’s van arrives to the village’s main square where people assemble, and this “visit” becomes a sort of event or gathering occasion for the villagers.

The described trading activities are completely private, without any type of support or incentive from the public administration. On the other hand, retailers do not have to pay any type of fee or municipal tax for selling in the villages of Chistau Valley, unlike in larger villages or towns (with a trading structure) in lower areas of the Pyrenees, where these taxes are common.

3.3. Summary and reflection on transformative capacity

When comparing the evolution of food habits in the last decades, one notices that there has not been a radical transformation; production for self-consumption still plays a relevant role for some (younger) families, and the appearance of the freezers allows aligning production and consumption. Nevertheless, despite the maintenance of these food practices, it is also needed to acknowledge the relevance of the role played by the traveling retailers, which would be meaning (according to some informal estimates) 60-70% of total food expenditure for some families. And this is so not only for elderly, but also for younger people whose working time does not allow easily to go down to the larger municipalities to buy.

This case study is the story of a food access necessity which has been fully responded by the market. The different profiles of traveling retailers that have been interviewed in this research acknowledge that this activity is, by the time being, profitable enough to keep the model. Actually, there is even competition between a diversity of business models –from individual entrepreneurs to companies that are expanding their area of activity- to cover certain villages. Interestingly, the commercial relationship cannot be dissociated from the personal relationships that establish between the retailers and the customers.

This is also a model of food access which responds to a necessity that tends to decline. Indeed, the demographic deterioration goes on, and the own retailers acknowledge that they have fewer families to serve each year. They insist that they will be traveling to these villages as there will be 1-2 families, since they even perceive this as a kind of community service. However, it is an uncertain future if the number of customers falls below the profitability threshold. In such case, it would be perhaps needed to look for policy support if the food access issue becomes another driver of rural depopulation in these kind or areas.
4. REFERENCES


5. ANNEXES

Annex I. Interviewed producers’ characterization table

<table>
<thead>
<tr>
<th>Date</th>
<th>Role</th>
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<th>Plot surface</th>
<th>Irrigation</th>
<th>University Degree</th>
<th>Agrarian tradition family</th>
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<td>PGS</td>
<td>0,5 Hectare</td>
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<td>Yes</td>
<td>Yes (grandparents)</td>
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<td>Producer/processor/distributor</td>
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<td>Yes</td>
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<td>Yes</td>
<td>Yes (grandparents)</td>
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<td>Yes</td>
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## Annex II. Interviewed administration, social movements and consumers table of codes

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<td>8/2/2016</td>
<td>Administration. Head of department</td>
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</tr>
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<td>9/2/2016</td>
<td>Administration. Advisor</td>
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## Annex III. Scenario workshops’ outcomes

### TABLE 6 LOCAL CASE STUDY SCENARIOS

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<thead>
<tr>
<th>Scenario</th>
<th>Short description</th>
</tr>
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<tbody>
<tr>
<td><strong>A. SUMA Y SIGUE</strong> (SO ON AND SO FORTH)</td>
<td>Aggravation of the consequences of climate change (crop losses, land abandonment). Agriculture in l’Horta degrades environmentally and socially (the Water Court disappears) Not much poverty, but revenues are tight, the welfare state also deteriorates It increases the population will live in rural areas Consumers do not care about healthy diets or local products, they access food through vending machines and large retailers Proximity markets have disappeared, and agroecology is considered sectarian and anecdotal, offering expensive products for a minority upper class Globally, the free trade agreement (TTIP) and multinationals have imposed a two-speed Europe</td>
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<td>Adapted from ‘Fed up Europe’</td>
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<td><strong>B. LA HUERTA ROBOT</strong> (THE ROBOT GARDEN)</td>
<td>European policies are geared towards closing borders and protectionism In Valencia, with an aging population, there is no available labour for many tasks (there are no migrant workers) The effects of climate change are growing, leading to more stringent environmental policies Strong investment in new technologies, particularly robotisation of agricultural operations. This takes place for both large holdings (drip irrigation water desalination plants, export-oriented monocultures) and small farms in the ‘ring’ closer to the city In parallel to technological development, social relations decrease Increase of efficient alternatives (energy recovery, waste utilization) Low consumption of meat (environmental awareness), but little concern for health (processed food from big operators)</td>
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<td>Adapted from ‘Retrotopia’</td>
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<td><strong>C. DECRECIMIENTO FORZADO Y TRANSFORMADOR</strong> (TRANSFORMING AND FORCED DEGROWTH)</td>
<td>Economic and climate crisis has continued, leading to a change in values, economic de-growth and a return to agricultural activities More protectionist policies promote own agricultural production and decentralization, as well as innovation and local products Environmental policies are more restrictive. Groundwater pollution decreases but there are water shortages due to climate change Competition for water (price, conflicts) is increases due to the rise in the number of producers The problems of water scarcity are partly offset by strong innovation (diversity crops, animals, water conservation techniques) Increased local consumption and self-consumption lead to loss of professionalisation of agriculture, but at the same time the proximity marketing channels are strengthened and a “Huerta label” is created. Overall, the gardens benefit from this scenario, but water scarcity jeopardizes social balance and sustainability of the system</td>
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<td>Adapted from ‘The price of health’</td>
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<tr>
<td><strong>D. CONSCIENTES PERO ESTRESADOS</strong> (CONCIOUS BUT STRESSED)</td>
<td>Climate change and water shortages have pushed land abandonment and decreasing the number of farmers The food system is very innovative: (i) Production, processing and distribution very organized thanks to ICTs, (ii) Very efficient irrigation systems, greenhouses with sewage, precision agriculture, (iii) local food industry is highly developed as population demand many processed food and a comfortable logistics (no time to cook), (iv) online sale, distribution drone Organic demand allows the increase of organic production and the maintenance of traditional crops, but also attracts large retailers to offer organic Technological production requirements hinder the emergence of new initiatives The legal framework is favourable for l’Horta</td>
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<td>Adapted from ‘Too busy to cook’</td>
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### TABLE 7 OBJECTIVES DERIVED FROM VISIONING AND BACKCASTING

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<td>The revalorisation of the producer</td>
<td>- Revalorisation of the producer through training</td>
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<td>- Economic revalorisation of producers</td>
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<tr>
<td>Development of short food supply chains</td>
<td>- Families have access to fresh, seasonal, organic and local products</td>
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<td>- Public administrations carry out responsible procurement, so that collective</td>
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<td>meals offer fresh, seasonal, organic and local products</td>
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<tr>
<td>Sustainable management of natural resources</td>
<td>- Sustainable water management based on collective action</td>
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<td>- Reducing environmental impact of agricultural production</td>
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<tr>
<td>Rising social training and awareness</td>
<td>- Tourist value and pay for l’Horta particularities</td>
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<td></td>
<td>- Children eat organic and respect the profession of farmer</td>
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<td>- Agricultural technicians operate under ethical principles and social</td>
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<td>responsibility</td>
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<td>- Local consumers choose and pay a fair price local and organic products as</td>
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<td>the acknowledge these products’ properties</td>
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<td>- Civil society internalises the value of the environment and recognises the</td>
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<td>value of agricultural heritage</td>
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