

T5.2 Case study report (Code ES5B)

**Slow Succession, Slow Revolution:
regenerating the agri-food system in the
Catalan Western Lands through
agrobiodiversity and local food cultures**

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Introduction

The aim of this case study is to generate knowledge on the context, origins, social dynamic evolution, political constraints and impacts of farming regeneration processes in the Catalan Western Lands, both in terms of environmental innovation and farm succession (generational renewal). Starting with an inquiry into the “Cultures Trobades” project and the Slow Food movement in the area, mainly aimed at the promotion of agrobiodiversity and local food cultures, we have interviewed 20 relevant actors in relation with the targeted processes of analysis, which provide a variety of perspectives on the topics. A data and desk analysis complement and enrich the study.

Our approach is both pragmatic and scientific. Thus, we consider the interesting results of this study rather a point of departure for further research than an ending point. Nevertheless, we hope that they contribute to revive the reflection on the growing necessity of articulating, consolidating and renewing an alternative agri-food system in the Catalan Western Lands, based upon the principles of environmental sustainability, economic viability and social bonding.

This report is structured as follows. The section “Context: the Catalan Western Lands” describes the regional and local context of analysis, including rurality, land use and the quantity and quality of the farming activity. The section “Farm regenerative agents and practices” presents the type of actors interviewed and describes the farm regenerative processes they have induced, focusing on the promotion of agrobiodiversity. The section “Origins, conditions and drivers of the regenerative practices” traces the origins, drivers and evolution of these processes, including family succession events. Next, the section “Social relationships and networkings” analyses synergies and networking among actors and the local communities in the region. Section “Political supports and constraints” provides an insight into the relevant public policies on farming regeneration in the area and how are they criticized by the actors interviewed. The section “Regenerative impact and future perspectives” describes the impact generated by the practices and future perspectives, as told by the actors themselves. We finally conclude with a summary of the main learnings from the analysis of regenerative practices and how they contribute to a promising alternative agri-food system in the Catalan Western Lands.

Context: the Catalan Western Lands

The Western Lands is a natural region comprising a vast territory surrounding the inner city of Lleida, capital of the Catalan province (NUTS3) with the same name (Lleida). The province of Lleida doesn't match the natural region of the Western Lands. The natural region includes the counties of Segrià, Noguera, Urgell, Pla d'Urgell, Segarra and Garrigues, all of them in the Autonomous Community (NUTS2) of Catalonia; and the counties of Baix Cinca and Llitera, both in the Autonomous Community of Aragón.

Geographically, the limits of the region are well set: the Montsec mountain chain to the North, separating it from the pre-Pyrenees lands; the plateau of Segarra to the East, which divides the river basins of inner Catalan waters from those leading to the Ebro river basin; several mountain chains to the South (Serra del Tallat, Serra de la Llena, Serra de Prades), separating it from the region (and province) of Tarragona; and the desert of Monegros to the West.

Politically, Catalan governmental authorities have defined a specific area for future territorial development planning, which includes only the Catalan counties in the Western Lands, not those from Aragon, naming it "Terres de Ponent" (term which we translate and use along the document as Catalan Western Lands). Despite not having yet an effective public administrative organisation, the region is defined as one of the 8 functional regions ("vegueries", in Catalan) in the General Territorial Plan of Catalonia, to be developed in the future, overcoming the historical division of Catalonia in 4 provinces (Barcelona, Tarragona, Girona and Lleida). With the new Territorial Plan, the current province of Lleida (NUTS3) should be divided in two "vegueries" or regions: some counties (mountainous areas) belonging to the newly created Pyrenees region, to the North; and the rest of counties belonging to the Western Lands.

Thus, the regional context of this case study is the proto-political region of the Catalan Western Lands. We describe it next, mainly in terms of rurality and farming activity, also highlighting specificities of the Noguera county, birthplace of the Catalan Western Lands Slow Food organization and the "Cultures Trobades" project, upon which the case study has been structured and developed.

Population and Rurality

The Catalan Western Lands have a population of 367,016 inhabitants (see Table 1)¹, representing a 4.7 % of the total population of Catalonia. The county of Segrià accounts for more than half of the population of the area, being the population quite fairly distributed among the rest of the counties (between 20,000 and 40,000 inhabitants approximately in each county, divided in between 15 and 30 municipalities each). When matched with total area, the resulting population density is 65.7 inhabitants per squared km., much below the Catalan average. Segrià and Pla d'Urgell are the counties with the highest density, but still well below the Catalan average.

The Catalan Western Lands doesn't match exactly with the current official administrative province of Lleida (NUTS 3 region), which qualifies as an intermediate region according to the official EU territorial typology (EU, 2018), and which could roughly be applied as well to the Catalan Western Lands. This qualification is very much conditioned by the role of the city of Lleida, the provincial capital, which makes up approximately for half of the population (of either the province or the proto-political region), and has an important urban character, being the only municipality with more than 50.000 inhabitants. Excluding the city of Lleida, its suburbs and surrounding towns, the Catalan Western Lands have a rather strong rural character. Indeed, up to three Local Action Groups, in the framework of the EU Rural Development Programmes, act in the area: the "Consorti Grup d'Acció Local Noguera-Segrià Nord", the "Associació Leader de Ponent" and the "Consorti per al Desenvolupament de la Catalunya Central". The first includes all the municipalities in the Noguera county, plus 6 municipalities of Segrià; the second includes all the municipalities in Garrigues, Urgell and Pla d'Urgell, plus 14 municipalities; and the third includes all the municipalities of the Segarra county, the easternmost, plus other municipalities from counties out of the Western Lands. Overall, the Catalan Western Lands have not been losing population during the last two decades (see Table 2). On the contrary, population has grown a 23.3%, with similar figures to the Catalan average (24.2%). Certainly, this global figure is hiding important heterogeneities in time and territory. Most of the population growth occurred during the 2000-2010 decade, partly because a huge influx of immigrants through all Catalonia, and also favoured by an

¹To facilitate reading, all tables derived from the data analysis are placed in the Appendix.

economic boom. During the last decade (2010-2020), after the Great Recession, the population stagnated, growing just 0.9% (well below the Catalan average, 3.6%). More importantly, while many counties' figures are around the average, the trends for Noguera and Garrigues are more negative: the former has grown only 12.7% during the period 2000-2020 (half of the Western Lands and Catalan average), including a depopulation phase in 2010-2020 (-2.5%), while the latter has lost population over the whole period (-2.1%), including an important depopulation phase in the last decade (-7.5%). Both Garrigues and Noguera counties have also a negative internal migration rate (residential variations to and from the rest of Catalonia and Spain), much higher than the -0.2 for overall Catalan Western Lands (see Table 3).

Looking at the age distribution of the population (see Table 4), interestingly there is no ageing process overall in the Catalan Western Lands if we take the last two decades in the analysis (population aged more than 64 years-old represented 20.8% in 2000, and 19.7% in 2020), contrary to the overall trend in Catalonia. Nevertheless, there has been an ageing process when looking at the last decade's figures (from a lowest 17.6% in 2010 until current figure close to 20%).

Land Use, Farming Activity and Food Systems

The Catalan Western Lands have an extension of 5586.0 squared kilometres, representing a 17.4% of total Catalan area (see Table 5). Noguera and Segrià counties are the largest, and take more than half of the total area of the Western Lands. The area is in general made up of plains, since almost 77% of the area has slopes less steep than 20%. The share for the total in Catalonia is almost 45%, hence the Western Lands are relatively flatter than the average, providing in principle a good setup for the practice of agricultural activity.

In relation to the Catalan average on land use distribution (see Table 6), the Catalan Western Lands have a much higher share of farmland (58.2%) and approximately half of the share of forest area (33.5%). The Noguera county is the only one in which forests occupy a larger area than farmland (53.8% and 40% respectively), but still below the Catalan average. There are other important heterogeneities in the area, indeed, which help in explaining the characteristics of the agri-food production systems developed. While in Pla d'Urgell (83.3%) and Segrià (49.8%) the irrigated farmland is by far larger than dry farmland, this is not the

case in the rest of the counties, in which the latter is more important, specially in Segarra (63.5%) and Urgell (49.5%).

Agricultural production in the Catalan Western Lands is oriented to arable crops (70.5%), particularly in Segarra county (98.9%) and to a much lesser extent in Garrigues or Segrià counties (around 60%), where permanent crops prevail (see Table 7). Horticulture production is residual, but it has the strongest share in Noguera county (more than 2%). Figures in terms of agricultural land used by main crop group are very similar (see Table 8), except for Garrigues county, in which the share of land by permanent crops is much higher than its production share, probably signalling a singular low productivity case.

Barley is the prevalent arable crop in the Catalan Western Lands in terms of land used (see Table 9), with maize and fodder being particularly relevant in those counties which have the most irrigated land (Pla d'Urgell, Segrià). For the same reason, but in terms of permanent crops (see Table 10), fresh fruit trees prevail in these counties, while nut trees and olive trees are predominant in the rest of counties of the Catalan Western Lands, being olive trees singularly relevant in Garrigues county, almond trees in Segarra and vineyards in Urgell.

Regarding livestock (see Table 11), pig farming is the most common activity in the Catalan Western Lands, with more than 2 500 holdings involved in the activity, representing a bit less than 50 % of total activity related to livestock. It is the most common activity in all counties, with Segrià and Noguera at the forefront. Cattle farming follows, with around 1 500 holdings, and around 900 holdings raise poultry. Sheep and goat are less represented, with less than 300 holdings each in total in the Catalan Western Lands, as per 2020.

Economically, farming activity in the six counties of the Catalan Western Lands is relatively much important than the average in Catalonia (see Table 12). While the Catalan share of farming activity, measured through the Gross Value Added, doesn't even reach 1%, it reaches almost 24% in Garrigues county, or 11% in Noguera, while it accounts between 4% and 8% in the rest of the counties. Garrigues, Segarra and Urgell follow the Catalan pattern in that livestock farming has a higher economic weight than land farming. Also, poultry is the agricultural sub-sector with higher value added in most of the counties of the Catalan Western Lands and in Catalonia in general, while singularly fresh fruit is the main farming activity in Segrià and pig farming in Noguera.

Food industry is also economically more relevant in the Catalan Western Lands than in the rest of Catalonia, twofold specifically, with Segarra particularly standing out, with an extraordinary industry share of 71.1%. This is mainly explained because an important food business corporation (“Grup Alimentari Guissona”) is established in this county. The company is an example of the prevalence and dynamics of the conventional food system in the Western Lands, since it has established during the last 50 years a strong regional network of farm suppliers through contract farming. Farmers grow grains and feed animals with company’s inputs and support, and the company buys the animals, slaughters, processes and sells the meat, also through its own commercial brand and network, which spreads over all Catalonia at low and affordable prices.

Interestingly, Agricultural Gross Value Added has decreased during the last 6 years (2013-19), and it has done so more in land farming than in livestock farming, and singularly in olive oil, which is the dominant crop in Garrigues, and in cereals, which are dominant in Noguera and Segarra (see Table 13). But overall, Segarra and Urgell counties have suffered the more important decreases in Agricultural Gross Value Added, pushed by the particularly negative evolution of livestock farming. On the contrary, Food Industrial Gross Value Added has grown during the same years in all the Catalan Western Lands’ counties, but less in Garrigues (2.4%) and more in Pla d’Urgell (18.1%). Since data is nominal, lower prices could be driving these recent negative trends for farmers. This is not further explored in terms of contextualization. From the point of view of employment, more than 7% of the employment in the region is concentrated in the agricultural sector (see Table 14). Again, this figure is not only much higher than the Catalan average (1%), but the highest among all proto-political regions in Catalonia, so we can definitely qualify the Catalan Western Lands, from this perspective, as the most agricultural region in Catalonia. This qualification works as well if we take into account the total absolute numbers of employment, because out of the more than 32 000 farm workers in Catalonia, approximately a third (almost 11 000) are located in the Catalan Western Lands. Within the Western Lands, some local differences are worth noting (see Table 15). Again, Garrigues and Noguera counties stand out, in this case with the highest share of agricultural employment, in both cases well above the average for the region (beyond 20% the former, more than 15% the latter).

Natural Environment and the Quality of Agricultural Activity

The Catalan Western Lands (see Table 16) have in total a lower share of natural protected area (21.6%) compared to the Catalan average (31.9%). While Noguera, Segarra and Urgell levels are around this average, the share of natural protected area in Segrià and Garrigues is far below (11.4% and 8.8% respectively), and almost non-existent in Pla d'Urgell (1.5%). Obviously, the limited natural protection in an important part of the Catalan Western Lands has favoured the development of an intensive agricultural production system. This may be particularly true in Pla d'Urgell and Segrià, in which irrigated farmland has contributed as well to the intensive development.

No public available data at the county level exists to account for organic farming land used and production, so it is impossible to aggregate data for the Catalan Western Lands. Nevertheless, data is available at the provincial level (NUTS 3 region) for Lleida, for which the Catalan Western Lands matches partially (the additional Western Pyrenees region is part of the Lleida province as well). Organic farming is growing over all Catalonia from 2000 to 2020, either in farmland (see Table 17) or in holdings (see Table 18), and apparently, Lleida is the region in which organic farmland is most predominant. Nevertheless, it is not possible to extrapolate this fact to the Catalan Western Lands, because data is misleading, in that a huge majority of this organic farmland in Lleida is located in the mountainous areas, where grasslands are more abundant, and this is the predominant type of farmland which is converted to organic. Indeed, Barcelona and Tarragona provinces, located away from the Pyrenees, have even a larger number of organic farm holders than Lleida.

Also in terms of the quality of farming production, and of particular interest for this study, is the data on the land which is cultivated with transgenic seeds, for which maize is allowed. Segrià is the county with the largest transgenic maize farmland (see Table 19), also in terms of share of total maize farmland (around 75%), with Pla d'Urgell and Noguera counties following close (more than 5 000 hectares and around 60%).

Farm and farm holdings structural characteristics

Farm statistics by gender, age and form of management are not available at county level, so it is not possible again to build the aggregate for the Catalan Western Lands. Nevertheless, it is

worth noting the characteristics at the overall Catalan territorial level, because given the weight of the farming sector in the Catalan Western Lands, they may indicate similar trends to the reality in this territory of interest. More than 75% of farm holders in Catalonia in 2016 are males (see Table 20), despite there is a long-term trend of females being incorporated to the sector since 1995 at least, when they just represented 15% (for a 25% now). The trend for an ageing farming sector seems unstoppable (see Table 21), with 37% of farmers being older than 65 in Catalonia in 2016, while the share didn't reach 30% in 1995.

Of course, farmland is worked also informally by family members, and also not professionally. Thus, the number of farm holders is higher than that of farm workers. In particular, there are 51 137 farm holders in Catalonia, which manage a total of 57 543 holdings, corresponding to 55 022 Annual Working Units (see Table 22). The share of family labor force is roughly 56% in 2016, so the family farm business setup still prevails in Catalonia. Indeed, family labor force is present in almost 90% of total holdings in Catalonia. This fact assigns a high importance to family business succession issues.

Some additional farm system characteristics, on farm holdings' size and property structure, are available for the Catalan Western Lands, despite they are slightly outdated, because they correspond to the last decennial census. Nevertheless, since changes in ownership are not that frequent, we can assume that the figures from 2009 provide a close picture to current reality. To this regard, the Catalan Western Lands farm holdings are in general larger than the Catalan average (see Table 23), and this is particularly true for Segarra county, with almost 60% of holdings with a size larger than 20 hectares, but also for Noguera county, to a lesser extent, with a 40% share. This is associated to the prevalence of arable crops, as shown above. The majority of farm holdings are managed by owners themselves (around 60%, with minor differences among territories), being leasing agreements more prevalent than partnerships (see Table 24).

To recap, the Catalan Western Lands are a proto-political region with no current effective public administration, but partially matched with the official province of Lleida. It is formed by six counties characterized by a strong rural and agricultural character, specially Garrigues and Noguera, comparing to the rest of Catalonia. It presents some heterogeneities in terms of farmland use and economic value, but grains, fresh fruit, poultry and pig farming prevail in general. A few big food business corporations, but also smaller cooperatives, drive and



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control a majority of this production processes through contract farming, and ecological practices seem to be relatively less extended than in other Catalan regions. Family farms are the most common management setup, and ageing is evident, thus succession and successors are key to understand the dynamics of the food system in the region.

Farm regenerative agents and practices

The promotion of agrobiodiversity and local food cultures in the Catalan Western Lands has been formally driven since 2004 by the Catalan Western Lands Slow Food association, and particularly through the “Cultures Trobades” initiative, starting in 2008. Nevertheless, the sustainability of the initiative is guaranteed through several agroecological farmers, who play the role of supporters to the core group of agrobiodiversity promoters. Moreover, a variety of restaurants in the region have a role not only in indirectly supporting the initiative, but also in influencing its further development and acknowledgement by getting to know the local food products to local society. Interestingly, while some of these restaurants belong to the Slow Food Accredited Network promoted by the Catalan Western Lands Slow Food association since 2008 as well, some others don't belong to the organization. In section “Social relationships and networking among actors and the local communities” we explore further this type of interrelationships among actors, but at this point we describe the personal profiles of the different actors involved in the promotion of agrobiodiversity and local food cultures in the Catalan Western Lands, and the characteristics of their activity (see Table 25 in Appendix with a denonymized list of interviewees for a summary).

Agrobiodiversity promoters: the «Cultures Trobades» core group and the «Catalan Goat» spin-off

«Cultures Trobades», as a collective, produces and commercialises grain and vegetable seeds of local or ancient varieties, and they identify and preserve olive trees and vineyard ancient varieties, amongst others. They have elaborated wine (together with L'Olivera Cooperativa) to disseminate the cultural value of certain vineyard varieties. Sporadically, they offer material coming from the olive grooves collection. Currently, "Cultures Trobades" elaborates and commercialises pasta with ancient wheat varieties.

The core group of “Cultures Trobades” and its “Catalan Goat” spin-off is formed by ES5B3, ES5B4, ES5B1 and ES5B2 and mainly based in Noguera county. ES5B3 set up the initiative of «Cultures Trobades» in the framework of Catalan Western Lands Slow Food association. He has conducted a variety of tasks within this project and has witnessed its evolution. He is a successor farmer since 2013. ES5B3 is currently in charge of maintaining "Cultures Trobades"

olive trees collection and a vineyard collection, and he also supports the management of a fruit trees collection located in a Farming School of the region. He multiplies vegetable seeds and few cereal varieties. Besides, he is a grain producer at Noguera county. Although initially there was not a link between his farm and "Cultures Trobades", he now cultivates a few wheat varieties that were retrieved by "Cultures Trobades" and transforms the raw material into pasta using "Cultures Trobades" branding.

ES5B4 is a newcomer to the Catalan Western Lands. Having a urban background, she decided to volunteer in organic farms through the WWOOF platform. She spent some years in Brasil working on a vegetable garden and collecting seeds. She reached «Cultures Trobades» through a volunteer, specifically helping ES5B1 in different tasks. She maintained regular contact with the core group of «Cultures Trobades» and ultimately moved to Sentiu de Sió (Noguera county). She is combining this activist task with her job as a teacher in a high-school. ES5B4 has conducted a variety of tasks within the "Cultures Trobades" initiative (such as seeds multiplication in the vegetal garden) and she is now rather focused on the process of transforming ancient wheat flavour into pasta and commercialising it through direct sale or through consumers groups.

ES5B1 got involved in «Cultures Trobades» at its early stage and conducted a variety of tasks ever since. He moved to Vilanova de Meià (Noguera county) in 2010 because there was an urgent need to manage the last flock of the Catalan goat, whose owner was retiring. Hence, ES5B1 took charge of the Catalan goat conservation project, while he was also actively involved in the preservation of horticultural seeds. That led to a high pressure put on him and, when he got sick, ES5B2 was there to replace him. He now keeps being part of "Cultures Trobades" core group.

ES5B2 is today in charge of the "Catalan goat" conservation project, which was set up by ES5B1 within «Cultures Trobades» but which now is an independent initiative. He is a new entrant into farming and also a newcomer to a rural area. ES5B2, by joining this project, has found a way to fulfill very personal needs: run away from big cities, engage in a self-managed productive project and engage in community-based and rooted initiatives. He admits that he initially had a "bucolic vision" of the rural areas and the connection with nature these offer. Yet, he has bumped into the reality (such as difficulties or hardwork) and he actually likes it. He now manages all the processes related to goat rearing (feeding, pasturing and

infraestructure maintainance) and he also conducts the management measures associated to the conservation of this breed. The farm is “out of the system” because they find this more suitable.

As for governance philosophy of «Cultures Trobades», they have few internal problems because they have a rather free-style approach, where each individual organises his or her work. They meet seldomly and make a very general and basic planification. They don't usually get mad amongst them, since they are aware that it is not possible to tackle all the tasks and accomplish all the objectives. ES5B3 states that the underlying "Cultures Trobades"'s goal is "to conserve by using", and its dinamization approach is quite genuine: *“the risk when “dynamizing” is expecting other actors to act. We broke up with that idea [...], we had to do the work, and not wait others to do so”* (ES5B3). He describes as well the management philisophy of the organization like this: *“We have a way of work which is: you are here doing your things, I am there doing my things, at your pace and at my pace. We have few meetings, we have a rather general and basic planning. We know we can't do all what we plan to do, and that some things will not work. We try not to get mad with this, and keep going”* (ES5B3). This rather relaxed approach seems to be quite crucial when developing this type of initiative in a context which is not very favourable.

ES5B1 states that, through "Cultures Trobades" initiative, they are trying to revert the deterioration of the “farming, food and human culture” that becomes apparent through the loss of agrobiodiversity. He is currently in charge of assessing seed's viability and multiplies those varieties whose seeds are aged. ES5B2 pays special attention to the environmental and animal welfare aspects of the Catalan goat project. He conducts certain farming practices, such as limiting the amount of goats per hectare in the forestland, reducing the stabling period, properly managing the manure or other wastes, reducing the use of medicines, etc. In a nuthsell, he tries to manage the goat flock in an “ancestral” manner. ES5B2 defines his utopy as a scenario in which he (or others involved) are able to get by or survive economically only by means of the goats flock and the required land for this activity. They expect the Catalan goat project to be self-sustained, not dependant on subsidies, but they acknowledge this is very hard nowadays.

Agroecological supporters

The core group of “Cultures Trobades” has found the crucial support of several agroecological farmers in the region, mainly through the purchasing and further preservation and multiplication of ancient local varieties identified previously. Interestingly, these actors don't form a coordinated group, but each one of them contributes in a different manner to the promotion of agrobiodiversity (and, with it, agroecology) in the Catalan Western Lands, shaping a regenerative alternative to the conventional agricultural system.

A first close group of loyal supporters is formed by ES5B5, ES5B11 and ES5B10. ES5B5 is a young new entrant that, after volunteering and working in horticultural projects in Switzerland, has come back to his home town in Segarra county. He has set up a vegetable production in a land owned by a friend, and he plans to apply for the public subsidy targeted to young people entering into farming. ES5B5 produces and commercialises vegetables through direct sale to his 30 costumers in th local county, who are subscribed to his weekly vegetable boxes, but also through a small shop. He opted for direct sale because the margin of this approach allows him to work at a small-scale (4000m²). ES5B5 uses the seeds provided by «Cultures Trobades», but also from other similar initiatives beyond the Catalan Western Lands, and he identifies some advantatges stemmed from cultivating these particular varietes, such as distinctive and peculiar vegetables with high organoleptic quality and adaptability to local climate conditions, beyond his intrinsic motivation for him as a farmer. Hence, despite ES5B5 is not directly involved in researching and promoting agrobiodiversity at large, he is indeed contributing to its conservation by actually using certain varieties and making them known and valued. He also implements agroecological practices and, in order to reduce fossil fuel consumption, he even uses animal power when performing some farm operations.

ES5B11, 43 years old, is a horticultural farmer in Urgell county. Even if he has a farming background, he could be considered as a new entrant, since he did not inherited much land and he started up from scratch after completely changing the inherited productive project, based upon the standard intensive pig farming activity so common in the area. Interestingly, he has been really involved in different initiatives aiming at enhancing a local food system from a communitarian, self-managed perspective. He is part of the farm workers union “Assemblea Pagesa”. ES5B11 implements agroecological practices not only in terms of

farming methods and commercialisation approaches, but also in terms of management measures for biodiversity enhancement. He has in mind concepts such as no-tillage farming, since he stays in touch with different agroecological actors of other territories in order to learn and improve farming practices. Amongst others, he plans to further diversify the production of the farm and would like to rear some animals in order to increase the recycling of nutrients and wastes within the farm. Interestingly, he tries to increment the heterogeneity of semi-natural elements within the farm by creating and maintaining field maring and herbaceous buffer strips. ES5B11cultivates some of the horticultural varities that are being preserved and fostered by «Cultures Trobades». Little by little, he is including more and more varities in his production by acquiring seedlings or seeds. He wishes to produce his own local seeds and seedlings as much as possible in the future. According to his colleague ES5B10, he is very involved in the multiplication and preservation of local seeds, and he has a rather thorough or methodical profile in this regard. ES5B11plans all these challenges on behalf of “self-sufficiency”.

ES5B10, 50 years old, is an horticultural farmer that decided to go organic-certified ten years ago and commercialises through local markets. He has inherited much of the land because he is a successor of his uncles’s farm, which was rather oriented towards fruit production, as well as fodder grain and maize. He is also part of the farm workers union “Assemblea Pagesa”. ES5B10 is implementing some sustainable management practices to increase soil quality, since he stays in touch with different agroecological actors of other territories in order to learn and improve farming practices. He is also and has been gradually changing the orientaton towards what he calls “food for people” (in contraposition with food for rearing animals). ES5B10 is interested in local and reliable seed production mainly because he thinks it is key to ensure one’s “independency” from the conventional agricultural system in the Catalan Western Lands. He also remarks the importance of agrobiodiversity in agronomic adaptation terms, and in general terms he is very aware of and critical towards different political and economic dynamics that are hindering sustainable and local food system.

Beyond the close group of supporters, several other agroecological farmers in the region collaborate or have collaborated more or less frequently with the “Cultures Trobades” initiative. They contribute as well to spread the initiative and agrobiodiversity, and provide additional perspectives and activities which complement and enrich the original “Cultures

Trobades” initiative and approach. We describe as well some of these complementary actors and their practices.

ES5B6, 41 years old, is professionally trained in farm management and based in Balaguer (Noguera county). He belongs to a new generation of Pàmies Hortícoles, a pioneering project in medicinal plants in Lleida and Catalonia, promoters of the association «Sweet Revolution», which spreads the use of plants for medical purposes, and which has had many conflicts with the Catalan Public Administration for this reason. The organization has been run historically by two brothers, with formal participation of their respective sons. ES5B6 is one of the sons, and he has been on and off the family business, but continuously since 2009. Now he is no longer formally involved in the family business, because of disagreements with his father and uncle, and he runs on his behalf part of the agricultural production, separately from the family business. Nevertheless, he is still established in the family properties, and he provides 80% of his production to Pàmies Hortícoles, the family business that sells to the public. Thus, his activity is still intertwined with the family business. ES5B6 grows 3-4 hectares of a great variety of vegetables and medicinal herbs, and also grows the plants in their initial stage from seeds, under several greenhouses. A total of ten workers are employed. Historically, under the family business, production methods were conventional, and commercialisation was done at whole-sale markets. Nevertheless, he pushed for a change in philosophy, towards organic methods and local markets. This arrived, but according to ES5B6, a bit late. ES5B6 takes special care in implementing biological strategies in the farm and the greenhouse to defend the plants from predators. Beyond the production of vegetables and medicinal plants, he tries to preserve and sell local ancient varieties of seeds. He is really passionate about this activity and would like to promote it further, but it is difficult for him to allocate time and resources to this type of research and development activity. With COVID, according to him, there has been a renovated interested in local seeds and plants, increasing sales at 20/1 and 5/1 respectively.

ES5B7 was born in Barcelona and has been professionally trained in farm management in several cities: Barcelona, Lisboa and Montpellier. His family was not in the farm business, so he can be considered a new entrant. After several years and periods abroad, ES5B7 returned to Catalonia by the end of the 90s, in search of a professional experience that could combine farm management with a social project. He got to know the experience of L’Olivera

Cooperativa, established at Urgell county, and he didn't had any doubt to enrol when was offered a position. He was not looking for an experience particularly in the Catalan Western Lands, he just cared about the philosophy of the project, which should necessarily promote social values and not only the search of economic profit, as conventional models (or "agroindustry", as he puts it). As the farm operations manager of L'Olivera Cooperativa, Pau takes care of 40 hectares of olives and vineyards (20 and 20, respectively), mostly under leasing agreements. L'Olivera Cooperativa is a workers' cooperative, with a different legal arrangement compared to the traditional agricultural cooperatives in Catalonia, born in the early 20th century as a means of sharing transformation processes and commercialisation by small farmers. The cooperative employs around 50 workers today, most of them with mental disabilities and at risk of social exclusion. This social business orientation is not unique in the Catalan Western Lands or Catalonia in general, but certainly L'Olivera was a pioneer and, since it was set up by the end of the 70s, is a referent among this type of social initiatives (which ES5B7 defines as "values farming", or "social farming", to confront it with "industrial farming"). Beyond the production of olive oil and wine, L'Olivera has historically supported the «Cultures Trobades» initiative, mainly taking care of the prospection, reproduction and inventory of ancient grape varieties. The cooperative sells the products around Catalonia and beyond, historically without a strategy to promote local markets, but this is changing these last years, and they are part of a broader local initiative to promote local products. ES5B7 defines as the big challenge of the initiative *"maintaining the fragile equilibrium between economic production and social inclusion"*.

ES5B8 is 39 years old and he is the successor to a farm family business in Segarra county. His father used to manage the land, mostly as a complementary activity to cattle farming, a common conventional production setup in the area. ES5B8 helped occasionally. Being the activity non-profitable enough to earn a living, ES5B8 opted to work in the construction sector, which boomed in whole Spain during the first decade of the 21st century. After the crisis in 2008, that left many construction workers unemployed, ES5B8 decided to go back to land and manage the family land which was left unattended. Together with other colleagues, they cooperatively started La Garbiana project. La Garbiana started as a worker's cooperative in which the key asset was a mill, and the main activity was the production of flour, which was used to elaborate different types of breads out of local grain varieties, some of them

preserved by the «Cultures Trobades» initiative. An important innovative component of the project is the reintroduction of the traditional stone-type of mill, for which at the time of the beginning of the project there was no evidence of current use in the Catalan Western Lands. La Garbiana today is not formally organized anymore as a cooperative business. The four colleagues who started the project are still cooperating very closely through strategic commercial relationships regarding the different activities initially established (farming, milling, baking), but they are self-employed and responsible for their own part of the business. As the organic land manager of 70 hectares of grains in dry lands, ES5B8 provides the raw material for the elaboration of the flour and subsequently bread, which they mainly sell at the local store, but also through other small distributors around the Western Lands. They supply as well to some Slow Food Accredited Restaurants in the area (Lo Ponts, L'Antic Forn). Nevertheless, there are some commercial and economic difficulties, because even the organic local market starts to be saturated and prices are low. Also, the philosophy of the common project is to keep it familiar and at a small scale, enough to earn a living, but far from exploiting scale economies as the larger farms and industrial milling companies do. They could opt for growing indeed, because the mill doesn't work at full capacity yet, but they don't want to. Interestingly, ES5B8 recognizes that a majority of consumers don't acknowledge local ancient varieties of their products: only a minority of «nostalgics» appreciates and buys them, but the majority of customers are not willing to pay a higher price for the local ancient variety, as they do with ecological products.

Finally, some agroecological farmers in the area contribute to the diffusion of an alternative agri-food system in the Catalan Western Lands, but are not explicitly supporting the agrobiodiversity initiative by «Cultures Trobades». An interesting example is ES5B15, the farm manager from Cal Valls, a pioneer ecological producer and processor in the Catalan Western Lands. Indeed, ES5B15 is the successor to the owner of the first-ever officially organic-certified farm in Catalonia, which already started to change the production system by the end of the 1970s. Nevertheless, no explicit formal support to the «Cultures Trobades» initiative is provided, despite they have used some local varieties in their farming and food processing activities. Another example are ES5B9, a married couple at their middle-ages who own and run together an agroecological farm in Segarra county since 2013. When they met in 2009, Joan, who had been professionally trained in farm management, was already

working for the family farm business, which at that time belonged to his father, who managed it rather conventionally. With the arrival of ES5B9a, a trained engineer, and her formal incorporation to the family through her engagement with Joan, a succession process started. The succession was the occasion to start the conversion to organic farming of the more than 100 hectares of grain grown at the different plots of land making up the farm, in a new formal organizational setup, which ES5B9 branded as «Fruits del Secà». Despite being located at the natural region of the Catalan Western Lands, they have mostly grown the business looking Eastern, as other agents in Segarra county, indeed. As such, when it comes to the preservation of ancient seeds, they have not formally participated in or supported the «Cultures Trobades» project, but rather other Catalan initiatives which promote agrobiodiversity. Through Fruits del Secà, ES5B9 grow more than 200 hectares of grains and pulses, half of which have already been converted to organic farming, in an area in which this process is rather uncommon, so they have been a sort of pioneers and innovators at the local level. They use mainly ancient varieties, some of them local, some not. To the best of their knowledge, they are the unique Catalan farmers to grow two of these varieties, which they have identified, preserved and introduced very recently: the red lentil and the brown flax. They pack part of the harvested product to sell it directly, and they process the other part with a stone-type mill to elaborate flour. They mainly sell the pulses to ecological school canteens, but also to ecological cooperative consumer groups, while they sell the flour to local bakeries. They prefer to sell directly rather than through distributors, and they acknowledge that the local market and small villages are hard to sell, while they got higher appreciation of their product from towns and cities. The new orientation of the family business has been economically successful, guaranteeing its sustainability, and employing both of them (ES5B9b full-time, ES5B9a part-time) plus an external worker who assists in cleaning grains and pulses before selling them.

Moreover, ES5B16, 29 years old, is the administrator, technician and producer of “Tres Cadires”, a cooperative that produces craft liquors from local nuts in Garrigues county. He was born in Belianes, and graduated from a vocational training course on industrial automatization, a field he worked on for some years, first as a technician and then as a robotics teacher in schools. In 2016, while he was still teaching, he founded “Tres Cadires” with his partner, who is the president of the cooperative, and a friend. In 2019 he left his

other job and dedicated himself exclusively to the cooperative. Even though his uncle was a farmer, his father was not, and he did not inherit any land. Nevertheless, he did take the recipe for the nut wine, the main product of the cooperative, from his father. No formal support to “Cultures Trobades” is acknowledged. Finally, ES5B18, 44 years old, is the owner and only associated worker of Masia Tomaso, a livestock farm in Noguera county. He inherited the land from his uncle, a farmer, but did not start farm until 7 years later, at 29 years old, when he bought the cattle and built a new infrastructure. He studied agroecology in the Farming School of Manresa, out of the Catalan Western Lands, and decided to manage the farm following organic livestock farming ideas and methods. Again, he doesn't support explicitly the “Cultures Trobades” initiative despite his project is totally aligned with it.

Slow Food Accredited Restaurants' Network

From a different angle, some cooks in the region are providing direct or indirect support and influence to the “Cultures Trobades” initiative, and agrobiodiversity in general, mainly through the Slow Food Accredited Restaurants' Network in the Catalan Western Lands (which is part of a formal larger Slow Food Accredited Restaurants' Network in Catalonia). Some of them participated in the origins of the «Cultures Trobades» initiative, but have lost connection to the core group. Interestingly, some others which don't belong to the Slow Food Accredited Restaurants' Network are providing support to the initiative through commercial purchases of the Catalan Goat meat. We describe next some of these agents and their restauration activities, highlighting regenerative characteristics.

ES5B13 is 41 years old. Born in the Noguera county, and initially encouraged by his father to become a farmer, he is indeed a cook and entrepreneur by vocation. He has become a renowned chef, winning international prizes. He was one of the founders of the Slow Food Accredited Restaurants' Network in Spain, and subsequently in Catalonia and the Catalan Western Lands, when the regional sections became independent. His main gastronomic project is the Slow Food Accredited Restaurant “El Dien”, established in his hometown Vallfogona de Balaguer (Noguera county) already in 2006, and in which he got to involve his father. Along with this project, he participates in different business initiatives, such as a catering service company, a gastronomic advisory organization or another local restaurant. The restaurant “El Dien” is a high-cuisine restaurant based upon the principles of ecological

and local food. From the beginning, ES5B13 envisioned a restaurant which would be provisioned only with local agricultural products, grown organically. As part of the Slow Food initiative, he was one of the supporters of the «Cultures Trobades» project, since the new varieties preserved and grown through the project could serve as raw material for this Slow-Food type of restaurants. But he and his father started as well their own horticultural organic and biodinamic farming project, about 1 hectare, which today supplies almost 80% of all the raw product they need in the restaurant to prepare the food. They have identified, preserved and grown different ancient varieties of horticultural products, specially tomatoes, and about 30% of the horticultural production remains without being collected, so it is used as natural fertilizer but also as a guide about future growing plans. The project overall has a healthy economy, and employs 12 permanent workers, when counting together the parallel projects that ES5B13 runs together with the Slow Food restaurant. Beyond the promotion of agrobiodiversity and organic farming, the project of “El Dien” presents innovative aspects in the way the restaurant works and how the plats are elaborated. Indeed, as he puts it, “my cuisine is a reflection of the state of my soul”. This means that he doesn’t offer a permanent menu to his customers, but instead he improvises every weekend a tasting menu, mainly based on the available horticultural products for that date, and also depending on the energy that he feels from the suppliers of the remaining products. To keep this energy, indeed, he even labels this products with an adjective in a post-it in the refrigerator. The thorough knowledge that he has on his few suppliers (beyond his own production) facilitates the application of this biodinamic and energetic philosophy.

ES5B14 is 53 years old, and he is the owner of the restaurant “Lo Ponts”, together with his wife, Montse. The restaurant is located in the Noguera county, in an important crossroad where many visitors stop on their way to the Catalan Pyrenées. He entered the restauration business together with his brother in 1984 and by chance, not by any specific motivation or vocation. Nevertheless, after many years running a conventional road restaurant, they changed a bit the philosophy, orientating the business from a local territorial perspective, until 2011, when they finally met the conditions to enrol in the Slow Food Accredited Restaurants' Network. After a progressive change in their philosophy, from their beginnings as a rather conventional road restaurant to a Slow Food certified type in 2011, the “Lo Ponts” restaurant offers daily menus mainly sourced with local products, to reinforce their territorial

embeddedness. But certainly, not all products are local, and the ecological production is not always a priority. Instead, the focus is on having an excellent tasting quality. They would prefer to source more products locally (meaning local the Noguera county or the Western Lands), but if the expected quality is not met, they source around Catalonia. Acknowledging that in the area where they are located it is very common for a farmer to be part of the conventional system, producing maize to feed animals for the big corporations, they consider themselves as an actor that can influence production transitions towards different products, made with ecological methods and oriented towards human food. Still, for the type of local client that they have, ecological products and local ancient varieties are difficult to appreciate. As an example, they use the bread they buy from La Garbiana, another project analyzed in the case study, which is of a high quality, and that is what they feel that customers appreciate, not necessarily that the bread is made up of an ancient traditional variety. Being part of the Slow Food Accredited Restaurants' Network helps them as well to find raw material of a high quality. They employ 15 workers, mainly from local areas, and have a fairly stable base of customers. Thus, economically their situation is sound, but they acknowledge some problems in hiring, training and retaining local engaged staff.

Finally, two restauration actors and initiatives are worth mentioning for its local impact and involvement with the promotion of agrobiodiversity, despite some differences among them. First, ES5B19, 41 years old, who is the owner and director of the restaurant Cal Xirricló, based as well in Noguera county. He is the third generation of owners, after his godparents opened a small tavern in the 50s, near the local farmers market, and his parents took it over some years later. ES5B19 studied in the school of hospitality and tourism, in Lleida, and he took over the restaurant in 2000 with his mother in a new location. ES5B19 has been slowly introducing new formats of food service to local customers (not keeping only the traditional strong breakfast for which they were known in the beginning), and more importantly, he tries to do a special effort in supplying the restaurant with singular local products. He is, indeed, one of the few cooks who serves the “Catalan Goat” meat, purchased to the core group of developers of this race, stemmed from the “Cultures Trobades” project. On the other hand, ES5B20, 36 years old, is the chef of the restaurant l’Antic Forn, based in Cervera, the main town in Segarra county, and usually known as a rather conservative local community. The restaurant was created in 2000 by his father, and ES5B20 worked there until he was 20. After

that he left to pursue other interests, namely music, and he came back in 2008, at the start of the financial crisis. At that time, his father wanted to close the restaurant and ES5B20 decided to take it over along a friend who studied cooking. He decided to change the direction of the restaurant and turned it into an Asian cuisine restaurant, but still strongly anchored in the use and promotion of local, ecological and seasonal products. He buys some stuff from La Garbiana, and during the pandemic he has taken the opportunity to introduce some changes in the food service, suppressing the menu format. Interestingly, he will soon offer a “pop-up” food service, but he will do it in the nearby eastern county of Anoia, which is not part of the Catalan Western Lands.

To recap, the array of actors and initiatives described in this section show a rather unarticulated movement towards an alternative agroecological system in the Catalan Western Lands, based upon the principles of agrobiodiversity and local food cultures. In the next sections we explore a bit further the origins, motivations and context, and social connections among actors involved in this long-lasting counter-cultural movement.

Origins, conditions and drivers of the regenerative practices

In this section we look specifically at the original conditions and motivations under which the regenerative practices in the Catalan Western Lands emerged, focusing on the “Cultures Trobades” initiative and the promotion of agrobiodiversity, but also how it evolved and the role of succession events in this evolution.

Origins, motivations, initial favourable conditions and initial constraints

Precedents, origins and first steps¹

Even though «Cultures Trobades» as an initiative was set up in 2008, we can at least trace some precedents back to 2002, when «Assemblea Pagesa», a farm workers union in the Catalan Western Lands was born as a split-off from the main farm workers union in Catalonia at the time, “Unió de Pagesos”. One of the first aims of the union was to organize direct protest actions (2003-04) against the ongoing introduction and spread of transgenic maize seeds among farms in the region, a process which had been taking place since the mid-1990s. This introduction and spread was seen as an important threat to agrobiodiversity not only in the Catalan Western Lands, but also over all Catalonia. These first actions and confrontation acts with the Department of Agriculture of the Catalan Government, which had been favouring the introduction of transgenic seeds, took place during 2003 and 2004, but would culminate some years later.

Parallel to these events, a group of around 20 people from the Catalan Western Lands, including some of the members of “Assemblea Pagesa”, organized a field visit to Torino (Italy) in 2004, to learn good practices during the Terra Madre Network Foundation event, promoted by the Slow Food movement to organize and reinforce small-scale farming and sustainable local food consumption. After this field visit, the organization «Slow Food Terres de Lleida» (Catalan Western Lands Slow Food association) was conceived to spread the

¹This sub-section is mainly based upon Pàmies (2013).

message around the Catalan Western Lands. The initiative “Cultures Trobades” is promoted by Slow Food “Terres de Lleida” only a few years later, in 2008, the same year in which the Slow Food Accredited Restaurant Network is conceived as well, as a project that could reinforce the former.

Interestingly, these initiatives run parallel to the protest actions against transgenic seeds. Indeed, during the year 2008, more than 100.000 people in Catalonia signed a Popular Law Initiative promoted by “Som lo que Sembrem” (We Are What We Sow), a platform made up of more than 200 civic society organizations from all Catalonia, including “Assemblea Paguesa”, who had conceived it. The initiative was presented at the Catalan Parliament in 2009, and aimed at prohibiting the use of transgenic seeds in the cultivation of maize, one of the most abundant crops in the most agricultural region in Catalonia, the Catalan Western Lands. The maize was at the core of the conventional agricultural system in the Catalan Western Lands, as a principal component in the elaboration of feed for livestock farming. The direct protest actions in 2003 and 2004 did not make the desired effect, the new transgenic varieties kept spreading quickly, and in 2008 not even farmers but a broader spectrum of society feared the risk that these varieties would entail for the preservation of agrobiodiversity in the Catalan Western Lands. The popular initiative was rejected by a majority of the Catalan Parliament and it couldn't even be debated.

Many farmers took active action in both parallel processes originated at the Catalan Western Lands, because they both aim at building an alternative to the unsustainable conventional agricultural system in the region. Moreover, in 2008 as well, it takes place in the Noguera county the first edition of the Food and Health Fair, promoted again by Catalan Western Lands Slow Food association, which organizes several conferences on the topic, and also a farmers' market in which the local agroecological farmers are the protagonists. Thus, in midst of the most important economic crisis in Catalonia and Spain in modern times (the Global Recession of 2008-09), a countercultural agroecological movement seemed to explode in the Catalan Western Lands. Among the actors introduced in the previous section, we can find some of the leaders of these initiatives: X (father to ES5B6 and leader of the “Assemblea Paguesa” in the early stages), ES5B3 (promoter of “Cultures Trobades”) and ES5B13 (promoter of the Slow Food Accredited Restaurants' Network).

The first steps of the “Cultures Trobades” project consisted in the prospection, identification and multiplication of traditional horticultural varieties in the Catalan Western Lands. The tasks of prospection and identification were mainly undertaken by ES5B3, through interviews to retiring farmers, and received the financial support of the Noguera County Council. Initial prospects by ES5B3 found out that there were not only interesting horticultural varieties at risk of extinction, but also vineyards, olive trees and fruit trees. Thus, the initial scope of activities of “Cultures Trobades” was soon enlarged to cover these other type of crops. Soon as well these initial prospect activities resulted in the identification of the last flock of Catalan goat, maintained by a shepherd in Noguera county. The identification of this last flock was not exempt of some chance, according to ES5B1. This flock was bought out by “Cultures Trobades”, and turned out to be crucial for the subsequent success in the preservation of this particular animal breed, a task that eventually would be undertaken independently from the “Cultures Trobades” initiative itself.

Already during these first steps a small group of agroecological farmers were providing a key support in the multiplication of the identified ancient varieties. That was the case, for example, of ES5B7, as the production responsible of L’Olivera Cooperativa, for the case of vineyard trees varieties, or Pàmies Hortícoles, for the horticultural varieties. In the beginnings, the role of Slow Food Accredited Restaurants' Network as a reinforcing agent in the promotion of agrobiodiversity seems to be not so important, because the low availability of ancient varieties in the local market.

Motivations

Taking into account the historical context described previously, it is obvious that a purpose of subverting the current conventional agricultural system in the Catalan Western Lands is at the origin of «Cultures Trobades» and the Slow Food movement in general. A statement by ES5B1, one of the core group members, makes it clear to the point: «*We are trying to revert the degradation of farm, food and human culture in this area, which is evident from the lost of agrobiodiversity and indigenous breeds*» (ES5B1).

But there are indeed more diverse motivations which triggered the active participation of farmers in these initiatives aimed at the promotion of agrobiodiversity in the Catalan Western Lands. Other actors highlight a personal dimension as a crucial motivation to

participate in these initiatives. ES5B2, for example, considers himself an «urbanite» who just wanted to flight the city and participate in a self-managed, communitarist and locally-embedded project, to fulfill a personal vital purpose. When he found out about the Catalan goat initiative through ES5B1, he got really enthusiastic about the idea, and started to collaborate in a voluntary basis until finally taking over the responsibility of the project. Similarly, ES5B7 from L'Olivera Cooperativa was searching for a farming project with social values, not necessarily in the Catalan Western Lands, but he happened to find it there. Regarding other agroecological supporters, as ES5B15 or ES5B9, they highlight that the triggering motive for the undertaking of regenerative practices was the own verification that, indeed, the current conventional agricultural system doesn't work, in that, for example, it forced them to use more and more chemical inputs to get rid of weeds, but the grains were becoming more resistant, generating additional expenses; or that there was no way to control the market price for their standard products. Thus, a completely new agricultural model, based on the principles of agroecology, should be the long-term sustainable solution. Some cooks of the Slow Food Accredited Restaurants' Network recognize more modest ambitions in their endeavours and finally, but interestingly as well, many of these initiatives were born under a long and important economic crisis in Catalonia (2008-13), also in the Catalan Western Lands, and the actors acknowledge that some of them acted, at least partly, out of a necessity to do things differently, just because the historical context seemed to be demanding so.

Initial favourable conditions and initial constraints

Several actors point to the availability of local knowledge in the area as a key resource to set up the initiatives. The Farming School in Manresa, a city in the nearby region of Central Catalonia, and specialized in agroecology, is usually signalled as key agent in providing a solid foundation to the initiatives. On the other side, the core group of «Cultures Trobades» complains from a lack of knowledge on local ancient varieties from the current farmers themselves in the Catalan Western Lands. As locally specific as it is this knowledge, it is difficult to acquire it through more formal institutions as a Farming School, so this may hinder the generation and further development of the practice, as pointed by ES5B1.

Regarding the specific case of the Catalan goat, both ES5B1 and ES5B2 point to the difficulties of achieving economic viability because of the costs imposed by the necessary breed preservation tasks. Moreover, the type of meat which is best obtained from the Catalan goat is not a well-known product among local society, or even Catalan society in general, so this low level of receptivity by consumers makes it difficult as well to plan for and achieve economic sustainability. This problem of lack of product valuation from the consumers is indeed not unique to food products obtained from ancient local varieties, but it is also shared by some of the agroecological farmers, like ES5B10, despite one would expect that Catalan society is already very familiar with ecological products, and the market usually pays an economic premium. Certainly, it may be the case that this type of food products regarded as of high-quality are more appreciated in big cities than in the more common smaller towns in the Catalan Western Lands.

In a similar vein, ES5B8 from La Garbiana points to the lack of cooperative culture in society as an additional difficulty to undertake collective projects, be it the ambitious initiatives promoted by the Slow Food movement in the Catalan Western Lands, but also minor formal cooperations. Indeed, despite not being a formal obstacle to the development of the promising regenerative practices, cooperative arrangements may facilitate the escalation and impact of these initiatives, something which has proven difficult in this case, because of the mentioned lack of cooperative values. Finally, ES5B4 also points to the prevalence of some traditional and conservative values in the inner communities of the Catalan Western Lands: *“Coming from Barcelona and from a non-agricultural environment is the worse combination that you may find here. And being a woman, too (...) There is a huge difficulty in accepting projects from newcomers”* (ES5B4).

Family farm succession

Some singular interesting insights arise from the process of farm succession, through which the promoters started to undertake the regenerative practices. ES5B1 makes an interesting point, stating that *«if I had owned or inherited land at that time, I wouldn't have participated in these issues, because I would have focused my time in just preserving my land»* (ES5B1). This points to the crucial role of land ownership and family farming in the setup of this type of regenerative processes, because the opportunity cost of subverting a family farm system

may be pretty high when there is already much land ownership or a functioning system to conserve, and it may hinder or slow down a process of change. That is, being a family successor may hinder or slow down the set-up of a regenerative practice, as stated by ES5B1 and other actors, interestingly not only farmers, as ES5B9, or ES5B11, but also cooks, as ES5B20 from l'Antic Forn. They all point indeed to a rather conservative and distrustful attitude of their parents in relation to the initiative to convert the farm towards an agroecological system, or a restaurant towards a modern ecological food service. For example, ES5B9b explains that *«we are still in the process after ten years. It is hard. We have taken it slowly because the pressure of my father, because he had many doubts to see that we were initiating something new that nobody else was doing around here (...) Until he dies we will have arguments, because it's been many years now that he is retired, but him being formally retired doesn't mean that he will not work at the farm or that he will not be there»* (ES5B9b). ES5B11 adds that *«changing family dynamics is complicated, we argued a lot, because they [the parents] don't understand the conversion you plan to do; and they see it as a direct confrontation, because I was saying that their way of managing the farm was aggressive, and I didn't want that. I had to flee home for 4-5 years, then come back and slowly undertake the changes I wanted to set up [ecological conversion]»* (ES5B11).

ES5B10, who didn't suffer himself from this problem, makes as well a harsh statement about the role of former generations, and particularly fathers, out of his observations in the area: *«There are some fathers who want to take decisions on family land until they die [even if formal succession has taken place]. I have seen this.»* (ES5B10). Indeed, ES5B3 explains how even that he runs the family farm, his father still owns the land and keeps the Common Agricultural Policy payments for himself, hindering in this case the economic development of his practice. To this regard, the experience at Pàmies Hortícoles is worth mentioning as well. The succession process in this case has been very slow and complex. ES5B6 recognizes that, even that formally the organization has been equally participated by his father and his uncle at 50%, it is very difficult to take decisions by consensus. Moreover, the personal and professional philosophy by ES5B6 and his father, which includes a harsh critique to the conventional system, is not shared with the other part of the family, with whom they share farm ownership. At some point, the family considered the possibility of dealing with the succession process with the support of an external organization. Nevertheless, neither ES5B6

nor his cousin, the new generations, accepted this option. Finally, Pau decided to become self-employed, out of the family business, but keeping the commercial relationship. This allowed him to keep some degrees of freedom, which couldn't have under the family business. So now, as he puts it, if he ruins his business because he tries new ideas, he is not ruining the family.

Out of the previous logic, pointing to the hindering role of owning land and belonging to a family business as an unfavourable condition to the promotion of regenerative practices, it seems like not being a family successor could favour the generation of these processes, assigning a crucial role to new entrants and newcomers in the set-up of regenerative practices. But many actors, some of them new entrants and newcomers themselves, alert as well of the problems that new entrants face when starting up an alternative farming practice. For instance, they point mainly to the difficulties in accessing land, because of its high price and low availability. Also, the official public aid granted by the Department of Agriculture of the Catalan Government through the Rural Development Program funds, which can be quite generous, is not aimed at land acquisition.

Certainly, some of the actors, including the restaurant managers, express that being the owner of the key asset (either land or a state/commercial establishment to be used for the purpose of the restaurant) is indeed very positive, because it facilitates long-term planning and, as such, the possibility of undertaking long-lasting changes to the current system. The broad time horizon that requires the promotion of agrobiodiversity and agroecology would be favoured in this case by asset ownership, which a successor automatically acquires at a very low cost. Moreover, some actors, such as ES5B15 or ES5B8, describe a smooth family succession process, despite a radical farming system change in the latter.

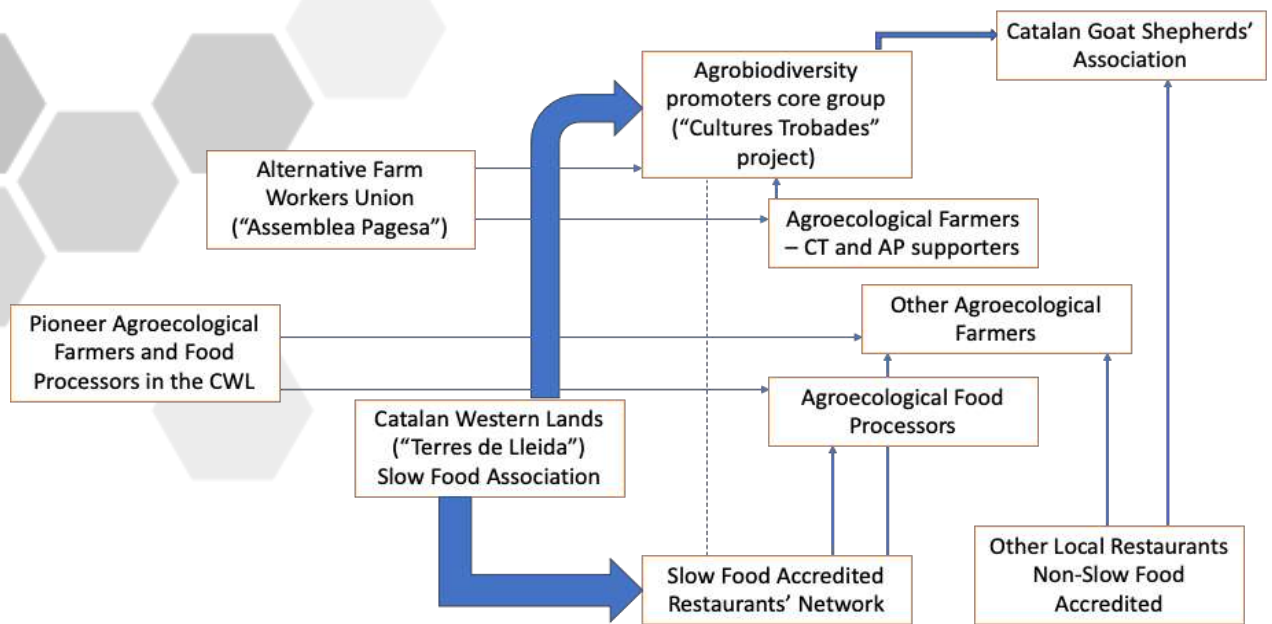
Social relationships and networking among actors and the local communities

This section describes and analyzes the social relationships and networking dynamics among the regenerative actors in the Catalan Western Lands, but also among them and the local community. The actors and the local community determine and shape the social dynamics and scope of the regenerative practices, enabling them or imposing constraints on their further development.

Synergies enabled and networking established with other regenerative actors

Figure 1 summarizes the social relationships established among the agents which are crucial in shaping the agrarian regeneration in the Catalan Western Lands. As it has been explained previously, the «Cultures Trobades» initiative was born in 2008 as a project from the Catalan Western Lands Slow Food Association, which occupied a central position in the region since its conception in 2004. But to understand the dynamics and further relationships and development of the initiative to promote agrobiodiversity, it is important to acknowledge the role of the «Assemblea Pagesa», the alternative farm workers union born in 2002 as a split-off from the main workers union at that time in the Catalan Western Lands and Catalonia in general, the «Unió de Pagesos». The «Assemblea Pagesa» played a key role in the protest movement against transgenic maize diffusion in the Catalan Western Lands, and this active claim was adopted by many of the farmers which are at the core group of the «Cultures Trobades» initiative, but also by some of the agroecological farmers supporting the initiative, who are still members of «Assemblea Pagesa». In a similar vein, the Catalan Goat Shepherds' Association, as a spin-off initiative from «Cultures Trobades» which became a formal organization on its own in 2014, keeps this political essence embedded in its economic development.

Interestingly, the group of cooks who took active part in conceiving the Slow Food Accredited Restaurants' Network, another project born from the Catalan Western Lands Slow Food Association, has had a rather weak support to the initiative and its core group of developers, considering the origin of their agricultural raw products' supply, which mainly come from other agroecological farmers or agroecological food processors. Moreover, the relationship of this group of cooks with the Catalan Goat Shepherds' Association is almost non-existent, in that none of the interviewed actors reports buying periodically the Catalan goat meat. Indeed, it is rather other local restaurants which are supporting economically the Catalan goat preservation initiative with systematic purchases of the meat from any of their producers.



Note: this figure is an elaboration on our own, and it necessarily simplifies the complex relationships among actors. The thicker arrows can be understood as projects or spin-offs from the original organization or group. The standard arrows indicate support from the original organization or group to the destination organization or group. The dotted line indicates a weak relationship.

Figure 1. Social relationships among regenerative agents in the Catalan Western Lands.

The key synergy enabled and networking established, which facilitate the sustainability of the «Cultures Trobades» initiative and the promotion of agrobiodiversity in general in the Catalan Western Lands, is the support provided by some agroecological farmers in the acquisition and multiplication of plant seeds from traditional local varieties, in order to preserve them. Not all agroecological farmers support all of the varieties, because their productive orientation is different. Indeed, the support is quite specialized: ES5B5 and ES5B11, for example, in horticultural varieties, or L’Olivera Cooperativa in vineyards. The social relationships among these actors are based on trust and mutual interest, thus facilitating the consolidation of the initiative and the network, albeit informally most of the time. Beyond the purchase and multiplication of seeds, the agents establish other type of relationships. For example, ES5B6 provides infrastructure for other farmers to use in their planting processes, and ES5B2 leases part of the farm for the seed multiplication process of other «Cultures Trobades» members. Moreover, the land that ES5B5 uses for his horticultural project is a grant from this friend ES5B3.

Some agents mention the small scale of their different farming projects as a crucial dimension to facilitate networking among them, which would be rather difficult with bigger

agents or companies, even if they would share the same principles. Regarding difficulties, indeed, some agents mention the geographical dispersion of their initiatives as an obstacle for further development of the collective project to promote agrobiodiversity. The dispersion is partially corrected through the use of the same premises in Balaguer (capital of the Noguera county) by «Assemblea Pagesa», the Catalan Western Lands Slow Food Association and «Cultures Trobades», which facilitates social relationships and cohesion.

Beyond the synergies and networking among the core group and its supporters, it is worth mentioning some of the social dynamics referring to the Catalan Goat Shepherds' Association, but also to other agroecological farmers and the Slow Food Accredited Restaurants' Network. Regarding the former, the constitution of an own formal organization by the agents who initiated the preservation of the breed, separated from the «Cultures Trobades» initiative, has implied as well the economical independence of the project, even that the emotional bond and the collaboration remain, as ES5B2 puts it. The economical effort which implies the collective tasks in the preservation of this singular breed, is indeed an important challenge for the promoters, since «Cultures Trobades» was providing key financial support during many years to sustain the project, but also the «Assemblea Pagesa» itself had donated some funds in the beginning to purchase the original last flock of the Catalan goat, which motivated the project. ES5B2 mentions as well the important economic support that two restaurants, including Cal Xirricló, provide with the purchase of the goat's meat.

Indeed, it is in analyzing further the role of the Slow Food Accredited Restaurants' Network, that the lack of articulation, coordination and cooperation among independent regenerative actors in the Catalan Western Lands is more evident. As pointed previously, none of these restaurants apparently purchases systematically the Catalan goat's meat, while the two restaurants that do it, don't belong to the Slow Food Network, and promote local food cultures rather informally. Horticultural varieties from the agroecological supporters may be purchased, but are not at the center of the supply strategy of these restaurants. ES5B13, from El Dien, as the promoter of the Slow Food Accredited Restaurants' Network, but as an actor specifically involved as well in the «Cultures Trobades» initiative, points specifically at the logic of social and economic independence of each project, and generational renewal, as a natural way of evolution for the different regenerative initiatives. This logic may have

hindered not only some joint common and solidarity efforts, but also a closer commercial relationship among actors, facilitating their economic sustainability. Moreover, as ES5B14 argue, customers at restaurants don't singularly appreciate local varieties, thus not motivating an active strategy to purchase agricultural products based on them and cultivated by the «Cultures Trobades» core group.

The lack of coordination or articulation is mentioned as well by ES5B6, regarding in this case the agroecological farmers themselves, not only food processors and restaurants. He considers that "Assemblea Pagesa", as an horizontal democratic farmers' organization, is rather weak currently, far from the early years in which there was an intense activity, mainly regarding the protests against transgenics. It seems in this case that difficult times motivated the social cohesion, but today the organization doesn't seem to reunite all regenerative agents under the same umbrella. Moreover, the organization has a strong political orientation, which may deter the participation of some agroecological farmers who look for specific technical support. To this regard, ES5B15 points to the crucial role of another organization in the Catalan Western Lands, the "ADV Ecològica de Ponent" (Catalan Western Lands Ecological Plant Health Association).

Finally, but also interestingly, ES5B8 from La Garbiana seems to play a bridging role among the different regenerative practices in the Catalan Western Lands, since his bread from ancient local varieties, some of them retrieved through «Cultures Trobades» is purchased by different type of restaurants, either belonging to the Slow Food Accredited Restaurants' Network or not. Nevertheless, he doesn't formally belong to any of these organizations, and the relationships established are purely commercial.

Relationships with the local community: positive levers, conflicts and constraints

In general, the interviewed actors express many more examples of conflicts, constraints and misunderstandings with the local community, than positive levers in activating the necessary social networking for the long-term preservation of agrobiodiversity and local food cultures. Among these positive levers, it is usually mentioned the increased interest in ecological products among local communities in the last two decades, which has even triggered some

attempts to build a formal cooperative network of consumers («Xarxa Ecològica de Ponent»), in which some of the actors are trying to be involved. Moreover, the smaller dimension of most rural municipalities in the region facilitates the outreach of the projects through word of mouth. Also, from the point of view of restaurants, they usually regard as positive the relationship with local customers, on one side, and with local producers, on the other side. Indeed, capturing the dynamics of food demand, restaurants play an interesting role in signalling future farming developments or in valuating new agricultural products grown by agroecological farmers.

Regarding the local social constraints, ES5B3 points out that there are few farmers who strongly support the process of preserving, cultivating and multiplying the use of ancient varieties, even among those who belong to «Assemblea Pagesa», the farm workers union more aligned with the practice. There is in general few receptivity, thus the process of promoting agrobiodiversity advances very slowly.

Most of the local traditional plant seeds sold by «Cultures Trobades» are bought by customers who grow the plants for self-consumption, so the impact on the agri-food market is indeed low. Moreover, some plant varieties are difficult and costly to work with, and consequently elaborating a high quality product in this specific case makes it even more complicated to sell it in the local market, because the price must be higher. Then, the product (in example, a bottle of wine) is positioned as a high-standard product, not affordable for a majority of the local society, and this doesn't match with the popular philosophy of «Cultures Trobades».

An additional problem with local actors, as indicated by ES5B3, is the relationship with the organism in charge of the regional qualification of origin for wines («Denominació d'Origen Costers del Segre»). There have been some disputes regarding the proper valuation of the work done by «Cultures Trobades» in relation with some local varieties prospection, identification and documentation. Apparently, the «DO Costers del Segre» has not rewarded economically some material provided by «Cultures Trobades» to which they had formally compromised. This is generating mistrust among the core group of «Cultures Trobades» and, as they see it, reinforces their popular approach to the promotion of agrobiodiversity, as opposed to a for-profit business oriented approach.

An additional constraint to the further development of the agroecological farming model and the promotion of agrobiodiversity in the Catalan Western Lands, as mentioned by ES5B3 and ES5B10, is the local competition with big companies investing in land acquisition in the area, either investor funds, construction companies or big food corporations driving the conventional animal fattening model through contract farming. These investments increase the price of land and decrease the supply, thus hindering access to land for current agroecological farmers trying to expand their activity. The problem with access to land is also crucial in the specific case of the preservation of the Catalan goat, as explained by ES5B1, for different reasons. First, most of the land in the region is filled with pig manure, making it unsuitable to graze or grow fodder to feed the goats during winter. Second, as it is the case in general, the owners of the land which is available are usually reluctant to lease it. And third, some proper land in the region is currently being oriented towards the cultivation of truffle, which makes the land unavailable for grazing. This last point is particularly interesting, since one of the Slow Food Accredited restaurant owners interviewed points the truffle as a product which is being more appreciated by customers, and thus offering an interesting potential for farmers. The interests of some actors themselves may be here conflictive as well. And all in all, the problem in accessing local land is clearly a source of instability and hinders the self-sufficiency of the preservation project for the Catalan goat.

Also in terms of the Catalan goat preservation practice by local shepherds, ES5B1 and ES5B2 mention as relevant the conflictive relationship with the local city council and the local community of the municipality of Vilanova de Meià (Noguera county). As per the city council, they seem to be more in favour of the conservation of the conventional agricultural production model articulated through pig farming, and they have removed the support they were initially offering to the project, in terms of a public room to have meetings of the Association, or a small financial support offered to local associations in general. Regarding local society, ES5B2 recognizes that the project was not well integrated from the beginning. Locals didn't understand in general what they wanted to do, and there was a lot of skepticism towards the project. The communitarist dimension was difficult to accept, and they were regarded as "those well-educated newcomers trying to show how things should be done". Still regarding the role of local and regional society, ES5B2 points to the lack of long term support, beyond initial integration difficulties and beyond Vilanova de Meià. Indeed,

initially the project was even sponsored financially by some locals, but the type of support which the tasks of preservation need is long-term, including some voluntary activities, and this is difficult to find among locals. For that purpose, they try to attract new generations to the region, which could be engaged in the practice. Two additional social constraints are pointed by ES5B2. First, the lack of support from the School of Shepherds in Catalonia: they seem to favour goat shepherding oriented towards the production of milk, not meat, as they do, and ES5B2 believes that they may do so because it is more economically viable the production of milk; but then the Catalan goat shepherding activity, oriented towards meat production, is neglected. And second, veganism as a social movement is growing, also in the Catalan Western Lands, and this movement usually includes in the same critique both extensive and intensive livestock farming, and this can clearly have a negative social impact on the project, despite no formal conflicts in this terms with local society are reported.

Interestingly, ES5B11, one of the agroecological farm supporters to “Cultures Trobades”, explains that there may be a lack of trust, or maybe too much individualism, in the Catalan Western Lands, but it seems pretty difficult to undertake collective projects based on long-term social supports by the local community. Moreover, the geographical dispersion of those farmers who think on similar lines (prevalence of the communitarist dimension and agroecological perspective), hinders potential collective work among actors (like sharing inputs or knowledge). Indeed, as it was annotated previously in describing the local collective action regarding the protests against transgenic maize diffusion in the region, ES5B11 reinforces the idea that people seem to collaborate just when things are complicated or when there is a huge conflict, not so in more neutral periods.

Additional local social constraints and conflicts are reported by other farmers and by some restaurant owners. ES5B6 recalls that environmental associations in the area have been particularly hostile against farmers in general, more than in other regions, making it difficult to collaborate and establish interesting synergies among actors. ES5B7 points to the promotion of new big irrigation projects in the region, favoring bigger farming companies representing the “agroindustry” model. Moreover, ES5B8 indicates that the potential positive influence of visitors (touristic or seasonal customers) is lower in inner rural areas like the Catalan Western Lands. More importantly, as shared by ES5B20, who is based in Segarra county as well, local communities in Catalan Western Lands characteristic rural areas are in



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general more traditional and conservative, and thus reluctant to the introduction of new agricultural varieties, ecological products or exotic gastronomic experiences, as provided by the regenerative actors in the region. And finally, ES5B15 points to the constraints imposed by neighboring conventional farmers and their use of herbicides and pesticides. To avoid contamination, they need to build biological barriers at the borders of their farms, drawing a metaphor for the socially distanced pathways that conventional and agroecological farmers seem to follow in the Catalan Western Lands.

Political supports and constraints

In this section we look at the role that institutions and public policy have played in furthering or constraining the promotion of agrobiodiversity and local food cultures in the Catalan Western Lands, specifically through the “Cultures Trobades” project, the Catalan Goat preservation initiative, and supportive agroecological and food restoration projects.

Political supports

In terms of political support, the actors have taken advantage of a number of subsidies and grants offered by a variety of institutions, from the local to the European level. The project «Cultures Trobades» received initially financial support from the Noguera county council, but also from the Catalan Ministry of Agriculture (through the European funded Rural Development Program' grant to support cultivated biodiversity) and “Fundación Biodiversidad”, an organization ascribed to the Spanish Ministry of Ecological Transition. The funds from the Noguera county council the Catalan Ministry involved cataloguing of local horticultural varieties, participating in its conservation, and the evaluation of other catalogues, while the project subsidized by “Fundación Biodiversidad”, on the other hand, supported the initial Catalan Goat breed preservation efforts after the remaining flock was bought by the association, in a grant that had a length of two years.

Beyond the financial direct support to the initiative, many of the actors, both those from the core group of «Cultures Trobades» and other supportive agroecological farmers, report having received the specific financial support for a young farmer to set up a farm, provided by the Common Agricultural Policy and channelled through the Ministry of Agriculture of Catalonia. They consider it in general as a useful tool to facilitate the establishment of new entrants, although they also saw some problems with it. ES5B3, for instance, argues that having to spend such a considerable amount of money in so little time, 6 months, is a disadvantage, since at such an early stage of the project, the farmer might still not be sure of which line of production they want to pursue, and as such they might invest in some tools or other assets without being certain of whether they will be used in the future, or whether they will take a change of direction later on. All in all, however, this subsidy is seen in a positive light. Some other farmers, like ES5B9b, have also benefited from the “agrarian improvement plans” offered by the Catalan Ministry of Agriculture, in order to subsidize some of the tools they had to purchase.

At the European level, the LEADER programme seems to be well regarded and received by the actors, not only farmers, but processors and restaurant owners. The perception is that these programmes have helped to develop further economically and socially the rural regions like the Catalan Western Lands, but also it has helped in changing the mentality

associated to this type of regions. As ES5B7 puts it, there used to be a cultural perception that associated rural regions with a certain backwardness, a view that might still exist in some circles. However, he considers that over the last 20 years, LEADER projects and other rural development initiatives have really helped to revalue rural regions and support regenerative projects such as the cooperative L'Olivera. Interestingly, Slow Food Accredited restaurant owners, such as ES5B13 and ES5B14, have also benefited from such programmes, a fact that showcases the impact that such initiatives have in a variety of fields.

Political constraints

Interviewees identify political constraints that hinder the existence, development and potential impact of different rural regeneration processes. Some of these constraints are very specific to the central object of study, the conservation of agrobiodiversity and the promotion of local food cultures, while others relate to broader, underlying patterns of the local and global food system.

The core political constraint in terms of agrobiodiversity conservation relates to the current legal framework. Indeed, on the one hand, the international treaties say that the *in situ* conservation of agrobiodiversity must be encouraged. On the other hand, European intellectual property law says that those seeds that are not included in an official catalogue can't be marketed. Thus, nowadays, it is illegal to commercialise local seeds which are not gathered in an official catalogue, as it is the case for many varieties preserved by "Cultures Trobades". Apparently, the inscription of local varieties in the official catalogue maintained by the Catalan government since 2012 implies a very demanding definition of agronomic parameters.

Moreover, there seems to be a conflict of competences regarding seed preservation between the Catalan regional government and the Spanish government. The state is trying to unravel the issue by making a register or catalogue of "conservation" varieties, those "without agronomic interest" or "without intrinsic value". It also appears that part of the solution will be articulated through the reform of the organic farming regulations.

ES5B3 states that, in any case, "for the time being, the legal coverage is not secure enough for initiatives like ours". ES5B3 states that "this [the lack of legal security] is a key obstacle and one of the reasons why we have not strongly opted for the commercialisation of seeds

as a strategy to economically sustain the project. [...] Many collectives have encountered serious legal constraints stemmed from a juridical complaint". In spite of this, "Cultures Trobades" is selling and distributing the seeds that they preserve and multiply, and that are still not part of the official catalogue, because their ultimate purpose is for these seeds to be cultivated and for these varieties to be once again part of the food culture of the Catalan Western Lands. Even if by doing so, they put themselves at risk of being fined.

According to ES5B3, the Catalan Department of Agriculture is concerned about the unfolding of agrobiodiversity conservation initiatives and its complex legal coverage. Since there is an increasing number of initiatives, and these are setting up seed commercialisation processes, public administrations implemented a short-term solution: through an agro-environmental measure defined in the current Rural Development Plans, agrobiodiversity conservation initiatives receive funds to contribute to the creation of a seeds catalogue that, in the long run, is expected to provide a complete legal coverage. Thus, the public administration, both the Spanish and Catalan governments, are already exploring different mechanisms with the ultimate purpose of facilitating the legal coverage of local agrobiodiversity promotion.

As for the Catalan goat conservation project, a similar constraint is found, although this has a much more superficial effect on the unfolding of the initiative. The Catalan goat is not included in the official Spanish Catalogue of breeds. Hence, the farms that raise this breed cannot be funded by the Rural Development Program agro-environmental measures targeted to the conservation of local breeds. The genetic particularity of the Catalan goat is excellently proved and documented in a report but, according to ES5B1, "most regional governments block the entrance into the catalogue to other breeds because the total budget is settled and they do not want to further divide it up".

However, the most important political constraints to the development of the Catalan goat conservation project are related to the highly bureaucratic processes and numerous legal demands that the public administration requires to the Catalan Goat Shepherds' Association. Different interviewees complain about such time-consuming processes, which are considered to be out of proportion when taking into account the scale of their projects. ES5B1 states that the Catalan government and the Spanish Estate "should control *the big ones [farmers]*, not *the small ones [farmers]*, who should be self-controlled and organised in a decentralised and self-managed manner". Interestingly, ES5B1 mentions that "public

bodies are way too paternalistic. The sanitary controls and register are too complicated and detailed [for a small project like ours]. They want to prevent any possible hazard but they end up creating incredibly tedious processes. Instead, [small] producers could be accountable for the hazards as they occur". As a consequence of this type of constraints, as well as the philosophy to deal with them, ES5B1 and ES5B2 have decided to "resist" to some of the sanitary requirements, such as those related to the carcass management or to the animal digital identification. In the line of these perceptions, when asked for policy proposals, ES5B1 concludes that "we would be satisfied enough if the administration let us do what we want to do. We would not even need to be fostered, only slightly protected", while he also outlines the need for an administration that "regulates, instead of fostering, big-scale farms, transgenic experimentation, herbicides and the big stakeholders within the food supply chain".

Different interviewees, particularly those directly linked to the Cultures Trobades initiative, are reluctant towards the Common Agricultural Policy subsidies, which are considered to have a very poor design. Some interviewees consider that the criteria behind these policies are merely based on productivity, while environment and peasantry welfare are not genuinely taken into account. According to ES5B2, *"[about the subsidy's dynamics] the farmer is always dependent on subsidies and, from time to time, he or she needs to increment the hectares or the number of animals in order to render the farm economically viable. There is clearly something wrong. [...]. It is a loop: developing an activity that produces a good that does not generate enough income, so being forced to get subsidies in order to survive"*. ES5B2 also mentions the link with certain farming sector within the area: *"Cereal producers receive a subsidy, and the underlying hazard is that the imports of north-American cereal reduce the price. Then the local farmers need to get a subsidy in order to be able to offer a lower price. It is contradictory, it does not make any sense, and these dynamics put the farmer in a threatening situation"*. This perspective is also shared by other agroecological farmers, such as ES5B5, that comments that *"certain international treaties have a very negative impact on some products, such as oranges, almonds or fodder"*.

ES5B3 outlines that *"the CAP direct payments are a disaster. I don't receive the direct payments associated to half of the land that I am leasing, because these direct payments are being kept by the landowner. Even if the landowner is my father."* ES5B3 believes this should

be corrected, but the solution might not be as easy as preventing retired landowners from blocking the direct payments, since this could translate into an increase in the lease prices anyhow. That is why ES5B3 is in favour of a *“farming basic income”* for those agroecological farmers that provide food and that are aligned with certain social and environmental commitments. In similar lines, ES5B5 comments that *“a big deal of the CAP direct payments is channelled towards big landowners; so there’s something wrong”*.

As for agroenvironmental measures of the CAP second pillar, ES5B3 complains that there is always a delay in the payment, and he also thinks that they are not well designed. ES5B10 outlines some inconsistencies in some CAP instruments. For instance, field margins should be encouraged somehow, but in practice the administration ends up reducing the amount of certain payments because a tree is detected through GIS and hence that surface can’t be eligible. Also in relation to CAP payments, while ES5B3 is satisfied with the subsidy targeted to young farmers entering into the farming sector, he also identifies room for improvement: *“I would have preferred not to be obliged to acquire new tools or machinery. [...] Plus, one is granted about 36.000€, which must be spent in only 6 months... but maybe one does not know how to better channel this amount in such a short time.”* ES5B5 also highlights some limitations in regard to the subsidy targeted to young farmers: *“In order to obtain this subsidy in the horticultural sector, one needs to work on at least one hectare. I believe this is stupid, since I have enough work with only 0,4 hectares. One hectare (in horticulture) for one farmer is an outrage, this would only be possible if one decides to mechanise the practices, get specialised in one product and sell to Mercabarna [wholesale market].”* So, apparently the subsidy targeted to young farmers is not tailored to small-scale horticultural farms. ES5B5 also criticises that *“since the subsidy is paid after few years, one needs to go into debt”*.

For the aforementioned reasons and others, the Catalan goat project does not apply for CAP payments. As ES5B2 explains, *“we are not interested in the management and responsibilities that go hand in hand with these payments. We believe these payments to be hindering factors rather than enabling ones. [...] The requirements are not suitable for (or consistent with) our activity”*. Apparently, the reluctance towards the subsidies requirements are further exacerbated by the fact that the practitioners do not have land security. As ES5B2 explains, *“for instance, if we decided to be “inside” [officially declared as a farm] we should build a concrete tank to manage goat manure. Yet, the farm is not ours, thus for us it is very complex*

to make investments on it. Plus, we consider this requirement to be unnecessary, since in our case manure is well managed through other practices. [...] The payments do not compensate.” When asked how CAP payments should be allocated, ES5B2 answers that these should ensure that *“projects like ours become viable, without adding extra requirements or responsibilities beyond the management measures that are need to ensure a favourable conservation state of the breed”*.

Also related to the impact of public policies in the viability of small-scale farms, ES5B2 states that *“nowadays it is not possible for us [Catalan goat project] to be viable, taking into account that we do not rely on public subsidies: the price that our product may have in the market is ridiculous”*. Further elaborating on the constraints stemmed from the market dynamics, ES5B2 outlines that *“in the goat rearing sector there is a clear tendency towards stabling and milk production. As a consequence of this, the goat meat is only a derivative and its price in the market is very low. This has a direct negative impact on the viability of my project, which is based in a small amount of grazing animals and whose main product is goat meat”*. In line with ES5B2, ES5B11 also considers the low selling prices (compared to the high costs of production) to be a constraint. Again, ES5B3 also criticises that the administration is allowing the imports of low-price products, and links this hindering factor with the fact that the administrations do not have a comprehensive planning for food production. He concludes that the food system should not be ruled only by market dynamics, but requires public intervention to adjust prices.

Going beyond those political dynamics that have a direct negative impact on Cultures Trobades initiative and the Catalan goat conservation project in particular, some actors also outline other policy constraints that currently hinder the regeneration of the farming activity in the Catalan Western Lands. For example, the constraints related to the bureaucracy are mentioned by many actors, both farmers and processors or restaurant owners. ES5B11 mentions the highly bureaucratic processes as important policy constraints. For instance, he considers that public administration should further work on offering infrastructures, such as processing premises, to farmers and other collectives, and he highlights this should be easy for the users in terms of bureaucracy and administrative requirements. ES5B10 also considers that some public subsidies are not tailored to small-scale farming, since in some cases the amount granted is not worth it, taking into account the workload associated to

bureaucracy. ES5B9 also mentions similar constraints in the process of applying to certain public aids: *“the requirements are not clear and the process ends up being messy”* and considers that there is not enough support for agroecological initiatives. ES5B9 has also had political constraints when trying to re-use and transform a pre-existing livestock farm into organic, since the local authority is not enabling the process. ES5B14 complains about a lack of support during COVID19 and that public administration has not cared about self-employed workers. Together with ES5B13, they identify self-employed conditions as a constraint. Finally, ES5B6 also has found policy constraints when it comes to the dissemination of ancestral knowledge associated to different varieties of medicinal plants, having received judicial complaints indirectly coming from the regional government, presumably in coordination with the pharmaceutical industry, according to him. This has had a negative emotional impact on them and their project. ES5B11 is organic-certified but he is very reluctant towards this certification because of at least three reasons. First of all, it is highly bureaucratic. Secondly, it does not include all the criteria that should be included. Finally, the need for an external certification clearly shows that the local community (consumers) has not a relationship with the local farmers. Actually, he is considering the idea of not being certified next year. In the same line, ES5B6 even states that *“CCPAE is our main enemy, at least in emotional terms, because of the bureaucracy this represents”*. In a nutshell, different interviewees consider that the controls of the certification process should not be a burden for the farmer. ES5B13 mentions that the certification costs should not be paid by the organic farmers, indeed.

In relation to the prevalence of the pig farming activity in the Catalan Western Lands and Catalonia in general, different constraints are highlighted. ES5B10 comments that large amounts of public money are invested in making small technological improvements for a production model that is polluting the water and the soil, and that the main issues of this sector are not being challenged (huge investments for irrelevant improvements). Also, pig manure dejection is having an impact on land prices, as ES5B2 and others mentions. ES5B10 mentions that a big part of the CAP budget is invested in indirectly perpetuating this pig industry, for instance by subsidising fodder production.

Analysing the overall effect of current conventional system and public policies in the farming and rural regeneration in the Catalan Western Lands, ES5B3 observes that *“the setting up of*

alternatives is much slower than the degradation made by food capitalism” and that “we need policies, not only optimistic narratives or speeches”.

Attitudes towards the institutions and cultural constraints

After discussing the current institutional support and constraints, we find it suitable to further describe the different views and attitudes that the regenerative agents in the Catalan Western Lands expressed in regards to public institutions and policies, since they can be signalling some specific singularities in the region.

Indeed, there is a rather generalized reluctance towards the public administration among some of the regenerative actors in the Catalan Western Lands, which translates to a negative view and distrust of policies and even the subsidies and funding opportunities they provide. While opinions vary depending on the actor, there is a generalized sense that public administrations are completely detached from the day-to-day reality of producers, a view that is echoed by some restaurant owners, such as ES5B13: *“the administration is very far from the reality [...]. They put obstacles instead of facilitating our task.”* According to different actors, this detachment entails that the policies promoted by public administrations are thus not suited to their needs and realities. Even when institutions promote relevant projects, their efficiency might still be hampered by such detachment from the territory: when discussing an initiative by the Catalan Ministry of Agriculture to create a catalogue of horticultural varieties in Catalonia, ES5B3 argues that, while he positively values the project, *“you have to be very patient because it's something that is being designed in offices and they have no idea”.*

Despite being perceived as disconnected from reality, public institutions are often not seen as naïve by the actors, but rather as having their own agenda and interests. Both ES5B2 and ES5B3, from the core group from «Cultures Trobades» argue that the administration only values the productive dimension of agriculture, supporting an agroindustrial model that favours the quantitative expansion of agricultural production and does not take into account the inherent value of the products. Some other actors, such as ES5B10, see the Department of Agriculture as a group of people that only manages subsidies but that are not capable of actually fostering the farming sector in a genuine manner, seeing it instead as a mere bureaucratic machine. According to ES5B1, *“the institutional structure and action is ruled*

solely by economic interests", while other criteria (presumably the cultural, social or natural ones) are not successfully integrated within public policies. In the same line, ES5B7 states that *"public policy have typically supported agroindustrial model. These have aimed at growing in magnitude, not in value"*.

This contrasts with some of the discourses in favour of local and even agroecological production that politicians and institutions have incorporated over the last years. ES5B3 argues that these discourses, although becoming more frequent over the last years, are not translated into practice: institutions keep promoting an agroindustrial model over the agroecological one. To this regard, and to foster agroecology and reverse the current intensive agricultural system in particular, ES5B3 would suggest the public administration to explore green public procurement: *"Instead of paying subsidies, it would be interesting if the public administration bought the production of new entrants that have an agroecological approach, and channel that food towards public uses such as schools and hospitals. [...] The best enabling policy would be to foster this semi-public sector"*. This idea is also mentioned by ES5B5: *"local food chains are somehow fostered, but public administration should be more proactive by ensuring that public spaces consume local and organic food"*.

The contrast between discourses and actions, the alleged hidden interests of institutions and the continuous support for an agroindustrial model, in detriment of more social and environmental sustainable models, have sparked distrust in some of the actors. ES5B11, for instance, openly expresses his distrust in public policies, a feeling that is shared, even if not as explicitly, by many of the other agroecological farmers and restaurant owners interviewed. This distrust is translated to a general scepticism and often avoidance of subsidies, as was already mentioned before. ES5B6, for instance, expresses his reticence to be dependent on subsidies, a feeling that ES5B2 shares, arguing that farmers should be able to support themselves instead of having to rely on external funding. ES5B1 broadens and complements this aspect by stating that *"efforts must be invested in a "bottom-up" manner [...]. If there are few people eager to get organised and act, there is not much to do, even if public policies were well defined"*.

Interestingly, many of the actors also expressed a generalized disenchantment not only with public institutions, but also with certain cultural changes and societal behaviours. Indeed, some actors recognize that in some cases the constraint being highlighted has a cultural

origin, rather than a political one. For instance, as ES5B7 comments, *“if one, as a professional, believes that the more cows you manage or the more land you have the better, then one is in a model of economy of scale and not of economy of value. And I think understanding that is the key”*. Also going beyond the administration, there is disillusion towards the current democratic system in general. ES5B11 exemplifies this when he mentions the legislative popular initiative Assemblea Pagesa organised in 2009 to ask for the regulation of GMO use: *“the interests of big industries and the shameless politicians destroyed a popular initiative. [...] What we can find behind all this [the administration] is a huge pression coming from big corporations that are growing throughout the region. The peasantry is not taken in account [...], another example of this would be the Segarra-Garrigues canal. Huge infrastructure for 4 o 5 big companies”*.

Individualism was also brought up in a number of interviews as being a major issue and driver of some of the problems discussed. ES5B11, for instance, considers that, even though the construction of collective projects by agroecological producers would have positive impacts both for the territory and for the farmers themselves, the creation of such collective projects is hindered by individualist notions. In this case, as he argues, *“it is not so much a critique of the administration, in this case, but rather a critique of the individualism that we all carry.”* ES5B8, on the other hand, believes that farmers themselves and not so much the administration are partly responsible for the devaluation of their products. As he puts it, *“the administration is there but the administration is all of us. [...] In the end, the peasantry needs an administration to go and complain to because of the low prices of the fruit. Well ... if the price of fruit is as it is, if the price of cereal is as it is, maybe it's because we don't believe enough what we're doing. Because I don't think it's the administration's fault that the apple that's coming in from the Italian tyrol comes in [...] I don't know, it must have something to do with the administration. But in the end it's something of the peasantry. What happens is... If a farmer doesn't believe in what he does, well... They let it go down”*. This view represents only an extreme version of some of the views shared by other actors, but it still remains important to consider. It seems, after all, that agroecological projects and producers might struggle not only with institutional constraints, but also with cultural aspects of the societies they are embedded in.

Regenerative Impact and Future Perspectives

Despite the lack of stable coordination among actors, the difficulties of the local context, and the lack of stable support from the local and regional public administration, the regenerative practices analyzed in this case study have generated relevant impacts, have interesting and promising future perspectives and in some cases and under particular contexts could be considered as a role-model and source of inspiration for other regenerative projects in European rural regions.

Regenerative Impact

The initiative “Cultures Trobades”, triggered in 2008 by some members of the Catalan Western Lands Slow Food association, and supported by several agroecological farmers and restaurant owners, aimed at promoting agrobiodiversity and local food cultures in the Catalan Western Lands. It aimed so in a certainly complex geographical and historical context, but more than 10 years later, a variety of positive impacts in terms of agricultural and rural regeneration can be described.

From the agri-environmental point of view, central to the development of this promising practice, the success is evident. Many different ancient plant varieties in the region have been identified, either horticultural material (more than 300 plants), olive trees, fruit trees or vineyards, and some of them have been purchased and multiplied by agroecological farmers, either the core group of “Cultures Trobades” or other supporters to the initiative. Moreover, a traditional animal breed, the Catalan Goat, which was coming to extinction in the early 2000s, has been regained, with more than 200 animals managed by four different farms, and supported by already associated breeders since 2014, even if it still lacks official recognition by the Spanish authorities. Certainly, as ES5B3 explains, the adoption of new varieties has been a rather slow process, singularly for the vineyards: it is just nowadays that 8-10 wineries have started to plant a particularly relevant variety which was already identified more than 10 years ago. And also, nothing guarantees the long-term sustainability of these partial

successes so far. But the impact in terms of agri-environmental regeneration can't be underestimated.

Additionally, this generation of local knowledge that has come with the preservation efforts of ancient plant varieties and the Catalan goat, has been transferred to society through thematic gastronomic fairs and technical workshops, in collaboration with local city councils and farming schools. Singularly interesting to this regard is the fair devoted to the Catalan Goat, organized for more than 10 years now. All in all, an important impact in terms of cultural regeneration as well.

The expanded agricultural biodiversity has partially turned to economic diversity in the farming activity, including nursery farming. Certainly, a majority of seed sales are destined to grow for self-consumption, but still a relevant share is purchased by agroecological farmers or nursery farmers, increasing their agronomic portfolio. To this regard, ES5B5 mentions that the task developed by "Cultures Trobades" is crucial, in that it allows farmers like him to purchase new types of seeds which otherwise he wouldn't have access to, and to provide an added value to his customers stemming from these varieties. Interestingly, ES5B1 and ES5B6 mention that coinciding with the COVID19 pandemic, the sale of ancient seeds, either online or through agricultural and food fairs, has increased a lot (approximately four times the previous demand).

While the economic impact of the "Cultures Trobades" and Catalan Goat preservation projects themselves is rather low in terms of investments and job creation, this is higher for many of the agroecological farming initiatives, food processing projects and restaurant services which provide direct or indirect support to the promotion of agrobiodiversity in the region. For example, the cooperative L'Olivera, with more than 50 workers in a municipality of only 100 inhabitants, contributing as well to the settlement of some of these workers in the municipality, or the ecological food processor Cal Valls, providing as well more than 50 workplaces in its central location in the Catalan Western Lands. Some of the restaurants interviewed, both belonging to the Slow Food Network or not, easily employ around 10 to 15 workers to provide their services.

Moreover, in terms of social and cultural impact, all the regenerative practices have shown, and are still showing, alternative development pathways to the current conventional system predominant in the Catalan Western Lands, raising conscience and awareness among the

local population. This is not only true for the core “Cultures Trobades” initiative, but also for the agroecological supporters and the food restoration projects in the framework of the Slow Food movement. For example, as ES5B6 puts it, they feel like are contributing to social and cultural regeneration with their rebellious attitude, as a protest against the conventional agri-food system in the Catalan Western Lands and Catalonia in general. They are helping in opening new ways of thinking and practicing farming activity in a region where the opportunity cost of doing so for successors is high, because of the facility to run a conventional farm. In similar terms, ES5B7 explains that they are a referent of the social agricultural model in the Catalan Western Lands, an agricultural system with social value added, locally embedded and of small scale. Thus, they are providing socioeconomic diversity, showing that it is possible to «escape» the conventional system, and the condition of «*economic slavery*» or «*strong dependency*» that comes with it. Instead, with this agricultural model, they show that farmers can decide upon their lives, shaping a broad and deep concept of citizenship, from which conventional farmers are excluded. Also in terms of systemic change, ES5B9 explain that, contrary to the predominant model in the region, they are pushing towards an agricultural model which provides food for humans, not for animals. Even the engaged restaurant owners feel that, with their business philosophy prioritizing local, seasonal and ecological products, they are not only raising awareness among local society, but also triggering production changes towards agroecology by some local farmers.

Future Perspectives

Looking backward to the intense early years of Slow Food in the Catalan Western Lands, in which the protest actions for the diffusion of transgenic maize in the region were coincidental with the birth of initiatives like “Cultures Trobades” and the Slow Food Accredited Restaurants’ Network, many actors acknowledge that this energy is rather different today. Thus, looking forward, the initiatives of agrobiodiversity and local food cultures promotion are regarded as entering a consolidating stage, characterised by a rather slow progression than an accelerated growth process.

ES5B3, talking about “Cultures Trobades” recalls that financial supports were very important in the beginning, and these have gradually disappeared. This makes it difficult to plan strategically ahead for a long-term. Nevertheless, he and other members of the core group of

“Cultures Trobades” envision different aims in the near future, like reaching economic stability and consolidation through a well functioning online market place for seeds and a stable catalogue of varieties, but also documenting and publishing the material collected during the last decade in relation to the preservation of olive trees, vineyards and the Catalan goat. More specifically, an effort should be done with the preservation activity in relation to fruit trees. And regarding the Catalan Goat, ES5B2 envisions indeed a growth of the flock, from current 200 animals to 300, reaching about 180-200 breeding females, to reinforce the reproductive capacity of the breed.

Both the core group members of “Cultures Trobades”, but also the Catalan Goat breeders and the agroecological farmers, call for a replication of some of these processes by successors and new entrants in the Catalan Western Lands, in as many municipalities and counties as possible. So far, most of these initiatives have taken place in the Noguera county, so there is room for replication in other local contexts. ES5B6 highlights that there is also the need to reinforce the self-sufficiency and independency of the process of preservation and promotion of agrobiodiversity, keeping it out of the control of the big companies, at least for the local traditional varieties.

Certainly, as pointed by ES5B7, some projects and initiatives such as the cooperative social farming by L’Olivera in Urgell county are quite unique in their historical and geographical contexts, thus generating a warning against replication. But at the same time, in general terms, this social agricultural model can be a referent, and represents a different way forward for the agrifood system, also in the Catalan Western Lands. ES5B7 recalls as well that regenerative processes such as fostering agrobiodiversity and local food cultures are slow by definition, because changing the agricultural system or structure is also a cultural change, which usually doesn’t happen overnight.

Nevertheless, change needs to be triggered by some agents, and to this regard, successors and new entrants play a key role in the development of future regenerative projects introducing new agricultural varieties and new food cultures. Moreover, many actors, including restaurant owners, observe that local society is also changing and demanding more sustainable food products and production methods, so this is a good opportunity for agroecological farmers, food processors and restaurant managers themselves to push further for change. In this collective effort for change towards the predominance of the

agroecological system in the Catalan Western Lands, ES5B7 notes that cooperative attitudes are crucial, despite the difficulties acknowledged by many actors in previous cooperation efforts in the Catalan Western Lands (as, for example, in the development and consolidation of a network of ecological producers and consumers in the region). And finally, ES5B8 recalls that an active and entrepreneurial attitude by new generations will need to be enforced, without waiting for the public administration support.

Conclusions

This report has documented the context, origins, social dynamics, political constraints and impacts of several farm regeneration processes in the Catalan Western Lands. At the core of the study is the «Cultures Trobades» project, promoted in 2008 by the organization «Slow Food Terres de Lleida» (Catalan Western Lands Slow Food association), with the aim to prospect, identify and preserve the use of local ancient seeds and animal breeds, after acknowledging a threat to agrobiodiversity from the dominant conventional agricultural production system in the region, based mainly upon livestock farming and controlled by few food business corporations through contract farming.

We have interviewed 20 relevant actors in relation with the targeted processes of analysis, including agroecological farmers and local restaurants, some of them part of the Slow Food Accredited Restaurants' Network, acting as supporters to the core practice, and which provide complementary and additional perspectives to the case. A data and desk analysis complement and enrich the study. A particularly successful initiative within the «Cultures Trobades» project, regarding the Catalan goat, is given specific attention. Moreover, the succession processes in family businesses are singularly analyzed.

The main results, outcomes and conclusions from this case study are:

- The succession process seems particularly suitable for the adoption of regenerative practices and innovations such as new agricultural varieties, agroecological methods or local food cultures. Nevertheless, in a family business, the role of the former generation (usually the father) is still very present and relevant after succession, and their conservative attitude can hinder or slow down the adoption of these practices by the new generations, which appear to be more entrepreneurial in spirit and less risk-averse.
- Self-management, self-employment and independence are strongly valued among the participants in the «Cultures Trobades» project, but also among agroecological supporters in the area and some of the managers of Slow Food Accredited Restaurants' Network. This seems to facilitate creativity and autonomous development of the initiatives. At the same time, together with extended individualism, it might hinder the development of formal cooperative structures or

even the coordination among the participants in the different regenerative practices in the Catalan Western Lands, despite a sense of communitarism is pursued in many of them, indeed.

- Many participants report a lack of agricultural and food education in local society, and together with a rather conservative attitude of some inner rural local communities, they make it difficult for the public to appreciate the added value of these regenerative practices, and thus generate further economic revenue and guarantee their economic sustainability. For example, while the economic premium for ecological products is well established, this is not always the case with the willingness to pay for products made from local plant varieties or animal breeds.
- The public administration has not been very supportive, in general, to the regenerative practices in the Catalan Western Lands, despite some financial support is provided for the promotion of agrobiodiversity and agroecological conversion. Moreover, it has usually been an obstacle according to some actors, including for legal complexity reasons. Participants in the «Cultures Trobades» project, but also agroecological supporters and Slow Food Accredited Restaurants' restaurant managers in the Western Lands, have been used to not expect much from the public administration, contributing to a feeling of despair and political disaffection which already engendered protest actions against transgenic diffusion in the mid-2000s.
- Despite the lack of stable coordination among actors, the difficulties of the local context, and the lack of stable support from the local and regional public administration, the regenerative practices analyzed in this case study have contributed to the diversification of the agricultural system in the Catalan Western Lands, orientating it towards human food consumption instead of conventional animal feed. This fact has proven particularly relevant as a resilient factor during the COVID19 pandemic crisis and the disruption of major food industry chains. Moreover, the practices have raised and disseminated local knowledge and they have contributed to improve the preservation of the natural environment and farmlands in particular. And last, but not least, most of the actors involved in these regenerative practices have shown alternative development pathways in the region, which have



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been not only inspirational to other initiatives, but also have generated higher social conscience among the population.

Our approach to this study has been both pragmatic and scientific. Thus, we consider the interesting conclusions of this study rather a point of departure for further research than an ending point. Nevertheless, we hope that they contribute to revive the reflection on the growing necessity of articulating, consolidating and renewing an alternative agricultural system in the Catalan Western Lands, based upon the principles of environmental sustainability, economic viability and social bonding.

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Appendix 1. Statistical Data

Territorial Unit	Population	Population Density (pop./sq. km)
Garrigues	18 873	23.7
Noguera	39 132	21.9
Pla d'Urgell	36 737	120.4
Segarra	23 318	32.3
Segrià	211 840	151.7
Urgell	37 116	64.0
Total Western Lands	367 016	65.7
Total Catalonia	7 780 479	242.3

Table 1. Population and Population Density in the Catalan Western Lands, 2020, by county

Source: Catalan Statistics Institute (Census) and Cartographic Institute of Catalonia.

Territorial Unit	2000-2010 (%)	2010-2020 (%)	2000-2020 (%)
Garrigues	5.9	-7.5	-2.1
Noguera	15.6	-2.5	12.7
Pla d'Urgell	26.6	-1.7	24.5
Segarra	27.3	1.6	29.4
Segrià	24.5	3.0	28.2
Urgell	20.3	-0.6	19.6
Total Western Lands	22.2	0.9	23.3
Total Catalonia	20.0	3.6	24.2

Table 2. Population Growth Rates in the Catalan Western Lands, 2000-2020, by county

Source: Catalan Statistics Institute (Census).

Territorial Unit	2000-2010	2010-2020	2000-2020
Garrigues	-2.94	-2.51	-2.7
Noguera	-0.88	-1.74	-1.3
Pla d'Urgell	2.82	-1.88	0.7
Segarra	-6.68	-2.68	-4.9
Segrià	0.31	0.36	0.3
Urgell	0.85	0.96	0.9
Total Western Lands	-0.14	-0.37	-0.2
Total Catalonia	-0.49	0.11	-0.2

Table 3. Net Internal Migration Rates (per thousand) in the Catalan Western Lands, 2000-2020, by county

Source: Spanish Statistics Institute (Residential Variation).

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Territorial Unit	2000 (%)	2010 (%)	2020 (%)
<15	13.2	15.0	15.5
15-64	65.9	67.4	64.8
>64	20.8	17.6	19.7
Western Lands			
<15	13.6	15.3	15.0
15-64	69.0	68.2	66.1
>64	17.3	16.5	18.9
Catalonia			

Table 44. Population Evolution in the Catalan Western Lands, 2000-2020, by age

Source: Catalan Statistics Institute (Census).

Territorial Unit	Total Area (sq. km.)	Area with slope < 20% (sq. km.)	Area with slope < 20% (%)
Garrigues	797.7	583.0	73.1
Noguera	1 784.1	973.3	54.6
Pla d'Urgell	305.1	304.7	99.9
Segarra	722.7	585.5	81.0
Segrià	1 396.7	1 282.4	91.8
Urgell	579.7	562.7	97.1
Total Western Lands	5 586.0	4 291.6	76.8
Total Catalonia	32 108.0	14 294.0	44.5

Table 5. Total Area and Orography in the Catalan Western Lands, 2019, by county

Source: Cartographic and Geologic Institute of Catalonia.

Territorial Unit	Forests (%)	Dry Farmland (%)	Irrigated Farmland (%)	Total Farmland (%)	No vegetation (%)	Urbanized (%)	TOTAL (hectares)
Garrigues	37.9	35.9	18.2	54.2	3.8	4.1	79 777
Noguera	53.8	23.8	16.2	40.0	3.7	2.5	178 407
Pla d'Urgell	3.0	1.6	83.3	84.9	5.4	6.8	30 514
Segarra	30.8	63.5	0.6	64.1	1.8	3.4	72 272
Segrià	20.3	17.5	49.8	67.3	6.1	6.3	139 666
Urgell	15.7	49.5	26.9	76.5	3.3	4.5	57 966
Total Western Lands	33.5	30.5	27.7	58.2	4.1	4.2	558 595
Total Catalonia	63.8	17.4	8.5	25.9	3.5	6.8	3 210 797

Table 6. Land Use in the Catalan Western Lands, 2019, by county

Source: Catalan Government - Department of Agriculture.

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Territorial Unit	TOTAL (Tones)	Horticulture	Arable Crops	Permanent Crops
Garrigues	195 545.8	0.6%	63.3%	36.1%
Noguera	623 510.5	2.1%	84.6%	13.4%
Pla d'Urgell	668 413.6	0.7%	82.5%	16.8%
Segarra	126 502.8	0.1%	98.9%	1.0%
Segrià	1 419 139.3	0.7%	55.6%	43.6%
Urgell	325 025.1	1.2%	77.3%	21.4%
Total Western Lands	3 358 133.0	1.0%	70.5%	28.5%

Table 7. Agricultural production in the Catalan Western Lands, 2019, by county and main crop groups
Source: Agricultural Production Statistics (Catalan Government).

Territorial Unit	TOTAL (Hectares)	Horticulture	Arable Crops	Permanent Crops
Garrigues	37 786	0.2%	24.7%	75.2%
Noguera	69 294	0.8%	89.6%	9.6%
Pla d'Urgell	26 881	0.6%	83.7%	15.7%
Segarra	43 520	0.0%	97.5%	2.5%
Segrià	88 970	0.4%	52.1%	47.5%
Urgell	40 828	2.2%	76.9%	20.9%
Total Western Lands	307 279	0.6%	69.7%	29.7%

Table 8. Agricultural land in the Catalan Western Lands, 2019, by county and main crop groups
Source: Agricultural Production Statistics (Catalan Government).

Territorial Unit	Total Arable Crops (hectares)	Wheat	Barley	Maize	Fodder	Other
Garrigues	9 329	11.4%	40.6%	15.4%	22.3%	10.3%
Noguera	62 095	19.0%	44.4%	17.3%	10.5%	8.8%
Pla d'Urgell	22 509	10.5%	14.8%	33.1%	33.4%	8.2%
Segarra	42 439	30.2%	54.6%	0.1%	2.0%	13.1%
Segrià	46 362	6.5%	34.0%	24.5%	19.6%	15.4%
Urgell	31410	19.6%	46.4%	8.7%	11.0%	14.3%

Table 9. Arable crops land in the Catalan Western Lands, 2019, by county and main arable crop
Source: Agricultural Production Statistics (Catalan Government).

Territorial Unit	Total Permanent Crops (hectares)	Fresh fruit	Almond	Vineyard	Olive	Other
Garrigues	28 400	4.8%	21.4%	2.1%	70.8%	0.9%
Noguera	6 673	44.9%	23.1%	4.8%	22.1%	5.1%
Pla d'Urgell	4 215	86.7%	4.7%	0.0%	2.0%	6.6%
Segarra	1 077	0.0%	51.3%	8.4%	38.3%	2.0%
Segrià	42 255	52.0%	12.7%	4.3%	23.8%	7.2%
Urgell	8 535	20.5%	28.5%	14.7%	34.9%	1.5%

Table 10. Permanent crops land in the Catalan Western Lands, 2019, by county and main permanent crop
Source: Agricultural Production Statistics (Catalan Government).

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Territorial Unit	Pig	Cattle	Poultry	Sheep	Goat
Garrigues	193	164	126	48	34
Noguera	697	324	271	80	64
Pla d'Urgell	286	108	90	14	13
Segarra	286	124	115	29	35
Segrià	790	719	231	99	67
Urgell	310	136	83	28	24
Total Western Lands	2 526	1 575	916	298	237

Table 11. Livestock Farming Holdings in the Catalan Western Lands, 2020, by county and main type of livestock

Source: Agricultural Production Statistics (Catalan Government).

Territorial Unit	Land Farming (% TOTAL Agriculture)	Main crop (% TOTAL Agriculture)	Livestock Farming (% TOTAL Agriculture)	Main livestock (% TOTAL Agriculture)	TOTAL Agriculture (% TOTAL Economy)	Food Industry (% TOTAL Industry)
Garrigues	29.1	7.4	70.8	57.8	23.7	19.7
Noguera	52.2	17.8	47.6	22.0	10.9	21.3
Pla d'Urgell	54.7	26.3	45.3	26.4	7.1	32.8
Segarra	31.7	24.3	67.7	41.2	4.4	71.1
Segrià	70.8	52.2	25.0	10.6	4.1	27.9
Urgell	46.5	14.0	53.4	34.9	6.8	24.4
Total Catalonia	37.6	9.2	55.5	16.2	0.9	12.8

Table 12. Agricultural Gross Value Added by main activity in the Catalan Western Lands, 2018, by county

Source: BBVA Economical County Yearbook. Note: main crop is olive oil for Garrigues, grains for Noguera and Segarra, and fresh fruits for Pla d'Urgell, Segrià, Urgell and Total Catalonia; main livestock farming activity is poultry for Garrigues, Pla d'Urgell, Segarra, Segrià, Urgell and Total Catalonia; and pig for Noguera.

Territorial Unit	Land Farming	Main crop	Livestock Farming	Main livestock	TOTAL Farming	Food Industry
Garrigues	-23.1	-40.8	-1.3	-0.3	-6.6	2.4
Noguera	-5.7	-29.6	-2.4	-4.6	-5.3	15.1
Pla d'Urgell	-16.2	6.0	-1.3	-4.3	-10.7	18.1
Segarra	-59.1	-61.1	-8.8	-11.7	-31.7	6.8
Segrià	-7.2	-3.4	-5.0	-8.6	-5.1	8.7
Urgell	-24.1	-1.4	-15.5	-18.3	-19.6	15.6

Table 13. Agricultural Gross Value Added growth (%) by main activity in the Catalan Western Lands, 2013-19, by county

Source: BBVA Economical County Yearbook. Note: main crop is olive oil for Garrigues, grains for Noguera and Segarra, and fresh fruits for Pla d'Urgell, Segrià and Urgell; main livestock farming activity is poultry for Garrigues, Pla d'Urgell, Segarra, Segrià and Urgell; and pig for Noguera.

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Territorial Unit	Total Farm Workers	Relative to All Employment (%)
Metropolitan Region of Barcelona	3 047	0.1
Girona Counties	4 394	1.5
Tarragona Land	2 583	1.2
Ebro River Lands	3 702	6.9
Western Lands	10 833	7.1
Central Counties	4 480	2.9
Pyrenees and Aran Valley	1 577	6.6
Penedès	1 461	1.1
Total Catalonia	32 169	1.0

Table 14. Agrarian Employment in Catalonia, 2020, by region

Source: Catalan Labour Market Observatory (Self-Employed and Salaried Affiliation to Workers' Social Security Regime).

Territorial Unit	2012 (%)				2020 (%)			
	Agr.	Ind.	Con.	Ser.	Agr.	Ind.	Con.	Ser.
Garrigues	22.2	20.3	12.9	44.6	21.8	21.1	10.4	46.7
Noguera	16.3	16.6	10.2	56.8	15.6	17.7	10.1	56.6
Pla d'Urgell	10.6	22.5	9.3	57.7	8.4	28.0	8.2	55.4
Segarra	10.1	48.6	6.0	35.3	7.5	52.8	4.3	35.4
Segrià	5.3	8.4	7.1	79.3	4.8	8.2	7.1	79.8
Urgell	8.4	25.8	10.1	55.7	7.7	26.9	8.0	57.4
Total Western Lands	8.0	15.1	8.0	68.9	7.1	14.6	6.4	69.2
Total Catalonia	1.2	15.9	6.4	76.5	1.0	16.2	7.5	78.0

Table 15: Employment structure by sector in the Catalan Western Lands, 2012-2020, by county

Source: Catalan Labour Market Observatory (Self-Employed and Salaried Affiliation to Workers' Social Security Regime).

Territorial Unit	Natural Protected Area (hectares)	Natural Protected Area (%)
Garrigues	6 999	8.8
Noguera	57 218	32.1
Pla d'Urgell	466	1.5
Segarra	23 142	32.0
Segrià	15 887	11.4
Urgell	16 900	29.2
Total Western Lands	120 612	21.6
Total Catalonia	1 023 862	31.9

Table 16. Natural Protected Area in the Catalan Western Lands, 2019, by county

Source: Catalan Government - Department of Agriculture.

Territorial Unit	2000	2010	2020
Barcelona	25.5%	12.9%	17.5%
Girona	19.0%	18.0%	19.4%
Lleida	41.7%	59.1%	53.9%
Tarragona	13.8%	10.0%	9.1%
TOTAL Catalonia	10 827	83 506	256 983

Table 17. Organic Farm Land in Catalonia, by province (NUTS3 region), 2000-20

Source: Catalan Council on Organic Production, 2020.

D5.2 30 CASE STUDIES ON RURAL NEW COMERS, NEW ENTRANTS TO FARMING AND SUCCESSORS

Territorial Unit	2000	2010	2020
Barcelona	19.3%	23.1%	33.9%
Girona	14.7%	14.9%	12.1%
Lleida	32.4%	35.4%	26.9%
Tarragona	33.6%	26.6%	27.1%
TOTAL Catalonia	327	1 247	3 367

Table 18. Organic Farm Holders in Catalonia, by province (NUTS3 region), 2000-20

Source: Catalan Council on Organic Production, 2020.

Territorial Unit	Non-modified	Transgenic	TOTAL	Transgenic (%)
Garrigues	586.9	813.2	1 400.2	58.1
Noguera	4 694.5	6 094.5	10 789.0	56.5
Pla d'Urgell	2 862.6	5 230.4	8 092.9	64.6
Segarra	27.4	11.3	38.7	29.2
Segrià	3 119.1	9 272.8	12 391.9	74.8
Urgell	1 356.6	1 534.2	2 890.8	53.1
Total Catalonia	18 288	29 690	47 978	62

Table 19. Conventional and transgenic maize farmland in the Catalan Western Lands, 2018, by county

Source: Agricultural Production Statistics (Catalan Government).

	1995	2005	2016
Males	84.6	81.0	75.2
Females	15.4	19.0	24.8

Table 20. Farm holders by gender, Catalonia, 1995-2016 (%)

Source: Spanish Agricultural Structures Survey, 2016.

	1995	2005	2016
< 25	0.3	0.6	0.1
25-34	5.4	4.8	3.1
35-44	14.2	13.4	11.0
45-54	23.5	23.1	21.5
55-64	27.0	25.2	27.2
> 65	29.5	32.9	37.2

Table 21. Farm holders by age, Catalonia, 1995-2016 (%)

Source: Spanish Agricultural Structures Survey, 2016.

	2013	2016
Holdings (%)	89,4	88,9
Annual Working Units (%)	58,3	56,4
Total Family labor force employed		
Holdings (%)	32,2	34,8
Annual Working Units (%)	41,7	43,6
Total Salaried labor force employed		
Holdings	59 097	57 543
Annual Working Units	56 045	55 022
TOTAL Labor force directly employed by the holding		

Table 22. Farm holding and Working Units by form of management in Catalonia, 2013, 2016

Source: Spanish Agricultura Structures Survey, 2016.

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Territorial Unit	<1	1-2	2-5	5-10	10-20	20-50	50-100	>100
Garrigues	1.1	9.4	22.4	24.6	23.8	15.2	2.6	0.8
Noguera	1.9	4.9	14.2	17.2	21.8	25.5	9.9	4.6
Pla d'Urgell	2.3	7.9	19.5	24.4	24.1	16.5	3.9	1.4
Segarra	0.6	3.1	7.9	11.2	20.3	36.0	14.7	6.3
Segrià	3.3	8.6	21.2	21.6	23.3	16.8	3.9	1.3
Urgell	1.2	6.9	17.0	20.9	20.2	24.0	7.3	2.4
Total Western Lands	2.1	7.4	18.5	20.8	22.6	20.4	6.0	2.3
Total Catalonia	3.0	14.7	24.5	18.8	16.3	14.9	5.1	2.7

Table 23. Number of holdings per used agricultural land (UAL), 2009 (%)

Source: Agricultural Census (Catalan Government), 2009.

Territorial Unit	Owned	Leased	Partnership
Garrigues	66.8	23.4	9.7
Noguera	54.1	28.4	17.5
Pla d'Urgell	52.9	33.3	13.8
Segarra	61.6	20.9	17.5
Segrià	65.2	25.0	9.8
Urgell	58.3	19.1	22.6
Total Western Lands	60.2	25.0	14.8
Total Catalonia	57.5	30.8	11.8

Table 24. Land property structure in the Catalan Western Lands, 2009 (%)

Source: Agricultural Census (Catalan Government), 2009.

Annex 2. The List of Interviews

Code	Interview Pseudonym	Gender	Role	Place and date of the interview	Other information: county; regenerative practice(s)
ES5B/Int.1	ES5B1	Male	New Entrant	On-line; 20/12/2020	Noguera; Agrobiodiversity
ES5B/Int.2	ES5B2	Male	New Entrant	Vilanova de Meià; 23/12/2020	Noguera; Agrobiodiversity
ES5B/Int.3	ES5B3	Male	New Entrant	La Sentiu de Sió; 23/12/2020	Noguera; Agrobiodiversity, Agroecology
ES5B/Int.4	ES5B4	Female	New Entrant	La Sentiu de Sió; 23/12/2020	Noguera; Agrobiodiversity, Agroecology
ES5B/Int.5	ES5B5	Male	New Entrant	Torrefeta; 23/12/2020	Segarra; Agrobiodiversity, Agroecology
ES5B/Int.6	ES5B6	Male	Successor	Balaguer; 13/01/2021	Noguera; Agrobiodiversity, Agroecology
ES5B/Int.7	ES5B7	Male	New Entrant	Vallbona de les Monges; 13/01/2021	Urgell; Agroecology
ES5B/Int.8	ES5B8	Male	Successor	Tarroja de Segarra; 13/01/2021	Segarra; Agrobiodiversity, Agroecology
ES5B/Int.9	ES5B9a, ES5B9b	Female & Male	Successors	On-line; 18/02/2021	Segarra; Agrobiodiversity, Agroecology
ES5B/Int.10	ES5B10	Male	Successor	Gerb; 20/04/2021	Noguera; Agrobiodiversity, Agroecology
ES5B/Int.11	ES5B11	Male	Successor	Castellserà; 20/04/2021	Urgell; Agrobiodiversity, Agroecology
ES5B/Int.12	ES5B12	Male	Successor	On-line; 18/05/2021	Segarra; Agrobiodiversity, Agroecology
ES5B/Int.13	ES5B13	Male	New Entrant	On-line; 19/05/2021	Noguera; Slow Food Accredited Restaurant
ES5B/Int.14	ES5B14	Male	Successor	On-line; 20/05/2021	Noguera; Slow Food Accredited Restaurant
ES5B/Int.15	ES5B15	Male	Successor	On-line; 22/05/2021	Pla d'Urgell; Agroecology
ES5B/Int.16	ES5B16	Male	New entrant	Arbeca; 26/05/2021	Garrigues; Ecological Food Processor
ES5B/Int.17	ES5B17	Male	Successor	Alcarràs, 26/05/2021	Segrià; None
ES5B/Int.18	ES5B18	Male	Successor	Àger; 26/05/2021	Noguera; Agroecology
ES5B/Int.19	ES5B19	Male	Successor	On-line; 27/05/2021	Noguera; Local Restaurant, Non-Slow Food Accredited
ES5B/Int.20	ES5B20	Male	Successor	On-line; 28/05/2021	Segarra; Slow Food Accredited Restaurant

Table 25. Interviews

Note: Interviews 1-5, 9-12, 16-18 by Clara Blasco; interviews 13-15, 19-20 by Miquel Correa; interviews 6-8 by Clara Blasco and Miquel Correa