

EU CAP NETWORK FOCUS GROUP RECOVERY OF ABANDONED AGRICULTURAL LANDS

Land abandonment: Identification and assessment of viable business models

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In this paper we first of all review the causes that underlie land abandonment and the features that characterise new, viable enterprises. Possible business models are then examined and examples of best practice reviewed.

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1. Introduction: defining ‘viable’

The overall task of the Focus Group is to suggest approaches that may help to tackle the problem of abandoned agricultural land in the many areas of the European Union where this is occurring. What such approaches might be will be different under the different topographical, ecological, demographical and economic circumstances that prevail in different regions. A key first step therefore is to be clear as to how we determine what enterprises to achieve this end are significantly viable, not only in the case of any particular enterprise, but in more general and more widely applicable terms.

In farming it is the *productive value* of the land that is traditionally exploited through the growing of crops and raising livestock. When its produces lose the ability to compete this value is lost. Farming is no longer *viable*. The process of land abandonment inexorably begins.

The abandonment of agricultural land comes about as a result of the failure of land in a particular home place to support the community that farms it: a place that may have been farmed for generations, acquiring over perhaps centuries a rich and distinctive gastronomic and cultural character that reflect its distinctive qualities, different in every region.

Rural society is in the beginning essentially self-sufficient and typically frugal, but as it becomes increasingly connected with the wider society and the broader economy it becomes dependent on outside markets to support itself. If it loses the ability to compete in this marketplace, the income to support family and community must be sought elsewhere. Land is abandoned, and community at the local level becomes weakened and eventually it disintegrates.

If it is to be economically viable again, other values of the land for which the market is prepared to pay must be identified and exploited through new enterprises. This requires, in the first instance, an imaginative but realistic understanding of the other functions of landscape and the values these give rise to. And it is the willingness of wider society to pay for these that turns these other *functions* into *resources*; i.e. the changing values of society open up new resource avenues. A familiar simple fictional example is the exploitation of hitherto unproductive land in Jean de Florette’s Provence for growing flowers as a new market for cut flowers begins to expand in the cities (Pagnol, 1963).

There are many ways in which a farm can be made more viable: by developing new products, by adding new value through further processing of the produce, by providing new services. So the list of *potential* enterprises is a very long one, but can be divided under the two general headings of niche products and other services, though with considerable overlap and synergy between them.

One possibility is that a product traditionally sold directly is processed on the farm, and this product is then sold; for example, milk processed to a higher value cheese or yoghurt (See below).

New viable food-based enterprises all rely on their environmental credentials as it were, in shaping their image for a new environmentally-conscious market. But there are many situations where it is not possible to capitalise on a food-based USP: even if all the other



criteria are present, lack of capital is often the sticking point. In these situations the farmer may be able to capitalise on the environmental services his farmed land provides through agri-environmental schemes that pay him to manage the land in the way necessary for the maintenance of these services.

Today's heightened awareness of ecosystem services and the concern for such values as water quality and natural diversity presents another opportunity. It imparts a new market value to products developed through initiatives to improve the quality of water or the biodiversity associated with production. This is the approach taken by many results-based agri-environmental schemes, where payment is made for the environmental results of more extensive grazing systems, restoration of hedgerows, improvement in farm safety, organic production developing biogas or biochar. Examples include the results-based payments paid in Ireland under its ACRES scheme, or the programmes to farmers in mountain areas of species-diverse Alpine grasslands. In these areas farming is continued in the low-level extensive way essential to preventing the grassland from reverting to scrub, but wholly insufficient to providing a sufficient income on its own. A more specific example is the supplement companies such as Vitel or Coca Cola are prepared to pay to suppliers for enhanced water quality or the biodiversity associated with production.

Under the heading of 'services' are enterprises that go far beyond traditional food production, and offer the possibility of advancing well-being by bringing new business opportunities to the struggle against land abandonment. For example, agricultural machinery such as harvesters, seeders, and plant protection services can be rented instead of bought (or bought collectively), reducing the financial pressure on farms in some areas, particularly small farms, which would lessen the risk of their being abandoned. Under this arrangement the farmers pay for reliably punctual services such as harvesting equipment with a driver, so they don't need to inquire about a bank loan to buy a tractor (for example), which might only be needed for short periods. Rural digitalization is another area that is relevant for marketing purposes, production efficiency, administration, remote working, or reducing the feeling of isolation. As well as this, the use of new renewable energy, including the storage systems, such as solar panels, wind power generation, and biomass, makes it possible to reduce costs and provides additional income for their users in rural area.

2. Key issues/reasons for land abandonment

The final result of these combined factors has been the gradual abandonment of those areas where production could not compete with that of large flat and fertile areas not only locally but anywhere in the world.

Some of the main reasons for land abandonment are difficulties and constraints in cultivation or limited cultivation options: as well as finding access to markets for traditional products. The limitation on cultivation possibilities is due to the predominance of land that cannot be converted to other viable enterprises, often because of topographical restrictions where the viable options may be limited to the production of milk or beef, and in some cases fruit production, or biomass/biogas production. Wherever it is possible farmers move their production to areas that are easier to cultivate, or offer greater possibility to change to products that generate a higher income in response to market demand, leaving remote/mountain areas in a state of gradual abandonment. If the whole



farm is located in an area with such high production constraints or restrictions, there is an increased risk that when its management ceases to be viable, farmers abandon it without finding a successor, or another farmer who will continue to keep the area under cultivation.

Furthermore, farmers in remote/mountain areas may be discouraged, in the face of various production constraints, from continuing the cultivation of areas which can no longer provide them with a living, so they must rely on the financial compensation provided through a CAP that is increasingly prescriptive and bureaucratic.

Another difficulty is the already high percentage of part-time farmers in mountain/remote areas. In many cases a younger generation has little or no interest in continuing to farm, having seen and experienced for themselves what it is like to farm in the face of harsh production conditions: often perhaps as well as needing to keep down a job off-farm.

At the end of the day, however, the root causes of abandonment and the loss of viability of traditional farm enterprises lie deeper and (in a sense) further away: in the intensification of agriculture, and the vastly increased scale of the large and increasingly multinational companies that control every stage of agri-enterprise, from research to consumer preference. Industrial agriculture – which is, after fuel, the single greatest cause of climate change – has made it impossible for many small farming communities in mountainous and otherwise marginal areas to compete. In the modern world the traditional distinctiveness of local produce has been replaced almost entirely by standardized products that are little more than commodities.

3. The bases of new approaches for possible business models

Although we might envisage a situation where re-design of former production is made more efficient from a technical, social, economic or environmental perspective, enabling a traditional enterprise to remain viable, in most situations other values of the land for which the market is prepared to pay must be identified and exploited through new enterprises. This requires, in the first instance, an imaginative but realistic understanding of the other functions of landscape and the values these give rise to.

Innovative approaches and solutions have to be found starting from the analysis of the complex phenomena and processes in place, being aware that there are not ready recipes and easy solutions to apply. The solutions, although not easy, should be found in the identification of different business models of agriculture, to be adopted firstly in those areas where the abandonment is in process. One thing it is very important to stress is that a successful new enterprise is never a go-it-alone effort, but requires collaboration between stakeholders at every level along the value chain.

It is necessary to envisage for these areas agricultural products that have a strong identity linked to the territory, and at the same time capable of looking at wider – even international – markets: not merely as commodities, but identified with their territory of origin: and with their own premium price as a result.

New possible business models of agriculture for inland areas affected by abandonment must be not based simply on price *competitiveness*. They must be based on the identities, the uniqueness and the peculiarities of the products. They have to be oriented to



customer targets having high spending capacity, high sensitivity for food excellence wherever in the world they are situated. Twenty years ago it was almost inconceivable for a small farmer to sell directly into world markets. Today it is possible. New tools are now available, and they can be used even by small farmers in local areas, especially young farmers. This can be the way to increase incomes considerably. It is necessary that the new business models should be culturally attractive for young people or new entrants. The key words should be: Identity, Income, Quality of life.

The list of potential enterprises is a very long one, but can be divided under the two general headings of niche products and other services, though with considerable overlap and synergy between them.

There are also imaginative alternative enterprises other than the traditional rural tourism strategies that could be significant generators of income: examples include pilgrimage tourism, the opening up of hiking and gastronomic routes as valuable options for slow tourism and sustainable and economic growth, exploiting festivals celebrating ancient local traditions and products, open-air art exhibitions and landscape museums. All of these tourist initiatives could become important revenue sources of tourism, creating jobs in at least some rural areas.

Finally, supplying such inputs to farmers as fertilisers and soil amendments based on biodegradable waste from rural areas could become profitable from an economic and environmental point of view, especially in light of the ever-increasing price of inorganic fertilizers, and perhaps in some cases, providing waste management services.

3.1 The case for the “Blue Ocean Strategy” business tool to improve business resilience in abandoned lands

Many farmers face the challenge of maintaining a profitable business in territories that either are abandoned or are actively undergoing an abandonment process. Often neglected by the market, these territories may have low population density, poor infrastructure, limited access to resources and customers, and high competition from other regions or countries. How can farmers overcome these obstacles and create value for themselves and their customers? One possible approach is to use business tools such as the blue ocean strategy.

The blue ocean strategy is a concept that suggests that instead of competing in existing markets (red oceans), businesses should create new markets (blue oceans) where there is no or little competition. By doing so, they can offer unique value propositions that satisfy unmet needs or create new demand. The blue ocean strategy consists of four steps: eliminate, reduce, raise and create.

Eliminate: This step involves identifying and eliminating the factors that the industry takes for granted but are no longer relevant or valuable to customers. For example, a farmer may eliminate the use of chemical fertilizers or pesticides that harm the environment and human health.

Reduce: This step involves identifying and reducing the factors that the industry overemphasizes but are not essential or appreciated by customers. For example, a farmer may reduce the amount of water or energy used in production or transportation.

Raise: This step involves identifying and raising the factors that the industry underdelivers but are important or desired by customers. For example, a farmer may raise the quality or freshness of the products or the variety or customization of the offerings.



Create: This step involves identifying and creating the factors that the industry has never offered but are valuable or attractive to customers. For example, a farmer may create new experiences or services for the customers, such as farm tours, workshops, online platforms, etc.

By applying these steps, a farmer can create a blue ocean of new opportunities and customers even in territories that are considered abandoned. This way, the farmer can differentiate from the competition, lower the costs, increase the revenues, and achieve a more resilient business that is less vulnerable to price wars, competition, and market fluctuations, and more capable of generating sustainable growth and profitability.

3.2 Sources of funding that could help farmers in abandoned lands in Europe to achieve the objectives of the EU Green Deal and other relevant policies

The sources of investment for farmers who want to acquire abandoned land are unfortunately almost the same as for all other kinds of real estate.

It is not realistic to expect that new farming enterprises can be established by young people without prior access to land. It is often the case that young people seeking to enter farming have linkages with farmer families and their lands, or have access to lands that public bodies make available under contract. In the first case the young farmers often take place of retired people.

There are benefits and fiscal measures that reward this kind of endeavor, but often the economic barrier remains too high for new (especially young) farmers to break even. Bank loans often require down payments or other guarantees, and as such are not suitable for many farmers. Government/CAP-funding schemes would be a great help if they were quicker (it usually takes almost two years for a CAP payment scheme to be completed) and not linked to the regular banking system.

One of the main sources of funding for farmers in abandoned lands is the Common Agricultural Policy (CAP), which provides direct payments, rural development measures and market interventions to support the agricultural sector. The CAP has currently undergone a reform process that aimed to align it with the EU Green Deal and make it more responsive to local needs and conditions. The new CAP introduces a new delivery model that gives more flexibility and responsibility to Member States to design their own strategic plans based on nine specific objectives, including environmental and climate action, social inclusion and territorial balance (<https://agriculture.ec.europa.eu/cap-my-country/cap-strategic-plans-country>). This can create more opportunities for farmers in abandoned lands to access funding for innovative and sustainable practices, such as agroforestry, organic farming, agroecology and high nature value farming.

Another source of funding for farmers in abandoned lands is the EU Cohesion Policy, which aims to reduce regional disparities and promote balanced and sustainable development across the EU. The Cohesion Policy consists of several funds, such as the European Regional Development Fund (ERDF), the European Social Fund Plus (ESF+) and the Cohesion Fund (CF), that support various types of projects and activities related to innovation, competitiveness, social inclusion, education, employment, health and environment. The Cohesion Policy also supports cross-border cooperation through programmes such as Interreg and ENI CBC. These funds and programmes could help farmers in abandoned lands to diversify their income sources, improve their skills and



knowledge, enhance their social capital and networks, and participate in integrated landscape planning and management.

A third source of funding for farmers in abandoned lands is the EU LIFE programme, which is the EU's dedicated instrument for environmental and climate action. The LIFE programme supports projects that contribute to the implementation of EU environmental and climate legislation and policies, such as the EU Biodiversity Strategy, the EU Climate Law and the Circular Economy Action Plan. The LIFE programme has two sub-programmes: one for environment and one for climate action. The environment sub-programme covers three priority areas: nature and biodiversity, circular economy and quality of life, and environmental governance and information. The climate action sub-programme covers three priority areas: climate change mitigation, climate change adaptation and climate governance and information. These priority areas could provide funding opportunities for farmers in abandoned lands to restore degraded ecosystems, enhance natural capital, adopt low-carbon practices, increase resilience to climate change impacts, and raise awareness and engagement on environmental and climate issues.

In conclusion, there are several sources of funding that could help farmers in abandoned lands in Europe to pursue alternative trajectories that are aligned with the EU Green Deal objectives. However, accessing these funds may require overcoming some barriers, such as lack of information, administrative complexity, eligibility criteria, competition and co-financing requirements. Therefore, it is important to provide adequate support and guidance to farmers in abandoned lands to help them identify and apply for the most suitable funding opportunities for their specific contexts and needs.

4. Some examples of best practice successfully applied

4.1 Slow Food Travel (<https://www.slowfood.travel/en>)

Slow Tourism shows how tourism and traditional, local and sustainable food production may collaborate in order to make remote areas and their farm enterprises viable again. One core element here is the close collaboration between food producers, accommodation facilities and gastronomy. Tourists are invited to experience, lend a hand and even help out in traditional food production via tailored experience modules instead of being just passive observers. Enterprises and farmers become food artisans, providing an experience that makes growing and preparing food a life-enriching experience. (However, even Slow Food has become more of a food business and marketing organisation with the passage of time).

4.2 Farm holidays

The provision of accommodation and activities on farms for tourism is already a well-established niche for farms in remote/mountain areas in many member states. This was especially the case when travel restrictions were in place during the Coronavirus crisis, but applies more generally because of the increased concern among younger people in particular in relation to travelling sustainably.



4.3 Improved market access and higher producer prices via food quality schemes

In some Member States food quality schemes exist that make the cultivation of an area that is at risk of abandonment mandatory for farmers who wish to participate in such schemes. This requirement is used as a marketing tool, and the generation of higher producer prices (e.g. ALMO, Zicktaler Moorochse, etc.) through cooperation with retailers and/or gastronomy. Participation in such food quality schemes may help to make agricultural production economically viable again for farmers.

4.4 The Aubrac territory: a case study

In the 1950s the Aubrac territory, a mountainous area south of the Massif Central, was one of the last areas using animal traction in France. Farming here was highly traditional, and the level of productivity so low that there appeared to be no way farming could continue and the only viable option was to plant trees. Over a period of several years during the 1960s however, the government funded a multidisciplinary research programme studying all aspects of the Aubrac area, including musicology, ethnology, culinary heritage, agronomy, zoology etc. Over the years that followed much of the land in this part of France was abandoned, but in the Aubrac region in the 1980s breeding of the Aubrac cow was resumed, and the milk industry revived thanks to the introduction of the Simmental, which is much more adapted to the region than the Prim Holstein. The local cooperative requested recognition of the Laguiole cheese PDO, the Aubrac beef Label Rouge and the Fleur d'Aubrac PGI. Today the Aubrac Region is a National Park – Parc National Regional de l'Aubrac – a very dynamic rural area of some 2000km², with much employment created through valourisation of its natural resources.

4.4.1 How has this come about?

The publicly-funded research programme in the 1960s helped to reconnect the different stakeholders to the territory. The links created between local elected politicians, researchers, and the inhabitants including the farmers themselves have made it possible to connect the different areas of expertise in a way that added new value to farm produce.

4.4.2 What is the situation today?

Setting up the National Park has made it possible to promote a new sustainable form of tourism. The different stakeholders – the ag-cooperative, the artisan company, the restaurants – are all very actively involved in promoting the Aubrac region. Among events organized annually is a mountain walk in March called 'Les Traces', during which traditional farm sheds are used to host the ramblers, providing them with an opportunity to discover the local cuisine. Connections have been established with cities: notably Paris, where one local cooperative called Unicor has two or three shops. This helps greatly with the promotion and sale of produce from the Aveyron area.



4.4.3 What are the challenges today?

Continue what has been so successfully started. Get the new generation involved. Secure technical support for the farms that is specifically adapted to these farming systems (raw milk produced from cows grazed on pastures and hay, without fermented food).

4.5 Castel del Giudice (Molise) case study

Another example of best practice in action is the inland areas of Molise in Italy, where the municipality, in agreement with farmers, made land that was in process of abandonment available for sustainable apple fruticulture. A joint company for the cultivation, management and direct selling of the produce was set up. This is now a profitable enterprise that has led to new economic and social life in a small village at 700 metres above sea level. With the support of the municipality the initiative has triggered the provision of accommodation facilities for visitors who come to see the village for themselves, to buy its produce: and to consider the possibility of replicating the initiative in their own areas.

Other examples of other possible business models include such initiatives as:

- Olive farms in specially dedicated areas where olive oil of the highest quality is produced: zero residues certified, processed, packaged and sold by the farmers themselves to consumers in regional, national or even world markets.
- Cow, sheep and goat farms in specially dedicated areas, producing cheeses, yoghurt or other milk products in their small farm dairies, seasoned, packaged and sold by the farmers themselves to consumers in regional, national or even world markets.
- Chicken (and other poultry) farms using traditional local breeds, producing eggs and meat of premium quality, prepared on farm and sold to consumers in regional, national or even world markets.

4.6 Lessons learned from success stories

A wide range of possibilities therefore begin to suggest themselves, but the key question is, which of these are *viable*, and what do we *mean* by viable? Many possible enterprises may be viable in a limited way, e.g. as one-off, geographically widely-scattered initiatives. For example, the highly-successful Center Parcs development in an area of plantation conifer forest on former farmland in central Ireland: an enterprise that few would have predicted would be so successful and profitable twenty years ago (centerparcs.ie). But this cannot be replicated across the region of Ireland in which it is situated, nor is it a replacement for abandoned farming and the integrated community it enabled and supported.

It is much easier to *list* these one-off possibilities than it is to identify those that would have this 'replacement' quality, especially because it is not possible to generalize, so dependent is the answer on the particularities of different places. There is always a danger of distortion as to what will actually work under different situations when we view other areas through the possibly distorting lens of our familiarity with an enterprise that may have been very successful in an area with which we are familiar and practically involved. Different business opportunities will require different business models, with



defining characteristics that vary according to the opportunities and constraints of each geographical situation.

The potential of such initiatives (Slow Food etc.) has been greatly enhanced with the development of new digital strategies that make it possible even for small local enterprises in remote locations under favourable circumstances to broaden their traditional local market not only regionally and nationally, but globally. Under such circumstances the unique qualities of locally distinctive traditional produce can be exploited in ways unimaginable even a few decades ago.

Food products such as these, the markets for which have hitherto been confined to particular local areas, can now be sold anywhere in the world. Many parts of Europe have a particularly rich and varied range of local varieties of crop species and farm animal breeds that were traditionally processed in the most varied and imaginative ways in the preparation of innumerable food products, often varying even from village to village. These can now be exploited with the new innovative strategies made possible by digital advances, particularly by enthusiastic young entrepreneurs for whom they offer a type of modern farming that has new relevance and meaning for them, and who are more at home with the relevant technologies than an older generation.

At the end of the day, however, the root causes of abandonment and the loss of viability of traditional farm enterprises lie deeper and (in a sense) further away: in the intensification of agriculture, and the vastly increased scale of the large and increasingly multinational companies that control every stage of agri-enterprise, from research to consumer preference. In the modern world the traditional distinctiveness of local produce has been replaced almost entirely by standardized products that are little more than commodities.

5. Leaving land to nature: ‘rewilding’ as enterprise

There will be situations where the abandoned land cannot be recovered for a farming enterprise. In some of these situations it may be appropriate to look forward in time to what they may become if ecological succession is allowed to proceed – or positively encouraged – and exploiting the range of new nature-based enterprises that can be developed as a result (including hunting and fishing), along with aspects of their cultural heritage: archaeology, geology etc. These are most appropriately developed at community level, and can extend over very large areas (though not exclusively so). Allowing nature to take its course on abandoned lands has the added advantage that it results in an increased level of carbon sequestration in many areas. There is however the serious downside of greatly increased risk in some areas of high biomass of the forest fires that have become an increasingly regular consequence of global warming.

When land has been allowed to revert to a natural state over a large area, the resulting increase in biodiversity will often make an important contribution in meeting our wider obligations in combating its loss and working to restore it. In situations like this however, where the interfering agricultural/human hand is removed to a distance, community is generally lost. The approach to formerly farmed land where *the over-riding aim* is restoring an original European biodiversity has come to be known as ‘rewilding’: allowing it to acquire a new and species-diverse natural ecological equilibrium without interference, with all the biodiversity and carbon sequestration that comes with this. The



concept was pioneered in the Netherlands by Frans Vera and his colleagues in the Oostvaardersplassen in the Netherlands (Vera 2000), and is perhaps best known from the successful ongoing example of the Knepp Estate in West Sussex in the UK (Tree, 2018).

Most rewilding initiatives in Europe to date have concentrated on extensive marginal areas where agriculture has been altogether abandoned. These wild areas however are still an important part of the farm enterprises in the foothills and indeed further afield, because they may provide much of what the visitor seeking an alternative tourism experience is in search of: ideal for walking or cycling, or nature-based experiences. If what is being achieved at Knepp could be achieved more widely, it would be of enormous significance. This may well be an approach that offers the possibility of viable enterprise in many situations and deserves more in-depth analysis than is possible in this short overview. It is something that needs to be explored much more systematically across Europe as a whole (Rewilding Europe, 2011; www.rewildingeurope.com).

On the other hand, on mountain pastures such as those in the Alps and similar areas, or in the Burren in western Ireland, abandonment leads to the loss of mountain pastures and meadows of very high biodiversity value. The advice of ecologists in such cases is to continue to farm these areas, at least in an extensive way. In areas such as these annual mowing and biomass harvest on abandoned open landscape areas is necessary in order to preserve species established in these ecologically-important habitats. The maintenance of such areas can also open up new business opportunities for the farmer, combined with new alternatives for biomass utilization instead of disposal.

6. Re-evaluating the place of community

Land abandonment is not just an issue of lost agricultural *land*, but of the loss of the *communities* it supports: the abandonment of villages and territories, the loss of local identities, the unravelling of the social fabric of unique local cultures. It is not just about the land itself therefore, but about the farming community that works it and finds a home in this particular place, and which has overlain it with a cultural imprint that may be centuries old, and is of enormous cultural value in its own right. Sustaining this community, and the physical landscape fabric in which it lives, is, as it were the other side of the coin of recovering abandoned farmland. Here too there is a spectrum of challenge. At one end there is the challenge of *restoring* community to land where the village has been more or less totally abandoned, at the other end the process is at an early stage. In the latter case restoration may be to *maintain and strengthen*, but the restoration of community to abandoned land does not necessarily entail the restoration of the traditional model. A very different model may be not only appropriate but essential to our times.

This is the ‘*agriculture landscape*’ that Emilio Sereni (in his magisterial *Storia del paesaggio agrario*) defined as the embodiment in land of a civilisation that has resulted from centuries of hard work by farmer communities to protect and preserve the territory, modelling its shape and making it the source of food unique to each distinctive region (Sereni 1997). The landscape in this sense is not just a thing of natural beauty but it is civilisation, culture, history. In this regard it doesn’t belong only to the farmers, but can be considered a common good of society as a whole.



7. Training needs for new enterprises

All of this will have *training* implications: training not only for the enterprise itself, but with regard to the changing value perspective within which it becomes a (new) viable resource in economic terms. The nature of the enterprise will determine the new training requirements. There are two aspects to this: on the one hand determined by the particular practical exigencies and challenges of the enterprise in itself; on the other by the requirement for adequate in-depth understanding of the changing environmental function/value perspectives out of which this new opportunity has grown. We therefore need to identify and define in as detailed a way as possible what new ecosystem services the recovered land cover represents. Sometimes the training will be individual or enterprise group, sometimes it would need to be at community level.

One of the leading causes contributing to land abandonment is the lack of economic resilience of SMEs in those areas. This is often due to the farmers' lack of broader entrepreneurial skills. Those skills are not sector-specific but transversal and transferable, and offer real benefits such as

- › Skills to recognize and realize business opportunities
- › Skills to interact with other people/groups (networking, co-operation)
- › Strategic skills for growth and risk mitigation

Farmers who apply a broader entrepreneurship approach to their enterprises can usually avoid economic or environmental issues by adopting solutions that seems counterintuitive to their profession, but offer more benefits in the long run, such as switching from conventional high yield, low-price agriculture (intensive) to regenerative low-yield, premium price (See above). Fortunately, today, this kind of training is available via state/EU-funded programmes as well as free local and online resources.

8. Knowledge gaps and research needs

Such is the range of variation in the nature of the problem of land abandonment across Europe that a systematic survey is needed to capture the full spectrum of variation and the many strategies and enterprises that are being implemented to combat it in the different areas. Such a comprehensive overview would provide the material for an analysis that would distil the elements of success, both in terms of approaches on the ground and of finance and other supports necessary. The case studies given earlier are examples of how this might be done. Areas that require particular attention include the following:

- › Identify, analyse and find synergies between various existing concepts and concrete examples on making remote/mountain areas attractive for tourism. Over time this may make the production of food in a region viable again. Successful examples of where this has been successfully done include the Slow Food Initiative (See above), Albergo diffuso, agri-tourism concepts such as 'Urlaub am Bauernhof' (AT), etc.
- › Assessing whether in any particular case this is actually a viable solution to abandonment requires answers to particular research questions. For example: in what locations and under what conditions does a particular place have the qualities required to be successful as a new tourist destination (where other locations don't) (scenic



value, remote but accessible, unique flora or fauna etc.). Again, research on such factors as distance to market are relevant to deciding whether Slow Food-type options are viable options.

- › Review the implementation of the EU optional quality term ‘mountain products’ and its added value for farmers participating in it.
- › Explore ways to make use of the limited cultivation possibilities in remote/mountain areas in light of the Green Deal. Research objectives could be the production of climate-positive meat and milk from optimized feeding of non-edible biomass (hay, silage, straw) and by-products of food production (bran, press cake) but also the production and processing of plant-based biomass for improving the bio-economy.
- › How can new branches of agricultural production be developed that were previously unused by farmers? There is great potential, for example in the area of supply of lignocellulosic biomass for industry (building industry, pulp and paper industry). Landscape maintenance is related to high costs, and at the same time there is a fast increasing demand for biomass as industry turns away from fossil resources. Agriculture could close the emerging supply gaps as a producer of grass-like biomass from extensive field management.
- › The relatively low price or low rental value of these lands makes them more attractive to potential investors. In France for example, the lower price of wine-producing land in relatively remote areas of lesser reputation makes it possible for new winemakers, who could not afford to get land in such well known areas as Bordeaux or Bourgogne, to get access to vineyards.

9. Ideas for innovation

Much of the innovation that is needed is specific to particular enterprises and differing ecological and geographical circumstances. A key innovation would be the identification of a new way to think of rural community, and of how modern digital and other new technologies can be harnessed to enable this.

As difficulties and constraints in cultivation are among the key issues that accelerate the abandonment of agricultural areas in remote/mountain areas, innovative technical solutions that are at the same time affordable and easy to handle are urgently needed in order to facilitate the management of those areas, easing the burden of heavy manual work that is still required in so many areas (e.g. the use of small remote controlled mulchers, etc.).

Another possible innovation that can help to prevent land abandonment or reactivate abandoned land may be the establishment of a platform or online marketplace, where farmers or municipalities can offer activities on and around their farms for tourism, or offer team events and recreational activities for businesses and other groups. On such a platform farmers can offer and promote activities such as prevention of shrub encroachment, building traditional stone walls, fencing, building troughs, mowing mountain meadows etc.

Spatial planning instruments and approaches may be used to tackle the risk of land abandonment where not only the viability of one isolated farm is analyzed and optimized but the viability of a whole region is considered through small-scale regional cultivation and management plans engaging farmers, enterprises and municipalities.



Programmes such as the Erasmus Programme could be a good way to connect young people to rural areas. In France for instance there is an initiative called Rural Erasmus (<https://www.insite-france.org/agir-aved-insite/les-missions-en-erasmuc-rural>) to encourage young people between the ages of 18 and 25 for a short mission in a village or other rural place.

10. Conclusions

- Land abandonment mainly affects inland mountainous and otherwise marginal areas in almost all European countries, its effects varying with local circumstances.
- Land abandonment as a process still ongoing is easier to confront than where the process of abandonment has been completed. In the latter case, after some years the lands lose the character of agricultural land and return to nature.
- Newly viable business models must be based on the perspective and attractiveness of adequate income
- New business models should also be winning cultural models, capable of attracting young people, consumers and the wider public.
- Successful produce has to represent the identity of the territory from which it comes.
- Finally, and certainly not the least requirement, is the passion, the ambition, the innovative capacity, the commitment of those who welcome the challenge to become independent, and have the desire for freedom that should be in the soul of everyone.



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