

## PROJECT FINAL REPORT



**Grant Agreement number: 265394**

**Project acronym: FARM PATH**

**Project title: Farming Transitions: Pathways Towards Regional Sustainability of Agriculture in Europe**

**Funding Scheme: KBBE.2012.1.4-03**

**Date of latest version of Annex I against which the assessment will be made: 2011-04-15**

**Period covered: from 1 September 2012 to 31 May 2014**

**Name, title and organisation of the scientific representative of the project's coordinator<sup>1</sup>:**

**Dr Lee-Ann Sutherland, James Hutton Institute**

**Tel: +44 1224 395 285**

**Fax: +44 1224 395 010**

**E-mail: Lee-Ann.Sutherland@hutton.ac.uk**

**Project website<sup>2</sup> address: [www.farmpath.eu](http://www.farmpath.eu)**

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<sup>1</sup> Usually the contact person of the coordinator as specified in Art. 8.1. of the Grant Agreement.

<sup>2</sup> The home page of the website should contain the generic European flag and the FP7 logo which are available in electronic format at the Europa website (logo of the European flag: [http://europa.eu/abc/symbols/emblem/index\\_en.htm](http://europa.eu/abc/symbols/emblem/index_en.htm) logo of the 7th FP: [http://ec.europa.eu/research/fp7/index\\_en.cfm?pg=logos](http://ec.europa.eu/research/fp7/index_en.cfm?pg=logos)). The area of activity of the project should also be mentioned.

## FarmPath Final Publishable Summary Report

### Executive Summary

The overall goal of FarmPath was to identify and assess future transition pathways towards regional sustainability of agriculture in Europe, and the social and technological innovation needs required to initiate and progress along these pathways. The research thus focused on ‘transitions in the making’, with the potential to have major impacts on mainstream farming practices at regional level.

One of the key contributions of this research has been the operationalization of the ‘multi-level perspective’ of transition theory for use in empirical field research. Analysis demonstrates that agriculture represents a ‘special case’ in terms of sectoral development: farms are engaged in multiple types of markets (e.g. food and energy production, tourism, recreation), limited by the productive potential of the land on which they are located, and strongly influenced by government policy at multiple levels. They therefore undergo multiple transitions processes simultaneously, and are subject to conflicting policies.

Twenty one case studies of regional ‘initiatives’ were studied:

- **Renewable energy production** (United Kingdom, Germany, Czech Republic)
- **Farmer collaboration** (Germany, Portugal, United Kingdom)
- **Alternative agri-food networks** (Czech Republic, France, Greece)
- **High nature value farming** (France, Bulgaria, Portugal)
- **Countryside consumption** (Portugal, United Kingdom, Bulgaria)
- **Reducing the environmental impact of farming** (France, Germany, Greece)
- **New forms of governance** (Bulgaria, Czech Republic, Greece)

Findings from these case studies demonstrated the importance of hybridity: engagement of actors across sectors to produce innovative production techniques, access to new markets, and change within existing governance systems. As such, innovation in agriculture often originates outside of the agricultural sector, and can be introduced by a variety of different actors. Encouraging cross-sectoral engagement and off-farm employment was identified as an important strategy for enabling innovation.

Findings also suggest that young farmers cannot be recognized as the main source of innovation in sustainability transition processes. Their engagement in the initiatives resulted from a combination of factors, particularly the economic attraction of farming and a desire to live in the countryside. However, there was considerable evidence that new entrants were important sources of innovation. Young farmers and new entrants are conflated in European policies and statistics; it is thus difficult to assess whether there is a ‘young farmer problem’ i.e. shortage of young people working in agriculture in Europe.

Following the study of different case studies, FarmPath applied a participatory, transdisciplinary approach to identify visions for the future of agriculture and land related activities, as well as the pathways to achieve those visions. Three clear visions emerged: farming competitiveness and profitability; conservation of the environment and natural resources; and increasing the connectedness between farming and rural communities. Although these visions were remarkably consistent between study regions, the mechanisms identified to address these visions varied widely, reflecting the different geographical, economic and political contexts in the regions. Further information these pathways, and measures that can be taken to progress along them, can be found in the FarmPath “Facilitating Sustainability of Agriculture at Regional Level” handbook, and “Regional Sustainability of Agriculture: Adapting Institutions and Policies to Enable Transition” policy brief. Both were presented at a joint final conference with the SOLINSA FP7 project in Brussels, December, 2013, to an audience of 100 policymakers, stakeholders and academics.

## *Project Context and Objectives*

### **3.1.1 Summary description of project context and objectives**

Over the past decade the transition towards increased sustainability in agriculture has been a central theme in the work of governments, NGOs and research institutions. Numerous publications, including the European Commission (EC) White Paper on Adapting to Climate Change (2009) identify the importance of increasing sustainability of agriculture in order to meet future challenges. However, despite the adoption of the notion of sustainable development of agriculture as a basic EC policy principle, it is becoming increasingly clear that changes are needed to ensure that agriculture in the EU can meet the increasing range of public goods and functions desired by European citizens (e.g. safe and high quality food, renewable energy and fibre production, maintenance of the environment, viable rural communities, recreational and amenity landscapes). At the same time, European farmers are dealing with fluctuating commodity prices, a changing subsidy regime, disease risks and outbreaks, extreme weather events, and a perceived shortage of young people interested in becoming farmers.

**In FarmPath, we propose that increasing sustainability of agriculture is best addressed by enabling flexible combinations of farming models, which vary to reflect the specific opportunity sets embedded in regional culture, agricultural capability, diversification potential, ecology and historic ownership and governance structures. We enabled progress towards this goal of increased regional sustainability by identifying and evaluating best practice in initiatives at farm and regional level, mechanisms to provide viable models for young farmers and new entrants, participatory identification of different future transition pathways and social and technological innovation needs and formalisation of multi-level policy recommendations based on this evidence.**

The definition of sustainability at regional level reflects a shift away from the notion that individual farms or farming systems can or should be expected to meet the full range of public and industry demands on agriculture. Instead, we propose that these demands should be met at a regional level, through flexible combinations of approaches to farming. The notion that sustainability is achieved at regional level not only takes into account that there will be regional differences in the forms and capabilities of agriculture. It also includes the tenet that the interactions between individual farm models and farming systems at the regional level are a key aspect of sustainability. Different approaches to farming can be expected to provide different public goods and functions (e.g. food security, employment, public access, energy crops), and they are expected to interact in complementary as well as conflicting ways (e.g. local food competing with organic food on supermarket shelves). However, what is decisive is whether the farm models present within a region interact in such a way as to meet the changing needs and demands of consumers, members of the production system and citizens (both within the region and more broadly across Europe) while providing socially and economically viable livelihoods for farm households.

The definition of sustainability as social and economic, as well as environmental, is consistent with current EC policies on rural development, which emphasise improving the competitiveness of the agriculture and forestry sectors, improving the environment, and quality of life (Council Regulation EC No 1698/2005), re-emphasised in the recently ratified Treaty of Lisbon (European Council, 2008). However, much of the recent research on increasing agricultural sustainability in Europe has focused on the environmental aspects of sustainability. While this is important in terms of meeting societal demands, it may have had the effect of reducing the social and economic sustainability of agricultural systems. This is reflected in the ageing of farming in some regions and the perceived shortage of young people (particularly women) who are taking up farming as a career and lifestyle choice. The quality of life and affluence associated with farming livelihoods, relative to lifestyles offered through other employment opportunities, has been identified as a key issue in farm succession. Mechanisms to provide viable models for young farmers are of specific importance to FarmPath. Acknowledging and promoting a diversity of farming models at regional level is expected to appeal to young people and new entrants to farming.

In FarmPath, sustainability of agricultural systems is defined as an ongoing, adaptive process of enabling farming households and members of the agricultural production and consumption chains to respond to the changing needs and preferences of consumers and citizens, through flexible combinations of farming models and provision of a suite of public goods and agricultural functions at regional level. In order to move towards increased sustainability, transition needs to occur. In FarmPath, transitions refer to important changes in functional systems. They involve several sectors or sub-sectors as well as a range of societal actors at different scale levels. Through the interdependency and co-evolution of these, society, or an important societal subsystem, fundamentally changes. A transition is thus qualitatively different from an incremental change that is limited in scope (e.g. does not affect a whole sector of the economy), in time (is only a fad and does not stabilise) or in space (only takes place in some region). Transitions are the result of long-term processes of fundamental change that incorporate processes of societal, ecological, economic, cultural, technological and institutional co-evolution. For a transition to occur different developments at the local, regional and national levels have to come together, causing a development pathway based on new practices, technologies, knowledge, institutions, social organisation and different guiding principles and values.

To do justice to the complexity and multidimensional character of choices, the assessment of alternative options needs to be a participatory process. Indeed, the system that is deemed desirable and thus the objective of transition will need to encompass different scales (of time and space), multiple dynamics and actors. Only through participatory processes is it possible to adequately address the legitimate multiple viewpoints as well as the uncertainty inherent in the alternative systems and alternative pathways to these systems. An important step is thus to identify and assess future transition pathways, i.e. envisioning sustainable future trajectories. Transition scenarios can be an important tool to provide a long-term perspective as an orientation for short-term action. Such scenarios build on the participative engagement of actors with diverse backgrounds which leads to new insights into the nature of the problems and the underlying causal mechanisms. As the process unfolds, such scenarios can be renegotiated and reshaped. The participative processes underlying the scenarios also serve as the basis for alignment, enrolment and mobilization of collective action necessary to initiate and maintain transition pathways. These future transition pathways are initiated through experiments, which are monitored and whose results are used as feedback to further guide the shaping of the transition pathway. FarmPath has undertaken processes of participatory visioning and scenario development, in order to identify and assess future transition pathways to sustainable agriculture, by and for regions, using a combination of bottom-up and top-down approaches.

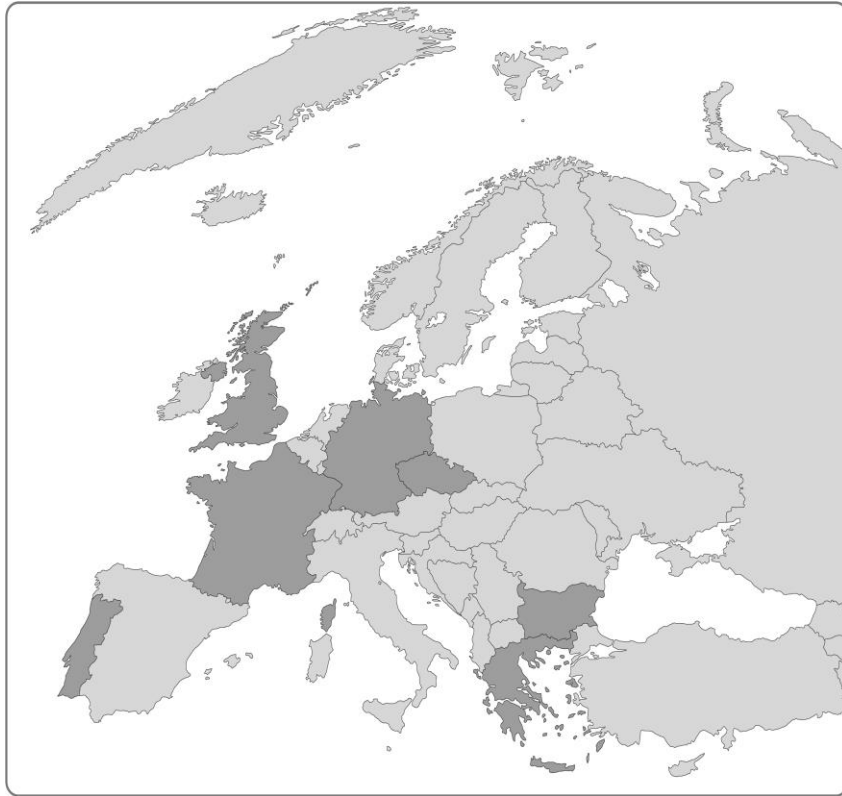
There is considerable evidence to suggest that transition processes are already underway in European agriculture, to respond to the new demands and opportunities for service provision and business development. These processes result from initiatives: innovations and actions taken to increase the social, economic and/or environmental sustainability of farming systems, production and consumption chains. Initiatives which are well established can lead to the establishment of new farming models, production and retail systems. FarmPath, we have built on the promising and well-documented range of initiatives at farm and regional level and in contrasting geo-political regions. FarmPath will assess how possible institutional arrangements, support measures and required socio-technical networks amongst actors within the farming community, policy, technology and wider society allow the transition of European farming to meet a broad range of sustainability aims. FarmPath research clarifies the social, institutional and technological innovation needs are involved in a further scaling up and dissemination of such promising farm development models at regional level, both individually and in combination. The over-riding objective is to identify the necessary and sufficient conditions for regional transition pathways to emerge and to develop from niches to broader transitions at regional and national level. Case study selection will thus include both cases where sustainable transition pathways were successfully initiated and are on-going, as well as cases where transitions were initiated, but did not proceed. FarmPath will also address farming initiatives and models from both 'alternative' and conventional farming systems.

Transition in agro-food systems will require the adoption and diffusion of new technologies embedded in new economic, social, institutional and cultural relations. Thus the analysis of the case studies and transition pathways will take a systemic approach, including identification of social and technological innovation needs and how these can be addressed. For example, technological issues (e.g. how farms and processors moved away from their oil dependence and other non-renewable sources of energy); new behaviours of consumers, farmers and local stakeholders; as well as processes leading to new institutional approaches and new governance partnerships, will be addressed. How the different developments interacted, across domains, space and time will allow better understanding of the possible means and levers for intervention as well as provide specific examples for new modes of governance based on open-ended collective learning. Policy recommendations from FarmPath thus include options for changes or additions to existing EU and national policies, new modes of governance, policy delivery mechanisms and targeted investment. In reflection of the multi-scale approach which was used, FarmPath provides evidence-based policy recommendations at different levels (EU, national, regional, farming systems).

The **objectives** of FarmPath were:

- 1) To improve our understanding of transition processes in European agriculture.
- 2) To provide an in-depth analysis of seven types of farming models and initiatives, through 21 case studies in seven European states
- 3) To assess future transition pathways for sustainable agriculture through the development and operationalisation of the concept of 'regional sustainability of agriculture'.
- 4) To identify mechanisms to provide viable models for young farmers, through an analysis of the engagement of young people in initiatives, evaluating the issues, preferences and challenges facing young people in agriculture at local, regional, national and European levels.
- 5) To develop evidence-based policy recommendations at farming system, regional, national and EU levels for identifying and pursuing future transition pathways and social and technological innovation needs.
- 6) To initiate a network of regional level stakeholders and organisations involved in transition processes in agriculture and to further equip, enable and consolidate it.
- 7) To provide resources for policymakers, academics and other stakeholders in order to develop their understanding and enable pursuit of transition towards regional sustainability of agriculture in their own efforts and organisations.

Primary data collection was undertaken in seven EU states: Bulgaria, the Czech Republic, France, Germany, Greece, Portugal and the United Kingdom.



FarmPath Field Research Countries

## ***Main S&T Results and Foregrounds***

The overall goal of FarmPath is to identify and assess future transition pathways towards regional sustainability of agriculture in Europe, and the social and technological innovation needs required to initiate and progress along these pathways. Specifically, the project focused on 'emerging transitions': processes that had the potential to significantly impact on sustainability of agriculture at regional level. The project was broadly divided into two phases of research: case studies of emerging agricultural transitions, and identification of transition pathways. Intersecting with these two phases was the ongoing development of a conceptual framework, and research on the role of young farmers and new entrants in transition processes. The consortium was comprised of nine research institutions from eight European countries. Research was undertaken in seven of these countries: Bulgaria, the Czech Republic, France, Germany, Greece, Portugal and the United Kingdom.

### **Conceptual Advances: Sustainability and Transition in Agriculture**

FarmPath employed an innovative interdisciplinary combination of theoretical perspectives from sociology, geography, political science, management, planning, technology studies, ecology and economics to develop a theoretical and evidenced-based conceptualisation of regional sustainability of agriculture, and the mechanisms needed to facilitate transition towards this ideal. FarmPath also had a strong transdisciplinary component so as to integrate scientific research and stakeholder's knowledge and preferences. Our general approach is one of conceptually driven research, undertaken through a combination of scientific analysis of transition in agricultural systems and participatory stakeholder identification of goals for agricultural systems and the best means to achieve them.

An overview of the state-of-the art in transition studies that are relevant and applied to agriculture has been compiled, allowing the positioning of the work in FarmPath in comparison with work on systems innovation and endogenous rural development. Key challenges of applying the multi-level perspective to agriculture have been identified, thus highlighting the contribution that FarmPath will make to both the scientific debate and policy practice.

Key conceptual challenges and lessons learned through FarmPath:

- Farms are very diverse, both within a region and between various regions in Europe. Indeed, farms differ in size, activity-mix and market orientation. This makes it difficult to identify a transition, which is often conceptualized as a shift from a homogeneous set of practices 'A' to a radically different, but also homogeneous set of practices 'B'.
- Farming practices are influenced by spatial configurations, e.g. how close a farm is to an urban centre or whether the landscape in an area is perceived to be attractive. It is thus unlikely that a whole region will change uniformly. Rather, various areas will face different opportunities and pressures (e.g. farmer markets, lifestyle farming). This makes it unlikely that there is one clearly defined transition in the whole region.
- In Europe, agriculture is usually understood as being 'multifunctional'. This implies that farms may be involved in several regimes, e.g. food production, energy production and recreation. If the analysis focuses on the transformation of one regime, important effects in other regimes might be missed.
- The case studies in FarmPath have showed that when applying the multi-level perspective of transition studies in a farming context, much care must be used to clearly define the various elements. This includes questions such as: what exactly is

the niche that is analyzed? In what way is the novelty it proposes radically different from the current regime? What regime does it aim to transform? Does it build bridges between two previously distinct regimes?

- The case studies showed the importance of building networks. This might take the form of 'tandems' where e.g. farmers and consumers, or wine makers and the tourism sector, pair up to co-develop and promote an alternative. Or it might take the form of actors from the niche who team up with sympathetic regime actors, creating a 'hybrid' network. In both configurations, the activities of the network create a new regional dynamic, which over time can enable a regional transition to sustainability.
- The case studies also showed that it is important to assess how a variety of niches that are active in a region collectively transform agriculture. Indeed, it might be that the sum of the changes initiated by the individual niches leads to transformative change, rather than the activities of one individual niche. As such it is important to avoid a sectoral approach to studying transitions, especially considering the territorial and multifunctional nature of agriculture. Transitions in farming might be initiated by the synergies in the activities of niches linked to food, energy and recreation that are active in a region.

## **Case Studies of Farming Initiatives**

The first half of the FarmPath project focused on identifying and assessing case studies of sustainability initiatives in selected regions. In total, 21 case studies were undertaken, in matched sets of three cases (seven topics were studied, each national team studied three topics). The purpose was to identify key drivers leading to the success or failure of the initiatives in different regional contexts, and resultant social, institutional and technological innovation needs. In keeping with the FarmPath emphasis on transdisciplinary research, the case studies were selected in consultation with regional national stakeholder partnership groups, and an international advisory group. Case studies were also 'clustered' across countries, to enable European-level analysis and for implications to be drawn. Table One contains a list of clusters and topics of the case study research.

FarmPath case studies spanned multiple time and spatial scales, and were diverse in terms of innovations. The range of cases show that new approaches to farming and farm management could originate in the innovative actions of farmers, non-farmers, institutional and market actors, or a combination. This also suggests that transitions do not follow a consistent pattern of change.

The learning element in the cases has been quite important, be it structured in a formal way or as an informal exchange of experience. The main topics have been around institutional and collaboration issues rather than simply technical processes. Learning often occurs through networks, which are central to the 'success' of innovations in becoming mainstream; all these have to be constantly renewed, since a transition towards sustainability has not an 'end point', but rather it is a continuous process of adaptation and change. However, networks can also constrain development. For example, the non-expansion of a new network beyond an initial 'core' to other community groups and external actors limits spread of the activity. Consequently, the initiative neither prompts the creation of spaces of exchange, nor facilitates a reflexive process and engagement of new stakeholders in joint learning and action.



**Table One: Case study topics and Regional Locations**

Selected Cluster	Initiative
Renewable Energy Production	On-farm wind energy production (Aberdeenshire, United Kingdom)
	On-farm biogas production (Vysočina, Czech Republic)
	On-farm biogas production in Wendland-Elbetal Bio-energy region (Germany)
Lifestyle farming	Sustainable rural lifestyle (Zhelen, Bulgaria)
	New management in small-scale farming (Montemor-o-Novo, Portugal)
	Lifestyle land management (Aberdeenshire, United Kingdom)
Certification programmes	Integrating rural tourism and local food production for sustainable development (Elena, Bulgaria)
	A regional label for quality products and environmental protection (White Carpathians, Czech Republic)
	A Local Quality Convention (Plastiras Lake, Greece)
Collaboration in agriculture	Collaborating for multifunctionality in the Montado silvo-pastoral system (Portugal)
	Formalised machinery and labour sharing (United Kingdom)
	Citizen shareholder capital for regional value creation (Freiburg, Germany)
Alternative Agri-food Networks	New farmers' markets (Plzeňský region, Czech Republic)
	Short supply chains around the city of Rennes (France)
	Integration of local winemaking and conventional tourism in Santorini (Greece)
High Nature Value Farming	New agricultural practices in protected areas (Bulgaria)
	Valuing the Mediterranean wild resources (Portugal)
	Landscape management in the St Amarin Valley (France)
Reducing the environmental impact of farming	Collective action to reduce green Algae (Brittany) (France)
	Ground water protection through organic farming (Mangfall Valley, Germany)
	Adaptation for survival: the case of peach producers in Imathia (Greece)

## Cluster-Specific Findings

### Key findings about On-farm Renewable Energy Production

On-farm renewable energy production can be considered a 'classic case' in relation to socio-technical transition studies, as it involves a socio-technical niche which remained largely unrecognized by both the agricultural and energy regimes until landscape pressures opened up a 'window of opportunity' in the 1990s. Over the 2000s, the niche has become increasingly integrated into both the agricultural and energy regimes.

- The rapid up-take of renewable energy production reflects the **business opportunity** it represented for farm businesses, technology suppliers, consultancies and national governments. Farmers view renewable energy production as a means of farm business diversification, and German and UK national governments view it as a means of achieving both economic development and climate change objectives.
- EU, national and regional-level **policies** have clearly had a major impact on renewable energy development, **acting as 'triggers'** to increase uptake of the respective technologies in all three case study regions.
- The **up-take of renewable energy production on farms clearly followed the implementation of long-term price supports**. It is notable that these supports have been primarily energy (as opposed to agriculture) oriented; the longevity of price guarantees (typically 10 to 20 years), is much longer than historical agri-environmental subsidies.
- The physical resources that farmers can access most easily (land, field crops and manure) are key to farmers' involvement in renewable energy production. **Farmers now face increased competition for these resources from other commercial actors**.
- On-farm renewable energy production contributes to decentralisation of energy production in general, but also **encourages intensification of agriculture**, because it tends to be located on large or intensive farms, because these farms can most easily afford (i.e. get loans) to install renewable technologies. Returns from diversification into renewable energy can thus act as a form of large farm subsidy.
- Farmers with digesters or wind turbines identify their **motivations as primarily towards securing a source of income** for the farm (as opposed to the more environmental motivations of pioneers). Electricity produced is primarily sold into the electricity grid for public use, rather than being used on farm.
- Access to the electricity grid to sell electricity is a key constraint in the Czech Republic and Scotland. Germany has addressed this issue by requiring grid managers to give priority to renewable energy producers.
- **Technological developments for anaerobic digestion and wind energy production have been minimal in the past 10 years**, focusing primarily on increasing efficiency and scale of production (i.e. wind turbines have got larger, a wider range of substrates for digesters), reducing impact (e.g. noise, odour) and increasing the accuracy of monitoring (preventing breakdowns).
- The **renewable technologies studied (anaerobic digestion and wind) have not become cheaper over time**; instead, technology prices have remained stable, and the costs of installation (labour, equipment, construction materials) have become

more expensive. This is in contrast to photovoltaics (solar panels) which have become considerably cheaper, potentially because of the larger market for them and cheaper purchase and installation costs.

- **Changes to price supports for solar panels have led to uncertainty over the longevity of price supports for other technologies.** The rapid up-take of solar panels (which was perceived as being primarily oriented towards receiving subsidies and associated with high electricity prices) has led to public concern over the utility of renewable energy price supports in all three regions, but particularly in Vycosina (the Czech Republic).
- **Both wind turbines and digesters are objects of social protest** owing to public concerns about amenity (visual and odour) and environmental impacts (for wind turbines, on wildlife; for digesters, the impact of monoculture maize).
- **Saturation in relation to on-farm anaerobic digestion and wind energy production appears to be occurring** before it has been implemented on the majority of farms, owing to physical limitations and public acceptance. There is a move toward 'community' renewable energy generation in all three countries, which may increase public tolerance, but progress has been slow.

### **Key Lessons Learned about Alternative Agri-Food Networks (AAFN)**

Alternative agri-food networks (AAFNs) are a new form of food production, marketing and consumption initiative based on an increased and more personalized link between producers and consumers. These networks most often occur at a local level and share the values of economic and social solidarity, environmental conservation and opposition to the logic of the dominant food-system. Thanks to their ability to answer the societal demand of 're-linking' around food, and because of their impressively fast development, AAFNs have been increasingly understood as a social trend. First initiated by localized small networks described as societal and commercial niches, AAFNs were progressively named and recognised during the mid-2000s as a coherent and significant phenomenon based on 're-linking' behaviours. AAFNs are mainly defined in opposition to conventional production, and developing as a reaction to globalizing trends.

- **All three initiatives were started at the local level by local actors.** In Pilsen, it was initiated by local promoters of farmers markets, who gathered local farmers in order to establish the first markets. In Rennes, the initiative started around local open-air markets (particularly the most important market of Rennes), thanks to initiatives of all types of farmers including young farmers. In Santorini, the initiative was started by local winemakers aiming to promote local (but also national and international) wine marketing. Findings thus demonstrate that a particular type of initiative can be started by different types of actors.
- **Networking was particularly important to the development of AAFN.** In Pilsen, collaboration between organisers helped to develop a list of producers ready to get involved in farmers markets; "outsiders" actors for example involved in gastronomy (conferences, competitions, exhibitions) and/or in other alternative food networks pushed forward the initiative. In Rennes, the initiative studied was generalised, by producers themselves, to other types of AAFN (e.g., box schemes, shops of producers, local products in public restaurants, marketing on the internet, pick-your-own). Those producers progressively gathered in thematic networks and associations, themselves constituting a strong regional Association of Associations (FRCIVAM), able to get involved in regional institutional decision making concerning their activities, and developing advisory services, networking, training and

researchers for their members. In Santorini, the initiative was pushed forward by the Union of Santorini's cooperatives, Santowines, which has approximately 2500 members (all the producers of the island: farmers and individual winemakers, of which 1000 are active. SantoWines now handles subsidies for farmers, processes and bottles quality wine, and has opened a supermarket for the direct sale of products to tourists.

- Some **socially-embedded limiting factors** to the development of the AAFN: In Pilsen in the beginning, the markets' organisers had fairly close relationships and shared their experiences. The situation changed later on, when the sector grew and competition between the organisers increased (due to limited number of suitable producers). This competitive relationship undermined the potential for regional and national support and confidence by institutions. In Rennes, after a period of very strong development of AMC during the 2000's, a question recently emerged: is the demand of consumers for local food products still exceeding supplies (as it had been), or are there now some signs of concurrence between producers, suggesting a period of stabilisation/saturation of the niche? The question is not yet clearly answered. In Santorini, at the farm level, the arrangements between winemakers and farmers are not fluid because the project of modernisation of the wine sector for quality production sold locally that is carried out by the wine producers, is contested by the farmers: most of the farmers still appear to be reluctant to follow the directions of the cooperatives or individual winemakers. The debate is related to the technical solutions for production, processing and marketing of wine, and to the best solutions to develop the identity and marketing of local wines (i.e., should it be based on the full respect of traditional and authentic practices, or should it rely on a new hybridation between those practices and of technical innovations?) This issue is related to a question of identity of both actors and products.
- In Rennes and Santorini (and possibly in Pilsen, in the future trajectory of the niche), the **enrolment of resistant actors into the niche is based on their progressive interest in the activity of the niche**. In Rennes, intermediary food chain actors joining the niche strongly benefit from their new economic and institutional independence towards the regime. Price negotiations with up- and down-stream actors, social recognition of their role, and social networking are strongly reinforced. The increasing presence of these actors will probably contribute in a decisive way to reinforce and stabilize the autonomy of the niche, thanks to the involvement of the full range of food chain actors. In Santorini, farmers involved in the niche earned twice the price for their grapes, were involved in a more reliable chain, as well as being involved in a renewed image of the quality of their product (even though the landscape and quality issues remain factors of disagreement).
- The examples of Rennes and Santorini inspire a broader observation: when directing energy towards its development and when coping with its success, **the niche needs to obtain the commitment of all actors involved in the food chain**, in other words, actors representing all of the sub-regimes in the food regime. If one of the categories of actors (one of the sub-regimes) is missing, the linking process of the niche appears blocked. The transition in Pilsen is too recent to allow for such an observation, and its future trajectory will be interesting to follow for this reason alone. The commitment of all sub-regimes seems to be a necessary condition for successful anchoring of the niche to the local-level of the regime.
- The **growing size of the niche provides the means to overcome resistance**: the more developed the niche becomes, the more it is able to generate and organize solutions. We have shown that these solutions can be based on the semi-forced participation of resisting actors, on a spontaneous movement of those actors who

initially resisted (for example when actors become more conscious of the benefits that involvement in the niche can provide), or on the creation of new actors who fill the gap left by the absence of resistant actors.

- Actors who join the niche from resisting sub-regimes appear satisfied because they **benefit from the niche's autonomy from the regime**. In return, thanks to the involvement of representatives of all sub-regimes, the niche reaches a more systematic structure and dynamic and thus reinforces the means of that autonomy. Both newly enrolled actors and those enrolling them, gain from this common dynamic. Indeed, the rules within the niche are permanently re-negotiated to ensure its key values, such as negotiated prices, retention of added value within the food chain and good working conditions. The development of a strategy of autonomy and the improvement of social, technical and economic conditions in the niche are possible because everything happens at the regional level. Thus, consultations and direct negotiations are possible within the network of local actors, a process which would not be possible at the macro-level of the food regime. Autonomy and quality, both components of the framework niches based on AAFNs, are inseparable from the regional dimension of such a transition, and can be understood as its key characteristics.

### **Lessons Learned on Reducing the Environmental Impact of Farming**

Natural resource management is one of the main challenges faced when designing policies aimed at increasing sustainability in rural areas, not only because of the complexity of natural processes but also due to complex interdependencies, spatial and temporal scale differences, and multiple policy dimensions involving a wide range of stakeholders. All three of the cases studied focus on the management of water resources, which had suffered at regional level as a result of agricultural intensification.

- In Lannion Bay, France, the change towards grassland fodder system was thought as sufficient to solve the algae problems. This **avoided a more radical change** of the existing situation i.e a change in all its elements (governance, politics, values, elites). However, at present, the algae problem is still not resolved: the technical action on rivers' water (which is now of good quality for drinkable water) is still discoloured. Recent research results suggested that the evolution of farming systems should probably be much more radical and connected to other actions in order to protect the environment of wetlands. This could drive to a new transition context in the future, with another analysis of the problem, another geography of the actors of the transition, and other types of technical and political answers. It is a potential evolution that is not yet started.
- In Mangfall Valley, the particularity of the transition was **the crucial role of one actor** since farmers were not well organised. This actor is closely involved and has as its main goal to sustain the drinking water quality of the city of Munich at a high level. The initiative has proved attractive due to financial incentives but also due to the fact that it constitutes a very good alternative in the dilemma of 'intensify or abandon' imposed by the global trend. Since 1992, when the initiative started, organic farming has been the mainstream in the water catchments in the Mangfall valley. There were, then, few other water suppliers in Bavaria and Germany that were operating in voluntary collaborations with farmers in the catchments. Twenty years later, most federal states suggest voluntary collaborations as well-functioning practice. Nevertheless, this type of arrangement has not yet been taken up into any Water Acts except the one of Lower Saxony.

- In Imathia, transition is characterised by the **strengthening of collaborative action and collective institutions**. Although its main stated objective was the enhancement of environment practices, the initiative addressed an important deficiency of the previously existing production system: the failure to ensure an acceptable (by the market) level of pesticide residues. The initiative was adopted to fit the needs of Producer Groups. The realisation of the potential of the initiative i.e. rationalisation of management practices and increased role of advice, both technical and managerial, led to a reorientation of the Producer Groups' goals since they could reduce environmental impacts and economic costs and improve quality.
- In the two latter cases the **technological changes** embedded in the initiative, contributed significantly, towards an improvement of the situation concerning the sustainability issue addressed by the initiatives, something that cannot be said for the Lannion bay case. This can be one of the factors that could explain the success of these initiatives.
- Another factor that could have contributed in the transition process in the Mangfall and Imathia areas, have been the **early adoption of the initiative by the existing actors and networks** while in the case of Lannion Bay, although the initiative has been the constituting reason for the formation and expansion of a new network, existing actors and networks have not been placed favourably for the initiative, but rather rely on the mere technological change for the solution of the acute problem.

### **Lessons Learned about High Nature Value Farming (HNV)**

The High Nature Value farming (HNVF) concept, which first emerged in 1993, recognises the relationship between certain types of farming activity and 'natural values', and that the conservation of biodiversity in Europe depends on the continuation of low-intensity, low input farming systems across large areas of countryside. HNVF is an extensive system and conforms to Natura 2000 regulations and other requirements covering protected areas. In general, it implies grassland management with benefits for biodiversity conservation and habitat protection. Its cornerstone is semi-natural pastures, meadows and orchards, as well as peripheral semi-natural features such as large hedges and copses (Opperman et al., 2012) The Bulgarian initiative focuses on an individual protected area (Natura 2000 zone). The French case focuses on a valley in a Regional Nature Park (RNP) in the Vosges Mountains. The Portuguese initiative focuses on three municipalities - Mértola, Barrancos and Almodôvar, within which there are several protected areas (including Natura 2000).

- HNV farming challenges the trend/aspiration for modern, competitive and high-profit agriculture in a globalized world and in the context of potential food insecurity; however the EU policy on HNV is not an end in itself. **Although it is a top-down approach it encourages bottom-up initiatives** adopting traditional environmentally-friendly land management practices for HNV farm and grasslands that ensure biodiversity protection and nature conservation in HNV areas in Europe.
- The involvement of various actors and stakeholders from both local and regional levels embedded in formal, informal organisations and/or other bodies and networks was a key element of the success of this innovation.
- A very important change in the three initiatives was the **strengthened process of collaboration and networking**. Partnerships built new bridges between actors with different interests, which resulted in collective action and boosted innovation. Strong horizontal networking was created in the French and Portuguese initiatives, integrating multi-level actors (from local to regional and even national in the French case). The networks facilitated the exchange of information, knowledge, and

- experience; built skills to help actors participate in decision-making processes, and increased trust and confidence.
- During the transition **new bridges were created between the agri-food regime and sub-regimes through activities such as recreation (France) and rural tourism (Bulgaria)**. In the Portuguese case, no new bridges were created at this level as Mediterranean Wild Resources traditionally had links to agri-food and forestry regimes, and with amenities provision (for example tourism and trekking) and biodiversity conservation.
- In adapting farming systems to multifunctionality, **farmers' identities were challenged** and changed. French farmers involved in the transition remained food producers but also shifted to being landscape managers; Portuguese producers also remained producers but seemed to perceive themselves more as agricultural entrepreneurs and/or service providers exploring high quality innovative products and services. Bulgarian farmers remained as commodity producers revealing, nevertheless, a trend towards increased enterprise and a shift towards becoming service providers.
- **Public demand for traditional quality food products was key to HNVF success**. This leads to the evolution of marketing behaviour and activities, and the use of local certification schemes. The initiatives facilitate mechanisms through which farmers initiate direct sales, shortening the producer-consumer chain. Farmers become more flexible and have a choice in planning and realizing their sales, seeking the best conditions and reducing their dependence on intermediaries. Currently, the three initiatives have succeeded in increasing local knowledge and know-how, reinvigorating awareness of quality local products and enabling responses to new consumer demand.
- One of the key lessons learned from comparing the three initiatives was the **crucial role of normative institutions and funding opportunities**, identified as key drivers in the emergence and development of transitions. To strengthen and make HNV farming more sustainable, continuous and consistent policy and measures are needed by the state institutions who are promoters of the EU policy at national and regional level. These are important for raising awareness, supplying information, knowledge and services of how to carry out HNV farming and why it is necessary to be implemented, so it is not perceived as a restrictive regime in the protected areas. However, this is a concern for the sustainability of these initiatives.

### Lessons learned about Farmer Collaboration

Collaboration, as opposed to conflict and competition, is a major pattern of human behaviour necessary for the production of goods and services (Fuchs-Heinritz, 2010). Individuals act together within a common context to achieve a common objective. From this general definition, it becomes clear that collaboration can take very different forms in terms of the number of actors involved; the intensity of interaction; the activities undertaken; and the social norms and values, framework conditions and objectives pursued. Furthermore, collaboration can be formal and/or informal. Cooperatives, particularly agricultural cooperatives, are a distinct organisational and regulated form of collaboration, generally with a solidarity-oriented, rather than profit-oriented approach. In agriculture, two key forms of collaboration can be differentiated: 'vertical cooperation' between agricultural producers and other businesses in sectors (for example, suppliers and processors); and 'horizontal cooperation' between agricultural producers (such as machinery rings) (Klischat et al., 2001).

- In the cases of CRIE Montado and Regionalwert AG, it was observed that **interpersonal collaboration between farmers (and other value chain actors)** increased in the early stages of the initiatives' development and as a result of their activities. Interpersonal and power relations are important, in particular, in the

development of bonding and trust, envisioning common concepts and strategies, and establishing functioning structures.

- **Leadership** has been identified as crucial for the success of collaboration in all three initiatives. This includes clear leadership structures on one hand, but also relates to personal characteristics of individual leaders on the other. A lack of (assumed) leadership was identified as an important factor responsible for the decelerating trend of CRIE Montado, whereas the strong dedicated personality of the founder of Regionalwert AG has been described as one of the most important success factors of the initiative.
- CRIE Montado contributes to **sustainability of agriculture by adopting an environmental rationale** in the context of individual farm projects. Furthermore, and more importantly, it also contributes to a re-invention of urban-countryside relations, sustainable farming, community development and a more human, creative and balanced territorial development. In the context of existing high levels of specialization, competition, and sectorial administration and markets, CRIE Montado illustrates the critical importance of collaboration in processes of transition towards regional sustainability of agriculture. Multifunctionality demands versatility and a level of detailed knowledge and know-how in multiple activity/sectors at the same time, which can best be addressed within collaborative approaches – which are at the core of this initiative.
- The **contribution made by machinery rings to the sustainability of agriculture** in the North East and Borders regions of Scotland **has been primarily economic**, in terms of providing a mechanism that helps to sustain the economic viability of farms through reduced costs and greater efficiencies in terms of the way that agricultural inputs (machinery, labour, commodities, training) are accessed across these regions. Although machinery rings are fundamentally based on collaboration and the generation of social capital across the regions, the consequences for social sustainability are mixed – including positive and negative effects on agricultural labour. For example, rings provide a means for young farmers to find work and gain experience in the sector; but at the same time, rings facilitate lower retained labour on farms, as farmers can access the ring's labour pool on demand. Currently, the impact of machinery rings on environmental sustainability is most limited. However, there are specific examples where contributions are currently being made (e.g. in the development of renewable energy production) and opportunities have been identified for machinery rings to coordinate smaller scale collaborations for the purposes of implementing local or landscape-scale policies relating to the environment in the future.
- Regionalwert AG Freiburg addresses regional sustainability of agriculture in several ways. Most important for the success of the initiative (and the most innovative aspect) is **the creation of new linkages between (regional) shareholders** who invest in organic farms and other businesses in the value chain within the region, thus providing capital for start-ups and investment. In addition, the initiative strengthens the regional organic agricultural value chain through different forms of collaboration among partner businesses including knowledge transfer mechanisms.
- **Learning** has played an important role in all of the initiatives and is relevant for the success or failure of the transition process. Two learning aspects are particularly important: learning regarding organisational functions and processes within initiatives; and learning on aspects related to agricultural management and sustainability. Machinery rings and Regionalwert AG have both institutionalized learning at different scales. Machinery rings have acted as a knowledge provider through advisory services and consultancies. Regionalwert AG has established an



entrepreneurs' forum for knowledge exchange among partner businesses and the Regionalwert AG Trust. The Trust's objective is to provide knowledge and support to other regions aiming to set up similar initiatives.

- The case studies show that the means used to facilitate collaboration can evolve over time and do not necessarily have to be introduced at the outset to contribute to the successful establishment of initiatives. They are also the result of the aforementioned learning processes. **Technical innovations** such as computer software or Direct Debit technology, and service orientation (such as convenient opening hours and ease of payments) introduced by the machinery rings have clearly increased the attractiveness of machinery rings for farmers. Opposed to that is the lack of logistics infrastructure, which has been identified as a limiting factor in the physical and material collaboration between farmers and other agricultural actors in the Regionalwert AG.
- In all three cases, **policies, particularly those aimed at fostering collaboration such as measure 124 (EAFDR 2007), have not played a significant role either in initiation or in the establishment of the initiatives.** On the contrary, the lack of policies or political action in particular areas which are perceived as problematic for the sustainability of agriculture has been seen as the main driver for the establishment of a niche. In relation to CRIE Montado, the lack of policies focusing on integrated/ multifunctional approaches, and in the Regionalwert AG case, farm succession and increasing external capital in farms, were the core drivers for the formation of the initiatives.

### **Lessons Learned about Countryside Consumption**

Countryside consumption can be understood as a driver of farm and farmland management grounded in quests for a rural lifestyle, and healthy food and leisure, which may or may not be closely linked to production. Increasing utilization of the countryside as a space of consumption (such as for amenity, living space, and leisure activities) has led to a shift in the role of production in relation to other land management activities, particularly in areas where production has become marginal. Countryside consumption definitively changes the way in which the actors concerned deal with farming, or involves the introduction of new actors into the farming sector. This particular form of farm management can be defined as lifestyle farming, where the rural landholder does not derive his/her income primarily from production (in other words the income generated from agriculture is not the main driver of land use and the value of agricultural production tends to be less of a determinant than other factors for farmer choices). Yet the lifestyle farmer may be, and often is, a producer and since he/she manages agricultural land, countryside consumption also has an impact on the management of the physical landscape.

- The main driver for this changing process is **the generalised demand in society for environmental, nature, health and well-being values.** However, although starting as a consumption-driven land management style, lifestyle farming is in some cases moving toward a stronger role in production, responding both to actors' aspirations and to the global crisis affecting food markets and family incomes and may yet be redefined again.
- **Local physical landscape features** as well as the location in relation to large urban areas clearly have an **impact on where lifestyle farming** is most likely to occur. Characteristics of the locale thus determine how, and if, this niche will occur.
- Lifestyle land management is also facilitated by the **increased accessibility of rural areas and mobility of individuals, coupled with IT advances** that make working from home more feasible.

- The impact in terms of area, in the physical landscape, is limited, but the maintenance of a living landscape in areas that otherwise would be prone to abandonment or simplification, should not be underestimated.
- There is a **strong impact on the rural communities**, as new people and new ideas come in and create new dynamics and networks, often more informed and aware of new society trends, than the locals.
- Lifestyle farms are **protected from commodity price fluctuations** and other risks associated with commercial agricultural production, but are more **vulnerable to changes in the housing market** and economy in general.
- The growth in lifestyle farming, in the Portuguese and Scottish cases in particular, is an example where change has occurred in the **absence of a formal ‘movement’** or policy initiative.
- **The agriculture sector does not appear to recognise countryside consumption**, and as such, it is growing without regulation or monitoring by agricultural policy-makers. A change which has the potential to impact on the care for the physical landscape, environmental awareness in rural communities, the introduction of innovations, the social dynamism, is left un-addressed and thus undervalued.
- In contrast, the housing sector, mainly the real estate market, is well aware of this process and is treating these **small-scale farms as highly valuable residential properties**. This further reduces the likelihood of the properties being purchased for commercial use.

The assessment thus demonstrates that the agricultural regime is missing two major opportunities. The first would be to strengthen its territorial role and responsibility for the management of natural resources as well as the physical space in rural areas – a physical planning role for the rural, which is strongly needed in the light of increasing resource scarcity and land use conflicts. This role has been present in the political discourse of the agricultural regime in Europe but to date it has been weak in content – as demonstrated by the increased dominance of the real estate regime in the cases studied. The second would be to embrace a leading and overarching role in supporting innovation by embracing the local autonomy and food quality agendas, reinforcing European diversity and regional specificities in the face of global production chains. This would support differentiation in relation to world agriculture and, therefore, could contribute to competitiveness.

### **Lessons Learned about New Forms of Governance (Local Certification Schemes)**

Governance structures can be defined as rules for organising activities in a certain context. Changes to governance structures result from the reciprocal interactions of actors, agencies and structures. This is not a new principle in understanding transition processes (Kabele, 2005) or indeed social processes more generally, but the emphasis here is on how these changes occur on multiple levels. This cluster focused specifically on the interactions between new forms of horizontal governance emerging in local quality and certification ‘niches’, and the vertical forms of governance characterising the agriculture and tourism or environmental protection regimes in which these niches develop.

- **Actors from outside the region** (including local people who return following years employed elsewhere) **influence the origin of the initiatives**, challenging the existing status quo in terms of activities implemented in rural development. The entrance of the actors from outside (the reason for their involvement in originating

the initiative) can be the result either of their ideology (the Czech case - environmentalists) or the experience (Greek case - entrepreneurs). In all cases they bring new views, ideas to the locality and develop new networks. They also operate as bridges for existing local networks. It also means the initiative starts with newcomers (who are, however, not primarily newcomers to agriculture).

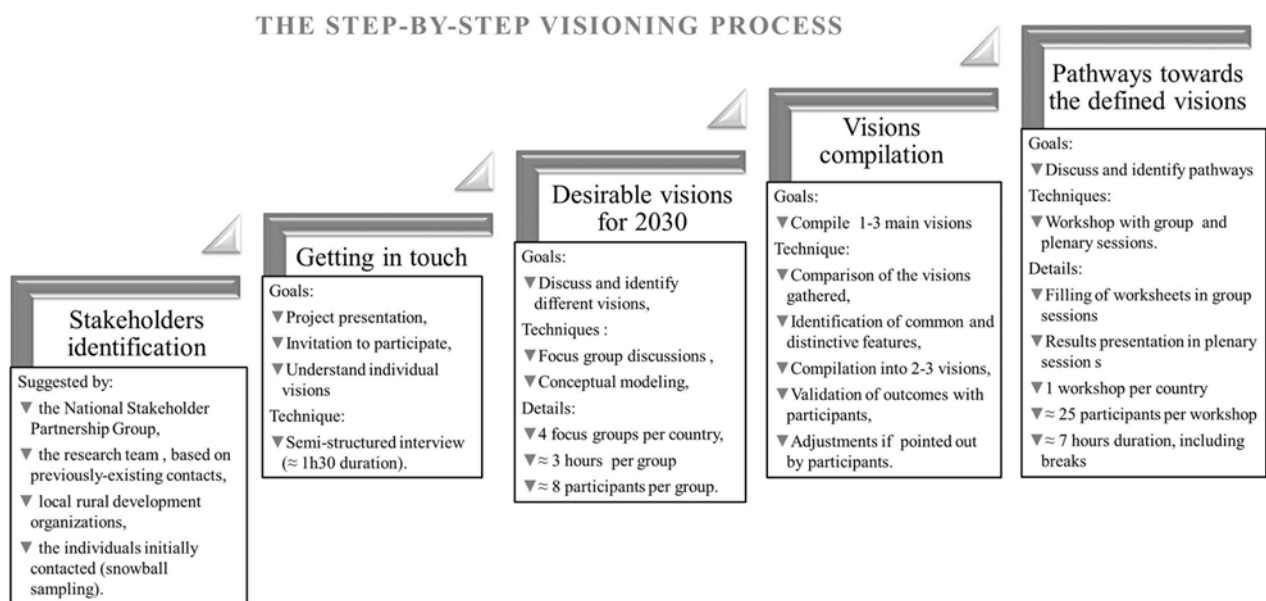
- Through their activities, **the actors in the initiatives address functions of the CAP**. The non-farming actors (including actors from outside) are those who highlight environmental protection or rural diversification functions. Farmers continue to focus on the agricultural production function. Such amalgamation of the actors in the initiatives is important to bring farmers and non-farmers together. It also gives higher credibility to the initiatives (it is not only one sector or one social group initiative and therefore has the opportunity for greater public awareness and support).
- **Conflicts/disagreements among the farmers and non-farmers in the initiative emerge**. This is because of different views and aims (the farmers are mostly more economically driven: sustainability for them means to be economically profitable, whereas the environmentalists prioritise environmental protection which sometimes contradicts farmer interests).
- **Horizontal networking which replaces traditional top-down government** (often related to being accustomed to subsidies) is an important type of new form of governance. The networks are important to transmit the information through the actors who are the bridges (mostly the actors from outside). The networks facilitate collective action.
- There is a **risk that the networks might become closed**, with the initiative only representing and benefiting those already in their associated networks. People outside the network (outside the initiative) are not influenced (i.e. inclusion of some people results in the exclusion of others).
- The initiatives indicate the **interest in quality issues** related to the regions which are linked with new forms of governance (networking). Every initiative introduced its quality scheme (Local Quality Convention in Greece, Label “Tradition of White Carpathian” in Czechia and certification-labelling scheme in Bulgaria). The schemes are oriented to support the use of regional/local resources. They are these regional quality certification schemes influencing the search for the new forms of governance related to networking (the schemes necessitate building trust and networks are important tool to transmit trust).
- Various forms of “anchoring” have been encountered among the cases however **most of the links between new and mainstream practices are not strong**; this is most visible in the Greek case study. Hypothetically, the incomplete forms of anchoring have deprived the initiatives of internal coherence and strength; in that sense those links are still vulnerable.
- An important role is played by international experience in the case of new EU member states (Czechia and Bulgaria) – **the initiatives are influenced by the experience from abroad** (EU policy or similar initiatives abroad).
- The Czech initiative developed its own micro-financing mechanism (the money generated through the implementation of the first grant is used to support further small scale grants)

- There are clearly **some elements of the LEADER approach implemented by the cases in terms of governance** (bottom-up, innovations, integration of various sectors, partnership, cooperation decentralised management and networking), although the Czech initiative does not participate in LEADER approach. This suggests these LEADER elements are more general than only related to this approach.
- After the successful introduction of a novelty and the establishment of a quality scheme (Greece; certification scheme in Czechia), the main actor (the regional development agency) restricted its animating and facilitating activities mainly to the members of the “core” network; the initiative neither prompted the creation of spaces of exchange, nor facilitated a reflexive process and engagement of new stakeholders in joint learning and action. Consequently, the opportunity of the initiative for further learning was restricted. The Czech case suggests similar development because it mostly addresses those familiar with the initiative and not all people in the region (i.e. they stand apart).

## Transition Pathways to Regional Sustainability of Agriculture

Following the study of different case studies, FarmPath applied a participatory, transdisciplinary approach to identify visions for the future of agriculture and land related activities, as well as the pathways to achieve those visions. This second phase of the research was further developed in seven of the regions where the niches studied are based (with one region per study country). The aim was to involve stakeholders and researchers in each region in the co-construction of visions and pathways as a way to grasp the potentialities and constraints faced by agriculture regionally, and to identify mechanisms, at different levels of governance, that can support a transition towards sustainability. The involvement of NSPGs (National Stakeholder Partnership Groups) from the beginning of the project, guiding and supporting decisions taken on project development in each region, represents a form of transdisciplinarity. Through the visioning process, stakeholder involvement was increased, moving the process further towards achieving the aim of transdisciplinary research; co-construction of research findings within a well-defined participatory approach.

Formal protocols for a five stage process were developed by the WP leader, and implemented in each research country. These stages are elaborated in Figure 1:



**Figure 1: Five stage implementation Approach**

The visioning processes were undertaken in one region in each research country, where at least one of the case studies from the first half of the project had been undertaken: Aberdeenshire (north east Scotland); Plzen region (Czech Republic); Freiburg Region (Germany); Montemor-o-Novo (Portugal); Pays de Rennes (France); Pazardjik and Plovdiv (Bulgaria); and Imathia (Greece). The goal was to convene a representative group of rural interests, including researchers, to answer two central and sequential questions:

- What is desirable for agriculture and other land-based activities for the region in 2030?

- What needs to be done to achieve this desirable future in 2030?

These two questions were formulated with different concerns: 1) to make it possible to create a distance from present conditions, construct visions which are detached from present constraints, and which could result from radical changes, (in other words transitions); 2) to think about a future which is far enough away to make a transition possible, but still close enough to be relevant for those involved; c) to consider agriculture as well as other activities that currently shape rural land use and the functioning of rural communities; 3) to identify the visions and also the pathways to enable visions to be achieved; and 4) to identify the need for these pathways at different governance levels, including the regional level where discussions were undertaken.

The research team defined the groups of participants to be considered according to the aims of FarmPath and the processes in focus. The final groups were:

- Official Interests (OI). Individuals involved in government and non-government activities related to rural issues; environmental organisations, farmer's organisations, established NGOs, business associations, unions, local authorities, national policy makers, etc.
- Run the Land (RL). Individuals implementing policies through land management, therefore including: farmers and land owners, hobby farmers, businesses associated with agricultural production, those responsible for protected areas, etc.
- Young Farmers (YF). Farmers under 40 years of age who possess adequate skills to set up an agricultural holding for the first time, or are the head of the holding. This definition follows the one used in the EU rural development regulation. YF could be aggregated in the RL group but the separation was intentional to enable an assessment of whether age and accumulated experience in farming would generate different perspectives.
- Those Who Benefit from the Land (BL). This group included end users, recreational users, health-related charities, community well-being and education practitioners, social care workers, residential associations, consumer organisations etc.

More than 50 visions were gathered across the seven European regions. Even considering the large differentiation of the regions, there were many similarities in the way these visions could be grouped using their central foci. One group of visions can be summarized as the intensification of production, neo-productivism, farming competitiveness and profitability. Within these visions, environmental constraints were expressed, but the focus was on farming production and productivism as a key strategy. Another group of visions (three of the visions identified) related to farming, but were centred on the environmental or conservation agenda, with the quality of the landscape and of the environment or natural resources as an expression of the desired outcomes. Finally, a third group of visions (comprising eight visions) focused on rural communities, a lively countryside, networks and close connections between the urban and the rural, strongly emphasizing rural values and lifestyles. Many visions were primarily centred on one of these three dimensions, but also included elements of others.

**Table 2: Vision Typologies**

Vision typologies and key points of each vision created				
CASE STUDIES	Intensification of production, neo-productivism, farming competitiveness and profitability		Farming centred on a conservation agenda, landscape quality as a desired outcome	Lively countryside with vibrant rural communities, and strong rural-urban networks. Strong reinforcement of rural values and lifestyle
<b>Aberdeenshire (North East Scotland)</b>	Farm resilience, profitability, public payments for non-market goods, respecting environmental standards.		Food security, re-connecting people with land; diversified farms, environmentally friendly; reduced fossil fuels.	Connected communities, urban-rural networks, innovative housing, infrastructure.
<b>Plzen region (Czech Republic)</b>	Food production, economic viability, protected domestic markets, higher status of farming, food quality.		Prosperous countrysides, prominent small scale production, rural tourism, cultural landscape.	Strong social dimension, cooperation between farmers, direct support of rural living for small farms and young farmers
<b>Freiburg Region (Germany)</b>	‘Regional competitiveness’, ‘environment-friendly management’; energy conservation and production		Cultural landscape: society values agriculture. long-term policies, economic viability	People centred agriculture, ‘sustainability’ and ‘individual self-responsibility’. Closer relationship between society and agriculture.
<b>Montemor-o-Novo (Portugal)</b>	Intensification of production, economic viability. Safeguard the Montado system, better technology, new rural identity.		Preserve Montado system, regional trademark, new mind-set and identity, cooperation, strategic planning, training.	
<b>Pays de Rennes (France)</b>	Large competitive farms, farmer-managed processing, no urban sprawl		Small farms, diversification of production and rural activities, alternative market channels, cooperative organisation, micro-industry, energy production.	
<b>Pazardjik and Plovdiv (Bulgaria)</b>	Efficiency, low environmental limits, new tech.	Specialization, intensification, exports.	Economic efficiency; cooperation and interaction social cohesion, local brand, direct marketing. Better quality of rural life.	
<b>Imathia (Greece)</b>	Modernization and specialization of farming. Establish quality brand name.		Biodiversity, specialisation, training, collaboration, quality products.	Integrated rural development; environmental spatial planning, natural resource protection cultural heritage management; better quality of life.

The pathways necessary in order to achieve these visions reveal a much wider diversity of concerns. The discussion in the final workshop, in each of the regions, resulted in a large and multiple list of pathways, which can be summarised:

- maintenance or re-emergence of farming activities;

- innovation in farming;
- new concepts of farming, farmers and rural areas; and
- overall policy and institutional change.

The maintenance or re-emergence of farming activities means that regardless of the farming system, there are certain current features considered to be essential to maintain, or re-activate, the social and economic role of agriculture. It was felt that this could be achieved through the development and maintenance of farming infrastructure and services, the economic viability of farming activities, well-planned land and farming succession, and closer interconnections between farming, policy and research.

Innovation in farming was considered achievable through innovative mind-sets and practices, and through the use of new techniques and technologies, practices and network connections; all of which were considered necessary for the future sustainability of agriculture and for other land-based activities.

'New concepts' referred to the need to acknowledge the shift away from production as the sole driver of land use and rural dynamics towards a complex interplay of other drivers, such as countryside consumption, or landscape and nature conservation. This pathway focuses on the multifunctional nature of the ideal transition and the need for multifunctionality to be acknowledged by public policies, as well as in the recognition of the range of actors involved in decision-making and management. The conditions required for these new concepts to spread are 'reshaped relations' between farming and the wider public, based on the attractiveness of rural areas, the trend for 'going local' (for buying locally produced goods), and for farming to be reintegrated into the local community. Multifunctionality was also seen as a central concept for farming and rural areas, with integrated actors and strategies.

Policy and institutional arrangements were those conditions that must be established at the macro level which frame the activities to be developed in rural areas. These arrangements correspond to the different sectors and strategies transferred into activities and legislation at different scales. For example, targeted rural investment and changing farmer mind-sets regarding the involvement of local communities were needed in order to gain Scottish Rural Development Programme (SRDP) funding. It was felt that these arrangements are best achieved through coherent policy-making, regulation, funding, institutions, and integrating understanding of, and prioritising, global policy issues.

Although the 'desirable' futures showed remarkable similarities across the study regions, the wide range of actions suggested indicates the importance of contextualized intervention and action, adapted to the characteristics and needs of each region. In such a diversified rural Europe, this outcome could be anticipated, yet it is still striking, nonetheless. The margin for flexible regulations and tailor-made solutions is increasingly small, constrained as it is by international agreements and European policy making, together with the growing globalization of markets and models. The results show that the opposite is considered necessary; that in fact, specific solutions and combined actions are required for sustainable pathways.

### **Young Farmers and New Entrants**

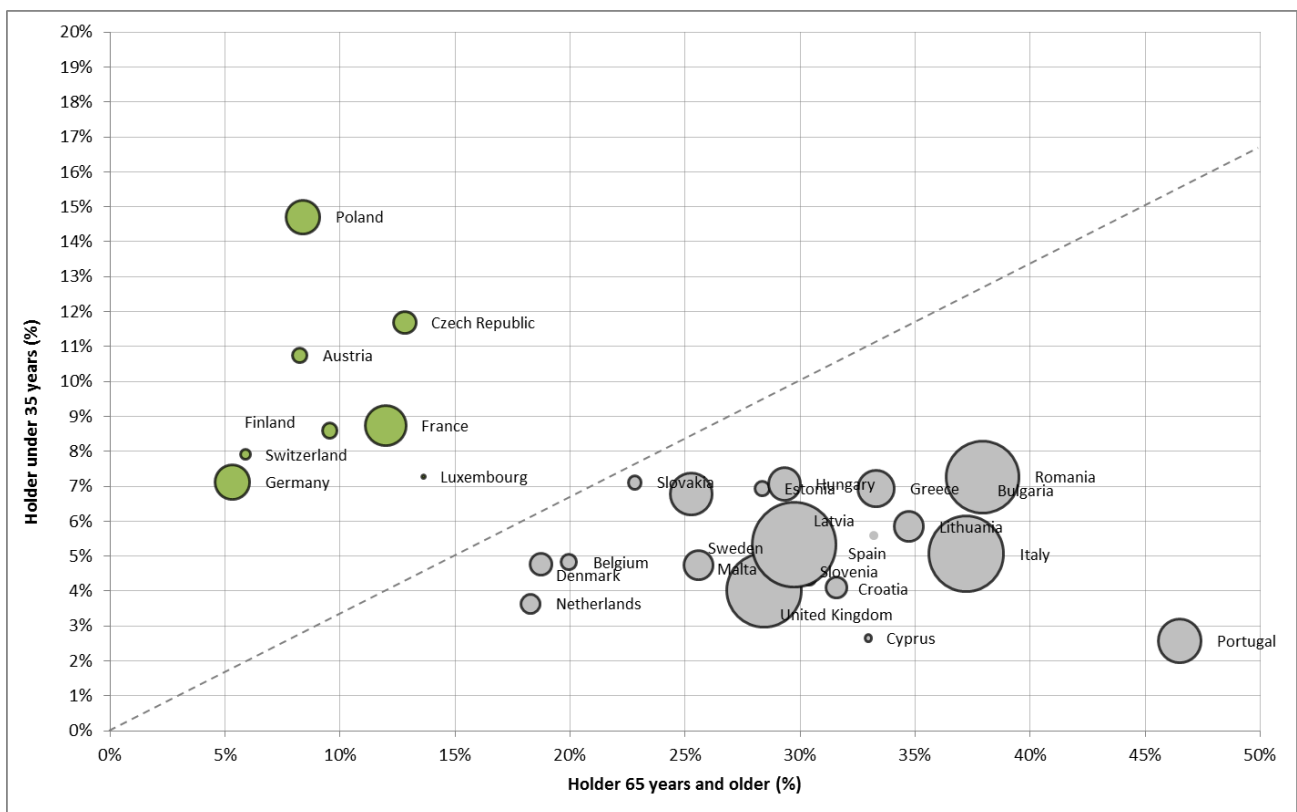
One of the underlying research questions addressed throughout the FarmPath project was the role of young farmers in sustainability transitions. There is widespread concern in European policy circles about the perceived shortage of young farmers in agriculture, due to their perceived role as innovators in agricultural systems (DGIP, 2012). The FarmPath research on young farmers included new entrants and farm successors, owing to the emphasis within the academic literature on the role of farm successors in farm business development. FarmPath research on young people



in agriculture involved literature review, analysis of Eurostat figures, and target empirical research within the case studies and visioning processes.

In the literature review, researchers found a major discrepancy between European policy documents and statistics, which emphasise young, new entrants to farming, and the academic literature, which argues for the importance of farming successors to on-going farm business development. In particular, recent European Commission documents define young farmers as new entrants, thus excluding both successors and new entrants which are over the age of 40. It is therefore difficult to assess the scale of the perceived 'young farmer' problem, as statistics do not include successors. Based on the empirical evidence from the project, it is evident that the two groups, young farmers and new entrants, differ in their needs thus making measures that do not distinguish between those two groups less effective.

Analysis of Eurostat statistics on sole holders demonstrated considerable regional variation, with holders of 35 years and under ranging from 2.5% in Portugal to 16.8% in Poland (see Figure 2). In general, the more common large farms are in a given European country, the more likely it is that farms will be run by young farmers. In line with this, the academic literature suggests that farms which are commercially successful (typically larger farms) are more likely to have successors. This suggests that the perceived lack of young farmers is related to the profitability of farming in the EU.



In the 21 cases studied in FarmPath, young farmers appeared to play less of a role in innovation development than anticipated: although they were very important in some cases (e.g. alternative marketing channels) they were marginalized in others (e.g. renewable energy production, where only farmers with significant financial resources could successfully participate).

- Young farmers and new entrants, despite being enthusiastic about renewable energy technologies, are largely excluded from renewable energy production owing to the high

investment costs. The economic opportunities of renewable production may facilitate farm succession on those farms able to invest in it.

- Young farmers and new entrants were important in all three alternative agri-food network case studies, through gaining visions of potential abroad (Czech case) and new ideas from urban education (Greek case). In Rennes, France, the role of young farmers and new entrants is identified as crucial for the development of AMC. Five types of new entrants and young farmers were identified regarding their contribution to the transition (e.g. involving new entrants in family farms, sometimes with very slow and progressive settlement process, rather in vegetable production; and new entrants starting more rapidly, and dedicating to organic farming). Four elements were then identified as necessary to the success of those new entrants and young farmers involved in AMC marketing channels: structured networks of farmers sharing an alternative vision of agriculture, new contents of education programs for farmers, a structured social demand of citizens for local products, and adapted public policies (which mostly appear at the regional level).
- In all three HNMF cases, young farmers are important actors in the implementation of the HNF and its agri-environmental measures and practices. They appear more sensitive to issues of environmental protection and are more willing to take risks and to undertake new initiatives. The young farmers and new entrants were the main drivers in the French case study. They initiated many of the partnerships in the collaboration process (e.g., the formation of the association “Agriculture and Landscape”); they created the dynamic in the local agriculture contracted under the AEM etc. However, in recent years they have met difficulties due to the market saturation and more limited access to new lowlands. In the other two cases there are not many young farmers involved, but in the Portuguese case they are more interested in HNF farming than those in the Bulgarian case, where young people are more attracted to intensive farming.
- Farm succession was a particularly relevant aspect of this in all three collaboration initiatives. For example, it was found that machinery rings provide opportunities for farm successors by being ‘supplier members’ to the ring; which allows them to work on the farm when required and also supplement their income by working as a contractor or labour provider to other farms at other times. Also, the facilitation of farm succession is an objective of Regionalwert AG Freiburg, which has happened in context of two of the nine partner farms. Although young(er) farmers (and new entrants) are members of all three initiatives, they don’t play a particular role within any of the organisations.
- The local certification schemes assessed did not directly influence young farmers. They are parallel to the initiative (the structure of the farm (family farm or corporate farm) plays a more important role). New entrants were important in starting the initiatives, but these individuals were not necessarily farmers.
- In all three countryside consumption cases, ‘lifestyle farmers’ were predominantly new entrants to agricultural land management (such as people who have an urban job, in Aberdeen or elsewhere, and bought the farm as a place to settle).

New entrants were thus found to be very important in most of the cases, as they brought with them new ideas for how farms could be managed and systems could be structured. In many cases these ‘new entrants’ were not young (i.e. they had undertaken a career outside of farming prior to becoming a farmer). They were also not necessarily ‘farmers’ – some were new rural residents who purchased land for amenity reasons, others were rural residents who became activists in support of particular innovations.

The definition of 'farmers' and 'new entrants' were brought into question in several cases. Where land managers were primarily oriented towards amenity, for instance, they were not typically viewed as 'real' farmers by themselves or their neighbours. Although some new entrants had no farming experience, others had been raised on farms and returned to these later in life (e.g. following a professional career). Farming successors were also important to some innovation processes (e.g. driving the up-take of renewable technologies). Owing to the importance of non-farming experience to innovation, rural young people should be encouraged to work off-farm and seek urban employment, and return to the farms later in life.

Policy measures specifically intended to assist young farmers and new entrants to become established were not found to be of particular importance to any of the cases studied.

Participatory workshops with the representatives of the YF and NE groups identified specific visions for the future of agriculture. These visions included keeping family farms as a major organisational form using mixed farming (plant production together with animal husbandry), a higher diversification of activities, production with high added value, and distribution through short food supply chains, which together are seen as a prerequisite for improving the income derived from agriculture.

The visioning workshops also demonstrated that, in many countries, agriculture and farmers suffer from low prestige. FarmPath policy recommendations thus emphasise communication about agriculture and farmers' roles in rural areas be improved. More generally, there should be enhanced education in the areas of technology, environment and business skills. Evidence generated in the project highlighted the clear demand of young farmers and new entrants in these areas. Living in, and the engagement of young people in, the countryside goes hand in hand with quality of life in these areas. Increasing the quality of life in the countryside can thus been seen as a major opportunity to help prevent the outflow of young people from rural areas.

Findings support the claim that the shortage of young farmers is generally related to the presence of entry barriers, the presence of exit barriers, low productivity in agriculture and inter-sectoral labour force movement in the intermediate age classes. The key condition for young people entering agriculture is that farming allows them to generate a stable and adequate income. It is thus recommended to improve income from farming, especially from farming on small farms through support for diversification, part-time farming and existing payment schemes.

## **Institutional Support Needs and Evidence-Based Multi-level Policy Recommendations**

Research teams involved in FarmPath field work identified institutional support needs and policy recommendations for different levels and actor groups. Policy workshops with relevant national and regional policy actors were conducted in the seven countries to verify and revise these recommendations. The primary recommendations were as follows:

### **To improve farm and regional-level innovation, national and European funders should:**

- Ensure that sufficient funding for any knowledge access and transfer activities are available, particularly for those focusing on the sustainability of agriculture.
- Take an active role in improving facilities for education and training and the re-establishment, and creation, of accessible rural extension services.
- Ensure that the conditions of funding require the combination of investment measures with the use of advisory services in order to ensure that investment measures are contributing to sustainability.
- Set up platforms that promote communication and connections between research institutes, associations and economic sectors.
- Place higher priorities for agricultural research in their strategies, and combine this with active installation and promotion of research services.

### **To develop broad actor networks:**

- Support integrated regional development with a long-term planning horizon, sufficient funding and implementation support.
- Provide support for innovation-oriented clusters and innovative cooperation models.
- Specifically, it is recommended to continue the support for LEADER-type approaches toward integrated regional development, and to expand their thematic scope.
- Set up an institutional framework for farmer cooperation and ensure adequate implementation processes for successful collaboration, e.g. through facilitators.
- Introduce specific measures and incentives for collaboration and auditing of cooperative enterprises.
- Provide training for farmers on cooperative management and governance issues in order to overcome reservations regarding cooperation.
- Fund access to professional mediators' and facilitators' support for agricultural co-operatives.

### **To reduce the administrative burden on farmers:**

- Decrease the administrative burden on farmers through changes to the organisational set up, e.g. through the provision of a 'fast track', and set up 'one stop shops', for farmers where they may deal with all administrative procedures and receive technical advice.

- Address the issue of unfavourable advisor-farmer relations through the installation of a body of trusted and knowledgeable long-term staff in advisory organisations through long-term funding (instead of short term, topic based, advisory projects):
- Develop a 'helping and coaching culture' by providing training to advisors on practical farming issues.
- Ensure a clear distinction between advice provision and regulatory bodies.

**Recognise and develop measures to counter the environmental impacts of economic policies:**

- Improve, through training and advice, the knowledge base of farmers about externalities in terms of control, monitoring, and sanctions.
- Develop and require the application of realisable farm accounting systems that include valid and litigable criteria for the judgement of environmental and social aspects.
- Involve European and national policy makers, farmers' associations, agencies in charge of national farm accountancy systems as well as banks, in the implementation of activities.
- Provide income instead of cost recovery (combination of AEM with incentives provided by the market; e.g. in the German case study on 'ground water protection through organic farming in the Mangfall valley', an additional payment by municipal authorities serves as a conversion incentive for farmers).
- Create a more flexible co-financing system provided by EU member states and regions in order to make it more attractive to offer corresponding measures.
- Reduce existing incentives for developments that are harmful to the environment.
- Develop a more effective ex-ante impact assessment of the new CAP and rural development measures.

**To improve the image of agriculture in society:**

- Improve communication about agriculture and farmers' roles in rural areas, e.g. through funding agricultural shows or engagement in schools, thus maintaining the perspective of farming are key for the economic, environmental and social sustainability of rural areas in Europe.
- Enhance the recognition of agriculture in society as a valued and important occupation by legitimizing public policy support, e.g. through campaigns, training and advice, and improve communication between public administration and citizens.
- Expand the school curricula (e.g. on-farm learning experiences for children and youths), so as to provide a corresponding increase of financial resources.
- Prioritize rural infrastructure on the basis of actual needs(e.g. roads, water-efficient irrigation infrastructure, sustainable and smart grids, and agricultural waste management;
- Ensure prior assessment of all social, economic and environmental effects of closing rural services and infrastructures, e.g. medical services, schools etc., and consider rearrangement and creative solutions to fit local people's needs.

### **To improve multi-level governance:**

- Enable cross-sectoral and cross-level coordination of strategies, policies, programmes and measures
- Reduce conflicting goals and trade-offs within such approaches. Renewable energy production in the agricultural sector provides a prominent illustration for such conflicts as it appears, from the 'Renewable Energy Production' cluster case studies carried out in Czech Republic, Germany and Scotland, that the sustainability impact has only been considered in a fragmented manner without an integrated perspective of all dimensions of sustainability. For instance, the ecological impacts of renewable energy production were largely neglected, resulting in increasing land consumption and monocultures associated with energy crop cultivation. However, renewable energy production, through its dependence on support and corresponding vulnerability to policy changes, has also proven to be at risk of being economically unsustainable.
- As a more general recommendation addressed to national ministries, regarding regionally sustainable agriculture, it is proposed to connect agricultural issues to a more transversal policy (water management quality, environment and natural resources, food models etc.) and the related broad range of stakeholders in the future Common Agricultural Policy.

### **Regional and local conditions should be considered in policy design and implementation:**

- Develop a coordinated cross-level and consistent cross-sectoral framework of national policy visions as well as regional and local strategies and measures.
- With regard to strategic goals at various policy levels (e.g. agri-renewables strategy), create a longer term political vision based on an integrated ex-ante (sustainability) impact assessment and regional pilot projects (e.g. as set up in the Scottish Land Use Strategy to implement mechanisms for the stronger integration of rural, regional and sectoral policy design).
- In the targeting of support for renewable energy production, the agricultural sector, but also broader rural development potential should be taken into consideration, removing the bias towards corporate operators. In the past, quantitative targets (for shares of renewable energies) were set and pursued without considering (in sustainability terms) the process and actors involved in their attainment.
- The strategic goals set at various levels should be implemented in a better coordinated manner. National-and regional-level platforms for institutional exchange are proposed in order to solve goal conflicts.
- Regarding monitoring and evaluation, recommendations include a careful ex-ante impact assessment, effective monitoring as well as flexible fine-tuning over time. Measures initiated by higher (i.e. EU, national) levels should be made subject to an assessment of their lower-level (regional, local) impacts (using relevant regional- and local-level criteria).
- Monitoring and evaluation of the existing policy and strategies should focus on processes and outcomes, consistently linked with sustainability objectives. More measures with result-based payments should be introduced, ensuring a multi-dimensional sustainability perspective.

**To enable regional differentiation:**

- Take into account regional and local conditions in policy design and implementation.
- Create a favourable environment for stimulating lower level movement, through promoting and enhancing effective participatory approaches engaging local and regional actors, e.g. in the design of strategies, programmes and measures.

**Enable regional marketing approaches:**

- Foster consistent marketing strategies that promote the regional features as well as quality and diversity of regional products, involving professionals' and consumers' organisations, collective farmers' marketing initiatives, research, and NGOs.
- Within the above-named strategies, set up regional brands, including regulations for the related certification processes.
- In order to improve consumer-producer relations, initiate training and awareness campaigns sensitizing consumers to regional specificities (e.g. on-farm visits for schools).
- In order to increase producers' marketing skills, training and advice should be provided (e.g. on improving the promotion of their products in direct sales as well as on communicating with consumers).
- As a means to increase value-added and foster short supply chains, set up e.g. farmers' markets allowing for direct producer-consumer contact; provide investment support for farmers to meet the official and marketing requirements for direct sales; and improve the existing ordinance on direct sales of products of animal origin in order to reflect the realities of small farms better.

**To support young farmers and new entrants:**

- Strategic documents which need to distinguish between young farmers and new entrants, and adjust their goals with regard to the roles of these two groups and their needs. National-level structural surveys should look at young people in agriculture from a more general perspective (i.e. including successors).
- Further research is needed to clarify the role of young people in sustainable development, e.g. regarding their inclination towards using innovative technologies.
- Changing the situation of young farmers' and new entrants' low representation as holders of larger farms would require enabling access to land, or secure tenure, e.g. through the establishment of land trusts.
- Support for small farms held by young farmers and any type of new entrant should either (a) directly improve their income from farming through payment schemes, or (b) support diversification of farms and part-time farming.
- Improve communication about agriculture and farmers' roles in rural areas in terms of recognition in society, thus maintaining farming as a key for the economic, environmental and social sustainability of rural areas in Europe.
- Education should be enhanced, particularly in areas of new technology, environment and business skills, which have been considered to be useful in the eyes of young farmers and new entrants.

## **Potential impact (including the socio-economic impact and the wider societal implications of the project so far) and the main dissemination activities and exploitation of results.**

### **General impact of the project**

The FarmPath project directly addresses the EC Cooperation Theme 2 goal of Activity 2.1, by undertaking research and stakeholder engagement addressing sustainable production and management of biological resources from land. Specifically, FarmPath will have a significant positive impact resulting from contributing to the delivery of the following EU strategies, policies and programmes:

- The Lisbon Strategy
- The EU Rural Development Programme
- The EU territorial cohesion strategy
- EU environmental policy

Identifying and providing supporting evidence for further EU policy development, through identification of transition pathways, and the right institutional and policy framing to access them, the identification of relevant research gaps, and of promising lines of future research. FarmPath has achieved this through a research strategy which is designed to address European level issues.

### **Impacts Contributing to the Delivery of EU Strategies, Policies and Programmes**

The Lisbon Strategy of the EU (European Council, 2000) has four key areas, one of which, investing in people, emphasises the importance of life-long learning, and facilitating the transition to a knowledge-based society. FarmPath has involved over 150 regional stakeholders through the formation of National Stakeholder Advisory Groups in each study country. These groups met a minimum of five times over the course of the project (in each study region), identifying important topics and initiatives for study in the regional case studies, participating in regional visioning exercises, providing feedback on research findings and identifying key players for dissemination activities. There is evidence in the Portuguese and French teams in particular, that investment in these networks and individuals will lead to longer term collaboration in future.

The contribution of the CAP to the Lisbon Strategy recognises the need for investment in human capital to exploit opportunities for employment in rural areas. Within the EU Rural Development Programme, this includes improving management of processes in the agri-food chain, sustainable land management and improving the environment. FarmPath has identified mechanisms to promote favourable conditions for transition processes in the farming sector, and for supporting the adaptive and reflexive capacity of farmers. Participation of relevant societal actors, such as retailers, processors, certification companies, farming co-operatives and other SMEs is also an inherent part of FarmPath research. In particular, these actors participated in the scenario-building exercises, which involved approximately 200 agricultural industry members and stakeholders from across Europe. By involving these stakeholders in a participatory dialogue, and through extensive dissemination activities, FarmPath has contributed to the development of a European Knowledge-based bioeconomy.

In delivering the policy recommendations, such as how to sustain new entrants to farming, FarmPath will contribute to the objectives of the European Union's Rural Development Programme's measures aimed at promoting knowledge and human potential, such as articles 21 on vocational training, and 22 on supporting young farmers (European Council, 2005). The apparent lack of young people interested in engaging in agriculture can be attributed to the low social and economic returns of farming, with the implication that current farming systems are not socially and/or economically sustainable. Although the issue of aging in agriculture is identified in EU schemes to promote the establishment of young farmers and promote early retirement of existing farmers (see council Regulation (EC) No 1698/2005), there has been limited European-level research into the issues behind the apparent increase in average age of farmers. FarmPath



has conducted research that demonstrates the importance of economic viability and positive lifestyle associations to retaining young people in farming, and the innovative potential of new entrants, which can be of any age. It also demonstrated the lack of evidence for a 'young farmer problem' in several member states, and the need for quantitative assessment of young people (not solely young new entrants) in agriculture.

The 2009 Treaty of Lisbon (European Council, 2008) recognised geographic inequalities with the enlargement of the European Union. Article 158 now adds territorial cohesion to economic and social cohesion, and highlights that geography should not be a barrier to equality of opportunity (e.g. regions which suffer from severe and permanent natural or demographic handicaps, islands, cross-border and mountain regions). The field research in FarmPath includes consideration of issues in many such priority areas, including economies in transition following recent membership of the European Union (e.g. Czech Republic and Bulgaria), island communities in Greece and mountain regions in Portugal. The definition of sustainability as regional and regionally determined, supports the development of research findings and policy recommendations which enable territorial cohesion. In particular, the regional sustainability of agriculture handbook specifically addresses the differing needs of rural areas across Europe.

Article 149 of the 2009 Treaty of Lisbon (European Council, 2008), Title XI (Education, vocational training, youth and sport) now stresses "... encouraging the participation of young people in democratic life in Europe." FarmPath helps deliver on this aim by the specific inclusion of young farmers in the National Stakeholder Partnership Groups (NSPGs), and targeted field research in both the case studies and visioning exercises, where including young people was a specific objective of the research.

FarmPath contributes directly to aims of the Community Sixth Environmental Action Programme 2002 to 2012 (European Commission, 2002), within which actions are promoted to which FarmPath will contribute beyond 2010. These include spreading best practice and fostering the exchange of experience on sustainable development: the FarmPath knowledge exchange outputs facilitate exchanges of experience across stakeholders in multiple regions, particularly in NSPG and the International Advisory Group. Findings from FarmPath have been made accessible to a wide variety of audiences through the web-site, a Handbook of Agricultural Sustainability and an academic book.

#### **Dissemination Activities:**

FarmPath research was undertaken using transdisciplinary approaches, which means that stakeholders were involved throughout the research process, in an iterative exchange of ideas, methods and research findings. In addition, project findings were disseminated throughout the project, utilising a variety of methods to reach a wide variety of audiences. Table three provides an overview of these activities.

### Dissemination Activities and Target Groups

	Level of Dissemination			Main target groups		
	Local/regional	National	European	Regional stakeholders	Policy makers	Researchers
NSPG meetings	X			X	X	
Web-site	X	X	X	X	X	X
Information notes	X	X	X	X	X	
Newspaper articles	X	X		X	X	
Regional scenario-building workshops	X	X		X	X	
Conference presentations and papers		X	X			X
Peer reviewed journal articles		X	X			X
Academic book		X	X			X
Regional sustainability handbook	X	X	X	X	X	
National workshops	X	X		X	X	
Final conference		X	X	X	X	X

## **Regional Stakeholder Engagement**

FarmPath involved regional stakeholders throughout the project as members of the National Stakeholder Partnership groups (NSPGs). Each field research team (Bulgaria, Czech Republic, France, Germany, Greece, Portugal and United Kingdom) established a team of 5 to 15 members at the beginning of the project, to guide the scientists in their decision-making. In particular, the NSPGs were involved in the identification and selection of initiatives for case study, recommended participants in the case study research, provided feedback on case study research findings, tested the design of the scenario building workshops, recommended participants in the visioning exercises, provided feedback on the resultant visions, participated in the final national policy workshops, and some also attended the final conference in Brussels.

## **Policy Makers**

Regional and national policy makers were involved in FarmPath as members of National Stakeholder Partnership Groups, key informants to the case study research, and regional policy makers were involved as participants in the visioning processes. Throughout FarmPath, information notes summarising the findings in non-academic language, were produced. These were distributed at meetings with national policy makers and industry events. One member of the international advisory group represented DG Agri, and organised a presentation of project findings to policy officers at DG Agri in March 2013, entitled "Making Farming Innovations Succeed". The FarmPath and Solinsa final conference, held in Brussels in December 2013, deliberately targeted policy makers from the European Commission. Approximately 100 people attended this event.

## **Academics**

The FarmPath team involved approximately 30 academics across nine research institutions. These individuals ranged from early career researchers in the midst of doctoral research, to tenured professors. Three senior academics were involved as members of the international advisory group, providing feedback on the theoretical framework, selection of case studies, protocol for the visioning exercises and reviewing the academic book. Several hundred academics from across Europe have attended conference presentations relating to FarmPath research findings. In particular, FarmPath and Solinsa academics organised a joint working group at the European Society for Rural Sociology Congress in Florence, Italy in August 2013. The FarmPath co-ordinator presented findings of the project at a Solinsa meeting in Paris, January 2012.

### Overview of Primary Dissemination Activities

Activities	Number	Size of Target Audience
Project Web-site	1	large
National Stakeholder Partnership Group meetings	33	12
Newspaper articles	6	large
Presentation to Non-scientific Audiences (e.g. industry, policy-makers)	8	150
Information Notes on Project Findings	9	large
Academic book	14 book chapters	1200
Regional Sustainability of Agriculture Handbook	1 (3 languages)	240 produced, also available on web-site
Final Policy Brief	1 (5 languages)	300 produced; also available on web-site
Presentations at academic conferences	30	large
Peer reviewed Scientific Journal Articles	3 published <sup>3</sup> , 6 in advanced stage of preparation	large
Final national conferences and policy workshops	7	Approximately 175 people attended
Final Brussels conference	1	Approximately 100 people attended

#### ***Address of project public website/Relevant Contact Details***

For more information on the FarmPath project objectives and progress, please visit the project website: [www.farmpath.eu](http://www.farmpath.eu) or email the co-ordinator Dr Lee-Ann Sutherland, [lee-ann.sutherland@hutton.ac.uk](mailto:lee-ann.sutherland@hutton.ac.uk)

<sup>3</sup> Please note that one of the publications was published in an international peer reviewed journal which was not recognised by the ECAS system: Zagata, L. 2013. 'We want farmers' markets' Case study of emerging civic food networks in the Czech Republic. *International Journal of the Sociology of Agriculture and Food* 19, 347-364

### **Contact info of beneficiaries**

The James Hutton Institute (JHI), Aberdeen, Scotland, UK  
Contact: Dr Lee-Ann Sutherland (Lee-Ann.Sutherland@hutton.ac.uk)

The University of Natural Resources and Life Sciences (BOKU), Vienna, Austria  
Contact: Dr Ika Darnhofer ([ika.darnhofer@boku.ac.at](mailto:ika.darnhofer@boku.ac.at))

Agricultural University of Athens (AUA), Greece  
Contact: Dr George Vlahos (gvlahos@aua.gr)

University of National and World Economy (UNWE), Sofia, Bulgaria  
Contact: Prof Plamen Mishev (mishevp@unwe.acad.bg)

The Institute for Rural Development Research (IfLS) Frankfurt, Germany  
Contact: Ms. Simone Schiller ([schiller@ifls.de](mailto:schiller@ifls.de))

The Czech University of Life Sciences Prague (CZU)  
Contact: Dr Lukáš Zagata (zagata@pef.czu.cz)

University of Plymouth (UOP), United Kingdom  
Contact: Prof Geoff Wilson ([geoff.wilson@plymouth.ac.uk](mailto:geoff.wilson@plymouth.ac.uk))

University of Évora (UEVORA), Portugal  
Contact: Dr Teresa Pinto Correia (mtpc@uevora.pt)

Agrocampus Owest (ISSA), Rennes, France  
Contact: Dr Catherine Darrot (catherinedarrot@gmail.com)

## Supporting photos



Participants at the final conference in Brussels.



Poster discussions at the final conference in Brussels.



Views of a biogas plant located in the 'circular village' of Püggen

Source: photographs by the Sarah Peter (April 2012)





Organic Bee-Keeping in Bulgaria

Cluster: New forms of governance

(Image: Bulgarian Team)



Montado Landscape in Mértola, Portugal

Cluster: High Nature Value Farming

(Image: Filipe Barroso)



Direct Marketing in Germany

Cluster: Collaboration

(Image: Simone Schiller)



Traditional vineyard in Greece

Cluster: Alternative marketing channels

(Image: Emi Tsakalou)



Bulgarian Farmers focus group discussion

(Image courtesy of Mariya Peneva, February 2013, Bratsigovo)



Final Portuguese pathways workshop

(Image courtesy of Anne Poinset de Sivry, May 2013, Montemor-o-Novo)



Low energy consumption community house in Hostětín, headquarters of the Czech initiative – the first low energy community house in the Czech Republic

(Image courtesy of Michal Lostak, 2012, Hostětín)



Tourists in Santorini can visit a winery and see a traditional 'kanava' - a cave dug in the volcanic soil, which houses a wine cellar (Image courtesy of Emi Tsakalou, 2012, Santorini)