

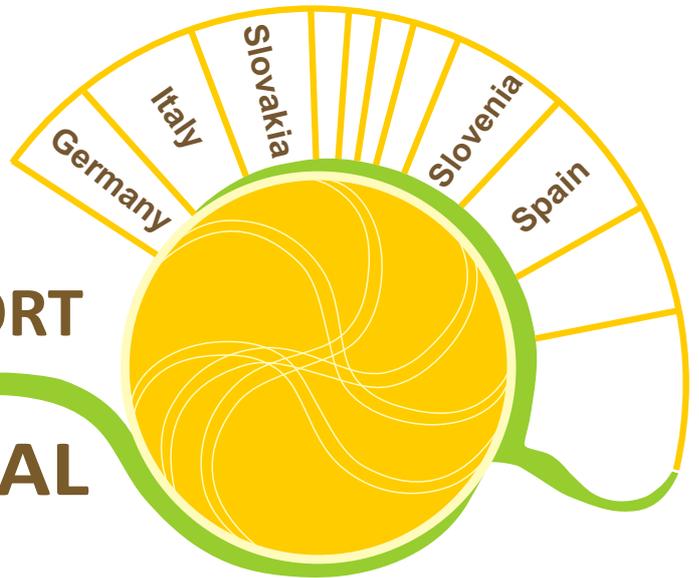


multifunctional Farming for the sustainability of European Agricultural Landscapes

Project N°: 2016-1-SK01-KA202-022502

SUMMARY REPORT

FEAL



*The state of the Art of the relation between
sustainable/multifunctional farming practices
and European Agricultural Landscapes*



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SUMMARY

Historically, a variety of agricultural systems developed in Europe have shaped our landscape – by former use, by recent use, through production-living-transportation circles, etc. To this day today, Europe has in many parts a dominant rural character, and a significant share of the population lives in the countryside. People feel themselves in one way or another connected to agricultural production. Small and family farms still exist in a high number, although one sometimes gets the impression that today only large-scale farming plays a role.

Farmers today are facing many different challenges, starting with their core business, which underlies the changing conditions due to climate change, as well economic and administration framework conditions often dominated by the decisions and rules set up in Brussels (EU). These include globalisation on the one hand, but a strong connection to one's own land on the other, a new awareness for the cultural values of agricultural production and landscapes among the local people, etc. Land plays various roles in production, leisure, education, biodiversity, and infrastructure. This sometimes leads to increasing land prices, while sometimes the opposite is true. All this makes it difficult for farmers today to plan. Skills are needed, which are much more than only agricultural production. Therefore, farmers should be considered as multi-optional entrepreneurs with a corresponding education that should be updated on a regular basis. But according to the specific conditions of farmers, displacements in order to participate in training is complicated at certain times of the year, depending on the farm's specialisation. Unfortunately, online based VET for farmers is not yet very common.

Agricultural production depends on many natural conditions, and the sale of agricultural products from farms is not easy. These reasons motivate farmers to start doing business in non-agricultural activities. FEAL shall provide an educational tool for how to apply knowledge on landscape values in different landscape types into daily farming activities through the example of case studies. Multifunctional and sustainable farming activities have slowly been growing, mainly in sub-mountain and mountain regions where the traditional landscape with its specific character and features is preserved. Raising awareness on landscape values for farmers and stakeholders, as well as the adequate daily maintenance of agricultural landscapes respecting their heritage and values, should improve the quality of the landscape and bring added value to the landscape. Inspirational ideas about landscape values applied in farming practices shall be disseminated and become a part of local or regional product trademarks, last but not least allowing them to be embedded into the tourist information system and farms in order to become hotspots in the network of touristic routes.

The relevant scientific literature related to the project occurs sporadically. Methods characterising the process of landscape character assessment are mainly designed for experts. Still no European (Agricultural) Landscape Classification exists. VET online offers for promoters in rural, often remote areas, do not exist in most countries. As the questionnaire survey (Annex 2) has proven, there exists a social demand for VET courses bringing the exchange of good practices and innovations for farmers in all partner countries. Many VET activities related to the topic of the project have started at secondary and high schools. However, the topic is rarely mentioned within ongoing projects and case studies representing best practices are very rare. This project shall fill this gap in the training activities.

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INTRODUCTION

This Summary Report compiles the state of the art of the relation between sustainable, multifunctional farming practices and European Agricultural Landscapes (EALs).

The main objective of this report is to explain the role of small, family, and young farmers in the maintenance of the countryside by diversified multifunctional activities aiming at the preservation of its landscape character and the natural, cultural, and historical heritage of Europe.

The work is based on:

- a bibliographic analysis of European Agricultural Landscapes and multifunctional, sustainable agriculture in the European context,
- a FEAL questionnaire survey (questionnaire template in English is provided as Annex 2), short interviews with stakeholders, and
- self-experience in the project's field, and the findings of national reports are interpreted in European context herein.

The FEAL project concerns collaboration with promoters – small, family, and young farmers in the rural environment – in order to improve their situation. It aims to provide training materials, ideas, and solutions for how multifunctional farming with respect to the heritage of European Agricultural Landscapes can lead to a win-win situation. Therefore, several rounds of interviews will be conducted during the project's lifetime. The inquiry is not meant to be representative for all of Europe, not even for the participating countries. But it gives some insight and reflections, and shows the needs and missing skills of the targeted group. The results will be used during subsequent project phases in order to produce well-adapted e-learning material. The graphical reporting can be found in Annex 2, and the findings of the questionnaire survey (Fig. 1) are integrated in this report in the according chapters.

Figure 1. Questionnaire survey (google form).



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Professional profiles of the respondents document the diversity of approaches to the targeted topic have enriched the bibliographic analysis and knowledge of the collective set of authors involved in this report

Germany (DE)



- Head of an agricultural consulting company and EU-certification point. Agronomist, SME, male.
- Professor from a Technical University, female.
- CEO of a regional land-care association, male.
- Think Tank leader, male.
- Young farmer at the point of taking over the farm from his parents, studying agriculture at the same time, male.

Italy (IT)



- Organic producer (vegetables, fruit, honey and beekeeping by-products) in Sicily, online selling, male.
- Wine producer in Piemonte (DOC wines), also managing agritourism, female.
- Two brothers, young farmers, males (one with degree in economics and the other one in agriculture and oenology), wine producers in Marche (DOC wines).
- Seed saver and producer of old varieties of vegetables (famous violet asparagus from Albenga), in Liguria, male.
- Organic producer of cereals and legumes, in Umbria (Monte Cucco Natural Park), female.
- Expert in livestock breeding sector meat producer (cattle, poultry, rabbits and sheep) in Umbria, male.
- Agronomist (together with her brother oenologist), agronomist, extra-virgin olive oil and wine producer. President of young farmers' association, in Umbria, female.
- Extra-virgin olive oil and wine producer, also managing an agritourism, in Umbria, female.
- Seed saver and producer of legumes and cereals, vice-President of the "Consortium of Fagiolina del Trasimeno", in Umbria, male.
- Livestock breeder with horse breeding and riding, Monti Sibillini national park, in Umbria, male.

Slovakia (SK)



- Expert employed in the State Nature Conservancy of the Slovak Republic, in the office of the Velká Fatra Protected Landscape Area, in the working position "agronomist", male.
- Contact person for the office of the Local Action Group "Podpoľanie", female.
- Expert in the field of land use and landscape ecology employed at the Slovak Academy of Sciences in Bratislava, female.
- Professor at the University of Constantine the Philosopher in Nitra and expert in the field of land use and landscape ecology, male.
- Head of the civic association "ViP BB" that is mainly active in the region of Central Slovakia, male.

Slovenia (SL)



- Landscape architect, lecturer.
- Engineer of agriculture – horticulture, with special emphasis on landscape design & arboristics.
- Bachelor of agriculture – animal science – with in-depth knowledge on agricultural policies.
- Bachelor of agriculture (2x) – agronomy – lecturer & teacher on sustainable development and entrepreneurship.
- Postgraduated in geography, specialist in landscapes.
- Food technologist, manager.

Spain (ES)



- Professor of vocational training in the agricultural and landscape field, male.
- Civil servant and agritourism landlord, male.
- Environmental civil servant, female.
- Person responsible for the integrated production association, male.
- Environmental consultant on environmental impact, male.
- Person responsible for a farming association, male.



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Agricultural production depends on natural conditions and the weather, which often causes economic losses for farmers. These losses used to be covered by CAP subsidies. Subsidies improve the current economic situation of farmers for a short time; however, from a sustainable agriculture point of view the increasing trend in self-sufficiency for farming is expected. Here, the diversification of enterprises on farms with a mix of several kinds of non-agricultural and agricultural activities is assumed to be a solution to compensate for economic losses caused by unfavourable weather and natural conditions, diseases and pests, or the economic situation of food markets. At the moment, the effects of climate change on European farmers is still unclear. Extensive research ([Weltin et al., 2017](#)) done across European countries confirmed that the size of the family on farms and their structure plays a role in motivating farmers for the future diversification of activities. The authors found that young organic farm households with a young age structure and larger families tend to further increase diversification activities on-farm, often with trends towards part-time farming with jobs in other fields of activities outside of the farm itself. In contrast, traditional, older, and smaller farm households have difficulties in generating sufficient synergistic effects on-farm due to missing economic capacity. Therefore, we can see the potential of young farmers (who are the target group for VET activities in this project) to spread multifunctional farming across the EU.

Establishing and keeping alive contacts among farmers and stakeholders is very important in the difficult socio-economic situation in Europe. Collaboration also ensures pursuing the principles of the European Landscape Convention (ELC) ([CoE, 2010](#)) that most of the participating countries have signed'. The convention aims to encourage public authorities to adopt policies and measures at the local, regional, national, and international level for protecting, managing, and planning landscapes throughout Europe. It covers all landscapes, both outstanding and ordinary, which determines the quality of people's living environment. The text provides for a flexible approach to landscapes whose specific features call for various types of action, ranging from strict conservation through protection, management, and improvement to actual creation.

A scientific background significantly influences the quality of VET activities. Europe is rich in natural, cultural, and historical values representing a high potential for the development of tourism in the countryside. Scientific works dealing with the context of small-sized farming practices and landscape maintenance are very rare. Relevant literature about the investigated topic is rare; while various methods on landscape character assessment exist in the different countries, a European approach is still missing, even though organisations and scientists have been underlining the strong demand for years now ([Kruse & Roth, 2013](#); [Kruse et al., 2010](#); [Kruse & Pungetti, Eds., 2007](#); and many others). In general, the intensive and enlightening process of developing a GIS in a participatory manner (e.g. [GIS3W, 2017](#); [Košice Region Tourism, 2016](#)) is itself capacity building and empowering.



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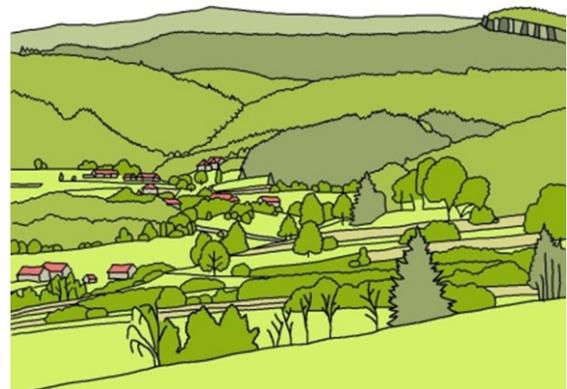
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Essentially, the more community geo-information users who participate in the mapping processes, and the more local applications there are of the geo-information, the more robust the decision-making processes and, by extension, the more vigorous 'good governance'. Central to this are the improved transparency and visibility of the relationships between the people and the state (and commercial interests) that are exposed by the map and GIS outputs ([McKall & Minang, 2005](#)).

This report gives an overview of European Agricultural Landscapes and explains how it will be applied in particular to national typologies during subsequent project phases. Such an approach provides a wider international view on farming practices contributing to the preservation of landscape values, and the comparison of best practices in the European context. Beneficiaries and small, family, and young farmers will be able to compare their “common” daily-used multifunctional and sustainable farming practices contributing to the preservation of landscape's heritage among the partner countries. The project also includes the implementation of an e-Atlas of EALs, which might be the first step towards a European classification and will also serve as one of the means of the e-learning platform.

Finally, the report provides recommendations on know-how about how the landscape values could be implemented, e.g. into conceptions of eco-museums, food marketing instruments (trademarks of local products), tourist information systems (touristic guides and farm websites promoting the natural, cultural, and historical values of the farmed landscape), but also in environmental protection and landscape preservation management as well as for sustainable agriculture – providing a living for future farmers.

¹Ratification dates of the European Landscape Convention: Slovenia: 2003, Slovakia: 2005, Italy: 2006, Spain: 2007.



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BRIEF HISTORY OF EUROPEAN AGRICULTURE^{II}

Forces behind European Agricultural Landscapes

Agriculture started some 10,000 years ago in the Middle East and spread from there to Europe. For thousands of years, landscape and society have been heavily influenced by developments in agriculture. Landscapes are influenced by a number of forces, some of which cause new dynamics while others are stabilising. The period of population growth from the 10th to the early 14th century particularly led to reclamations in most parts of Europe. From the 9th century, the North Sea region and Central Europe recovered and went through a period of rapid population growth, which led to large-scale reclamations of forests, heathlands, and wetlands ([Bartlett, 1994](#)). A later period of population growth, the so-called 'long sixteenth century' (c. 1450-c. 1650), was another phase of reclamations, but was also characterised by the more intensive use of existing arable and pasture lands and is therefore less clearly visible in the landscape. However, this was a period of increasing economic integration, in which regions all over Europe became a part of an integrated European economy, leading to new patterns of regional specialisation when local, more or less self-supporting farmers started to produce for an international market.

Why do we need to know about the history of European Agricultural Landscapes and the trends related to their further development?

In the mediaeval agrarian economy in which risk management rather than profit maximisation was the main aim for farmers, the commons could even mean survival in years of bad harvests. High mediaeval reclamations led to the shrinking of common lands and therefore to stricter rules for the use of the commons. During the first half of the 14th century, the population reached a maximum. Increasingly dependent on grain, it was hit hard by a succession of bad harvests. Some regions turned towards animal husbandry. In Central Europe (particularly in the present-day Czech Republic) and in French regions with poor soils, fish farming developed during this period and thousands of hectares of land were inundated. Many of the traditional grain-growing regions, however, were not able to develop alternatives, a result being that many arable and thousands of settlements were abandoned. In parts of the Central European hills, agriculture never recovered; in later centuries, forestry (often based on demands from mining) became the most prominent type of agriculture. In most regions, however, the emphasis was not on reclamations, but on improvements to existing agricultural land.

From the end of the 16th century, the trade system connected the Baltic grain producers with the Mediterranean consumers, meaning that now a real European market existed for grain and some other agricultural products. The result was a regrouping of agrarian production, in which regions on the southern shore of the Baltic developed into large grain exporters. Some of the old open-field regions, particularly Central England and parts of the Mediterranean, could switch to other products. This period showed an increasing specialisation in many regions. The more complex rotations led to a more individual management of the open fields. Most of the new reclamations were highly individualised, with enclosed fields and dispersed farms. Often the farm buildings were moved to their newly enclosed fields, which led to a new pattern of dispersed farms.



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In most pre-industrial societies, agriculture occupied the majority of human activities. In fact, before the middle of the 20th century, the majority of the European population lived in rural regions. The World Crisis in the 1930s was followed by the Second World War, with increasing state intervention in the occupied countries. During the last year of the war, scarcities of food occurred in some regions, although in most cases this was related to a logistical rather than a production problem.

The second half of the 20th century has been an extraordinary period for European agriculture (Renes & Paul, 2004). From the 1950s, agricultural policy was a main driving force within the growing European Economic Community. Germany, which had lost many of its most productive agricultural regions, aimed at the re-establishment of its position as an industrial nation and expected to remain an importer of agrarian products. The new European Economic Community aimed at a stronger interdependence between countries that had been at war so often during the preceding century. In Eastern Europe, the implementation of socialist economic principles in the Soviet sphere of influence brought far-reaching changes. In Eastern Germany, a short-lived land reform divided the old estates into family farms, but after a few years the old estates were re-established as collective farms. Collective and state farms were also established in other parts of Eastern Europe. Elsewhere however, particularly in most of Yugoslavia and in parts of Poland and Romania, small-scale farmers were left untouched.

The new landscapes, characterised by large fields surrounded by hedges, were efficient production spaces, which functioned well into the 1970s when a new wave of scale enlargement brought the removal of many hedges and in fact a return to the openness of the mediaeval landscape. New specialised landscapes resulted partly from the development of industries, but the improved transport possibilities must have been the main factor behind the concentration of production in certain regions. When phases of population pressure led to reclamations and to a growing interdependence, periods of decline could bring about the opposite: land desertion and a certain degree of economic de-specialisation and disintegration. Times of crisis often showed fundamental, qualitative transformations, thereby creating the conditions for profit maximisation during a later period of renewed growth. In periods of population pressure, farmers increasingly produced basic foodstuffs, particularly grain and, to a lesser degree, meat. Decline or stagnation, on the other hand, led to experiments with other products, which could successively become real money-makers during the next phase of growth (Thirsk, 1997).

Agriculture moved from risk management towards profit maximisation, resulting in increasing specialisation.



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The specialisation process formed a large threat to a number of typical landscapes of mixed farming, such as the Mediterranean *coltura promiscua* and *montados/dehesa* landscapes. Relatively low world-market prices and rising labour costs strengthened the processes of scale enlargement and mechanisation in European agriculture. Mechanised arable farming especially required large fields, and large parts of rural Europe were reconstructed for this type of farming. In fact, the huge fields of the Eastern European collective or state farms are not dissimilar from the landscapes that resulted from the more gradual process of land consolidation in Western Europe. Such land consolidation projects, in many ways comparable with the English and Scandinavian enclosures of earlier centuries, now took place on a large scale in France, Spain, Germany, the Netherlands, and Belgium. These processes erased large numbers of field boundaries and other landscape features.

European landscapes lost much of their historic, and often regionally specific, features. In general, the agricultural landscapes became more uniform, but there are strong regional differences. The arable landscapes were influenced most; pastoral landscapes and the more marginal agrarian landscapes in the mountains were less changed by collectivisation or land consolidation.

Present trends: towards the post-productivity of European agricultural landscapes

The extraordinary period of extreme state intervention in agricultural production is now coming to an end. In Eastern Europe, a phase of re-privatisation took place following the collapse of the socialist system in 1989 (Renes, 2010: 94). It is certainly a radical transformation, but there is also a remarkable degree of continuity: locally, for example in parts of Eastern Germany, a direct line runs from the old landed estates to the post-war collective farms and to the present large-scale capitalist farms.

Within the European Union the tendency towards a more open world economy, which is vigorously advocated by the World Trade Organisation and the large non-European agricultural exporters, is expected to lead to the gradual abolition of agricultural subsidies. Since the 1990s, a new phase in the globalisation process, in which the abolishment of trade barriers together with the ongoing process of lowering transport prices throughout the world, leads to production and consumption patterns that are more congruent than ever before. European agriculture and its landscapes are now going through another transformation.

The present developments show large regional variations. The most intensive agriculture is still connected to the European core region that runs from southeast England through the Low Countries to northern Italy and is nowadays known among geographers as the 'blue banana'; it also shows a remarkable similarity and continuity with the core mediaeval region. A further development of large-scale agriculture is taking place in the traditional grain-growing regions, as well as in the parts of Eastern Europe that have been characterised by collective farming.

In recent years, a new market has been developing for the production of biofuel, creating 'energy landscapes'.



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In other regions that are marginal within the future European rural space, a large variety of survival strategies are being developed, in particular for small farms. These strategies include regional brands, tourist activities, and organic farming, often sustained by subsidies for environmentally-friendly practices. Some regions are now going through a phase of the abandonment of agriculture, sometimes in a planned way to enable the development of ecological zones and networks, but in other cases as the unplanned retreat of agriculture. Economic growth and prosperity most often are at the expense of the natural environment. On the other hand, humans changed 'natural' landscapes into semi-natural or cultural ones, and in the course of time these acquired an intrinsic value ([Nienhuis, 2008](#)). Agriculture in these rural regions is described as post-productivity: a situation in which agriculture becomes less a food producer than a producer of landscape. It is not clear whether this new agriculture will be sustainable, in an era when ever more people are losing contact with the countryside, and for much of the younger generation, real nature and landscape are not necessarily preferred over virtual realities. Anyway, inclusion of landscape values into spatial plans introduces an opportunity to promote local identities and to support landscape quality ([Slámová et al., 2017](#)). The conservation of the cultural features of agricultural landscapes can add value to tourism and provide local and regional food products. Preserved rural landscapes also help maintain the quality of life for rural residents by providing viable communities and economies and the positive values associated such landscapes ([Agnoletti, 2014](#)).

The chronological overview makes it clear that landscapes have been changing throughout history. Yet we also saw that change was not the whole story. Every individual region shows a succession of periods of change and periods of stability. During these latter periods, landscapes matured and some have become 'traditional landscapes' or, to use a modern term, 'heritage landscapes'.

In recent years, there has been much discussion on the different ways to protect 'agrarian', 'cultural', 'traditional', or 'historic' landscapes. The ELC and the designation of cultural landscape as world heritage as well as many national and regional initiatives are proof of the widespread wish to protect landscapes. The arguments are often aesthetic or ecological, but different authors also point to the variety of historic landscapes (see for example [Zimmermann, 2006](#)). More than in the past, the role of local people in shaping the future of local landscapes is taken into account.

It is important to realise that landscapes have a dynamic history and that landscape protection can never succeed by freezing a situation. Landscape protection is about finding new functions within existing structures. Historical research can be helpful in showing the resilience of landscape structures throughout very different periods and economic systems.

"Excerpt, adapted by the author himself, from: [Renes \(2010\): "European agricultural landscape history" in: Pungetti & Kruse, Eds. \(2010\).](#)



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CURRENT AGRICULTURAL PRODUCTION

The situation of small farms in the project countries

Europe. In the beginning of the 21st century predominantly urban regions made up just one tenth (10.0 %) of the land area but accounted for more than two fifths (42.4 %) of the population ([EC, 2013](#)). Changes in agriculture still influence large parts of the landscape. At the European level, agriculture is organised today under the umbrella of the “Common agricultural policy (CAP)” that was launched in 1962. The main elements of the CAP post-2013 concern the following: the fair distribution of direct payments (with targeted support and convergence goals); the strengthening the position of farmers within the food production chain (e.g. through the promotion of professional and inter-professional organisations; changes in the organisation of the sugar and wine sectors; revisions of public interventions and private storage aid as well as new crisis management tools); and support for rural development and safeguarding the environment and biodiversity. The CAP is financed by two funds: a) the European Agricultural Guarantee Fund (EAGF) finances direct payments to farmers, as well as measures responding to market disturbances; b) the European Agricultural Fund for Rural Development (EAFRD) finances rural development programmes (RDP) ([EC, 2016](#))¹. Trends in the shares of agricultural areas managed by farms of different sizes are displayed in the graphs in Annex 3

Small farms support rural employment and can make a considerable contribution to territorial development, providing specialist local products as well as supporting social, cultural, and environmental services ([EC, 2016](#))³.



Small farms have always been a cornerstone of agricultural activity in the EU, as they support rural employment and can make a considerable contribution to territorial development, providing specialist local produce/products as well as supporting social, cultural, and environmental services.



There is no fixed European definition as to what constitutes a 'small' or a 'large' farm. In addition, there is no fixed definition as to when a small farm is rather a subsistence household producing food for its own consumption and thus is not an economic unit. But several national definitions exist for national laws or regulations. It should be noted that no cut-off thresholds for identifying subsistence households have been introduced. There are two main criteria that have been used to delineate farm size: one is based on a classification of farms in economic terms based on their standard output, while the other one is based on the utilised agricultural area (UAA).

The total number of farms in the EU fell by more than a quarter in less than a decade. For several decades, the number of farms in the EU followed a downward path. Between 2005 and 2013 the total number of farms in the EU-28 (excluding Croatia) fell by 26.2%, equivalent to an average decline of 3.7% per annum. The largest declines in farm numbers were recorded in Slovakia (-12.5% per annum) and also in Italy (-6.5%).

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There was little change in the UAA farmed in the EU during recent years, as the average rate of change was 0.1% per annum for the EU-28 (excluding Croatia) between 2005 and 2013. The total UAA for the EU-28 stood at 174.6 million hectares in 2013. This relatively stable agricultural area, coupled with a declining number of farms, has resulted in farms across the EU becoming, on average, bigger. Some of the fastest changes were recorded among those Member States that joined the EU in 2004 or more recently, as the process of structural adjustment took place.

The structure of agriculture in the EU Member States varies depending upon differences in geology, topography, climate, and natural resources, as well as the diversity that is found in terms of (former) political and economic systems, regional infrastructure, and social customs. The differences witnessed between Member States in relation to the average size of their farms are however largely linked to ownership patterns, as those countries with high numbers of small farms are characterised by semi-subsistence and family holdings, whereas larger farms are more likely to be corporately-owned, joint stock and limited liability farms, or cooperatives. In terms of UAA, most agricultural land was found in France (15.9% of the EU-28 total in 2013), followed by Spain (13.3%), while it is 9.6% in Germany. By contrast, there were 680,000 farms in the EU-28 with a standard output of at least EUR 100,000; these very large farms accounted for 6.3% of the total number of farms and for 71.4% of the agricultural standard output in 2013. It should be noted that while many of these farms with a high level of standard output occupied considerable areas of agricultural land, there are specific types of farming which may have considerable output in monetary terms from very small areas of agricultural land; for example, horticulture, flowers, fruits, or poultry farming.

Many small farms are characterised by the fact that farm holders may struggle to make a living. A characteristic of very small farms is that they are often subsistence households. The graphs in Annex 3 show the proportion of farms where more than half of the production of the farm is self-consumed, and the information is once again analysed according to the economic size of farms. Across the whole of the EU-28, almost three quarters (74.4%) of very small farms (in economic terms) consumed more than half of their own production in 2013, while just over two fifths (42.6%) of small farms were classified as subsistent. A high proportion (the share rising above 90%) of the very small farms in Latvia, Romania, and Slovenia were subsistence households.

Almost three quarters of farms in the EU that are very small in economic terms were subsistent.

Results of the FEAL-Questionnaire (Annex 2)

- 1.2 "Overall, farming is sustainable in your country". Again, agreement in Italy was very high, while Slovakia was divided into agreement and disagreement. In Germany and Slovenia, the disagreement prevailed. In Spain, there was no common evaluation.

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- 1.3 “Overall, farming activity leads to satisfying economic results for the farmers”. Most of the interview partners agreed to the statement. The strongest agreement comes from Italy, while the majority of the German and Slovenian interviewees disagreed.

Asked to assess the importance of possible obstacles creating win-win-situations for farming with EAL, the results are rated differently among the countries (Fig. 2):

- VI.1. “Lack of experts in the field”. Most interview partners find this argument very important or important, while the majority in Germany find it less important.
- VI.2. Lack of knowledge transfer in farmers' educations”. All interviewees consider this statement as very important or important.
- VI.3. “Lack of experience transfer in farmers' practice (farmer learning from a farmer)”. Most answers are very important or important. In Slovakia, the majority finds it totally unimportant.
- VI.4. “Lack of institutional involvement in the topic”. With this sentence, we find the biggest diversity among answers, from very important in Slovakia and Spain, important in Italy, Germany, Slovenia, and Spain, neutral (IT) and less important (DE), or even totally unimportant (SK).
- VI.5. “Insufficient legislative support”. This is considered as very important (SK, ES) and important (DE-IT, SI), but also as neutral (IT), less important (IT), and totally unimportant (SK).
- VI.6 “Insufficient economic success”. This is a very important argument in Germany and Spain, an important one in Italy and also Spain, a neutral one again in Italy, and a totally unimportant argument in Slovakia.
- VI.7 “Insufficient communication among the stakeholders (farmer and society; farmer and other rural entrepreneurs, etc.)”. This is considered as very important (DE-SK-ES) or important (DE-IT-ES), but also as neutral (IT) or even totally unimportant (SK).

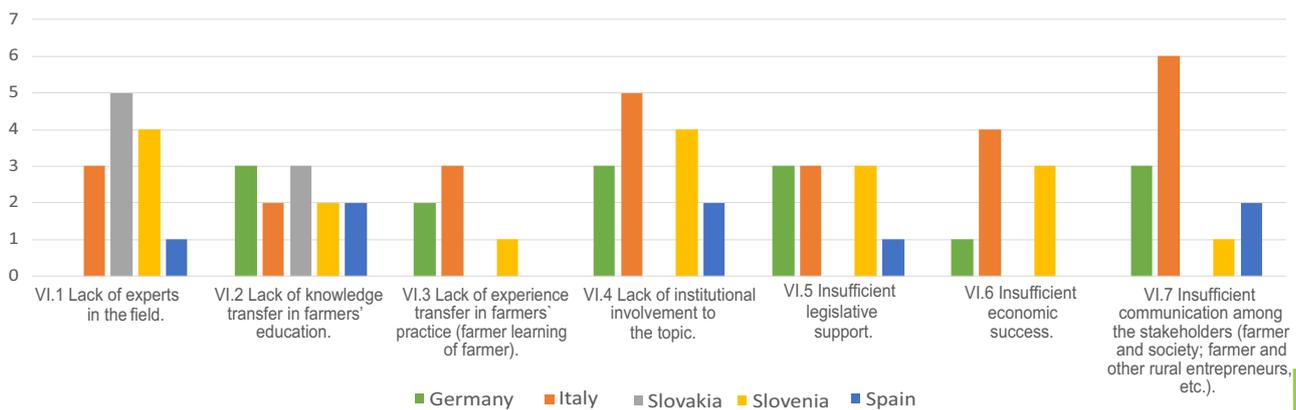


Figure 2.VI. Importance of possible obstacles for creating win-win-situations of farming with EAL: important.



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Current agricultural situation in partner countries

 **DE** In 1950 a farmer fed 10 people, while in 2012/13 it has risen to 144, with 645,000 farms and 285,000 employees. In 1900 the level of self-sufficiency with regard to foodstuffs was 87%, and in 2012/13 it is around 92% with strong annual fluctuations. Despite a strong increase in productivity, Germany has always remained an import country for agricultural and food products. However, given the division of labour in a globalised economy and the diversity desired by the consumer, the degree of self-sufficiency is hardly relevant to the socio-political dimension. According to data from the Federal Statistical Office, Germany currently faces a struggle for land. A major challenge for agriculture in Germany is the lack of agricultural land. On the other hand, national legislation in Germany provides incentives for investing in the development of agricultural land, according to which adequate parts of agricultural lands that were turned into built-up areas have to be “naturalised”. The number of farms in 1949 was about 4.82 million with about 1.65 million employed by these farms. Over time, the number of farms decreased by size per farm. Nowadays, technical progress makes it possible to manage holdings, which are many times larger than in 1949, with only a slightly higher number of workers. The number of agricultural holdings has decreased between 2007 and 2012 by 34,100 farms to 287,500. This means 10.6% in total and 2.2% per year. It seems that the structural change in agriculture has slowed down over the last few years because in the decades before the yearly decrease of agricultural holdings was 3%, which corresponds statistically to the fact that the number of farms was divided in half every 20 years. Today, the structural change is marked by the following facts: The number of farms smaller than 100 ha is diminishing, while holdings with more than 100 ha increased between 2007 and 2011 by 2,400 to 34,100 companies. These larger holdings produce 56% of the UAA in Germany. The farm average in Germany was in 2007 52 ha, and in 2012 already 58 ha. In the experience of HuL^{III} it makes sense in many situations to let stakeholders become shareholders. There is a need for new models, especially in the use of agricultural land with often contradictory interests in environmental issues and economic needs.

 **IT** The UAA of 12,856.05 hectares is divided into 54.5% arable, 26.7% meadows and pastures, 18.5% permanent crops – which include olives, vines, citrus and fruit trees – and 0.2% horticulture. Woody crops, including olives, grapes, and citrus and fruit trees, continue to be the most widespread (73.8% of farms with UAA cultivate tree crops), with an average size of 2 hectares per farm. Arable crops are cultivated by more than half of the farms (51.3% of the total) with an average size of 8.5 ha per farm. Permanent grasslands are present in about 1/6 of the surveyed farms (16.9% of the total) with an average size of 12.5 hectares per farm. Breeding farms consist of 217,449 farms, 13.41% of the total ([EC, 2016](#))². With reference to the last Census of Italian Agriculture ([ISTAT, 2010](#)) there are 1,620,884 farms in Italy. The average farm size in Italy is 7.9 ha. 437,000 of them are commercial, 154,000 partly commercial and partly for self-consumption, 495,000 completely for self-consumption, 77,000 not operative, 103,000 going to start-ups, and 45,000 partly operative.

^{III}HuL = Hof und Leben, German partner in FEAL.



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The total turnover is €49,460 million, the total number of work days is 250,806,000, and the total arable land is 12,856,000 ha; 161,716 are young farm leaders under 40 years of age (9.9%); 461,922 farm leaders are between 40 and 54 years (28.5%); 997,246 are 54 years and older (61.52%). Last but not least, 271,000 are older than 75, representing 16.7% of the total. 95.4% of Italian farms are family farms and 49.7% of family members work on their own farm.

 **SK** The Slovak Republic spreads over an area of 49,036 km² of which around 48% is agricultural land. Agricultural land is composed of around 71% arable soils and 28% permanent grassland; 65% of the agricultural land is classified as affected by natural constraints limiting its production potential. The highly extensive agriculture leads in some areas to land abandonment and the loss of grassland biotopes, 69% of which are not sufficiently managed ([EC, 2017](#))¹. Slovakia has 5.4 million inhabitants, of which 88% live in the predominantly rural and intermediate regions which cover 95% of the Slovak territory ([EC, 2017](#))¹. Agriculture contributes to the viability of rural areas and balanced territorial development by generating employment in primary production and the supply and processing/distribution chains. It also helps to maintain the rural infrastructure. In remote and peripheral areas, farming is often one of only a few economic activities ([Bohátová et al., 2016](#)).

The Slovak Government recognises agriculture, food, and forestry as strategic sectors of the state's economic policy with an irreplaceable role in the structure of the economy (The Government of the [Slovak Republic, 2016](#)). The unemployment rate in rural areas is 17%, much higher than the EU average. Youth unemployment is also very high (39%). Recent CAP developments were focused on the maintenance of intensive large-scale farming rather than the direct enhancement of agrobiodiversity and rural development at a local scale. In this context, local, site-specific attributes can and must form an essential part of rural development plans, to meet the demands for the management of the diversity of agricultural mountain landscapes and facilitate the multifunctional role of agriculture ([Bezák & Mitchley, 2014](#)). Nowadays, a minority of Slovak land is owned by small and family farmers characterised by their low economic output. Their number is significantly higher (80 %) than large farms, characterised by a high economic output (1,180 with a standard output higher than €250,000) ([EC, 2017](#))¹. Large Slovakian agricultural enterprises have 80.7 ha, which is a relatively extensive area in comparison with 16.1 ha in the EU-28 ([EC, 2016](#))⁴.

 **SL** Slovenia is characterised by its dynamic relief, diverse cultural heritage, and richness of natural values. Almost 90% of Slovenia lies above 300 m and only about 20% of the territory represents flat areas in the form of contiguous valleys and basins. Due to diverse natural conditions, dispersed settlements and a large number of small settlements prevail. Over 60% is covered by forests, and Less Favourable Areas (LFA) cover 86.3% of the total Slovenian territory, of which 72.4% are mountainous areas. Agriculture is more concentrated in Eastern Slovenia (NUTS2) ([EC, 2015](#)) where 69.9% of farms are located. Slovenia has more than 72,000 agricultural holdings – with an average size of 6.6 ha and an average standard output of €16,200. Of these, some 60,000 holdings farm less than 10 ha and 62,100 generate less than €15,000 of standard output. Only 7.7% of farm managers are young farmers.

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The unemployment rate was high, at 10% (2013) for the population in general, and 21.6% among those younger than 24 years old. In this context, the creation of businesses other than those related to pure agriculture is also a key for creating jobs and fostering local development in rural areas ([EC, 2017](#))².

 **ES** Farmland represents 28% of Spain's total area, standing above the European average (24.7%). Scrub and bare soil also represents a percentage above the European average, assuming 11.7% and 4.7% of the territory, respectively. On the other hand, forests (36.7%), grasslands (13.9%), water surfaces (0.9%), and wetlands (0.1%) are below the European average. In general, most of the farms are small in size, as more than 50% have less than 5 ha and 25% have less than 2 ha. Only 5% of farms have more than 100 ha, but their surface area exceeds 55% of Spanish agricultural land. Spanish agriculture has several features: physical difficulties (soil, water, mountains, and climate), which are limiting factors for competitive and profitable agriculture. Further, the excessive fragmentation characterises the property system, which hinders their viability, and the progressive depopulation and abandonment of the territory, with territorial imbalances, the rise of the aging population, poor generational replacement, and a lack of interest from young people in agricultural activity and to continue living in the rural environment, have a negative influence on agriculture. The high proportion of small farms means that 60% of the work units are carried out by family members, 38% is work done by the owner of the farm with the rest depending on other family members, but spouses take up only 6%. While the remaining 40% of the work units depend on employed personnel, shared almost equally among permanent and eventual workers. A greater proportion of farms specialise in permanent crops (fruit, olive, vineyards), but in terms of area, non-permanent crops account for almost three-quarters of the UAA. Two major issues seem to be the most relevant in Spain because of their possible influence on agricultural development: the distribution of property and the action of the state. A very unbalanced distribution of property and the absence of an agrarian reform that could have corrected the situation may have some important consequences on agrarian growth. A profound change took place in the 1980s, with the accession to the EEC bringing about access to an intense demand for Mediterranean products and allowing better access to products, productive factors, and the technology of other member countries. As has been the case throughout the European continent, the Spanish agricultural sector has become very dependent on EU subsidies and grants. Within this logic, the difference between a majority family agriculture, but with a declining tendency, and a minority (although highly predominant in productive terms) agriculture with greater economic viability, has been accentuated. In addition, the traditional productive orientation of the agricultural sector has been extended to include other objectives, such as rural development and environmental protection. It implies a broader concept of economic development, through the conservation of nature and the struggle against depopulation.



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LEGAL BACKGROUND

Legal background of small-sized farms, family farms and young farmers

A small agricultural enterprise – a self-employed farmer (micro-enterprise or small enterprise within the meaning of [European Commission Recommendation no. 2003/361/EC](#)) – does business in primary production.

Small farms have always been a cornerstone of agricultural activity in the EU. ([EC 2016, p. 28](#))².



National definitions exist, e.g. in Slovakia, the concept of a self-employed farmer is intended for natural persons who, themselves or in cooperation with others, are dedicated to a particular type of agricultural production and where the production output is between €4000 and €9999. Regarding the legal form, the key act is the Law on Private Business Activities ([Act no. 105/1990 Coll.](#), as amended) where the rights and obligations of self-employed farmers are defined: he/she must fulfil the exact field of his/her activity and conduct his/her trade only in agricultural production, including management in forests and in the water areas specified by law. He/she manufactures agricultural products to obtain a permanent source of income, in particular by selling them; He/she processes his/her own agricultural production, in consideration of the necessary authorisations if required; He/she provides occasional work or performances in connection with agricultural production using the equipment serving for agricultural production, generally at the time when it is not fully utilised for this production, or mines non-reserved minerals.

What we mean when we speak of family farmers or young farmers as part of our FEAL-Project ... We have to keep in mind that no official definition by the EU or CAP exists ... but we lean on some country definitions:



A family farmer is a self-employed farmer, a natural person who meets the conditions of a micro- or small enterprise within the meaning of [the European Commission recommendation no. 2003/361/EC](#) and performs agricultural production as a business. At least 2 family members are in a direct or subsidiary relationship, including husband and wife. In some countries, employment status and regulations are legally defined in the labour code and other regulations, e.g. Czech Republic and Slovakia.

A young farmer is a self-employed farmer (micro-enterprise or small enterprise within the meaning of [Commission Recommendation no. 2003/361/EC](#)) who performs primary agricultural production as a continuous and separate activity under his/her own name, on his/her own responsibility, and in order to obtain profit, which is the main source of income. At the time of submission of the application for a non-repayable financial contribution, the farmer is no more than 40 years old and has the corresponding professional skills and abilities, and for the first time establishes the agricultural enterprise as its sole and highest representative.

[Chrastinová et al. \(2013\)](#) detailed the obstacles with which farmers struggle everyday.

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Although they were compiled in Slovakia, they are more or less valid for all European (small) farmers:

- *insufficient capital, education, and training opportunities;*
- *weak financial support for small farms in comparison with capital-intensive large farms;*
- *problems in renting land from large farms having a long-term rental of the land;*
- *complicated food marketing;*
- *absent definitions of family farmer and self-employed farmer in the national legislation;*
- *insufficiently targeted support for young, small, and start-up farmers;*
- *missing social benefits;*
- *the absence of an agricultural adviser institute or agricultural information centre;*
- *weak promotion of regional food;*
- *problem with cattle breeding inside built-up areas belonging to villages;*
- *unresolved ownership relations;*
- *restrictions arising from the Labour Code – on the national or EU level;*
- *the absence of a Farming Act that would include the protection of property.*

Notes on legislation in the partner countries

 **DE** A major challenge for agriculture in Germany is the lack of agricultural land. On the other hand, the national legislation in Germany provides incentives for the development of investment in agricultural land, according to which adequate parts of agricultural lands that were turned into built-up areas have to be “naturalised”. With the GAK (Gemeinschaftsaufgabe Agrarstruktur und Küstenschutz), there are several eligible measures for subsidies: the cultivation of a diverse crop; the extensive use of permanent greenland; ecological production methods; the installation of flowering strips; the cultivation of intermediate fruit; erosion control measures in agriculture.

 **IT** The main problem still emerging in funding procedures is their slow bureaucratic ways, as weight is added to normal farm administrative management. The risk is that it may take too many working days to start and follow-up with funding procedures and/or have high costs for specialists presenting the proposed development projects. Also, multiple offices of different administrations sometimes cause conflicts in competence and unclear solutions for what and how to do. The most recent changes in legislation concerning small-sized farms and young farmers are constituted by the Law Decree of 18 May 2001, no. 228 Orientation and modernisation of the agricultural sector in accordance with Article 7 of the Law of 5 March 2001 no. 57. The definition of an agricultural entrepreneur, instead of the general term of farmer, including the direct farmer and agricultural company, enters into force in the legislation as an individual or cooperative by the modification of Article 2135 of the Italian Civil Code, also including food processing and farm valorisation not only as those producing fibres and food, but also providing a wide range of services including agritourism (Art.3), in harmonisation with the laws on agritourism ([Law 730/1985](#) and Law 96/2006) and their regional articulation, and direct selling (Art.4).

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This law also aims to favour farm succession and recognises the role of the farmer as a main professional activity (Art.10) at the centre of rural development. The role assigned to the farmer within the food supply chain according to quality and traceability criteria is also important (Heading 4, Articles from 14 to 31).



SK Small and family farms face many obstacles during the submission process for subsidy applications in Slovakia. Self-employed farmers intend to trade in agricultural production as natural persons, but their activities must be mainly related to agricultural production. In the case of multifunctional activities, a trade licence is required. The legislative conditions for doing business in multifunctional agriculture in Slovakia are not appropriate. Many different laws from various branches are related to farming activities; conflicts of interest frequently occur and legislative solutions are far from being implemented. In such a situation, online public advisory services provided by civic associations or non-governmental organisations play a very important role helping farmers to orient themselves within unclear legislation and direct their impulses towards innovative business strategies.



SL There are measures and payments within CAP Pillar 1 and Pillar 2 Slovenian RDP ([EC, 2017](#))², that can contribute to the preservation of agricultural landscapes and development of multifunctional activities. The 2014-2020 reform of direct payments for farmers (CAP pillar 1) is set in a way that it supports environmentally-friendly and sustainable farming practices; for example, green payments for agricultural practices beneficial for the climate and environment, which supports crop diversification and the maintenance of permanent grassland. It also supports young and small farmers. A positive effect on agricultural landscape can also be presented by the scheme for coupled support for milk from mountain regions that may help prevent the abandonment of agricultural land in mountain regions. LEADER and Community-Led Local Development measures can significantly contribute to the preservation of agricultural landscapes and their cultural and historical heritage.



ES The lack of specific national regulations for family agriculture, small farmers and young farmers, multifunctional agriculture, or sustainable agriculture, causes legislation to be inspired by laws from the EU in order to cover certain concepts and provides certain rules for these concepts, even if only in the management of aids of a European origin. A positive is that the national legislation regulating direct aids for farmers defines a Simplified Scheme for Small Farmers, which means that the total direct payments to be received for farmers who own CAP direct payment rights in 2015 are less than €1,250. In relation to young farmers, two types of aid available under the legislation are possible: subsidies, in a regime of competitive competition, directed for the creation of businesses for young farmers within the framework of the RDP of 2014-2020 ([EC, 2017](#))³; and special direct payments schemes for young farmers. A specific framework for multifunctional farming development is established by several laws ([Act on Tourism in the Rural Environment and Active Tourism](#); [Act on Natural Heritage and Biodiversity](#), etc.) as well as specific laws protecting and regulating the development of certain agricultural landscapes ([the Act on Dehesa](#), the Act on the Andalusian olive grove, etc.).

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CHALLENGES OF MULTIFUNCTIONAL FARMING

Challenges of multifunctional farming in improving the socio-economic situation of small, family, and young farmer

Agricultural landscape as a natural resource is largely managed by agriculture. In recent years, the concept of multifunctional agriculture has become important in the CAP Agenda 2000 and the provisions on rural development plan ([Council Regulation No. 1698/2005](#)) that provide relevant frameworks to integrate environmental aims into agricultural policy, and it is still promoted for 2014-2020 ([Regulation EU No. 1305/2013](#)).

What kind of activities are leading a farm towards multifunctionality?



definitions

Multifunctionality and the sustainability of farms are central issues in the academic debate and in RDPs, because farming is rapidly changing and evolving through the development of activities that add value to goods obtained from cultivation and livestock and through the offering of many services to visitors and local communities. Multifunctionality implies the diversification of sources of farm income, allowing farmers to reduce the business risk relying on alternative sources of revenue. Multifunctionality is directly related both to the sustainability of farms and to the production of services for society (ecosystem services). In 2001, the Organisation for Cooperation and Economic Development (OECD) defines multifunctionality as the set of contributions that agriculture can make to the economy and welfare of society. "Its primary function of supplying food and fibre, agricultural activity can also shape the landscape, provide environmental benefits such as land conservation, the sustainable management of renewable natural resources and the preservation of biodiversity, and contribute to the socio-economic viability of many rural areas" ([OECD, 2001](#)).

Multifunctional agriculture includes different functions, which concern relationships with the different interfaces between the farm and context:

- *space (environment, landscape)*
- *production (e.g. safety food, quality, and diversity of food), and*
- *services to the community (managing rural areas, social functions) (Fig.3).*

This determines coexistence in the same area of ecological, economic, cultural, historical, and aesthetic functions ([Brandt Eds., 2000](#)).

The European Union gives the following definition for sustainable agriculture:

- Applied to agriculture, sustainability goes beyond being a purely environmental issue, and includes economic viability as well as social acceptability.
- The delivery of public goods such as environmental benefits are closely interlinked with the capacity of agriculture to be economically sustainable, generate adequate family income, and be socially sustainable. The thrust is to improve the quality of life in rural areas.

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- We foster sustainable agriculture in the EU through our domestic policies, as well as in our cooperation with developing countries. Cultural and natural heritage values represent an additional asset for multifunctional farming.

Sustainable farming is generally intended as greener agriculture, which is innovative because of less environmental impacts. For example, conservation farming is characterised by conservation tillage (CT) which is considered as a soil management practice aimed at preserving soil fertility and biodiversity and reducing negative impacts such as the disruption of the soil's structure, erosion, and carbon loss during tillage ([Zentner et al. 2004](#); [Conant et al. 2007](#)). Non-inversion soil cultivation is the hallmark of CT, in combination with adapted husbandry and crop techniques such as cover cropping, the surface incorporation of crop residues, or crop rotation (Pisante, 2007; [Lahmar, 2010](#)). [Holland \(2004\)](#) and [Trewavas \(2004\)](#) reviewed many comparative studies from both the USA and Europe, and found CT benefits both the environment and wildlife.

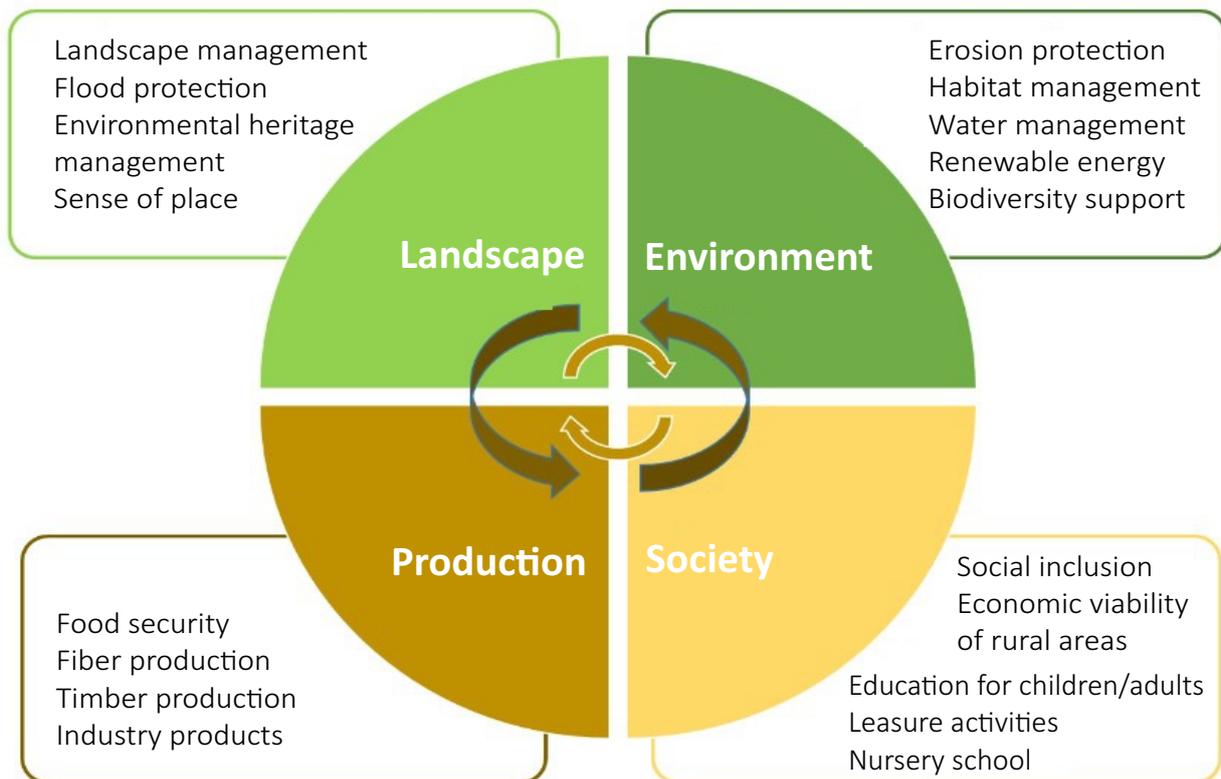


Figure 3: Framework of connections among farm functions (in boxes) and interfaces between the farm and its context. Multiple relationships between interfaces and functions are highlighted by arrows (e.g. management of hedges effects respectively i) environment = support for natural habitat, ii) productions = biological pest control, iii) company = visual quality of spaces for leisure, landscape = environmental heritage for enclosed fields).



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Results from FEAL-Questionnaire (Annex 2)

- I.1 “Overall, multifunctional agriculture is well developed in your country”. While Italy strongly agrees or agrees, like Slovenia and parts of Slovakia, we do have disagreements in the rest of Slovakia, Germany, and in Spain.
- V.2 “The exchange of successful experiences in multifunctional/sustainable farming creates win-win-situations with regard to maintenance and the protection of EAL” was considered as very important by a large majority of the interviewees (Fig. 4a) VII.1 “Understanding of multifunctional/ sustainable farming” and VII.4 “Understanding of the relationship between multifunctional/ sustainable farming and EAL” had been evaluated as very important (Fig. 4b) or important by the large majority of the interview partners. Only in Germany and Slovakia was the latter also evaluated as less important.

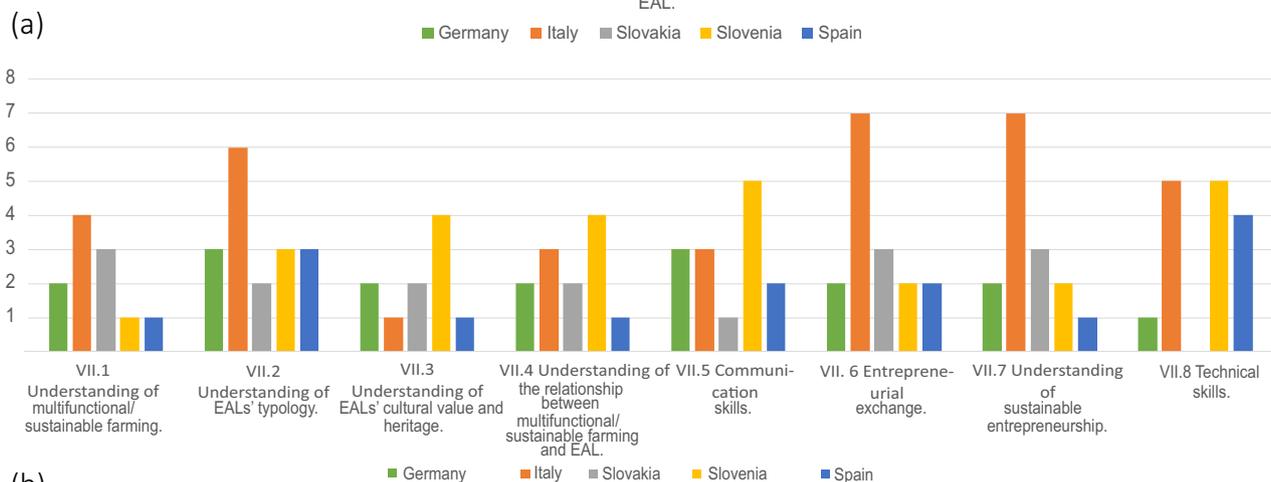
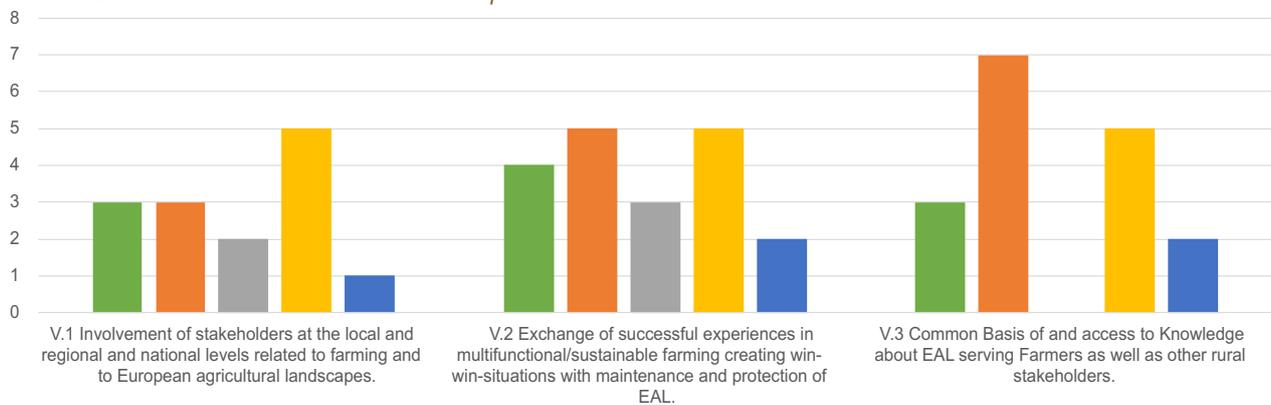


Figure 4a4b. V. Importance of the following factors in order to increase knowledge and skills in an integrated concept of Farming and EAL: very important (a); VII. Importance of different skills/qualifications/knowledge for farmers who want to build up successful farming fostering maintenance of EAL: very important (b).



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In the following, some multifunctional activities^{IV, V} that can be combined with farming are explained. Annex 6 lists examples from the FEAL-Partners.



Processing and direct sale of agricultural products

The processing and direct sale (generally by family members, on-farm) of products respond to the request of the consumer for direct contact with the producer, the preliminary assessment of which includes the most demanded products and what profitable products are needed. This function needs a flexible approach because the farmer must be willing to change the crop orientation, to invest in new equipment and to learn new skills (e.g. problems for storage and conservation, but also for the age and education of the farmers), and also to adapt the opening hours of the farm shop.

Several regional, national, and EU laws governing the sale and processing of products give an indication; for example, of how to organise laboratories to perform the processing, on health and hygiene standards for processes on occupational safety, labelling, etc. ([Regulations EC no. 852/2004](#) and [no. 853/2004](#)).



Product transformation on behalf of a third party

This is a service addressed to other farms that want to transform their products and then sell them independently.



Guides, festivals, and tastings

Participation in consortia for the promotion of a farm's products (high quality products or traditional products) or participation in the repertoires of local food and wine made by institutional sites aimed at the tourist promotion of the territory. Participation of a farm's products in local festivals.



Farmer's Markets

Farmer's markets are a direct marketing solution. In some cases, they are governed by specific regulations; for example, in Italy farmer's markets are generally set by municipalities when requested by local farmers. The advantages include much larger buyers and a structure for coordination that takes care of administrative requirements. Generally, they are organised with different banks where each farmer sells products independently. They are open on a few specific days and only sell local and seasonal products. Farmers' markets help maintain important social ties, linking rural and urban populations. Focusing on 'local' products, farmers' markets help to create a distinction and uniqueness contributing to the construction of a sense of place.

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Quality labels

Three European Union schemes for geographical indications and traditional specialties, known as the protected designation of origin (PDO), protected geographical indication (PGI), and traditional specialties guaranteed (TSG), promote and protect the names of quality agricultural products and foodstuffs. They are based on the legal framework provided by the [Regulation EU No. 1151/2012](#) of the European Parliament and of the Council of 21 November 2012 on quality schemes for agricultural products and foodstuffs.

Through the label, consumers can easily recognise these traditional quality products and can rely on their authenticity in terms of their regional origin or traditional production. Other quality certification programmes are supported locally.



"Pick-your-own"

Consumers collect fruits and vegetables directly from field, purchasing them at favourable prices.



Box schemes

Baskets, bags, or boxes with seasonal products are delivered by the producer directly to the home of consumers (private citizens, groups of citizens, and schools, etc.), often combined with social projects and often locally organised.



Purchasing groups

A purchasing group is formed by a set of people who decide to meet and buy wholesale food products, to be redistributed between themselves. The Solidarity Purchasing Groups have a particular model of consumer coordination where they use the concept of solidarity as a guiding principle in the choice of products



Community Supported Agriculture (CSA) or solidarity economy

These are new methods of associations between producers and consumers (also mediated by a public administration) identifying a new model of land development aimed at increasing local resilience and bringing back economic processes to the territory. It is a new frontier and a testing field. In this group, community urban gardens can also be included.



E-Commerce

Web platforms or blogs are more or less structured, and complex tools use the web to allow direct contact with the consumer.

^{IV}Sources and more information: <http://www.ismea.it> (Fabio Del Bravo et al., 2016); <http://enrd.ec.europa.eu>

^Vsources and more information about Hazard Analysis and Critical Control Points: <https://www.food.gov.uk/business-industry/food-hygiene/haccp>

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Agritourism

Agritourism is the part of rural tourism strongly linked with accommodation on farms. It has been encouraged by CAP since 1980. The farm needs to respect legal prescriptions and needs to adapt its facilities to perform this work. National or regional laws establish criteria and limits for the different rural tourism services providing indications for housing, camping, and catering (e.g. maximum number of beds, places for agri-camping, meals or places-table).



HoReCa circuit

Supplies products to the HoReCa circuit. HoReCa is an English acronym (hotel, restaurant, cafe) that identifies a particular sales strategy, organised so as to contact hotels, restaurants and bars directly to offer products without intermediaries.



Farmhouse restaurant

The farmhouse restaurant can be addressed to:

- Farm guests (lodging, camping);
- House guests and also to "external" guests (on the farm only to eat);
- Only to "external" guests (without accommodation).



Social agriculture

Social farming includes several forms of acceptance for the elderly, youth, and people with disabilities. Social farms generally undertake activities in collaboration with health authorities and drug services, thus with the local authorities, voluntary organisations, universities, and schools. There is no specific legislation at the European or national level, as the social farm is indirectly regulated by the laws regulating agriculture, health, social policies, and labour. In Italy, some regions have specific regional laws on the subject (e.g. Calabria, Toscana, Friuli Venezia Giulia, and Campania).



Rehabilitation and care for persons with disabilities

This service is addressed to persons with severe disabilities (physical, psychological/mental, and social). The farm needs to involve specific competences and needs to organise specific areas equipped for performing rehabilitative projects (garden therapy, pet therapy, donkey therapy); for example, an area for assisted intervention with animals for pet therapy. Pet therapy has a therapeutic, rehabilitative, and educational value and requires the use of domestic animals (i.e. dog, horse, donkey, cat, and rabbit).



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Training and job placement

The aim is to give experience-oriented employment to disadvantaged people (e.g. individuals with minor disabilities, people outside of the productive process, integrating migrants or refugees). The process is developed in conjunction with agencies for work support, with institutions, other farms and social cooperatives, or with schools.



Education

The educational farm wants to contribute to the creation of a stable link between people and the earth. In this way, the farm becomes an environmental and food education centre for schools and families where people can directly experience nature, food, and traditions. Usually, summer camps or educational day trips for schools are performed, with activities including cheese-making, traditional gardening, and bee keeping.



Day-care services for the elderly

The aim is the involvement of the elderly in small agricultural work and in structured workshops. Activities to stimulate the elderly participation and the interest of people supporting socialisation, intergenerational exchange, and the promotion of well-being.



Agri-kindergartens

Agri-kindergartens (or agri-nests) are dedicated to providing services to preschool children education (0-3 years in Italy) with the rediscovery of the educational role that nature can play.



Ecological functions

Agriculture and related land use can have beneficial or harmful effects on the environment. The measurement of these kind of services is not easy and is generally considered under the umbrella of ecosystem services. All these functions are generally supported economically and indirectly recognised by the agri-environmental schemes of RDPs.



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Farm and landscape relationship

The effects of the landscape pattern organisation on ecosystem services and ecological functions are central issues in academic research and studies on the ecological sustainability of agricultural management practices (e.g. organic farming, integrated crop management, etc.).

The concept of ecosystem services was developed by the international work programme “[Millennium Ecosystem Assessment](#)” (2003). Ecosystem services are the benefits (tangible goods and intangible services) provided by ecosystems that contribute to human life and wellbeing. Examples of ecosystem services include products such as food and fresh water, and non-material benefits such as recreational and spiritual benefits in natural areas, etc. The closeness between farm multifunctionality and the ecosystem services of the farm is evident (see Annex 7).

Recently, increasing attention has been directed towards the design of the agricultural landscape, which is the process of the arrangement of spatial features in the landscape itself ([Lovell et al., 2010](#); [Speelman et al. 2013](#)). [Nassauer & Opdam \(2008\)](#) defined landscape design as “any intentional change of landscape pattern for the purpose of sustainably providing ecosystem services while recognisably meeting societal needs”. The design of agricultural landscapes is crucial towards the sustainability of the landscape, because different choices can lead to either extensive or intensive cultivated landscapes. Extensively managed agroecosystems consist of both agricultural and natural habitats, such as hedgerows, woodlands, and meadows, which increase landscape biodiversity. Such natural structures can be ecological corridors, which facilitate the movement of wild species among the different elements of a landscape. On the other hand, intensively managed agroecosystems usually lead to a general simplification of landscape structure due to the increased use of crop monocultures and the consequent fragmentation, or complete elimination, of natural habitats. Therefore, agricultural landscapes that are managed according to the ecological intensification concept are expected to be ecologically more functional, more efficient in ecosystem services, and thus more sustainable.

The overlap between ecosystem services and rural landscape function definitions is evident. Currently, the issue revolves around how to apply this concept to real life (planning and management of the farm) by decision support systems and mapping ecosystem services (participatory mapping). In particular, mapping ecosystem services offers social outcomes such as social learning and the creation of social capital linked with the consciousness of links between man and natural resources, which are important drivers of sustainable land use ([Brown & Fagerholm, 2015](#)). Other social outcomes include: awareness-raising and community engagement, and the inclusion of citizens and transfer of ecological knowledge within (and among) communities and across generations. The table in Annex 7 documents the farm related ecosystem services based on a 2008 World Resource Institute guide and supported by case studies ([Ranganathan et al., 2008](#)).



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A new classification system, the Common International Classification of Ecosystem Services (CICES), is being developed by the European Environment Agency ([EEA, 2016](#)). The aim of CICES is to propose a universal classification of ecosystem services that is both consistent with the accepted categorisations and allows the easy translation of statistical information between different applications ([Englund et al. 2017](#)).

The multifunctionality of agriculture, the sustainable farm, and their relationships with the landscape are much broader issues, well-established as central points in the EU policy on the development of rural areas.

Sustainability is evolving from an approach based on products to an approach based on the production process and the entire agri-food system (i.e. the sustainability of the food chain, the sustainability of the short-production-chain, ecosystem services). In this vision, environmental sustainability is not separable from economic and social sustainability. Multifunctionality is intended as a way to obtain the diversification of farm income sources. But in recent years, increasing attention has been given to the services that farms generate towards the management of the environment and landscape, as well as on what their production contributes to local communities (social inclusion, educational services, vitality of communities, generational knowledge exchange, tangible and recognisable landscape). Not to mention their benefits to society (local products and high-quality products, maintenance of natural resources, land, and community resilience).

What are the relationships with the landscape?

All farm activities are performed on the landscape using the landscape's resources, with mutual effects and constraints between a farm and a landscape. Landscape characteristics both on a local and broad scale (e.g. mountain area or peri-urban area) can drive the farmer to choose the type of farming activities. However, the "intensity" of farm multifunctionality is perhaps more influenced by the business skills of the farmer than the landscape context.

Multifunctional agriculture from national perspectives

 **DE** Multifunctional agriculture – its full understanding and implementation into practice – is one of the keys for sustainable regional development and for the maintenance of landscapes in Germany. The concept of multifunctional farming is an old one, but the marketing activities in this field are new. It is used in advertisements in the real estate sector as well as in tourism. However, for many farms in Germany it has already been a long-established everyday reality.

 **IT** The Italian approach gives farmers a key role in landscape protection, preservation, and maintenance, also in terms of knowledge and heritage transfer to new generations, with a strong and direct influence on the economic, social, and environmental spheres.



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All public administration bodies and regions are oriented to address financial resources towards the objective of landscape protection and enhancement as a part of the historical, natural, and cultural values linked to important social and economic issues, such as tourism and its economic drivers. The funding is included in the structural fund programmes, mostly through specific measures of the RDPs, funded by EAFRD, and of Regional Operative Plan, funded by ERDF. There is no doubt that, after more than 40 years from the first law on agritourism, in Italy the success of this initiative can be admired as the restoration of historical rural buildings and the maintenance of courtyards, gardens, groves, and orchards, with a strong impact on tackling hill and mountain abandonment and generational farming gap and ensuring employment for new generations. This kind of sustainable development has also contributed to the deployment of IT services and connections to rural areas coping with the digital divide, to maintain one of the most important aspects of sustainable development.

 **SK** Slovakia is rich in natural and traditional heritage and natural resources, providing opportunities for more diversified agriculture, forestry, and the rural economy (e.g. through rural tourism). The RDP (2014-2020) promotes innovative projects delivering new products, technologies, techniques, or ways of working. One main objective will be to increase the competitiveness of agriculture and forestry by supporting investments bringing higher added-value to the primary production and increasing the efficiency of the organisation of the supply chain. In this way, the agricultural diversification with a particular focus on the plant specialised sectors (e.g. fruits and vegetables) and animal sectors should create more resilient and productive agriculture with new jobs and alternatives for agricultural diversification ([EC 2017](#))¹. Accordingly, based on the questionnaire results (Annex 2) we can say that small-sized agriculture is sustainable in Slovakia. The largest number of self-employed farmers (96.1%) produce on an area up to 500 ha. The highest level of economic results was achieved by self-employed farmers who farmed an area of more than 500 ha, which saw the highest share of profitable enterprises. The level of the economic results for this group of self-employed farmers was significantly influenced by subsidies, which proved to be an advantage of scale, also proven by the lowest cost of revenues (92.8%). The positive economic result (income-expenses) was achieved on average in all scale intervals in the area of farming. However, when taking into account the personal income of the farmer, the economic results were significantly lower, and as to the enterprises farming small areas of up to 100 ha, the self-employed farmers were making a loss on average, applicable mainly to enterprises farming up to 50 hectares ([Ministry of Agriculture and Rural Development of the Slovak Republic, 2016](#)). In the case of integrated rural development in the 2014-2020 programming period, the European Commission introduces the possibility of using funds from other EU funds, as multi-funding operation through community-led local development, where the LEADER approach acts as an integral part. In framework of the LEADER initiative implemented in the RDP 2014-2020, small, family, and young farmers can become members of local action groups (LAGs) and thus contribute to rural development, and concurrently, they can be the beneficiary of financial support from measures implemented in the framework of the particular RDP 2014-2020 specifying how important it is to complete the missing recreation infrastructure or to restore it,

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with an emphasis on the LEADER approach to the care and establishment of accompanying public landscapes and elements of green infrastructure that contribute to the natural enrichment of the countryside and emerging from the historical/cultural traditions of a given village/village within the LAG territory ([APA, 2015](#)).

 **SL** The broad role of agriculture is summed up by the concept of sustainable agriculture. According to the expert opinion of people who worked on this resolution, the European and Slovenian public accept this multifunctional role of agriculture, but talks with farmers or other experts show that they are not truly aware of this role. Agriculture is an economic activity of special social significance. The basic task of agriculture is to ensure an adequate supply of safe food, thereby satisfying one of the basic needs of humankind. The ecological function of agriculture is defined by its decisive contribution to the quality of water, soil, air, and biodiversity. Agriculture has also an important impact on the cultural landscape and its aesthetic and natural values. Also, with its economic and social role, agriculture contributes significantly to the vitality of rural areas and population density. The Rural Development Priorities of Slovenia are funding actions with a particular emphasis on restoring, preserving, and enhancing ecosystems related to agriculture and forestry, the competitiveness of agri-sector and sustainable forestry, and social inclusion and local development in rural areas. Measures within RDP (2014-2020) ([EC, 2017](#))² in Slovenia supporting the sustainability of agricultural landscapes include agri-environmental measures M10 with connections to measure M1 – Knowledge transfer and M2 – Advisory services. The measure M16.9 provides support for the diversification of agricultural activities in activities related to health, social inclusion, agriculture supported by the community, and education on the environment and food. Also, LEADER or Community-Led Local Development measures can significantly contribute to the preservation of agricultural landscapes and cultural and historical heritage related as one. The multifunctional role of agriculture is also recognised within the Slovenian resolution on strategic orientations of Slovenian agriculture development and food industry up to the year 2020. There are also policy stimulants outside CAP or RDP, such as the cross-border cooperation and transnational cooperation project within Interreg that can encourage the preservation of agricultural landscapes & development of multifunctional agricultural practices within their priorities (biodiversity, protection of natural and cultural heritage, also the development of SMEs and social inclusion).

 **ES** The challenge for farmers is to be able to perceive the aspects valued by potential demand, in economic terms, so as to give them an incentive to develop multifunctional and sustainable activities. Sustainable farming is defined in the Andalusian Rural Development Programme 2014-2020 ([EC, 2017](#))³ that has included several measures and operations pursuing the maintenance of activities beneficial to the environment against the risk of abandonment, the introduction of productive systems that allow a more sustainable use of natural resources, and the sustainable development of genetic resources in agriculture, as well as the growth and consolidation of the ecological sector.



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While a general and incomplete loss of agrarian jobs has taken place, the rural space is going through a process of very uneven economic diversification. All in all, despite the loss of substance, inhabitants, jobs, and dwellings that have not yet been finished, the new activities and functions of the rural areas are smoothing out the crisis and the break-up of Spanish rural space and society.

The definition of a family farm implies several elements characterising its role in the maintenance of landscape values:

- *Convergence between family patrimony and agrarian heritage (income from the activity on the farm is integrated into the family's common heritage).*
- *A certain way of organising family work within the farm (the owner and members of his/her family directly contribute to most of the work necessary to carry out the farm).*
- *A certain way of conceiving the profitability of the exploitation (the strategies are defined with criteria not only of economic rationality, but also of social rationality, since exploitation is perceived by the family as a working instrument and a source of self-employment, and not only as productive capital to be profitable).*
- *Direct linkage between farm and territory (insofar as the family farm is part of the rural economy of the territory where it is located, and while the income it generates is usually consumed in the same territory).*
- *Connection with the local culture (while family members belong to the local community itself and participate directly in their social dynamics).*
- *Control over natural resources (water, soil, genetic material, etc.).*



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VET OFFERS FOR FARMERS IN THE PROJECT COUNTRIES

2005 - The Foundation of ENQA-VET

In October 2005, the majority of EU member states founded the European Network for Quality Assurance in Vocational Education and Training (ENQA-VET), with a view towards developing and implementing a common concept for quality assurance in VET. Since 2007 the EU has supported this process by making financial resources available to fund the work of the Secretariat in Dublin and elements of travel costs. In order to promote quality assurance at the national level and to strengthen cooperation at the European level, the countries represented in the ENQA-VET reached an agreement to establish “National Quality Assurance Reference Points for VET”. Until 2010, these had preponderantly been attached to institutions or had been operating as an informal network (inter-institutional steering group).

Results from the FEAL-Questionnaire

The FEAL-questionnaire (Annex 2) has clearly shown that collaboration between national, regional, and local levels is very important, as well as the exchange of good practices and common knowledge and access to knowledge about EALs serving farmers as well as other rural stakeholders. One result of the questionnaires is that any initiatives and advisory services including VET are welcome to help farmers adapt their business activities in accordance with complicated legislation (Fig. 5). These services are normally provided by local chambers of agriculture and on a national level by the respective country's Ministry of Agriculture. Still they are often at a distance that is too far for farmers to access. Online portals are becoming more and more important. They are often run by non-governmental organisations.

FEAL has asked about the offers for VET with respect to EAL

- IV.1 “VET activities concerning EAL for small and family (young) farmers are sufficient in your country”: this statement was answered with a negative tendency, especially in Slovakia and Spain where the majority disagreed, while the majority in Italy remains neutral. The results of the other countries are wide-spread.
- IV.2 “After completing education (VET, university degree, or other) in the majority of cases the farmers know the relationship between their farm and EAL”. The answers towards this statement varied a lot, while there was agreement in Italy, Slovakia, and Slovenia and some neutral responses in Slovakia, Italy, and Germany, there was also an important number of disagreement or even strong disagreement in all countries.
- IV.3 The statement “Rural society as a whole has sufficient education and training concerning EAL” was evaluated more or less negative: while in Italy, Slovenia, and Slovakia more or less 50% answered neutral, all the others and the second half of Slovenia and Slovakia disagreed or even strongly disagreed. This shows how relevant projects like FEAL are.



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- IV.4 “After completing education (VET, university degree, or other) in the majority of cases rural society and rural stakeholders know the relationship between farms and EALs”. While there are agreements as well as disagreements, many chose to answer neutral.

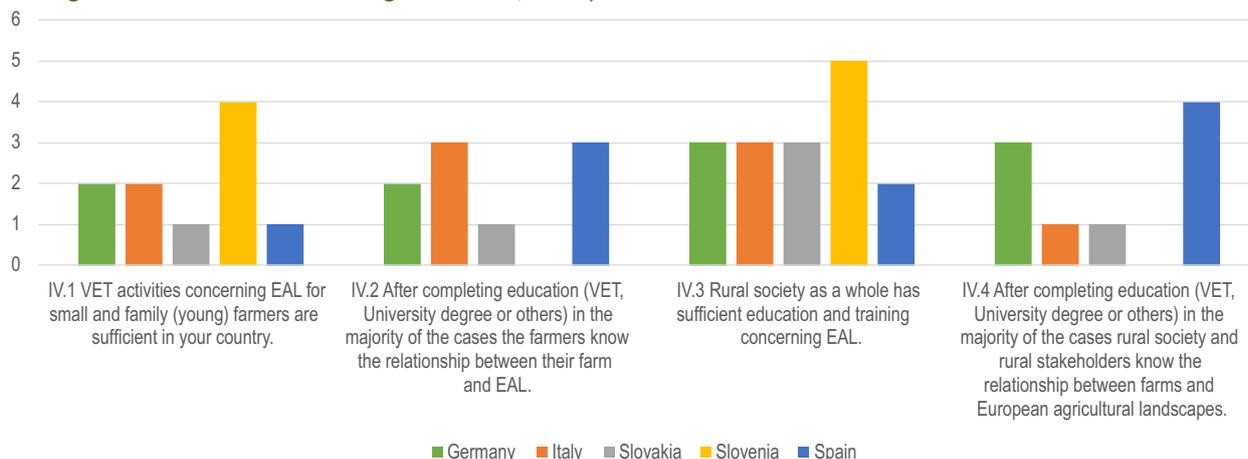


Figure 5. IV. Vocational Educational and Training (VET) and Education concerning EAL: disagree.

National perspectives

DE In 2008, DEQA-VET, the German Reference Point for Quality Assurance in VET at the Federal Institute for Vocational Education and Training (BIBB), was established in Bonn on behalf of the Federal Ministry of Education and Research (BMBWF). DEQA-VET actively engages in networking VET actors and institutions in Germany. As a point of contact and service office for questions relating to all aspects of quality assurance and quality development in VET, DEQA-VET pulls together information and expertise, investigates projects and initiatives, and organises events relevant to the theme. The aim is to form networks among stakeholders in VET, which include social partners, companies, part-time vocational schools, full-time vocational schools, continuing vocational education providers and certification bodies, VET researchers, education policymakers, and administrators within the Federal and Länder governments. It also fulfils an intermediary role between the national and European level. As the National Reference Point, it represents a node of the European EQAVET network (ENQAVET). As Germany is a federal state, education is also organised federally, which means that each Federal State (16) has its own education strategies, offerings, and structures. There are many different offerings for farmers with a special focus on transformation towards organic farming. Counselling for farmers is federally organised and extremely diverse. In addition to local chambers of agriculture, state offices, regional authorities, and institutions, there are also numerous private consulting companies and certainly education portals and institutions. Online VET for farmers does not exist or is at least not very common. The “Education Server” collects a huge variety of VET for 6 Federal States in the so-called Green Professions, which combine nutrition, gardening, forestry, domestic economy, organic farming, plant production, animal production, environment, and certainly agriculture itself. There are also courses on marketing, public relations, attracting visitors, raising awareness, etc.



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However, most of the training modules depend on the physical participation of a farmer at the education entity. VET online offers are still quite rare, not to say that they do not exist at all. That is why Germany is participating in this FEAL project.

 **IT** The importance of specific training addressed to farmers and stakeholders on the preservation and enhancement of rural landscape is stressed by the respondents to the questionnaire (Annex 2). VET education on the theme of rural landscape and connected farming activities is not so developed for the moment in Italy, even if there is notable awareness for farmers on this theme and specific care is addressed to traditional/historical rural buildings, especially if used for agritourism, farm holidays, and country-houses, and the maintenance of traditional cultivations and traditional farming remains as important farm assets. Several universities in Italy offer masters courses based on themes linked to landscaping and gardening, some of them with a specific focus on rural landscapes and corresponding to the topic of organising workshops, conferences, and training courses focused on historical agricultural landscape. Scientific backgrounds in biodiversity and landscape enhancement have recently been included (October 2016) in the training courses for professional young farmers based on at least a 150-hour course. Content quality is recommended according to international standards and procedures, such as: a) use of the reference process model of the international standard ISO/IEC 19796-1:2005; b) preparation of a scheme based on the reference process models for the quality management system; c) adaptation of the information model of ISO/IEC 19796-1:2005; d) description of all processes for the planning, development, production, and evaluation of quality management; e) discussion and agreement with all partners under Delphi methodology; f) feedback from experts under peer-review for the outputs; g) set up of the complete and sustainable quality management system for the planning, production, evaluation, and optimisation of all project processes for the final report. The priority themes linked to those issues are: "Promotion and valorisation of agro-biodiversity", "Promotion of entrepreneurial capacity, multifunctionality and diversification", "Safeguard techniques of forestry heritage", "Methodologies and processes of social agriculture", and "Promotion and preservation of the rural landscape".

 **SK** The State Vocational Education Institute is a professional, methodological, advisory, coordinating, and training institution. It is a budgetary organisation directly managed by the Ministry of Education of the Slovak Republic. The institute is responsible for developing and testing new educational programmes, curricula, and educational and training projects at secondary VET schools, as well as the methodology for the development of curricula and new school-leaving and final exams. In Slovakia, ECVAVET is implemented. ECVAVET means the European system of credit transfers amongst different countries within similar VET courses. There is a social demand for VET courses bringing an exchange of good practices and innovations for farmers (results of the Slovakian questionnaire, see in Annex 2). The situation in research dealing with farmers' practices in multifunctional and sustainable agriculture and its continual implementation into VET activities for farmers is undesirable in Slovakia.



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Relevant scientific works are rare. Although there are more and more e-learning courses ([Agroinštitút Nitra, štátny podnik, 2017](#)), no VET activities deal with the support of multifunctional agriculture based on the knowledge of landscape values. Prevailing VET activities focus on ecological and organic agriculture as well as agricultural production. Besides, the project questionnaire results (Annex 2) documented the adequate knowledge of the context of the landscape's heritage and multifunctional and sustainable farming practices that is held by stakeholders, farmers, and rural society, while the public presentation of best practices – for example, case studies – is missing in Slovakia.

 **SL** A large share of future farmers (students coming from farms and being potential successors of their family agricultural holdings) have enrolled into agricultural programmes offered by the Slovenian VET system. Agricultural programmes at the secondary VET level are implemented in similar frameworks all over Slovenia. A consortium of Biotechnical Schools renewed the agricultural VET programmes 10 years ago. Now these programmes have a strong emphasis on sustainable development, tourism in the countryside, and entrepreneurship, so young student – farmers can gain a different perspective on how to manage their farms, depending on the extent the teachers implement the questions of multifunctional farming and landscape preservation within these subjects. After the secondary level, VET students can enroll in different higher educational institutions such as universities or higher vocational colleges. In Slovenia, there has only been two attempts of online training for farmers – as far as the authors are aware of. Both trainings were in the field of organic farming and were organised by BC Naklo (2009-2011) and the other financed by the Slovenian research agency (Target research programme) and developed by the University of Maribor in 2012. BC Naklo is currently developing online trainings within Erasmus+, and as the authors observed during discussions with a group of 40 farmers, the older generation (50+) especially prefer face-to-face courses than online courses. The younger generation are willing to participate in online courses. There are also offerings from Higher Vocational Colleges in Countryside Management. Within this programme, some of the issues regarding multifunctional farming and agricultural landscapes are tackled, such as sustainable development, with selected chapters of biology, countryside sports and tourism, natural values, and biodiversity protection (optional course) and entrepreneurship. At the college level of nature preservation, there is an obligatory course on nature protection and spatial planning.

 **ES** In Spain, the VET offers are also diverse, manifold, and from different hierarchical levels. There are modules of vocational training in online modes, but the training offered this way is still limited; although every day there is more of a supply, this offering depends on each autonomous community, since education in Spain is managed by the autonomous communities. For now, no agrarian or environmental modules are offered online. There is also a lack of knowledge transfer from institutions, agencies, and between farmers, explaining the best options and successful examples of multifunctional agriculture. The development of VET capacities beyond merely the agronomic is expected;

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The completion of the utilitarian vision means joining supply and demand and enhancing commercial, marketing, administration, and public relations skills. Training in ecology and the development of sustainable agricultural practices mirrors over the long-term the economic impact of the application of these techniques. Although, there is no evidence of projects similar to what we have in hand, experts believe that the training tools may be a complement to regulated or non-regulated training in agriculture, environment, or forestry fields.

Targeted groups of young farmers are the most promising for using online e-learning materials and applying new modern business strategies to their farms.

Generally, online-based VET for farmers are not very common yet, especially when we talk about education aiming to apply knowledge on landscape values into multifunctional agriculture. One result of the questionnaires (Annex 2) is that any initiatives and advisory services including VET are welcome to help farmers adapt their business strategies in accordance with complicated legislation. These services are normally provided by local chambers of agriculture and on a national level by the respective country's Ministry of Agriculture. Still they are often held at a distance that is too far for farmers to access. Online portals are becoming more and more important. They are often run by non-governmental organisations.

Social demand for VET activities and the need to solve landscape quality makes the project's outputs applicable in future VET courses. Raising awareness on landscape values for farmers and stakeholders and promoting adequate daily maintenance should improve the quality of many exceptional and common European landscapes and bring added value to the landscape.

Project outputs based on the international exchange of best practices are presupposed to be implemented into the possible future training materials of VET courses running under the rules of the European EQAVET framework ensuring the quality of the education provided.



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VALUES AND HERITAGE OF AGRICULTURAL LANDSCAPES

Values and heritage of agricultural landscapes in Europe

Results from the FEAL questionnaire (Annex 2) appealed to both experts and the public in the discussion on landscape values. All interviewees considered both statements V.1 and V.3 as very/important, without exception (Fig. 6a6b).

- V.1 "The involvement of stakeholders at local and regional and national levels related to farming and to EALs".
- V.3 "Common basis of and access to knowledge about EAL serving farmers as well as other rural stakeholders".

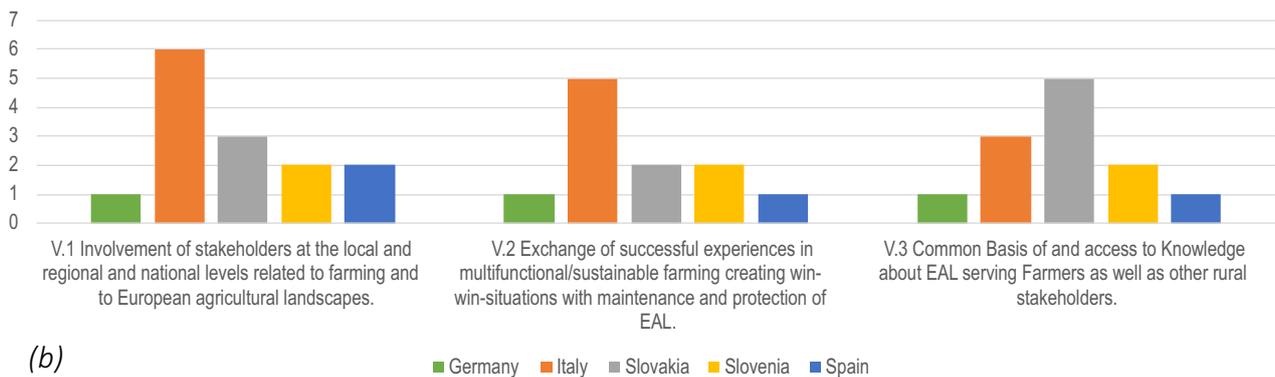
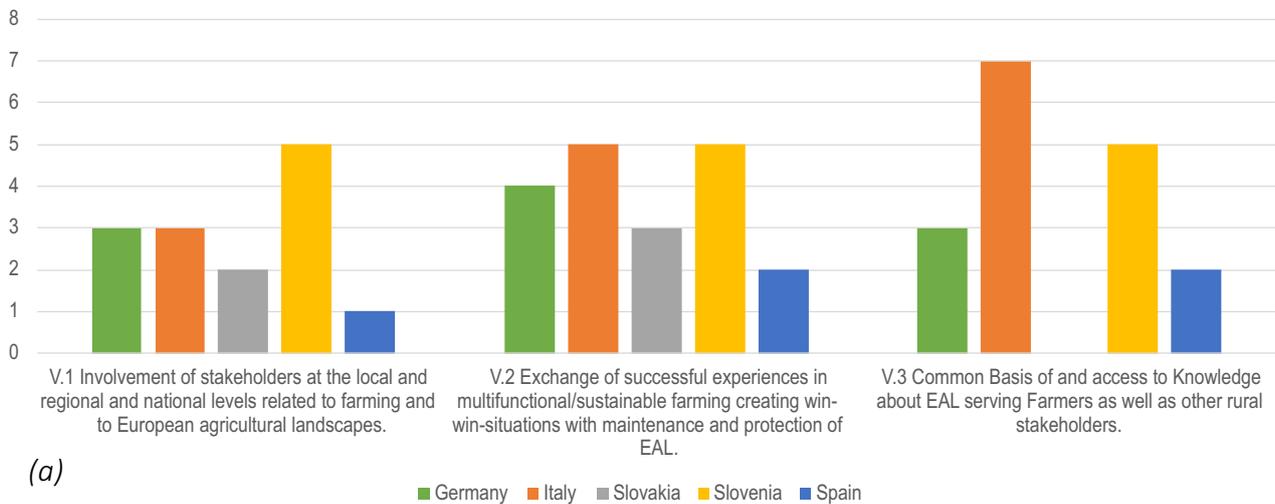


Figure 6a6b. V. Importance of the following factors in order to increase knowledge and skills in an integrated concept of farming and EAL: very important/important.

Interviewees did not bring definite answers about their awareness of EALs and landscape values.





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- *III.1 “Farmers have a very good knowledge about EALs and its values”. The meaning is divided between half agreement in Italy and Germany and neutral reactions in Italy, Slovakia, and Germany, while Slovenia and Spain disagreed, and also Italy had some disagreements.*
- *III.2 “Rural stakeholders have very good knowledge about EALs and its values”. Also towards this statement, disagreement is predominant – followed by a neutral reaction in Italy and Slovakia (here neutral is the dominant answer.)*
- *III.3 “Rural society as a whole have very good knowledge about EALs and its values”. The trend of neutral answers (mainly Italy, Slovakia, and Germany) or even disagreement is maintained towards this statement, especially for Slovenia, Spain, and Germany, with strong majorities at any time.*

The landscape classification is explained from historical and cultural points of view considering the geographical dimensions of the presented landscapes – from European dimensions specifying traditional land uses in European regions to local landscapes bearing their own original features more or less known by stakeholders, farmers, and the broad public. Many contemporary agricultural systems have a parallel in historical ones, and this knowledge can contribute to the understanding of current problems in agriculture and finding appropriate solutions.

Main European Agricultural Landscape types and economic connections amongst EALs^{VI}

Renes (2013) summarised the different methodological approaches for classifying the (agri)cultural landscape in Europe as follows: “Since the final years of the 19th century, geographers and other scientists have investigated the historic landscape. In the course of time, six traditions have been developed that all left their marks on present research. The traditions were: [1] historic-genetic settlement studies, that started in Germany (August Meitzen) and were characterised by archival studies into the structures of settlements and field patterns; [2] regional surveys following French geographers (Paul Vidal de la Blache) that also contained research into the historic landscapes; [3] deserted settlement studies, developed in Germany as well as on the British Isles; [4] interdisciplinary studies in landscape history and archaeology in the English tradition shaped by William Hoskins and others; [5] the new cultural geography, with Denis Cosgrove as the main initiator, that brought landscape back into the mainstream of human geography; and lastly, [6] new interdisciplinary landscape research. Between the first three traditions, individual scientists can be traced as intermediaries. The three more recent traditions were mainly English-language based and found an international audience”.

The large geographical variation and the complex histories resulted in a huge variety of regional and local landscapes, each with its own stories and characteristics. Although most books on European landscapes mainly present kaleidoscopic views of local case studies, there have been attempts towards a more systematic approach ([Emanuelsson, 2009](#)),



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including maps of rural settlement and landscape types (Lebeau, 1969; [Meeus et al., 1990](#)). These maps elaborate on the older classification into three groups (Smith, 1967, p. 196): [1] the open fields, the large-scale grain-producing lands, [2] the 'bocage', the small-scale enclosed landscapes that were characteristic of the western fringes of Europe (hence the alternative name 'Atlantic' system), and [3] the Mediterranean landscapes, a complex group of landscapes some of which are in fact fairly similar to the other types. Such maps are interesting, but also limited as they are extremely generalised and do not show much history. Historians usually give more emphasis to the long-term changes, but they often neglect the geographical aspect. Although, a large degree of generalisation is of course necessary for synthetic publications covering the whole of Europe, such generalisations eschew many of the most characteristic historic landscapes that were the result of local or regional specialisation.

It is important to realise that the different landscape types were economically connected, each fulfilling certain roles in the European economy. Sometimes the connections between agricultural landscapes take a very concrete form, when farmers with their animals move on a seasonal basis from one landscape to another, thereby making optimal use of different circumstances. Particularly between mountains and lowlands, such 'transhumance' systems have existed all over Europe. The history of these systems is often unclear. They can be thousands of years old, but certainly have had their ups and downs. During the last century, most transhumance systems have disappeared.

In this section, we provide the main landscape types. Next, a chronological history of the main phases in the development of European landscapes is presented. The main landscape types, presented by Meeus's map (Annex 4), are mainly based on 19th century evidence. Below, we give the main types together with some historical backgrounds.

Old bocage



The so-called bocage landscapes (other terms are Bocage; Semi-bocage; Kampen) were characterised by individual fields that were enclosed by hedges or drystone walls, further by dispersed settlements and much permanent grass. Recent research has shown that these, seemingly old, not to say timeless-looking landscapes have a long and complex history. During the early Middle Ages, they must have consisted of small enclosures surrounded by huge areas of forest and grazings. The number of hedges must have been very small then ([Astill & Davies, 1997](#); [Antoine, 2002](#)). The process of gradual enclosure that brought the present small-scale landscape took many centuries and was only completed in the early 20th century.

Open-field landscapes



The open fields were typical landscapes of the High Middle Ages. These landscapes are characterised by extensive arable fields that, notwithstanding the often very fragmented patterns of landownership, lacked hedges and other visible boundaries.



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The typical land-use was grain growing, often in a two or three-field system. During the Early Middle Ages, most of these landscapes must have looked fairly similar to the predecessors of the bocage landscapes, with small enclosures surrounded by large areas of extensively used grazing lands. The High Mediaeval grain bonanza brought the rapid development of the landscapes that specialised in grain production and around 1300 open-field landscapes were characteristic of Central England, a large zone through temperate Europe, as well as parts of the Mediterranean. From the Late Middle Ages onwards, grain production moved eastward when many English open fields were enclosed and turned into grassland, later followed by open fields elsewhere, and with new open fields being developed in the Eastern Baltic. During the 20th century, many open fields kept their open landscape, but their ownership structure was changed by land consolidation (Western Europe) or collectivisation (Eastern Europe). Some of these developments resulted in landscapes that were classified by Lebeau (1969) into three subtypes.

First, former open fields, grouped settlements, their subsequent enclosure, and some settlement dispersion. These is an intermediate type between the open field and the bocage landscapes, resulting from the early enclosures in the British Isles, South Scandinavia, and parts of the Mediterranean. From the earlier phase of open-field agriculture, the villages that remained differentiated these landscapes from the old enclosed landscapes.

Second, open fields, grouped settlements, and arable land (recent changes in East-Central Europe). The remaining parts of the zone of open fields. Although in most cases the structure of landownership has changed, the open fields are still recognisable.

Third, open fields transformed in some former communist states. In a number of communist states, land was brought under state ownership and was organised into collective or state farms. This happened during the 1920s in the Union of Socialist Soviet Republics. During the 1940s and 1950s, the same process unfolded in territories that were newly conquered by – or at least brought within the sphere of influence of – the Union of Socialist Soviet Republics. The main examples are the former German Democratic Republic, the present Baltic states, Hungary, the Czech Republic, Slovakia, and Bulgaria. In other countries underwent the same political situation, however, this collectivisation did not take place (former Yugoslavia, parts of Poland and Rumania).

Linear settlements



Lebeau's settlement map characterises the settlements in a number of regions in coastal or in (originally heavily forested) mountainous regions as "Linear settlements, in polderland or in forests". These landscapes are mainly the result of systematic high-mediaeval colonisation, although some date from later centuries. This colonisation movement led to highly-planned landscapes of individual holdings.



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The most characteristic type consists of linear settlements in which each farmer owned a single strip of land. In German-language literature, these settlements are called 'Hufendörfer'.

Mediterranean landscapes.



The Mediterranean landscapes ([Grove & Rackham, 2001](#)) were mainly classified according to some specific types of land use that had shaped very typical landscapes. They fall into four subtypes.

The first group included Mediterranean open fields with tree crops and mainly grouped settlements with some dispersion. The open-field landscapes of the Mediterranean are usually treated as a separate group of landscapes, different from the open-field landscapes of the temperate zone. However, there are more similarities than differences. Just like the open fields in the temperate zone, the Mediterranean ones were characterised by the production of grain in unenclosed strips.

The second group, the huertas (a Spanish term), refers to the irrigated lands in the river deltas. These landscapes with their extremely intensive agriculture on Holocene soils can be compared to the deltas of temperate Europe, but they differ from the latter ones by the importance of irrigation.

The third, the coltura promiscua, is a very typical landscape that is especially well-known in Italy and that is characterised by mixed land use of small grain fields, surrounded by lines of trees (sometimes pollarded trees, in other cases olive or mulberry trees), and, in between the trees are grapes. These systems may have been developed during the late Middle Ages, but certainly spread during the 17th century.

The fourth, the montado (in Portuguese) or dehesa (in Spanish), is another landscape of mixed land use, with a combination of trees (cork oaks, holm oaks) with pastures for sheep or pigs. This savanna-type landscape is typical for parts of the Iberian Peninsula, but can also be found elsewhere in the Mediterranean. These landscapes can have very old roots, but the growth of the wine trade during the 18th century led to the increased planting of cork oaks, and in fact many of the dehesas are now thought to date from the 18th to the early 20th century ([Plieninger, 2004](#)).

Mountains ('montagnes') and highlands



Highlands and mountains are landscapes that usually have a peripheral status in the agrarian economy. However, they too are agricultural landscapes, which were often characterised by specialised agricultural activities, particularly animal husbandry. Parts of the lower mountains (hills) that are part of the bocage landscapes on both maps are in fact closer to the highlands.



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The British hills have a long history of sheep-raising, with open moorland landscapes as a result. In most continental hills, forestry was a major occupation. Mountain pastures often delivered young animals, hardened in the difficult environment, to lowland farmers. Dairy products (cheese) were also a major source of income for many mountain regions. Some of these landscapes have a complex history, with a much denser rural settlement in the past than nowadays.

The consolidation of national typologies with European landscape types

National types of agricultural landscapes are consolidated by the database of the types of European Agricultural Landscapes that was developed by EUCALAND ([Pungetti & Kruse, Eds., 2010](#); Kruse et al., 2011), and has still been updated during the life of the project. The landscape character with valuable features will be defined at the local level (Fig. 7) (Annex 4, Annex 5).

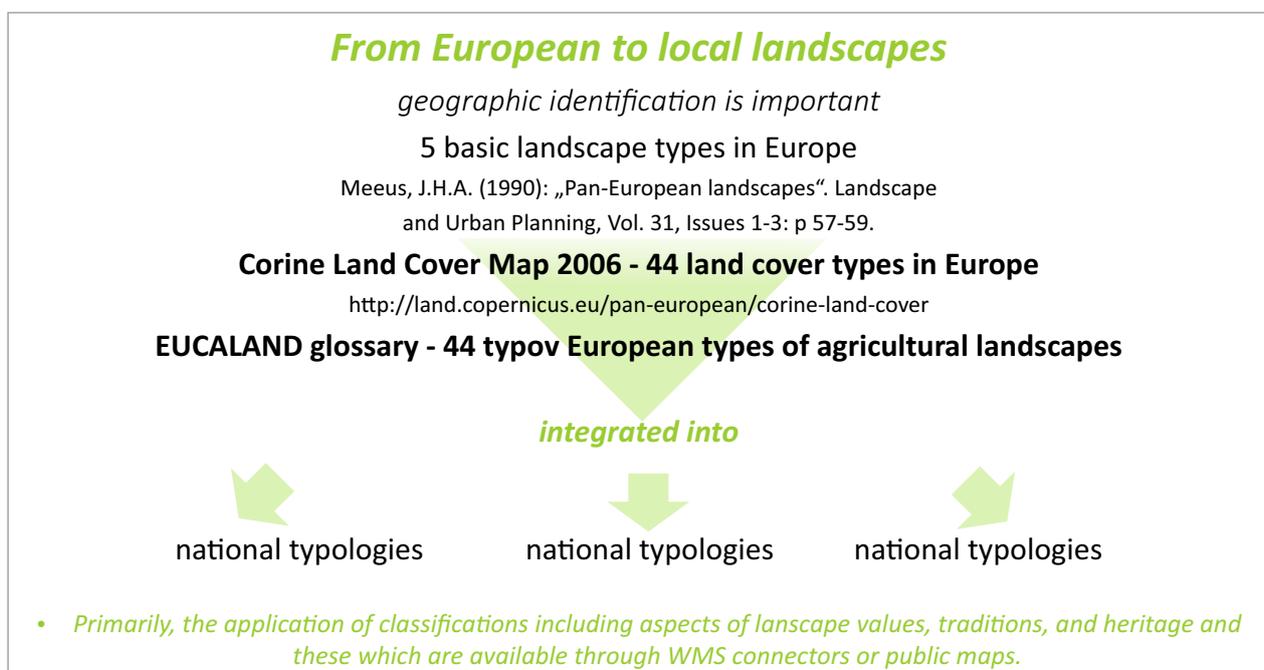


Figure 7. The consolidation of European and national approaches to landscape classification.

Considering national approaches to the classification of landscapes applied in the project, one suitable method is the method on landscape character identification and assessment ([Jančura et al., 2010](#)) or other relevant methods describing the process of the quality assessment of landscape types (Annex 5).

The most important steps of the method include:

- Identification of landscape types (according prevailing land-cover and relief configuration); landscape types are interpreted in maps as texts and are displayed in photos, panoramas, and eventually, as hand-drawn images – icons



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(information graphic contain the minimum information redundancy, comprehensible for the wider public).

- The assessment of landscape type quality. Axiological attributes as significance (local, regional, national, and international) and values (endemic occurrence, unique combination of features, the presence of historical structures in the landscape, visual harmony, visual exposure, landscape identity, symbolic significance of a place, risk of extinction) are aligned to landscape types. Definite complexity of features appearing in visual landscapes in the context of each of the other represents individual character of landscape.
- The proposals of incentives towards the achievement of the final landscape's quality (expected by public and experts) and/or the elimination of the visual impact symptoms.

National approaches towards landscape classifications and mapping

 **DE** Germany has no specific classification of landscape types dealing with the heritage of agricultural landscapes. Several approaches to the typologies of agricultural landscapes exist in Germany; however, there is no national agricultural landscape inventory. A map developed by [Gharadjedaghi et al. \(2004\)](#), which comes closest to a classification, uses the criteria of physiographic boundaries, current land use as indicated by data from the CORINE Land Cover satellite imaging project, and other locally applicable landscape boundaries. Landscapes are classified into landscape types using characteristic features that are easy to spot in the field. Qualities that are not readily apparent are not used for classification purposes. Thus, the German land surface can be divided in this way into 858 separate landscapes including 59 conurbations. These landscapes are classified into 24 landscape types based on the relative prominence of certain features. Each landscape is also assigned to one of three major geographic subdivisions: Lowlands/Plain, Uplands, and Alps and Alpine Foothills.

 **IT** Italy has a long tradition in the research of agricultural landscapes ([Sereni, 1961](#); [Agnoletti, Ed., 2013](#)). In Italy, after the establishment of the National Observatory on Landscape Quality in 2004, under the responsibility of the Ministry of Cultural Goods and Activities and Tourism, also as a consequence of the Landscape European Convention known as the 2000 Florence Convention, a National Observatory of Rural Landscapes was constituted in 2012 by the Ministry of Agriculture, Food, and Forestry Politics. The National Observatory of Rural Landscapes manages and evaluates yearly applications to submit outstanding rural landscapes as a candidate for the National Catalogue of Rural Landscape. In addition to the landscape, the Observatory's activities are aimed at the preservation and enhancement of "agricultural practices and traditional knowledge", defined as "complex systems based on ingenious and diversified techniques, on local knowledge expressed by rural civilization, which have made a major contribution to the construction and maintenance of traditional landscapes." ([UNESCO CBD, University of Florence, 2014 & Ministry of Agricultural Food and Forestry Policies, Laboratory for Landscape and Cultural Heritage, 2016](#)).



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 **SK** Several typologies of agricultural landscapes exist in Slovakia and the prevailing types were published in the Landscape Atlas of the Slovak Republic ([Miklós & Hrnčiarová, Eds., 2002](#)) and in the book of Representative Landscape Types of Slovakia (Bezák et al., 2010). All typologies are available online. For this project's purposes, we give attention to the following, which reflect a traditional way of land use arising from the agricultural practices used in the past:

- Typology of the specific landscape structures includes the following types: traditionally used agricultural landscapes with small agricultural buildings; traditionally used agricultural landscapes with water mills; landscape with combined traditional land use and with technical sites and folk architecture; traditionally used agricultural landscapes with scattered settlements; landscape with traditionally used meadows and pastures; vineyards.
- Typology of historical structures in agricultural landscapes (HSAL) ([Špulerová & Štefunková, Eds., 2009](#); [Špulerová & Petrovič, 2011](#)) includes the following types of HSAL: HSAL with dispersed settlements; historical structures of vineyard landscapes; historical structures of arable land, grasslands, and orchards; historical structures of arable land and grasslands. Subtypes are divided according to the prevailing land use.

 **SL** Slovenia is placed in the heart of Europe, and has always been a transitional country between east (Pannonia) and west (Padania), which has influenced settlement patterns and furthermore, the landscape's appearance. Geographical and climate elements have an important role in settlement and land use formation. Historically, Germanic, Romanic, Hungarian, and Slavic cultures caused the development of a variety of cultural landscapes in the relatively small territory of Slovenia. Traditional farming resulted into the formation of certain types of farmlands and many of them are classified as outstanding landscapes. [The Cultural Heritage Protection Act \(2008\)](#) defines "cultural landscape" to be an open space with its components, structure, development, and application mostly determined by human interventions and activities. The atlas of Slovenian landscape types (Marušič et al., 1998) created a foundation for the determination of the most valuable (outstanding) landscapes. It provides an expert basis for the establishment of Areas and Elements of Landscape Identity which were designated for national planning acts and valuable information for any continued research on types of landscape areas. Moreover, it can be used in the development of tourism.

 **ES** Although the classification and characterisation of landscapes is relatively scarce in other countries, Spain already has an initial characterisation of landscapes existing in its territory, in line with the recommendations of the European Convention on Climate Change ([United Nations Organisation, 1992](#)). The Atlas of the Landscapes of Spain ([Mata Olmo & Sanz Herráiz, Eds., 2004](#)), which was published by the Ministerio de Agricultura, Alimentación y Medio Ambiente, was accomplished after several years of work in 2004. This Atlas can be considered an important tool when it comes to identifying landscapes throughout the entire territory, analysing their characteristics and dynamics of transformation, the pressures that modify them, and facilitating the control of undesirable changes. It is available online.



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It is, in fact, the only one available as a reference, since no other tools have been developed at the national level so far, although at other regional scales, especially at the regional level in certain Autonomous Communities, or by concretely analysing certain types of landscape (organisation of the landscape, landscape dynamics, perception of the landscape, qualitative evaluation). The Spanish Inventory of Natural Heritage and Biodiversity provides a complex database and maps on Spanish natural heritage. The structure of the landscape typology is explained in Figure 8.

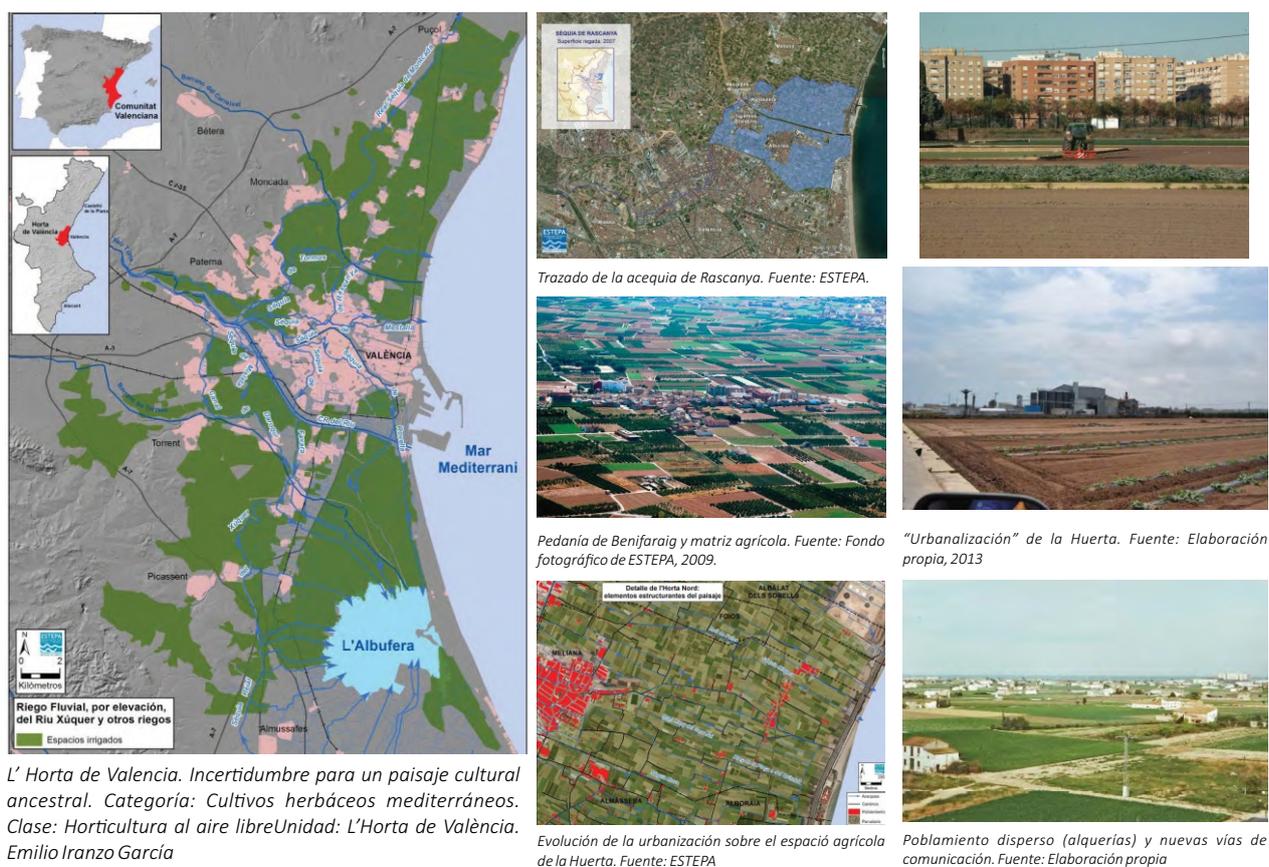


Figure 8. The comprehensive typology of Spanish landscapes is published in Spain's Landscape Atlas published by the Ministerio de Agricultura, Alimentación y Medio Ambiente (2014).

^{VI} Excerpt, adapted by the author himself, from: Renes (2010): "European agricultural landscape history" in: [Pungetti & Kruse \(Eds.\) \(2010\): "European Culture Expressed in Agricultural Landscapes - The Eucaland Project Book". Palombi Editori, Roma.](#)



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THE PRESERVATION OF A LANDSCAPE'S HERITAGE

Multifunctional and sustainable farming activities contributing to the preservation of a landscape's heritage

The natural and cultural values of cultural landscapes are generated by historical landscape structures. Their value arises primarily from a high level of biodiversity and diversity of land cover, preserved traditional agrarian forms of land cultivation and technologies, and socially and culturally significant historical buildings (Štefunková et al. 2011). The importance of small farms is felt predominantly in rural settlements, because their production is (often) minor for market purposes and it serves rather for local or partially local consumption. Multifunctionality is one of the most important aspects of sustainable development. There are essentially two approaches to the analysis of multifunctionality. One is to interpret multifunctionality as a characteristic of an economic activity. The second way of interpreting multifunctionality is in terms of the multiple roles assigned to agriculture (Bohátová et al., 2016).

The FEAL questionnaire (Annex 2; Fig. 9) partially confirmed the following

- *I.4 "Farming already leads to positive effects on EALs". While in Slovakia the majority strongly agreed with this statement, a good share also agreed in Germany, Italy, and Slovenia. In Italy, there is also a significant number of neutral evaluations, while in Slovenia half of respondents disagree.*
- *I.5 "Profit-oriented farming and landscape maintenance/conservation/improvement can create win-win-situations." Most interviewees agreed strongly to this statement.*

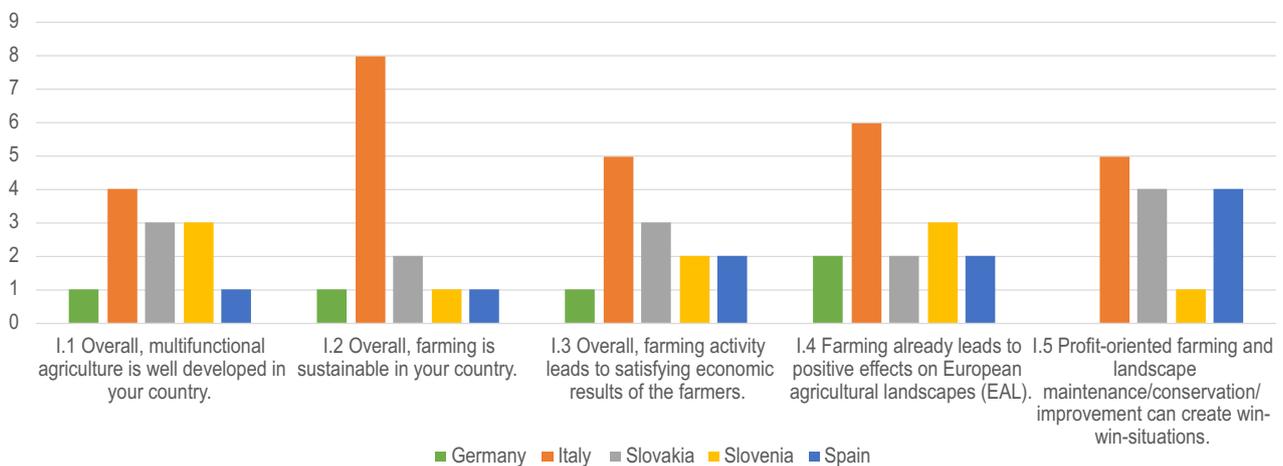


Figure 9. I. Situation of Farming and Agriculture: agreed.

The results of the FEAL questionnaire (Annex 2) generally confirmed the need for the EAL quality assessment. All interviewees agreed on the need for the protection and valorisation of EALs, while the level of awareness of EALs was evaluated differently.



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- II.1 “EALs and their values are widely recognised in society”. There is an interesting gap between agreement (Germany, Slovakia, Spain, and Italy) and disagreement (Germany, Spain, Italy, and Slovenia). In the latter, even the majority disagrees.
- II.2 “Nowadays EALs and their values for society should be maintained and protected”. This statement only returned agreement. Without exception.
- II.3 “The quality of EALs (biodiversity, landscape, cultural heritage, etc.) may suffer because of recent farming systems”. The same is true for this statement, where all interview partners strongly agreed or agreed (Fig. 10a).
- II.4 “The quality of EALs (biodiversity, landscape, cultural heritage, etc.) may improve due to new innovative and creative farming concepts”. The majority also agreed with this statement (Fig. 10b).

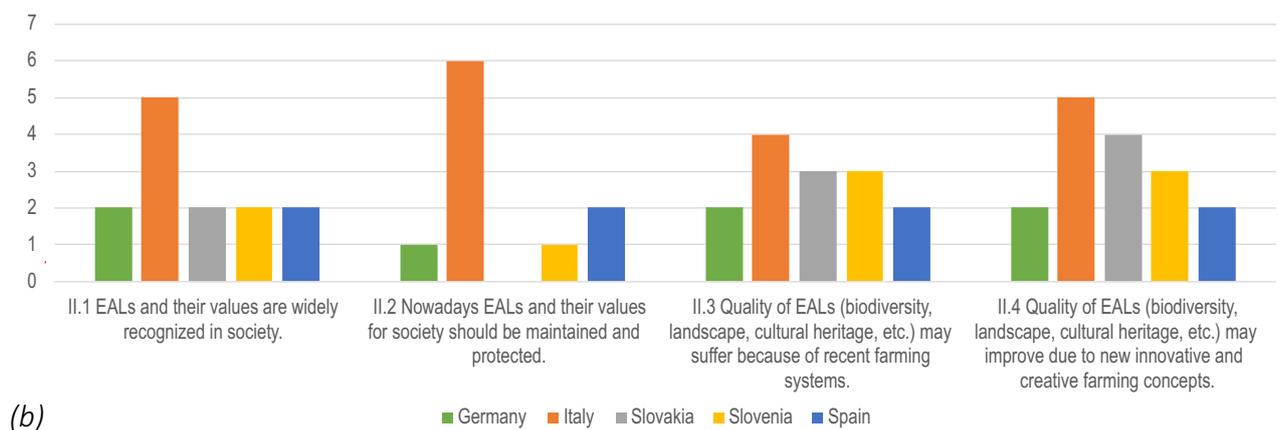
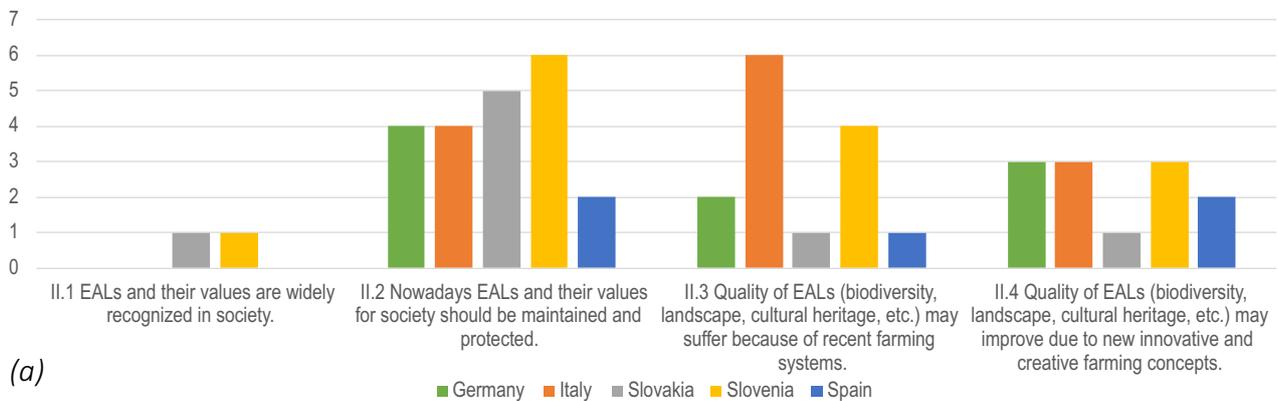


Figure 10a10b. II. Situation of European Agricultural Landscapes: strongly agree (a)/agree (b).



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National approaches



DE Most of the agricultural products serve the mass market, aiming to achieve good quality produce for cheap prices. This puts farmers in the position of competing for more and more efficient and cost-effective production. Depending on the entrepreneurial approach this can – not must – lead to negative effects on the landscape. Generally, niche markets are growing based on organic/regional/sustainable product certification in Germany. This leads to higher revenues per product unit for the farmers. Among the widely known challenge of the availability of resources (workforce, land, capital), the most important factor for successful farming will be the entrepreneur and his conceptualisation of the whole farm: excellent technical skills, a clear entrepreneurial approach, and consequences in implementation.

Most important is the existence of vital farms transferring knowledge on landscape values into “cash flow” and incorporating the so-called added value into conventional farming activities. The situations in the participating countries are different.

The fragility of the economic situation and low income will not foster sustainable farming methods. It is necessary to solve this Gordian knot to foster the broad implementation of win-win situations between farming and landscape. And the solution is not seen in ever more subsidies, but in straight concepts for farmers in their specific environment – on their own or in cooperation with others. It makes sense in many situations to let stakeholders become shareholders. There is a need for new models, especially in the use of agricultural land with often contradictory interests in environmental issues and economic needs.

With the GAK (Gemeinschaftsaufgabe Agrarstruktur und Küstenschutz) there are several eligible measures for subsidies: cultivation of a diverse crop; extensive permanent greenland use; ecological production methods; installation of flowering strips; cultivation of intermediate fruit; erosion control measures in agriculture. Individual farms take the initiative in multifunctional farming as well as in other initiatives by organisations engaged in environmental and/or nature protection, which contribute to the development of multifunctional agriculture in Germany.



IT In Italy there has been, since 1985, a special law devoted to integrating farmers' incomes by managing tourism hospitality, with a specific tax scheme and funding to restore buildings and annexes, courtyards, and other kinds of spaces dedicated to the reception of visitors and other tourism facilities and services. The more recent law no. 96, of 20 February 2006, integrated into the regional level by specific rules, has pointed out the relevance of farming as a mandatory requirement to make use of the law and the importance of recovering rural heritage and the provision of traditional farm foods and recipes. The law has highly contributed to restoring rural properties and landscapes. Other kinds of rural hospitality, not directly linked to farming, include country houses, holiday homes, and bed & breakfasts, as it is also in other European countries. There is progressive interest for young and female farmers in new concepts of sustainable agriculture, looking to organic farming, the Mediterranean diet, and the use of renewable energy sources.



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 **SK** Farming activities create landscape values. Moreover, they provide other ecosystem functions, influencing positively hydrology, fire prevention, micro-clime, etc. Currently, traditional agricultural landscapes require financial support for the preservation of their character in Slovakia. Regions with naturally disadvantaged production are significantly supported by agri-environmental payments in the EU. We do not consider this manner of allocating subsidies to agriculture to be sustainable; however, agri-environmental payments are useful in the initial phases of agricultural revival ([Slámová et al., 2016](#)). Projects realised in the framework of the RDP 2007–2013, Measure 3.1. Diversification into non-agricultural activities, contributed to the development of new non-agricultural activities for final beneficiaries. The majority of them were focused on agritourism and their aims were to attract tourists to Slovak regions, to create new jobs, and to achieve higher gross added value from non-agricultural activities. It was confirmed that these objectives were achieved, although several problems occurred within project implementation. The main problems were connected to financing and the administration of projects ([Bohatova & Schwarz, 2016](#)). Slovak farmers who recognise the landscape character and its values and transform the knowledge into their business activities on the farm are only working on few farms in Slovakia.

 **SL** There are also policy stimulants outside CAP or RDP, such as the project of cross-border cooperation and transnational cooperation within Interreg, that can encourage the preservation of agricultural landscapes and the development of multifunctional agricultural practices within their priorities (biodiversity, protection of natural and cultural heritage, as well as the development of small-sized enterprises and social inclusion). However, such supportive actions cannot overcome the human factor. According to results of the PEGASUS project^{VII}, the private initiative of a farmer is weak and it is considered to be an old-fashioned model. An individual approach is not viable, but cooperation is marked with mistrust and the lack of fidelity and entrepreneurial skills. The rest of the community does not trust individuals that stand out in this point. Innovative and entrepreneurial individuals are showing possible ways to others, proving to them that there is a way to develop in a sustainable way; however, the ability or willingness to understand these possibilities is low. The same goes for the willingness to cooperate.

 **ES** The reality is that Spanish agriculture accounts for 28% of the national surface, where there are climatic difficulties, lack of water, poor soil, and multiple mountainous areas. It is also facing an important atomisation process, as more than half of the farms are of less than 5 ha, which makes the development of professional agriculture and the generation of employment (60% of the work is supported by family agriculture) difficult. The lack of employment opportunities in the rural environment is encouraging an abandonment of its younger population, which greatly hinders the generational exchange in this sector. The fragmentation of farms, their small size, the suspension of the payment of CAP subsidies to small farmers, and the limitations of our agricultural system make it difficult to maintain the sustainability of many farms.

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The Andalusian RDP 2014-2020 ([EC, 2017](#))³ included measures supporting multifunctional and sustainable farming in points of “Agro-environment and Climate” and “Ecological agriculture”, and within them, have defined operations that pursue the maintenance of activities beneficial to the environment against the risk of abandonment, the introduction of productive systems that allow a more sustainable use of natural resources and the sustainable development of genetic resources in agriculture, as well as the growth and consolidation of the ecological sector.

^{vii} Source and more information: http://cordis.europa.eu/project/rcn/91171_en.html



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EXPECTED BENEFITS OF THE PROJECT FOR FARMERS

The project is addressed mainly to family, small, and young farmers and has an ambition to bring about the following benefits:

Improving an awareness of landscape values by farmers and stakeholders and increasing the capacity and knowledge and tackling challenges of European countryside development regarding the intentions of the European Landscape Convention and considering the specifics of countryside management in different EALs.

The questionnaire (Annex 2) confirmed our assumption that an awareness of landscape values by farmers and stakeholders is important for the improvement of the farming trade environment. In terms of obligations arising from the ELC ([CoE, 2000](#)), it is expected that all European countries need to maintain the diversity of European types with the co-participation of the public in decision-making processes. The current European trends focus on value-semantic features of the landscape and the preservation of those features resulting from the natural and historical genesis of a territory ([Jančura et al., 2010](#)). From the questionnaire survey (Annex 2), there is no clear answer as to whether landscape values are known to farmers; however, there is cross-societal interest for landscape character preservation. Respondents agreed that landscape quality would be improved using innovative and creative farming practices. The interviewees expressed their wish for methodical tools for understanding the significance of landscape values in an agricultural landscape. This project will explain the application of methodical steps and results through the help of case studies in order to bring scientific knowledge into the practice of small, family, and young farmers.

Providing ideas and solutions for future training materials, and how multifunctional farming that respects the heritage of EALs can lead to win-win situations.

Farmers are in touch with the landscape every day. Farming encompasses a wide variety of organised land or marine-based activities intended to produce food and other materials for domestic consumption or for sale through a market mechanism. As a result, farming has deeply significant implications for humans. In addition, farming shapes the ecology and outer appearances of the rural environment to the point where, in many countries, the farmed landscape has a cultural value that rivals or exceeds its economic significance ([Jackson, 2013](#)). Diversified activities on farms and multifunctional agriculture allow farmers a certain level of independence from agricultural production that is conditioned mostly by natural conditions and the weather. Further, according to a bibliographical survey and results of the questionnaire (Annex 2), we can say that farmers in all countries struggle each day with administrative difficulties and the not-fully functional marketing of products. This could be the main motivation for searching for innovations of commonly used agricultural practices with the main aim for farmers being to increase the economic profit of their farms. The current state of the health of the agricultural landscape, nevertheless, for the country as a whole, does not meet the criteria for optimal and ecological land use in many EU regions.

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This statement especially applies for traditionally farmed landscapes where the main problem is land abandonment (Slovakia, Slovenia, Spain). Waiting for the decisions brought about by legislation brings the irreplaceable loss of landscape values, and as a consequence, disturbances in ecological relations and eventually economic losses. One result of the questionnaires (Annex 2) is that any initiatives and advisory services including VET are welcome to help farmers adapt their business strategies in accordance with complicated legislation. Well-educated farmers would be able to identify potential for sustainable landscape development, and thus start activities which the country requires directly and are expected to be applied in their successful business plans.

Explaining the role of small, family, and young farmers in the maintenance of the countryside by diversified multifunctional activities aiming at the preservation of the landscape character and the natural, cultural, and historical heritage of agricultural landscapes in Europe.

Multifunctional farming is developed at different levels in each country. The following activities are assumed to be relevant for the preservation and maintenance of landscape values:

- Agritourism rising from eco-museum conceptions of traditionally farmed landscapes, where a farm is assumed to be a hot-spot for tourists and an essential element in the development of the recreational infrastructure of the countryside;
- Direct marketing of farm products related with community-supported agriculture and the solidarity economy (processing and direct sale of agricultural products, "pick-your-own", box schemes, purchasing groups);
- Social farming, including day-care services for the elderly, rehabilitation, and care for persons with disabilities, training, and job placement for disadvantaged people;
- Education (for instance, agri-kindergartens, organisation of courses, workshops, etc.).

A farm can serve as a hotspot in the regional tourist information system and it can provide the on-site presentation of the landscape, including further advisory and other services (Fig.11).

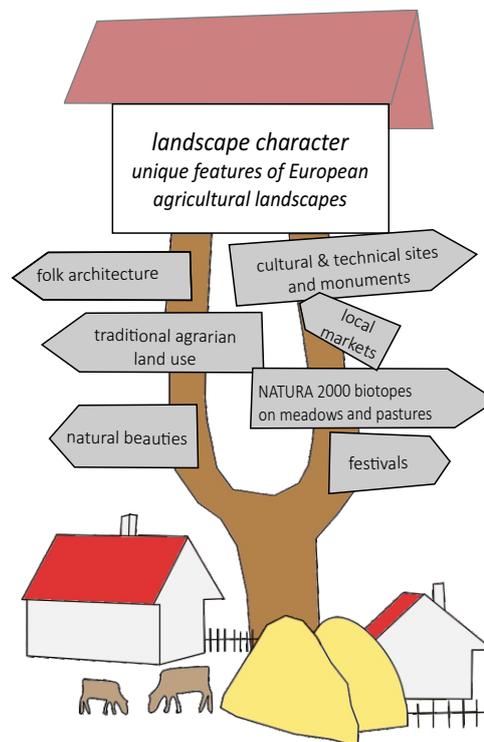


Figure 11. The importance of the agricultural activities of the small and family farmer in the preservation of landscape character and in building tourist information systems.



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Moreover, considering local traditions and festivals, it can be an attractive place to organise craft workshops or cultural events. A guide for touristic education pathways, horse paths, and other types of tourist offerings seems interesting. A personal guide can interact directly with visitors in the countryside and tourism activities can be enriched by other experiences related to farming or tasting the local products etc.

A virtual guide provided as a mobile application linked to the farm's website can mediate the view of the landscape through augmented reality and an internet connection can rapidly enlarge the basic information package provided on the farm's website. The creation of eco-museums is another way of combining landscape identity, traditional knowledge, heritage, raising awareness, food experiences, and education – for farmers as well as for visitors. The main aim of eco-museums is documenting the distinctiveness of the landscape and representing the landscape's character. An eco-museum embodies the preservation of the tangible and intangible natural, cultural, and historical heritage of the landscape, cultural facilities, and traditions. The management of the territory is performed with the participation of local residents, and eventually, visitors can actively test traditional farming practices.

The landscape's image or identical landscape features are used as trademarks of products originating in a certain territory for product marketing strategies. A regional trademark strategy related with local products can be applied in daily food marketing in shops, during festivals, or used for the regional promotion in tourism activities.

Results from the FEAL-Questionnaire (Annex 2)

Regarding the question of rating the importance of different skills/qualifications/knowledge for farmers who want to build up successful farming in order to foster the maintenance of EALs, the results display a high diversity of rankings.

- VII.2 “Understanding EAL typology”. This skill is considered either as very important or important.
- VII.3 “Understanding EAL cultural value and heritage”. The interviewees evaluated this capacity either as very important or important, with only two persons in Germany who consider it as less important.
- VII.5 “Communication skills” are ranked either as very important or important. In Slovakia, two partners evaluated this skill as neutral.
- VII.6 “Entrepreneurial exchange” is either a very important or an important ability according to the interviewed persons. In Slovakia, two rated it as less important.
- VII.7 “Understanding of sustainable entrepreneurship.” Most interview partners find this capability to be either very important or important. Three ranked it neutral in Italy.
- VII.8 “Technical skills” are in general estimated either as very important or important. In Germany, three persons expressed their neutrality towards these skills (Fig. 12a12b).



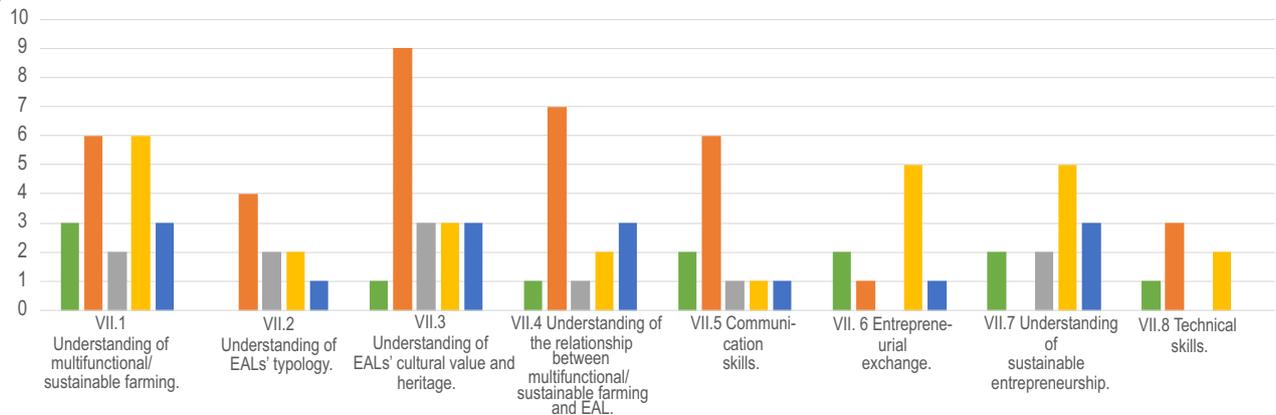
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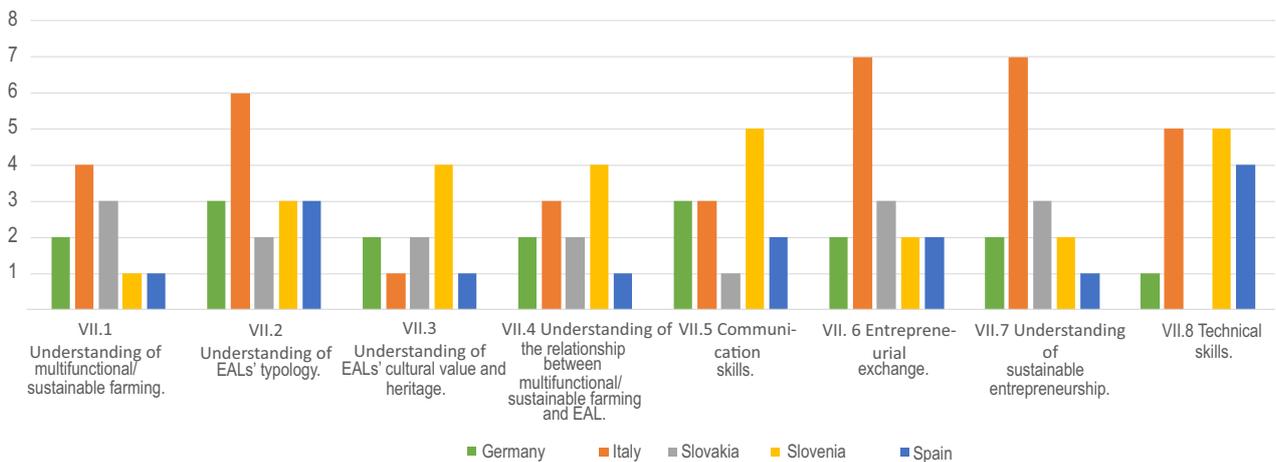


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(a)



(b)

Figure 12a12b. VII. Importance of different skills/ qualifications/ knowledge for farmers who want to build up successful farming fostering maintenance of EAL: very important (a)/ important (b).

FEAL aims at providing a means to close this gap and to propose learning material in order to fulfil these demands, formulated by the interview partners during this first project phase.

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CONCLUSIONS

Landscape protection is about finding new functions within existing structures and providing them with an adequate maintenance. Historical research can be helpful in showing the resilience of landscape structures throughout very different periods and economic systems. Traditional agricultural systems rise from historical land uses and contribute to the values of many European landscapes. The multifunctionality of agriculture and sustainable farms and their relationships with the landscape are much broader issues, are not new, and are well-established as central points in EU policy on the development of rural areas. Although there are differences between national situations, small-sized farmers play an important role in rural society as well as in shaping the diversity of EALs. All multifunctional and sustainable farming activities are undertaken in the landscape using the landscape's resources with mutual effects and constraints between a farm and a landscape. Landscape characteristics both at the local level and on a broader scale can drive a farmer to choose the type of function. However, the variety of multifunctional activities is perhaps more influenced by the business skills of the farmer than the landscape context. Most important is the existence of vital farms in the landscape and transferring the knowledge on landscape values into a farm's business strategy ("cash flow") and incorporating the so-called added value into conventional farming activities.

The total UAA for the EU-28 stood at 174.6 million hectares in 2013. This relatively stable agricultural area, coupled with the declining number of farms, has resulted in farms across the EU becoming, on average, bigger. The structure of agriculture in EU Member States varies depending upon differences in geology, topography, climate, and natural resources, as well as the diversity that is found in terms of (former) political and economic systems, regional infrastructure, and social customs. The differences witnessed between Member States in relation to the average size of their farms are, however, largely linked to ownership patterns, as those countries with high numbers of small farms are characterised by semi-subsistence, family holdings, whereas larger farms are more likely to be corporately-owned, joint stock and limited liability farms, or cooperatives

According to Eurostat data ([EC, 2016](#))² almost three quarters of farms in the EU that are very small in economic terms were subsistent. Small farms have always been a cornerstone of agricultural activity in the EU, as they support rural employment and can make a considerable contribution to territorial development, providing specialist local produce/products as well as supporting social, cultural, and environmental services. According to the report's findings, many small farms are characterised by the fact that farm holders may struggle to make a living. Generally, small-sized and young farmers struggle everyday with the following obstacles:

- insufficient capital, education, and training opportunities;
- weak financial support for small farms in comparison with large capital-intensive farms;
- problems in renting land (unresolved ownership relations; or large farms have long-term rental contracts of the land)
- complicated food marketing;
- insufficient and complicated legislation;
- missing social benefits in some countries.



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Within the European Union the tendency towards a more open world economy, which is vigorously advocated by the World Trade Organisation and the large non-European agricultural exporters, is expected to lead to a gradual abolition of agricultural subsidies. The fragility of the economic situation and low incomes will not foster sustainable farming methods. It is necessary to solve this Gordian knot to foster the broad implementation of win-win situations between farming and the landscape. And the solution is not to be found in ever more subsidies, but in straight concepts of farmers in their specific environment – on their own or in cooperation with others. It makes sense in many situations to let stakeholders become shareholders. There is a need for new models, especially in the use of agricultural land with often contradictory interests in environmental issues and economic needs.

There is no fixed European definition as to what constitutes a 'small' or a 'large' farm. In addition, there is no fixed definition as to when a small farm is rather a subsistence household producing food for its own consumption and thus is not an economic unit. But several national definitions exist for national laws or regulations. It should be noted that no cut-off thresholds for identifying subsistence households have been introduced. There are two main criteria that have been used to delineate farm size: one is based on a classification of farms in economic terms based on their standard output, while the other one is based on the utilised agricultural area. Italy is the best example of appropriately designed legislation for small-sized and family farmers on maintaining the historical landscapes of the all countries involved in this project. On the other side, an unfavourable situation in the legislation of Eastern European countries negatively influences the daily activities of small, family, and young farmers as well as the submission processes of applications for aid and funding, which is too complicated for common farmers.

The large geographical variation and the complex histories have resulted in a huge variety of regional and local landscapes, each with its own stories and characteristics. The systematic approach represents the classification of European landscapes as done by [Meeus et al. \(1990\)](#). Although a large degree of generalisation is of course necessary for synthetic publications that cover the whole of Europe, such generalisations eschew many of the most characteristic historic landscapes that were the result of local or regional specialisation. On a European scale, the division of the main landscape types was applied – Old bocage; Open-field landscapes; Linear settlements; Mediterranean landscapes; Mountains ('montagnes') and highlands. National types of agricultural landscapes are proposed to be consolidated within the database of the European types of agricultural landscapes that was developed by EUCALAND ([Pungetti & Kruse, Eds., 2010](#)). Currently, it contains 44 types and still continues to be updated. Complementary information about land cover at a regional scale is provided in the Corine Land Cover Map (44 land cover categories). From a national point of view, Slovakia applies typologies dealing with traditional land use and historical structures in agricultural landscapes, Germany uses typology based primarily only land cover classification, because no specific typology on historical landscapes exists there.

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Spanish typology comprises both current and historical aspects of land use and belongs among the most complex landscape typologies in Europe. Landscape types in Slovenia reflect a variety of ambient conditions, with geo-climatic gradients and their corresponding land uses appearing visually in the landscape character. The Italian approach characterises historical rural landscapes from North to South emphasising their historical and cultural values inherited from ancient times. The current European trends focus on value-semantic features of the landscape and the preservation of those features resulting from the natural and historical genesis of a territory. All interviewees agreed on the need for the protection and valorisation of EALs. The current situation in applied research on landscape values and their implementation into farming practices is undesirable. Most methods characterising the process of the landscape character assessment are designed mainly for experts. A 'soft version' of such a method for the common public is not available. Furthermore, there are no European classifications and approaches that would help farmers and young entrepreneurs to learn the history, characteristics, and meaning of EALs. Therefore, this project shall provide an educational tool on how to apply knowledge on landscape values in different landscape types into daily farming activities through the example of case studies.

The FEAL survey underlined the bottom-up approach of small, family, and young enthusiastic farmers towards landscape and territorial planning that is welcome and that can play a very important role in decision-making processes in the future maintenance of landscape types. Nevertheless, the help of non-governmental organisations providing information transfer among state bodies, stakeholders, and experts to farmers is undisputable in all participant countries.

The targeted group of young farmers is the most promising for using online e-learning materials and applying new modern business strategies on their farms. Generally, online-based VET for farmers is not very common yet, especially when we talk about education aiming for the application of knowledge on landscape values into multifunctional agriculture. These services are normally provided by local chambers of agriculture and on a national level by the respective country's Ministry of Agriculture. Still they are often held at a distance that is too far for farmers to access. Online portals are becoming more and more important. They are often run by non-governmental organisations. The social demand for VET activities and the need to improve the quality of the landscape makes the project's outputs applicable in future VET courses.

Raising awareness on landscape values for farmers and stakeholders and promoting adequate daily maintenance should improve the quality of many exceptional and common European landscapes and bring added value to the landscape. The project's outputs based on the international exchange of best practices are supposed to be a baseline educational material that would be implemented in the future into training materials for VET courses running under the rules of the of the European EQAVET framework, ensuring the quality of the provided education.



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Project N°: 2016-1-SK01-KA202-022502

Bibliography

- [Agnoletti, M. \(Ed.\) \(2013\). Italian Historical Rural Landscapes. Cultural Values for the Environment and Rural Development. The Netherlands, Springer Dordrecht.](#)
- [Agnoletti, M. \(2014\). Rural Landscape, Nature Conservation and Culture: Some Notes on Research Trends and Management Approaches from a \(Southern\) European Perspective. Landscape and Urban Planning, 126, 6673.](#)
- [Agricultural Paying Agency \(APA\) of the Slovak Republic. \(2015\). Rural Development Programme \(RDP\) 2014 2020. Retrieved from <http://www.apa.sk/download/8588>](#)
- [Agroinštitút Nitra, štátny podnik. \(2017\). Virtuálne vzdelávacie prostredie. Retrieved from <http://www.agroinstitut.sk/vle/>](#)
- [Astill, G. & W. Davies \(1997\). A Breton landscape. London / Bristol, PA, UCL Press.](#)
- [Antoine, A. \(2002\). Le paysage de l'historien; archéologie des bocages de l'ouest de la France à l'époque moderne. Rennes, Presses Universitaires de Rennes.](#)
- [Bartlett, R. \(1994\). The making of Europe; conquest, colonization and cultural change 950-1350. London: Penguin.](#)
- [Bezák, P., Izakovičková, Z., Miklós, L., Moyzeová, M., Špulerová, J., Mojses, M., Kočický, D., Petrovič, F., Boltžiar, M., Hreško, J., Hrnčiarová, T., Šatalová, B., Lieskovský, J., Lehotský, M., Štefunková, D., Dobrovodská, M., Baránková, Z., Gajdoš, P., David, S., Halada, L. & Oszlányi, J. \(2010\). The Representative Landscape Types of Slovakia. Bratislava, Institute of Landscape Ecology SAS.](#)
- [Bezák, P. & Mitchley, J. \(2014\). Drivers of change in mountain farming in Slovakia: from socialist collectivisation to the Common Agricultural Policy. Regional Environmental Change, 14 \(4\), 1343-1356.](#)
- [Bohátová, Z. & Schwarz, P. 2016. Evaluation of support for non-agricultural activities in Slovakia in the period 2007-2013 through the Rural Development Programme 2007-2013. Journal of Central European Agriculture, 17\(2\), 467-476.](#)
- [Bohátová, Z., Schwarcz, P., Schwarczová, L., Bandlerová, A., & Tříčik, V. \(2016\). Multifunctionality Interactions and Implications: The Case of the Podkylava Village \(Western Slovakia\). European Countryside, 8\(2\), 147-159.](#)
- [Brandt, J., Tress B. & Tress G. \(Eds.\) \(October, 2000\). Multifunctional Landscapes: Interdisciplinary Approaches to Landscape Research and Management". – Conference material. Conference on "Multifunctional landscapes", Centre for Landscape Research, Roskilde. Retrieved from <https://fr.scribd.com/document/183454032/Introduction-to-the-Theoretical-Foundations-of-Multifunctional-Landscapes-and-Their-Application-in-Transdisciplinary-Landscape-Ecology>](#)
- [Brown, G.G. & Fagerholm, N. \(2015\). "Empirical PPGIS/PGIS mapping of ecosystem services: A review and evaluation. Ecosystem Services, 13, 119-133.](#)
- [Chrastinová, Z., Stanková, M. & Belešová, S. \(2013\). Small and family farms in Slovakia and EU-Countries. Ekonomika poľnohospodárstva, XIII.4, 53-68.](#)
- [Conant, R.T., Easter, M., Paustian, K., Swan, A. & Williams, S. \(2007\). Impacts of periodic tillage on soil C stocks: a synthesis. Soil & Tillage Research, 95, 1-10.](#)
- [Council of Europe \(CoE\). \(2000\). The European Landscape Convention, ETS No. 176. Retrieved from <http://www.coe.int/t/dg4/cultureheritage/heritage/Landscape>](#)
- [Emanuelsson, U. \(2009\). The rural landscapes of Europe; how man has shaped European nature. Stockholm, Formas.](#)
- [Englund, O., Berndes, G. & Cederberg, C. \(2017\). Review How to analyse ecosystem services in landscapes- A systematic review. Ecological Indicators, 73, 492-504.](#)
- [European Commission \(EC\). \(2012\). Agriculture the way towards sustainability and inclusiveness" \(European Commission side event at the Rio+20 Conference\). Retrieved from \[https://ec.europa.eu/agriculture/events/rio-side-event_en\]\(https://ec.europa.eu/agriculture/events/rio-side-event_en\)](#)
- [European Commission \(EC\). \(2013\). Rural development statistics by urban-rural typology. Retrieved from](#)



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multifunctional Farming for the sustainability of European Agricultural Landscapes

Project N°: 2016-1-SK01-KA202-022502

- http://ec.europa.eu/eurostat/statistics-explained/index.php/Rural_development_statistics_by_urban-rural_typology
- European Commission (EC). (2015). NUTS - Nomenclature of territorial units for statistics. Retrieved from <http://ec.europa.eu/eurostat/web/nuts>
 - European Commission (EC). (2016)¹. Agriculture statistics at regional level. Retrieved from http://ec.europa.eu/eurostat/statistics-explained/index.php/Agriculture_statistics_at_regional_level#Agricultural_land_use
 - European Commission (EC). (2016)². Farm structure statistics. Retrieved from http://ec.europa.eu/eurostat/statistics-explained/index.php/Farm_structure_statistics
 - European Commission (EC). (2016)³. Small and large farms in the EU- statistics from the farm structure survey. Retrieved from http://ec.europa.eu/eurostat/statistics-explained/index.php/Small_and_large_farms_in_the_EU_-_statistics_from_the_farm_structure_survey
 - European Commission (EC). (2016)⁴. Slovakia, Common Agricultural Policy (CAP) in your Country. Retrieved from https://ec.europa.eu/agriculture/sites/agriculture/files/cap-in-your-country/pdf/sk_en.pdf
 - European Commission (EC). (2017)¹. Factsheet on 2014-2020 Rural Development Programme for Slovakia. Retrieved from http://ec.europa.eu/agriculture/rural-development-2014-2020/country-files_sk
 - European Commission (EC). (2017)². Factsheet on 2014-2020 Rural Development Programme for Slovenia. Retrieved from https://ec.europa.eu/agriculture/sites/agriculture/files/rural-development-2014-2020/country-files/si/factsheet_en.pdf
 - European Commission (EC). (2017)³. Factsheet on 2014-2020 Rural Development Programme for Spain. Retrieved from https://ec.europa.eu/agriculture/rural-development-2014-2020/country-files/es_en
 - European Commission (EC). (2017)⁴. EU quality logos. Retrieved from https://ec.europa.eu/agriculture/quality/schemes_en
 - European Environmental Agency (EEA). (2016). The Common International Classification of Ecosystem Services (CICES) Version 4.3. Retrieved from <http://www.cices.eu>
 - GIS3W, 2017. SDI e GIS Open Source. Studio e realizzazione di Sistemi Informativi Geografici completamente Open Source. Retrieved from <http://gis3w.it>; <http://partecipazioneprfvg.gis3w.it/#8/46.155/12.003>
 - Gharadjedaghi, B., Heimann, R., Lenz, K., Martin, C., Pieper, V., Schulz, A., Vahabzadeh, A., Finck, P. & Riecken, U. (2004). Verbreitung und Gefährdung schutzwürdiger Landschaften in Deutschland. *Natur und Landschaft*, 79 (2), 71-81.
 - Grove, A.T. & Rackham, O. (2001). *The nature of Mediterranean Europe; an ecological history*. New Haven / London, Yale UP.
 - Holland, J.M. (2004). The environmental consequences of adopting conservation tillage in Europe: reviewing the evidence. *Agriculture, Ecosystems & Environment*, 103, 1-25.
 - Italian Institute of Statistics (ISTAT). (2010). Agricultural census. Retrieved from <http://www.istat.it/en/agricultural-census>
 - Jackson, P. (2013). *Food Words: Essays in Culinary Culture*. London, Bloomsbury Academic.
 - Jančura, P., Bohálová, I., Slámová, M. & Mišíková P. (2010). Method of identification and assessment of characteristic landscape appearance. *Bulletin of the Ministry of Environment of Slovak Republic*, 18 (1b), 2-51.
 - Klijn, J.A., Bethe, F., Wijermans, M. & Ypma, K.W. (1999). *Landscape assessment method at a European level; a case study of polder landscapes*. Wageningen: SC-DLO (Report 173). Retrieved from <http://library.wur.nl/WebQuery/wurpubs/311221>
 - Košice Region Tourism. (2017). New mobile application - Košice Region. Retrieved from <http://kosciregion.com/en/news/new-mobile-application-kosice-region>
 - Kruse, A. & Pungetti, G. (2007). EucalLand, European culture expressed in Agricultural Landscape. *European spatial planning and landscape*, 88, 219-222.



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multifunctional Farming for the sustainability of European Agricultural Landscapes

Project N°: 2016-1-SK01-KA202-022502

- [Kruse, A., Centeri, C., Renes, H., Roth, M., Printsman, A., Palang, H., Jordá, L.B. Velarde, M.D. & Kruckenberg, H. \(2010\). Glossary on Agricultural Landscapes. *Tájökológiai Lapok, Special Issue*, 99-127.](#)
- Kruse, A., Roth, M. Raap, E. & Strasser P. (2011). Inventories of European Agricultural landscapes as basis for planning and acting in the political scope. In M. Dobrovodská, Špuleroová, J., Štefunková D. (Eds.), *Research and management of the historical agricultural landscape* (pp. 179-201). Bratislava: Slovak Academy of Sciences.
- [Kruse, A. & Roth, M. \(2013\). Landscape inventories as means to understand landscape change- A summary of the special EUCALAND session at the 25th PECSRL conference. *Tájökológiai Lapok*, 11 \(1\), 193-195.](#)
- [Lahmar, R. \(2010\). Adoption of conservation agriculture in Europe lessons of the KASSA project. *Land Use Policy*, 27, 4-10.](#)
- Lebeau, R. (1969). *Les grands types de structures agraires dans le monde*. Masson, Paris.
- [Lovell, S.T., DeSantis, S., Nathan, C.A., Olson, M.B., Mendez, V.E., Kominami, H.C., Erickson, D.L., Morris, K.S. & Morris, W.B. \(2010\). Integrating Agroecology and Landscape Multifunctionality in Vermont: An Evolving Framework to Evaluate the Design of Agroecosystems. *Agricultural Systems*, 103, 327-341.](#)
- Marušič, J., Ogrin, D., Jančič, M. & Bartol, B. (1998). *Metodološke osnove : [uvodni zvezek]*, (Regionalna razdelitev krajinskih tipov v Sloveniji). Ljubljana, Ministrstvo za okolje in prostor RS, Urad RS za prostorsko planiranje.
- [Mata Olmo, R. & Sanz Herráiz, C. \(Eds.\) \(2004\). Atlas de los Paisajes de España. Madrid: Ministerio de Agricultura, Alimentación y Medio Ambiente, Centro de Publicaciones D.L.](#)
- [McKall, M. K. & Minang P. A. \(2005\). Assessing participatory GIS for community-based natural resource management: claiming community forests in Cameroon. *The Geographical Journal*, 171\(4\), 340-356.](#)
- [Meeus, J.H.A. & Wijermans, M.P. & Vroom, M.J. \(1990\). Agricultural landscapes in Europe and their transformation. *Landscape and Urban Planning*, 18, 289-352.](#)
- [Meeus, J.H.A. \(1995\). Pan-European Landscapes. *Landscape and Urban Planning*, 31 \(1-3\), 57-79.](#)
- [Miklós, L. & Hrnčiarová, T. \(Eds.\) \(2002\). Landscape Atlas of the Slovak Republic. Bratislava, MŽP SR, Banská Bystrica: SAŽP.](#)
- [Ministry of Agricultural Food and Forestry Policies, Laboratory for Landscape and Cultural Heritage & University of Florence. \(2016\). National Register of Historical Rural Landscapes. Retrieved from <http://landscapeunifi.it/en/national-register-of-historical-rural-landscapes>](#)
- [Millennium Ecosystem Assessment. \(2003\): People and Ecosystems: A Framework for Assessment and Action. Washington D.C.: Island Press. Retrieved from <http://www.millenniumassessment.org/en/index.aspx>](#)
- [Ministry of Agriculture and Rural Development of the Slovak Republic. \(2016\). Report on Agriculture and Food Sector in the Slovak Republic 2015 \(Green Report\). Retrieved from <http://www.mpsr.sk/en/index.php?navID=16>](#)
- [Nassauer, J.I., & Opdam P. \(2008\). Design in Science: Extending the Landscape Ecology Paradigm. *Landscape Ecology*, 23, 633-644.](#)
- [Nienhuis, P.H. \(2008\). Environmental History of the Rhine-Meuse Delta. Netherlands, Springer.](#)
- [Organization for Cooperation and Economic Development \(OECD\). \(2001\). Multifunctionality Towards An Analytical Framework. Retrieved from <https://www.oecd.org/tad/agricultural-policies/40782727.pdf>](#)
- Pisante, M. (2007). *Agricoltura Blu. La via italiana dell'agricoltura conservativa. Principi, tecnologie e metodi per una produzione sostenibile*. Bologna, Ed. Edagricole.
- [Plieninger, T. \(2004\). Built to last? The continuity of holm oak \(*quercus ilex*\) regeneration in a traditional agroforestry system in Spain. In: W. Konold, A. Reinholz & A. Yasui \(Eds.\), *Weidewälder, Wytweiden, Wässerwiesen traditionelle Kulturlandschaft in Europa* \(pp. 5-62\). Freiburg: Culterra, Schriftenreihe des Instituts für Landespflege der Albert-Ludwigs-Universität Freiburg 39.](#)
- [Pungetti, A. & Kruse A. \(Eds.\) \(2010\). European Culture Expressed in Agricultural Landscapes. Perspectives from Eucaland Project. Roma, Palombi Editori.](#)



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multifunctional Farming for the sustainability of European Agricultural Landscapes

Project N°: 2016-1-SK01-KA202-022502

- [Ranganathan, J., Bennett, K., Raudsepp-Hearne, C., Lucas, N., Irwin, F., Zurek, Mash, N. & West, P. \(2008\). Ecosystem Services. A Guide for Decision Makers. World Resource Institute. Retrieved from <http://www.wri.org/publication/ecosystem-services>](http://www.wri.org/publication/ecosystem-services)
- [Renes, H. & Paul, L. \(2004\). Landbouw en cultuurlandschappen. In: B. de Pater, T. Béneker & W. Buunk \(Eds.\), Europa: ruimtelijke samenhang en verscheidenheid in de Europese Unie \(pp. 69-92\). Assen: Van Gorcum.](#)
- [Renes, H. \(2010\). European agricultural landscapes: main types and forces behind them. In G. Pungetti & A. Kruse \(Eds.\), European Culture Expressed in Agricultural Landscapes. \(pp. 76-82\). Rome, Palombi Editori.](#)
- [Renes, H. \(2013\). Europäischer Vergleich methodischer Ansätze z zur Erforschung der historischen Kulturlandschaft – ein Überblick. Berichte. Geographie und Landeskunde, 87 \(3\), 215-231.](#)
- [Sereni, E. \(1961\). Storia del Paesaggio Agrario Italiano. Roma- Bari, Editori Laterza.](#)
- [Slámová, M., Jančura, P. & Daniš, D. \(2013\). Methods of Historical Landscape Structures Identification and Implementation into Landscape Studies. Ekológia \(Bratislava\), 32 \(3\), 267-276.](#)
- [Slámová, M., Jančura, P., Fabriciusová, V., Beláček B., Zrníková, K. & Prídavková, Z. \(2016\): Traditional Agricultural Practices, Land Cover Diversity and Biodiversity in the Southern Podpolanie Region. In M. Agnoletti & F. Emanuelli \(Eds.\), Biocultural Diversity in Europe. Environmental History 5 \(pp. 247-268\). Springer International Publishing Switzerland.](#)
- [Slámová, M., Krčmářová, J., Hronček, P. & Kaštierová, M. \(2017\). Environmental factors influencing the distribution of agricultural terraces: Case study of Horný Tisovník, Slovakia. Moravian Geographical Reports, 25 \(1\) 34-45.](#)
- [Smith, C.T. \(1967\). An historical geography of Western Europe before 1800. London, Longmans.](#)
- [Speelman, E.N., Garcia-Barrios L.E., Groot J.C.J., & Tiftonell P. \(2013\). Gaming for Smallholder Participation in the Design of More Sustainable Agricultural Landscapes. Agricultural Systems, 126, 62-75.](#)
- [Špulerová, J. & Petrovič, F. \(2011\). Historical Agricultural Landscape as a Subject of Landscape Ecology Research. Hrvatski Geografski Glasnik, 73\(2\), 155-163.](#)
- [Špulerová, J. & Štefunková D. \(Eds.\). \(2009\). Handbook for Mapping of Historical Structures of Agricultural Landscape. Retrieved from <http://www.uke.sav.sk/hspk/typizacia/metodikaSK1.pdf>](#)
- [Štefunková, D., Dobrovodská, M., Kanka, R., Krnáčová, Z., Bezák, P., Boltižiar, M., David, S., Dramstad, W., Ďugová, O., Fjellstad, W., Gajdoš P., Halada, L., Hreško, J., Izakovičová, Z., Kalivoda, H., Kalivodová, E., Kenderessy, P., Krištín, A., Majzlan, O., Moyzeová, M., Petrovič, F., Stašiov, S., Šteffek, J. & Vagačová, M. \(2011\). Attractiveness of the Carpathian landscape, focusing on the historical agrarian structures and biodiversity. Bratislava, UKE SAV.](#)
- [Thirsk, J. \(1997\). Alternative agriculture; a history from the Black Death to the present day. Oxford, Oxford UP.](#)
- [The Government of the Slovak Republic. \(2016, 17.06.\). Manifesto of the Government of the Slovak Republic. Retrieved from <http://www.vlada.gov.sk/manifesto-of-the-government/>](#)
- [Trewavas, A. \(2004\). A critical assessment of organic farming-and-food assertions with particular respect to the UK and the potential environmental benefits of no-till agriculture. Crop Protection, 23 \(9\), 757-781.](#)
- [UNESCO CBD Joint Program between biological and cultural diversity. \(2014, 11.04.\). Florence Declaration on the Links Between Biological and Cultural Diversity \(Florence\). Retrieved from <http://landscapeunifi.it/images/pdf/UNESCO-CBD JP Florence Declaration.pdf>](#)
- [United Nations Organisations \(1992\). United Nations Framework Convention on Climate Change. Retrieved from <https://unfccc.int/resource/docs/convkp/conveng.pdf>](#)
- [Weltin, M., Zasada, I., Franke, Ch., Piorr, A., Raggi, M. & Viaggi, D. \(2017\). Analysing behavioural differences of farm households: An example of income diversification strategies based on European farm survey data. Land Use Policy, 62, 162-174.](#)



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- [Zentner, R.P., Lafond, G.P., Derksenc, D.A., Nagyd, C.N., Walla, D.D. & Mayb, W.E. \(2004\). Effects of tillage method and crop rotation on non-renewable energy use efficiency for a thin Black Chernozem in the Canadian Prairies. Soil & Tillage Research, 77, 21252136.](#)
- [Zimmermann, R.C. \(2006\). Recording rural landscapes and their cultural associations: some initial results and impressions. Environmental Science & Policy, 9, 360-369.](#)

Acts

- [Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises \(2003\) \(2003/361/EC; Notified under document number C\(2003\) 1422; OJ L 124, 20.5.2003\) Retrieved from <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:124:0036:0041:en:PDF> \(Europe\)](#)
- [Regulation \(EU\) No 1305/2013 of the European Parliament and of the Council on support for rural development by the European Agricultural Fund for Rural Development \(EAFRD\) and repealing Council Regulation \(EC\) No 1698/2005 \(2013\). Retrieved from <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32013R1305> \(Europe\)](#)
- [Regulation \(EU\) No. 1151/2012 of the European Parliament and of the Council of 21 November 2012 on quality schemes for agricultural products and foodstuffs. Retrieved from <http://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32012R1151> \(Europe\)](#)
- [Council Regulation \(EC\) No 1698/2005 of 20 September 2005 on support for rural development by the European Agricultural Fund for Rural Development \(EAFRD\) \(2005\). Retrieved from <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=URISERV%3A160032> \(Europe\)](#)
- [Regulation \(EC\) No 852/2004 of the European Parliament and of the Council of 29 April 2004 on the hygiene of foodstuffs. Retrieved from <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32004R0852> \(Europe\)](#)
- [Regulation \(EC\) No 853/2004 of the European Parliament and of the Council of 29 April 2004 laying down specific hygiene rules for food of animal origin. Retrieved from \[http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32004R0853R\\(01\\)\]\(http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32004R0853R\(01\)\) \(Europe\)](#)
- [Act on Private Business Activities, No 105/1990 Coll. \(1990\). Retrieved from <https://www.slov-lex.sk/pravne-predpisy/SK/ZZ/1990/105/19920310> \(Slovakia\)](#)
- [Agritourism Act NO 730 of 5 December 1985, Gazzetta Ufficiale, No 295 \(16.12.1985\). Retrieved from \[http://www.edizionieuropee.it/LAW/HTML/89/zn96_02_019.html\]\(http://www.edizionieuropee.it/LAW/HTML/89/zn96_02_019.html\) \(Italy\)](#)
- [Decree No 96/2006 of 17 July 2006 regulating tourism-related professions in Castile-La Mancha. \(Italy\)](#)
- [Law of Dehesa. Law 7/2010, of July 14, for Dehesa. Andalusia government. Retrieved from <http://www.juntadeandalucia.es/boja/2010/144/1> \(Spain\).](#)
- [Act on Natural Heritage and Biodiversity 42/2007 \(13.12.2007\). Retrieved from <https://www.boe.es/buscar/doc.php?id=BOE-A-2007-21490> \(Spain\)](#)
- [Decree No 20/2002, of January 29, on Tourism in the Rural Environment and Active Tourism. Retrieved from <http://www.juntadeandalucia.es/boja/2002/14/1> \(Spain\)](#)
- [Cultural Heritage Protection Act \(ZVKD-1\) \(2008\), Official Gazette of the Republic of Slovenia 16/2008 of 15 February 2008. Retrieved from <https://www.uradni-list.si/glasilo-uradni-list-rs/vsebina/84972> \(Slovenia\)](#)



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Web links related to typologies of agricultural landscapes, catalogues and datasets (June 2017)

Online maps: national landscape typologies

Europe



<http://www.eea.europa.eu/data-and-maps>

<http://land.copernicus.eu/pan-european/corine-land-cover>

<http://ec.europa.eu/eurostat>

<http://ec.europa.eu/agriculture/rica/>

<http://inspire.ec.europa.eu/theme/gg>

<https://ec.europa.eu/agriculture/>

Germany



http://sg.geodatenzentrum.de/web_download/dlm/clc10/clc10.pdf

http://www.geodatenzentrum.de/geodaten/gdz_rahmen.gdz_div?gdz_spr=deu&gdz_akt_zeile=5&gdz_anz_zeile=1&gdz_unt_zeile=22&gdz_user_id=0#dok

http://sg.geodatenzentrum.de/wms_clc10_2012

<http://www.bbsr.bund.de/BBSR/DE/Veroeffentlichungen/lzR/2008/5/GrafikenKarten.html>

<http://www.oebvi-schroeder.de/wissen/nutzung.html>

Italy



<http://www.pcn.minambiente.it/viewer3D/>

Slovakia



<http://geo.enviroportal.sk/atlassr/>

Slovenia



<http://rkg.gov.si/GERK/WebViewer>

Spain



http://www.magrama.gob.es/es/ministerio/servicios/publicaciones/H108574_tcm7-321053.pdf

http://www.magrama.gob.es/es/ministerio/servicios/publicaciones/H108799_tcm7-329420.pdf

<http://sig.mapama.es/bdn/visor.html>

Online maps: agricultural landscapes (ALs) and their historical and cultural values

Europe



<http://whc.unesco.org/en/culturallandscape/>

Germany



<https://www.landwirtschaftskammer.de/foerderung/pdf/rl-msl-2011.pdf>

<https://www.landwirtschaft-bw.info/pb/MLR.Foerderung.Lde/Startseite/Foerderwegweiser>

<http://www.unesco.de/kultur/immaterielles-kulturerbe/bundesweites-verzeichnis.html>

<http://www.forum-kulturlandschaft.de/kula-forum/content/en/index.html?jid=0o6>

<https://www.kleks-online.de/>

Italy



<http://landscapeunifi.it/en/national-register-of-historical-rural-landscapes>





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Slovakia



<http://www.uke.sav.sk/old/phocadownload/mapa%20RKES.pdf>
<http://www.uke.sav.sk/hspk/>
http://www.uke.sav.sk/hspk/typizacia/HSPK_typy.zip
http://nipi.sazp.sk/arcgis/services/atlassr/atlassr_05_rest/MapServer/WMServer

Slovenia



<http://zalozba.zrc-sazu.si/sites/default/files/9616358642.pdf>

Spain



http://www.magrama.gob.es/es/ministerio/servicios/publicaciones/H108799_tcm7-329420.pdf

Online maps: agricultural landscapes (ALs) and natural values

Europe



<http://natura2000.eea.europa.eu/>
<http://www.eea.europa.eu/data-and-maps/explore-interactive-maps/european-protected-areas-1>
<https://www.eea.europa.eu/data-and-maps/figures/map-of-distribution-of-ramsar-sites-within-the-eea-member-countries-open-circles-indicating-sites-designated-to-protect-threatened-species-green>

Germany



<http://www.bbsr.bund.de/BBSR/DE/Veroeffentlichungen/lzR/2008/5/GrafikenKarten.html>
https://www.bfn.de/0308_nsg.html
<http://www.geodienste.bfn.de/schutzgebiete/#?centerX=3786876.500?centerY=5669060.000?scale=5000000?layers=1023>
http://www.geodatenzentrum.de/geodaten/gdz_rahmen.gdz_div?gdz_spr=deu&gdz_use_r_id=0&gdz_akt_zeile=2&gdz_anz_zeile=9
<https://geodienste.bfn.de/landschaften?lang=de>

Italy



<http://www.pcn.minambiente.it/viewer3D/>

Slovakia



<http://n2k.daphne.sk/hnelesy.html>
<http://geo.enviroportal.sk/uev>
<http://geo.enviroportal.sk/vu>
<http://geo.enviroportal.sk/atlassr/>
<http://uzemia.enviroportal.sk>
<http://www.arcgis.com/home/webmap/viewer.html?useExisting=1&layers=06807b0fce2f4dc789fb7236e5e343ea>
<http://maps.geop.sazp.sk:80/geoserver/sopsr/ows?SERVICE=WMS&>

Slovenia



<http://rkg.gov.si/GERK/WebViewer>
http://www.arso.gov.si/narava/naravne%20vrednote/PravilnikNaravneVrednote_2015_Cistopis_01072015.pdf

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Spain



<http://www.knjiznica-domzale.si/Portals/0/Dokumenti/Naloge/Kme%C4%8Dke%20hise%201del%20zgodovina.pdf>

http://www.mapama.gob.es/es/biodiversidad/servicios/banco-datos-naturaleza/informacion-disponible/Paisajes_descargas.aspx
<http://wms.mapama.es/sig/Biodiversidad/Paisaje/wms.aspx?>
<http://wms.mapama.es/sig/Biodiversidad/Paisaje/wms.aspx?request=getcapabilities>
<http://www.mapama.gob.es/ide/metadatos/index.html?srv=metadata.show&uuid=a01cb8d6-2a8c-4041-bd92-5b8f0db67a66>
http://www.mapama.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-espanol-patrimonio-natural-biodiv/Componentes_Lista_IENB.aspx

Multifunctional farms and organization supporting multifunctional/sustainable farming

Europe



http://ec.europa.eu/agriculture/quality/schemes_en
http://enrd.ec.europa.eu/thematic-work/social-inclusion_en
http://enrd.ec.europa.eu/publications/eafrd-projects-brochure_en

Germany



<https://www.bildungsserveragrar.de/>
http://www.bmel.de/SharedDocs/Bilder/Fachbereiche/Ernaehrung/IFL_Karte_Geoschutz.jpg?jsessionid=BF2523290B9D1F5BE981FC4ACEA2BAB3.2_cid296?__blob=poster&v=32
<http://www.bauernhofurlaub.de>
<http://www.soziale-landwirtschaft.de/>

Italy



<http://www.ismea.it>
<http://www.vinidigaspero.it/>
http://www.ilfrantoioidibevagna.it/default2.asp?active_page_id=11
<http://www.olistella.com/il-frantonio.html>
<http://www.ecomela.it/azienda/>
<http://www.regione.toscana.it/cittadini/alimentazione/marchio-agriqualita>
<http://www.ersa.fvg.it/divulgativa/i-prodotti-a-qu-a>
<https://www.friuli-doc.it/en/friuli-doc>
http://www.prolocofaedis.it/consorzio_turistico_dolcenorddest.html
http://www.turismofvg.it/code/29836/Speciale_cantine
<http://www.fvgbio.it/it/nostre-proposte/>
<http://www.bioexpress.it/chiamo/index.htm>
<http://www.irisbio.com/en/mondo-gas/>
<http://www.retegas.org>
<http://www.fioretta.it/en/products/catering-horeca>

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Italy



<http://www.humar.it/azienda.aspx>
<http://www.tess-transition.eu/urban-gardening-in-rome/>
<http://www.parcorurale.it/>
<http://www.nonnastella.it/agricamping-toscana.html>
<http://www.caravan.it/2015/03/agricamping-italiani/>
<http://www.ortodilucania.it>
<http://www.maie-project.eu/>
http://guida.agr.univpm.it/guida.php?id=3&grafica=1&id_insegnamento=1083&id_facolt_a=3&id_aa=15&id_docente=318
<https://www.sottosoprafvg.it/attivita/fattoria-sociale/>
http://www.fattorialasonnina.org/portale_sito/en/the-social-farm-.html
http://guida.agr.univpm.it/guida.php?id=3&grafica=1&id_insegnamento=1083&id_facolt_a=3&id_aa=15&id_docente=318
<http://www.agriturismolucatello.it/tuscany-last-minute-offers-arezzo-bed-and-breakfast-week-end-casentino.asp?sezione=2>

Slovakia



<http://www.predajzdvora.sk>
<http://www.bbvipa.webnode.sk>
<http://www.mladyfarmar.sk>
<http://www.vipa.sk>
<http://www.ecotrend.sk>
<http://www.podmelichovouskalou.sk>
<http://www.odorica.sk>
<http://www.gemer.org/rodinna-farma-agroturistika-u-kalasa-vysne-valice-f1-foto.html>

France Swiss

<http://agriculture.gouv.fr/les-appellations-dorigine-protegees-aop-pour-les-produits-agricoles-et-les-denrees-alimentaires>
<http://www.bienvenuealaferme-drome.com/>
<http://www.magnybio.fr/paniers.php>
<http://rural-camping.com/france/index.htm>

Austria

<http://www.farmholidays.com/?L=4>
<http://www.mitterthey.at>
<https://www.molkeprodukte.com/>
<https://www.bregenzerwald.at/s/en/culture/-/food/culinary/dairy-farming-up-close>

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ANNEXES

Annex 1. Abbreviations.

Annex 2. Questionnaire form in English and graphical reporting.

Annex 3. Some statistical data on agriculture in the participating countries.

Annex 4. Maps of agricultural landscapes and classifications in Europe.

Annex 5. National landscape classifications (an example from Slovakia).

Annex 6. Examples of multifunctional farming.

Annex 7. Tables on farming and ecosystem services.

Annex 8. The comparison of terminology supported by legislation or defined by state bodies, national agencies and research institutions in FEAL partners' countries.



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ABBREVIATIONS

APA	Agricultural Paying Agency
CAP	Common Agricultural Policy
CICES	Common International Classification of Ecosystem Services
CVET	Continuing Vocational Education and Training
DEQA-VET	The German Reference Point for Quality Assurance in VET
EAL	European Agricultural Landscapes
EAGF	European Agricultural Guarantee Fund
EAFRD	European Agricultural Fund for Rural Development
ECVAVET	European system of credit transfers amongst different countries within similar VET courses.
ENQAVET	The European Network for Quality Assurance in Vocational Education and Training
EC	European Commission
EEA	European Environmental Agency
ELC	European Landscape Convention (CoE, 2000)
EU	European Union
ERDF	European Regional Development Fund
GIS	Geographic Information System
HoReCa	The HoReCa is an English acronym (hotel, restaurant, cafe).
ISO/IEC 19796-1:2005	A framework to describe, compare, analyse, and implement quality management and quality assurance approaches
ISTAT	The Italian National Institute of Statistics
IT	Information technology
IVET	Initial vocational education and training
LAG	Local action group
LEADER	The LEADER programme (an acronym in French meaning Links between actions for the development of the rural economy)
LFA	Less Favourable Areas
MiBACT	Ministry of Cultural Goods and Activities and Tourism in Italy
MiPAAF	Ministry of Agriculture, Food and Forestry Politics in Italy
NUTS	Nomenclature of Territorial Units (NUTS levels 1, 2 and 3) for EU statistics.
OECD	Organization for Cooperation and Economic Development
OER	Open educational resources (OER) are freely accessible, openly licensed text, media and other digital assets that are useful for teaching, learning, and assessing as well as for research purposes. It is the leading trend in distance education/open and distance learning domain as a consequence of the openness movement.
PGI	Protected Geographical Indication
PGO	Protected Designation of Origin
RDP	Rural Development Priorities (in Slovenia)
RDP	Rural Development Programme
SME/SMEs	Small and Medium-sized Enterprise/Small and Medium-sized Enterprises
TSG	Traditional Specialities Guaranteed
UAA	Utilised Agricultural Area
VET	Vocational Education and Training (training for adults, to improve in their professions), defined in the Copenhagen Process

Annex 1. Abbreviations.



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QUESTIONNAIRE FORM

Please mark with a cross how you evaluate the following statements.

Use the space to make your own remarks generously.

		strongly agree ++	agree +	neutral 0	disagree -	strongly disagree --
I						
Situation of Farming and Agriculture						
<u>Please mark the degree of your agreement with the following sentences:</u>						
I.1.	Overall, multifunctional agriculture is well developed in your country.	<input type="checkbox"/>				
I.2.	Overall, farming is sustainable in your country.	<input type="checkbox"/>				
I.3.	Overall, farming activity leads to satisfying economic results of the farmers.	<input type="checkbox"/>				
I.4.	Farming already leads to positive effects on European agricultural landscapes (EAL).	<input type="checkbox"/>				
I.5.	Profit-oriented farming and landscape maintenance/conservation/improvement can create win-win-situations.	<input type="checkbox"/>				

		strongly agree ++	agree +	neutral 0	disagree -	strongly disagree --
II						
Situation of European Agricultural Landscapes (EALs)						
<u>Please mark the degree of your agreement with the following sentences:</u>						
II.1.	EALs and their values are widely recognized in society.	<input type="checkbox"/>				
II.2.	Nowadays EALs and their values for society should be maintained and protected.	<input type="checkbox"/>				
II.3.	Quality of EALs (biodiversity, landscape, cultural heritage, etc.) may suffer because of recent farming systems.	<input type="checkbox"/>				
II.4.	Quality of EALs (biodiversity, landscape, cultural heritage, etc.) may improve due to new innovative and creative farming concepts.	<input type="checkbox"/>				

Annex 2. Questionnaire form in English and graphical reporting.



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QUESTIONNAIRE FORM

III

		strongly agree	agree	neutral	disagree	strongly disagree
		++	+	0	-	--
Situation of Knowledge concerning EAL						
<u>Please mark the degree of your agreement with the following sentences:</u>						
III.1.	Farmers do have very good knowledge about the EAL and its values.	<input type="checkbox"/>				
III.2.	Rural stakeholders have very good knowledge about the EAL and its values.	<input type="checkbox"/>				
III.3.	Rural society as a whole has very good knowledge about the EAL and its values.	<input type="checkbox"/>				

IV

		strongly agree	agree	neutral	disagree	strongly disagree
		++	+	0	-	--
Vocational Educational and Training (VET) and Education concerning EAL						
<u>Please mark the degree of your agreement with the following sentences:</u>						
IV.1.	VET activities concerning EAL for small and family (young) farmers are sufficient in your country.	<input type="checkbox"/>				
IV.2.	After completing education (VET, University degree or others) in the majority of the cases the farmers know the relationship between their farm and EAL.	<input type="checkbox"/>				
IV.3.	Rural society as a whole has sufficient education and training concerning EAL.	<input type="checkbox"/>				
IV.4.	After completing education (VET, University degree or others) in the majority of the cases rural society and rural stakeholders know the relationship between farms and European agricultural landscapes.	<input type="checkbox"/>				

Annex 2. Questionnaire form in English and graphical reporting.



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QUESTIONNAIRE FORM

V

very important	important	neutral	less important	totally unimportant
++	+	0	-	--

Please rate the importance of the following factors in order to increase knowledge and skills in an integrated concept of Farming and EAL:						
V.1.	Involvement of stakeholders at the local and regional and national levels related to farming and to European agricultural landscapes.	<input type="checkbox"/>				
V.2.	Exchange of successful experiences in multifunctional/sustainable farming creating win-win-situations with maintenance and protection of EAL.	<input type="checkbox"/>				
V.3.	Common Basis of and access to Knowledge about EAL serving Farmers as well as other rural stakeholders.	<input type="checkbox"/>				

VI

very important	important	neutral	less important	totally unimportant
++	+	0	-	--

Please give your assessment of the importance of possible obstacles for creating win-win-situations of farming with EAL:						
VI.1.	Lack of experts in the field.	<input type="checkbox"/>				
VI.2.	Lack of knowledge transfer in farmers' education.	<input type="checkbox"/>				
VI.3.	Lack of experience transfer in farmers' practice (farmer learning of farmer).	<input type="checkbox"/>				
VI.4.	Lack of institutional involvement to the topic.	<input type="checkbox"/>				
VI.5.	Insufficient legislative support.	<input type="checkbox"/>				
VI.6.	Insufficient economic success.	<input type="checkbox"/>				
VI.7.	Insufficient communication among the stakeholders (farmer and society; farmer and other rural entrepreneurs, etc.).	<input type="checkbox"/>				
VI.8.	Other possible obstacles in your experience:					
VI.9.	Remarks:					

Annex 2. Questionnaire form in English and graphical reporting.



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QUESTIONNAIRE FORM

VII

very important ++	important +	neutral 0	less important -	totally unimportant --
----------------------	----------------	--------------	---------------------	---------------------------

Please rate the importance of different skills/ qualifications/ knowledge for farmers who want to build up successful farming fostering maintenance of EAL:						
VII.1.	Understanding of multifunctional/ sustainable farming.	<input type="checkbox"/>				
VII.2.	Understanding of EALs' typology.	<input type="checkbox"/>				
VII.3.	Understanding of EALs' cultural value and heritage.	<input type="checkbox"/>				
VII.4.	Understanding of the relationship between multifunctional/ sustainable farming and EAL.	<input type="checkbox"/>				
VII.5.	Communication Skills.	<input type="checkbox"/>				
VII.6.	Entrepreneurial Exchange.	<input type="checkbox"/>				
VII.7.	Understanding of sustainable entrepreneurship.	<input type="checkbox"/>				
VII.8.	Technical Skills.	<input type="checkbox"/>				
VII.8.	Other important skills/ qualifications in your experience:					
VII.9.	Remarks:					

Questionnaire form available at:

https://docs.google.com/forms/d/e/1FAIpQLSdtVBVqhMYaiJY-oy/OiyDuGPT2UvYXH_rUzTA1BhT9tSJFSA/viewform

Annex 2. Questionnaire form in English and graphical reporting.



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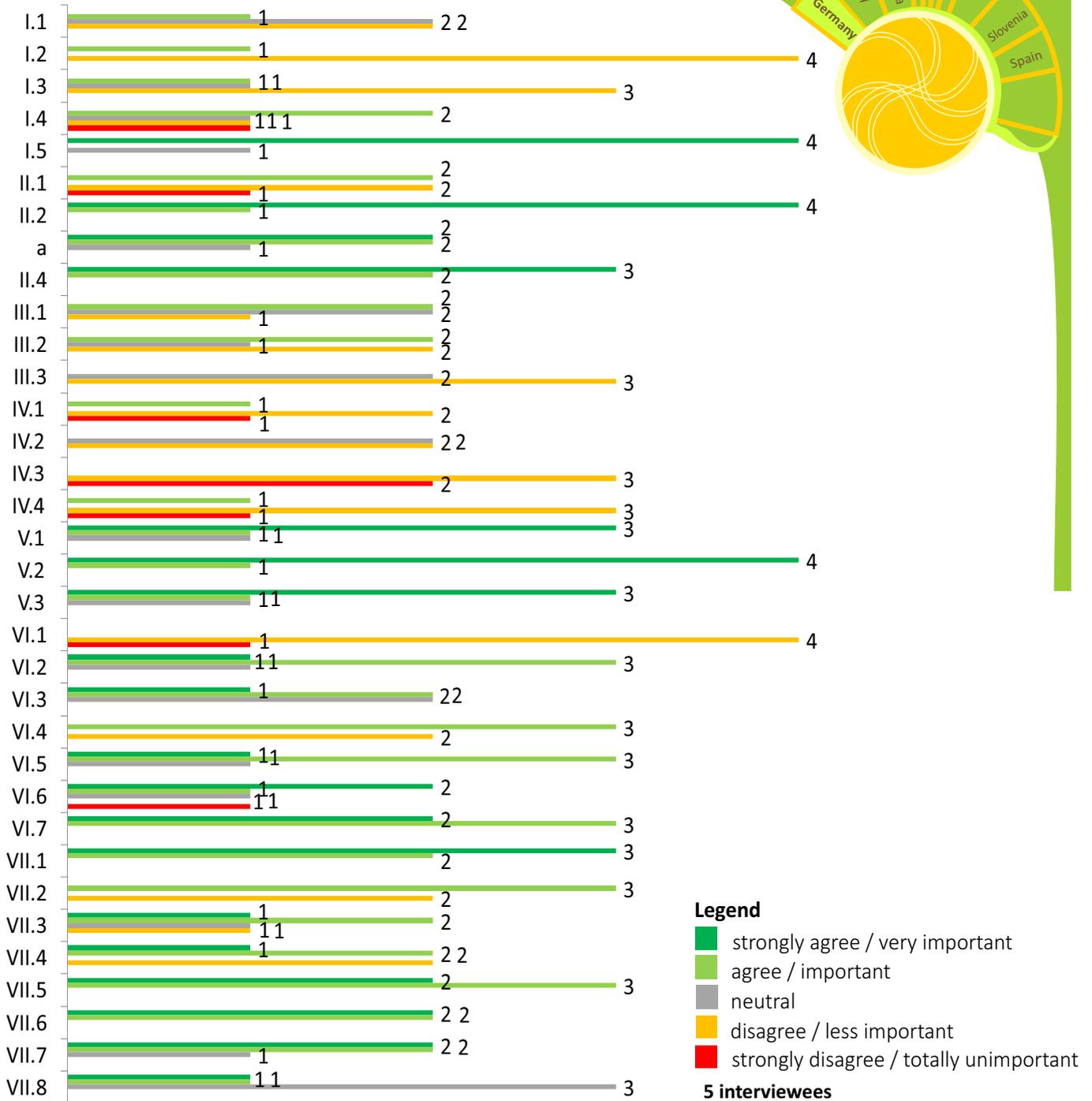
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multifunctional Farming for the sustainability of European Agricultural Landscapes

Project N°: 2016-1-SK01-KA202-022502

GRAPHICAL REPORTING



Annex 2. Questionnaire form in English and graphical reporting.

Funded by the Erasmus+ Programme of the European Union



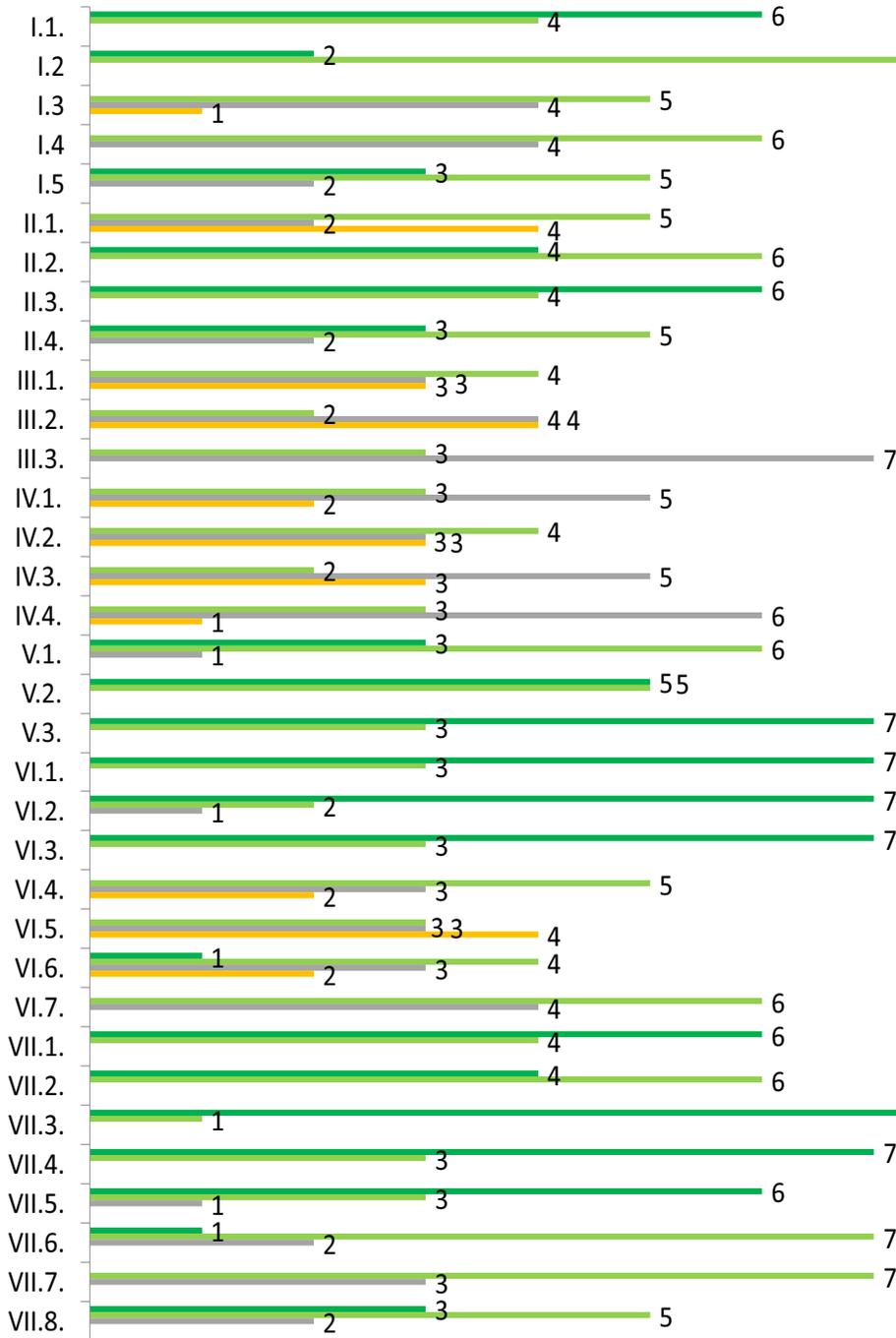
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GRAPHICAL REPORTING



Legend

- strongly agree / very important
- agree / important
- neutral
- disagree / less important
- strongly disagree / totally unimportant

10 interviewees

Annex 2. Questionnaire form in English and graphical reporting.



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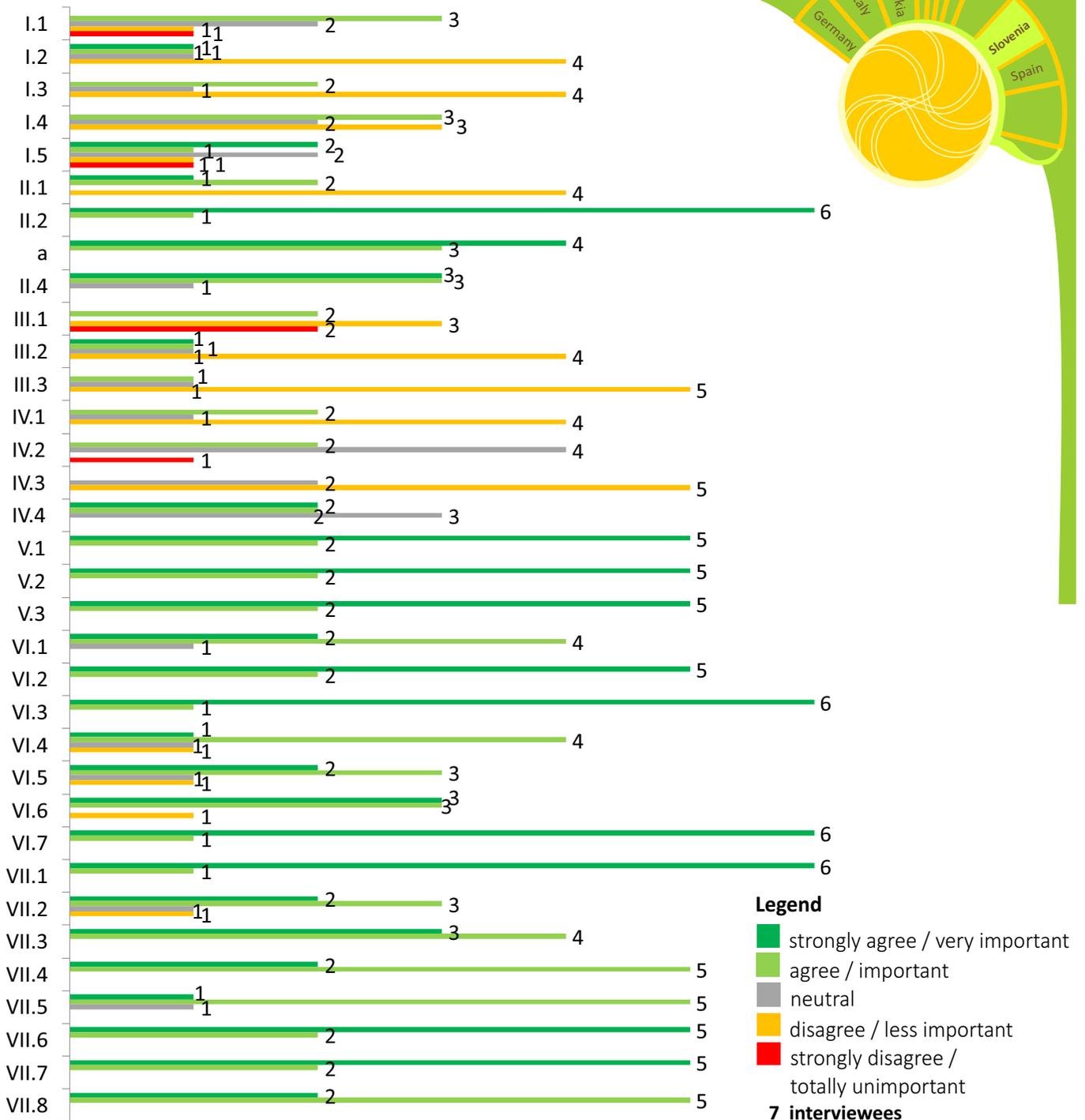
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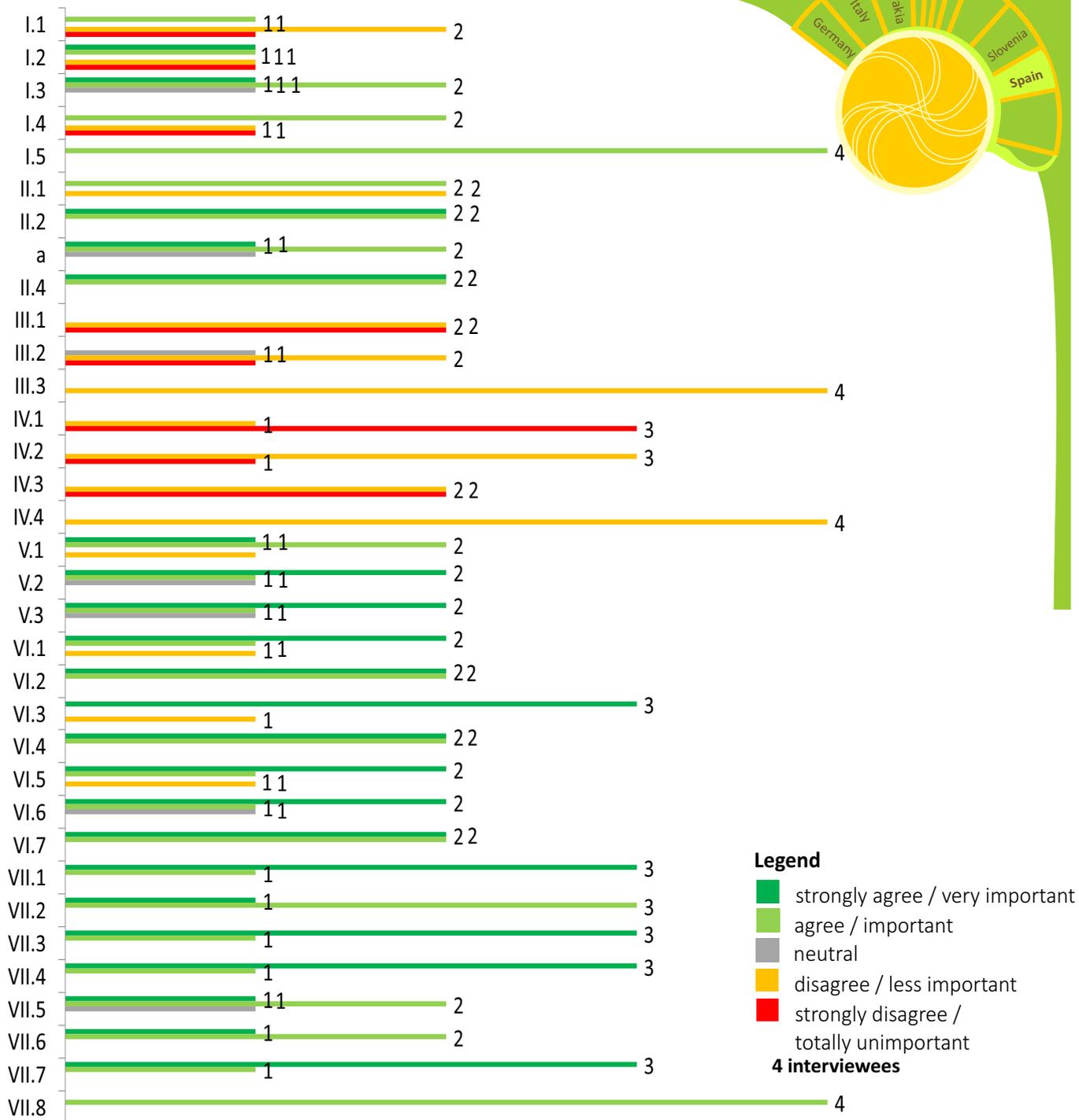
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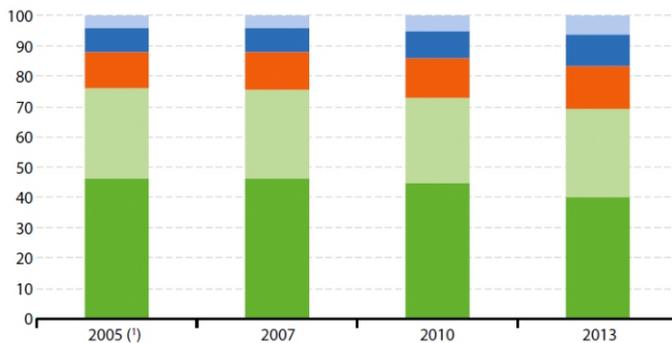
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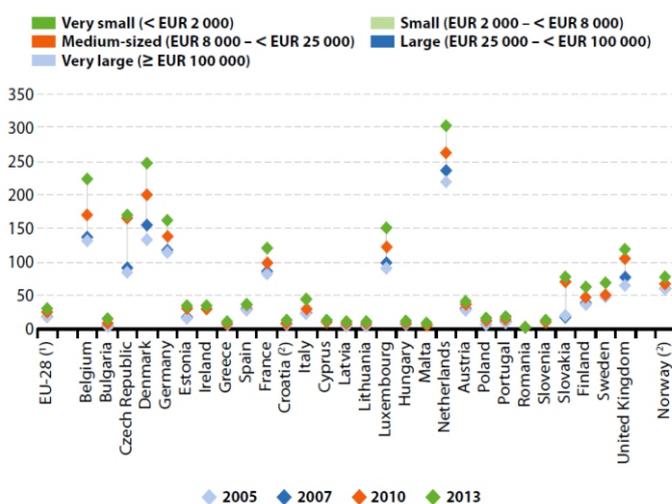
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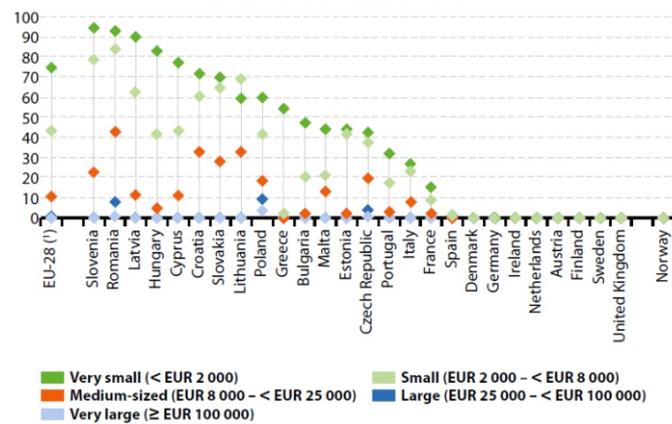
EUROSTAT REPORT (2016)



Share of total number of farm holdings, by economic size of farm, EU-28, 2005–13 (excluding Croatia) (% of total). ([European Commission, 2016](#))³



Average economic size of farm holdings, 2005–13 (thousand EUR) Note: the economic size is measured in relation to the standard output. ⁽¹⁾2005: EU-27. ⁽²⁾2005: not available. ([European Commission, 2016](#))³



Share in % of farm holdings with more than half of production being self-consumed, by economic size of farm, 2013. Note: ranked on the share of very small farms defined in economic terms as those with a standard output <EUR 2 000. Belgium and Luxembourg: not available. ⁽¹⁾Excluding Belgium and Luxembourg ([European Commission, 2016](#))³

³ European Commission (EC). (2016)³. Small and large farms in the EU - statistics from the farm structure survey. Retrieved from http://ec.europa.eu/eurostat/statistics-explained/index.php/Small_and_large_farms_in_the_EU_statistics_from_the_farm_structure_survey

Annex 3. Some statistical data on agriculture in the participating countries.



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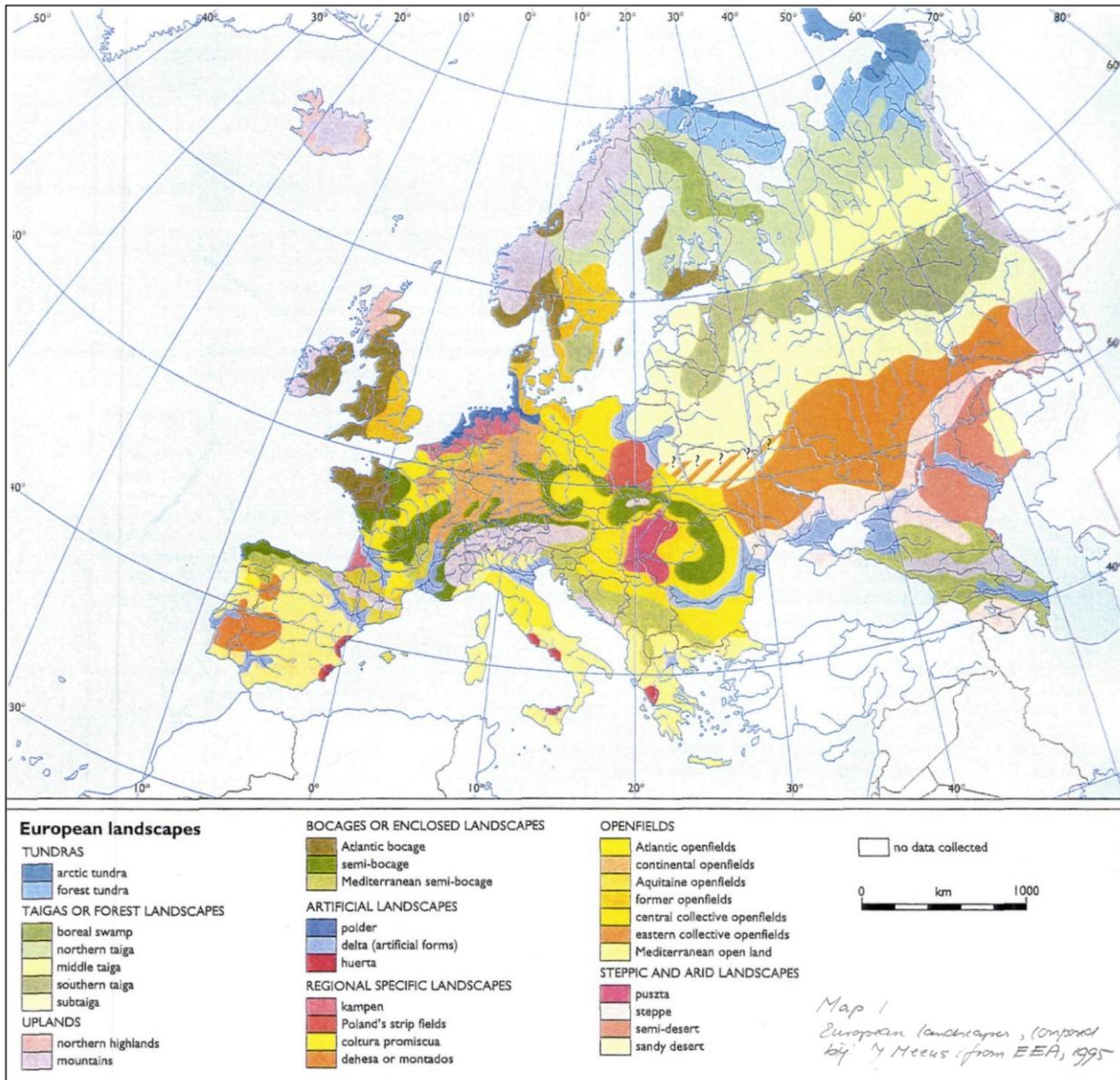




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THE "MEEUS" MAP OF EUROPEAN LANDSCAPES (EEA,1995)¹



¹Klijn, J.A., Bethe, F., Wijermans, M. & Ypma, K.W. (1999). Landscape assessment method at a European level; a case study of polder landscapes. Wageningen : SC-DLO (Report 173). Retrieved from <http://library.wur.nl/WebQuery/wurpubs/311221>

Annex 4. Maps of agricultural landscapes and classifications in Europe.



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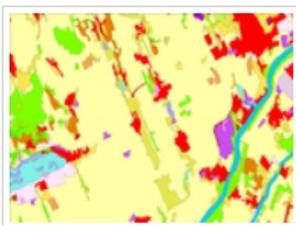
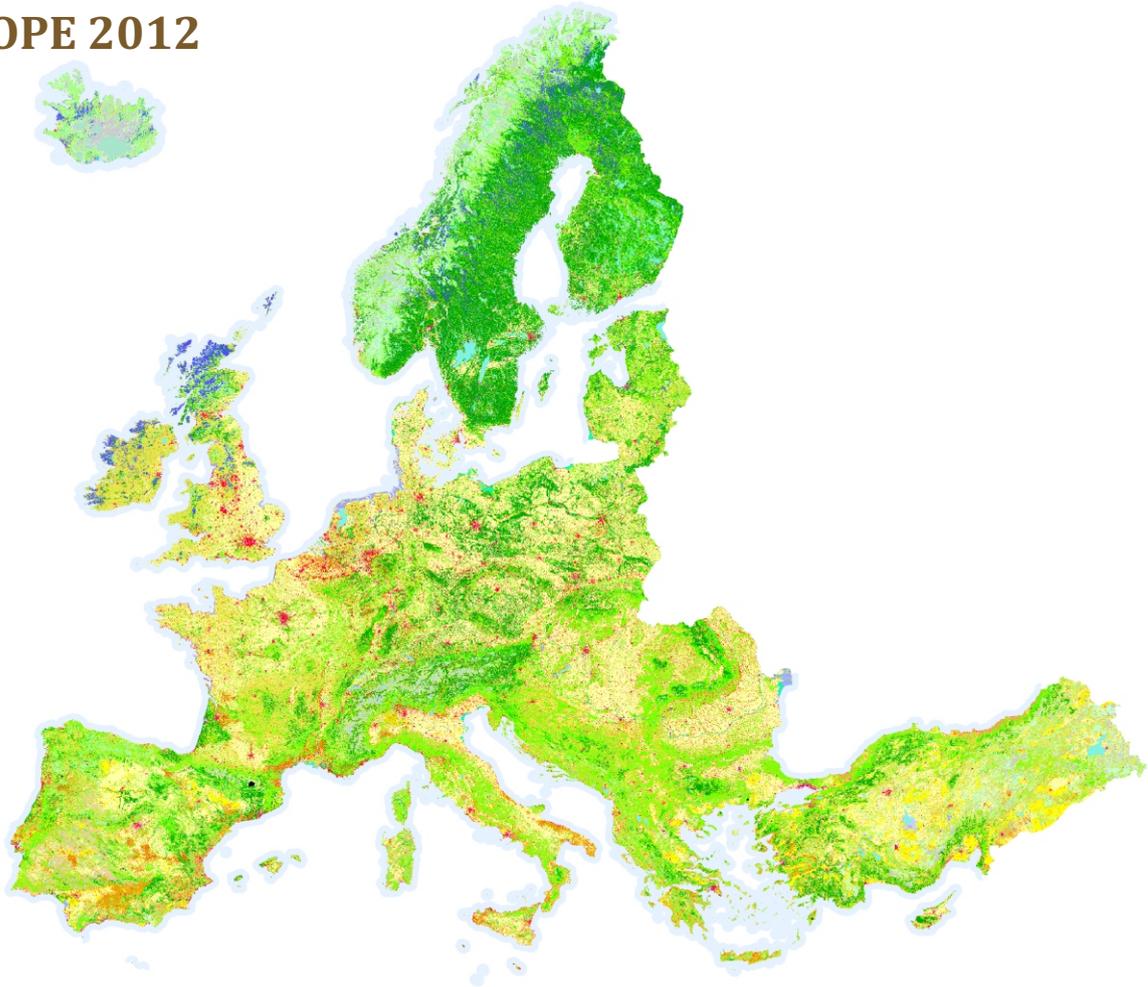
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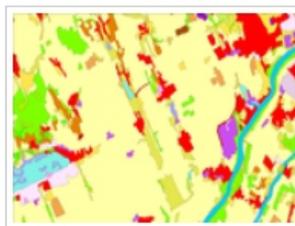
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Project N°: 2016-1-SK01-KA202-022502

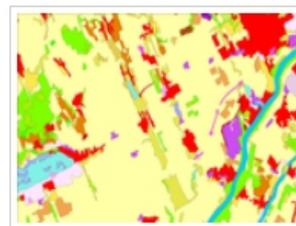
CORINE LAND COVER DATABASE¹ EUROPE 2012



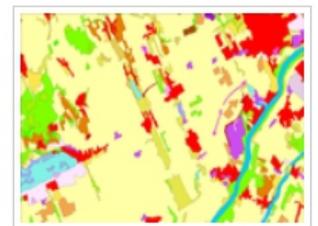
CLC 1990



CLC 2000



CLC 2006



CLC 2012

¹Corine Land Cover (CLC) maps contain 44 land cover types; data available from 1990, 2000, 2006, 2012 Retrieved from <http://land.copernicus.eu/pan-european/corine-land-cover>

Annex 4. Maps of agricultural landscapes and classifications in Europe.



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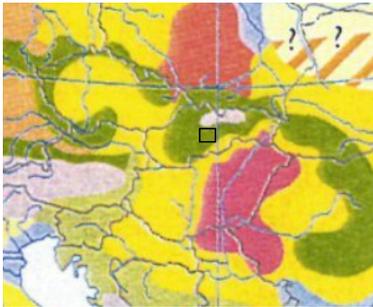
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LANDSCAPE TYPOLOGY

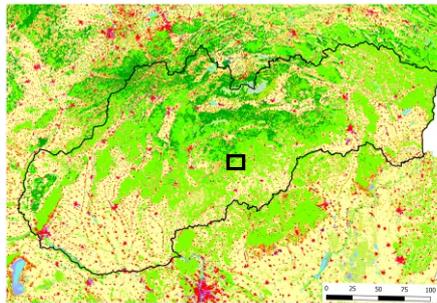
EUROPE - SLOVAKIA - PODPOĽANIE REGION

The "Meeus" map of European Landscapes (EEA, 1995)¹ (cut out of the map).



"Enclosed semi-bocage landscape"

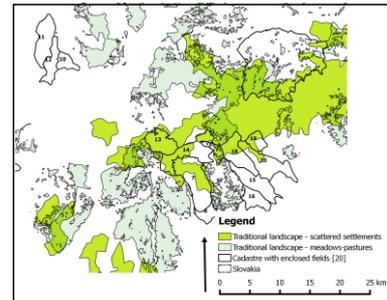
Corine Land Cover 2012, Slovakia²



"Agricultural areas; Heterogeneous agricultural areas;

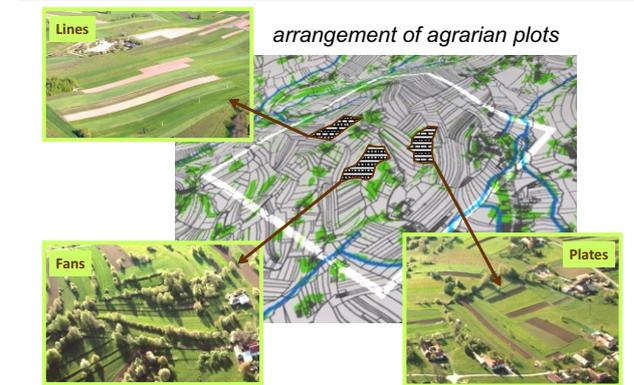
Specific landscape structures (cut out of the map).

(Miklós & Hrnčiarová eds., 2002)³



"Traditional landscapes with scattered settlements & with meadows and pastures."

Landscape character of the Podpoľanie Region⁴ specified according to the method on landscape character assessment (Jančura et al, 2010).



¹Klijn, J.A., Bethe, F., Wijermans, M. & Ypma, K.W. (1999). Landscape assessment method at a European level; a case study of polder landscapes. Wageningen : SC-DLO (Report 173). Retrieved from <http://library.wur.nl/WebQuery/wurpubs/311221>

²Corine Land Cover (CLC) maps contain 44 land cover types; data available from 1990, 2000, 2006, 2012 Retrieved from <http://land.copernicus.eu/pan-european/corine-land-cover>

³Miklós, L. & Hrnčiarová, T. (Eds.) (2002). Landscape Atlas of the Slovak Republic. Bratislava: MŽP SR, Banská Bystrica: SAŽP.

⁴Jančura, P., Bohálová, I., Slámová, M. & Mišíková P. (2010). Method of identification and assessment of characteristic landscape appearance. In Bulletin of the Ministry of Environment of Slovak Republic, 18 (1b), 2-51

Annex 5. National landscape classifications (an example from Slovakia).



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multifunctional Farming for the sustainability of European Agricultural Landscapes

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MULTIFUNCTIONAL ACTIVITIES

Processing and direct sale of agricultural products



- <http://www.comelli.it/en#home> (Italy)
- <http://www.vinidigaspero.it/> (Italy)

Product transformation on behalf of third party



- Olive transformation: http://www.ilfrantoiolibevagna.it/default2.asp?active_page_id=11;
<http://www.olistella.com/il-frantonio.html> (Italy)
- Apple transformation: <http://www.ecomela.it/azienda/> (Italy)

Quality labels



- http://ec.europa.eu/agriculture/quality/schemes_en (Europe)
- Collective label "Agriculture Environment Quality (A.Qu.A.)" is supported by the Friuli Venezia Giulia region by a specific regional law: <http://www.ersa.fvg.it/divulgativa/i-prodotti-a-qu-a> ;
<http://www.regione.toscana.it/cittadini/alimentazione/marchio-agriqualita> (Italy)
- Collective label "Agriqualità" is supported by the Tuscany Region and aimed to identify and promote food products made by integrated farming techniques. (Italy)
- For France and Swiss an example is the "Appellation d'Origin –controlée": <http://agriculture.gouv.fr/les-appellations-dorigine-protegees-aop-pour-les-produits-agricoles-et-les-denrees-alimentaires> (Swiss and France).
- There are also regional protected labels in Germany:
http://www.bmel.de/SharedDocs/Bilder/Fachbereiche/Ernaehrung/IFL_Karte_Geoschutz.jpg;jsessionid=B_F2523290B9D1F5BE981FC4ACEA2BAB3.2_cid296?__blob=poster&v=32
- Currently 7 regions in Slovakia use regional trade marks – Hont, Ponitrie, Podpoľanie, Gemer-Malohont, Záhorie, Malodunajsko-Zadunajsko, Karsticum, Kopanice.

Guides, festivals and tastings



- <https://www.friuli-doc.it/en/friuli-doc> (Italy)
- http://www.turismofvg.it/code/29836/Speciale_cantine (Italy)
- <http://www.bienvenuealaferme-drome.com/> (France)
- <http://www.bauernhofurlaub.de/> (Germany)
- <http://www.farmholidays.com/?L=4> (Austria)
- <http://www.mitterthrey.at> (Austria)

Box schemes



- <http://www.fvgbio.it/it/nostre-proposte/> (Italy);
- <http://www.magnybio.fr/paniers.php> (France)

Purchasing groups



- [http://www.irisbio.com/en/mondo-gas/;](http://www.irisbio.com/en/mondo-gas/) <http://www.retegas.org> (Italy)

Annex 6. Examples of multifunctional farming.



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MULTIFUNCTIONAL ACTIVITIES

HoReCa circuit



- <http://www.fioretta.it/en/products/catering-horeca> (Italy)

E-commerce



- <http://www.castellodiarcano.it/?affid=000167> (Italy)
- <http://www.humar.it/azienda.aspx> (Italy)

Community Supported Agriculture or Solidarity economy



- <http://www.tess-transition.eu/urban-gardening-in-rome/> (Italy)

Agritourism



- <http://www.parcorurale.it/> (Italy)
- <http://www.nonnastella.it/agricamping-toscana.html> (Italy)

Farmhouse restaurant



- <http://www.caravan.it/2015/03/agricamping-italiani/> (Italy)
- <http://rural-camping.com/france/index.htm> (France)

Social agriculture



- http://enrd.ec.europa.eu/thematic-work/social-inclusion_en (Europe)
- <http://www.maie-project.eu/> (Italy)
- <http://www.soziale-landwirtschaft.de/> (Germany)
- http://guida.agr.univpm.it/guida.php?id=3&grafica=1&id_insegnamento=1083&id_facolta=3&id_aa=15&id_docente=318 (Italy)

Training and job placement



- http://enrd.ec.europa.eu/publications/eafnd-projects-brochure_en (Europe)
- <https://www.sottosoprafvg.it/attivita/fattoria-sociale/> (Italy)

Rehabilitation and care for persons with disabilities



- <https://www.sottosoprafvg.it/attivita/fattoria-sociale/> (Italy)
- http://www.fattorialasonnina.org/portale_sito/en/the-social-farm-.html (Italy)

Day-care services for the elderly



- http://enrd.ec.europa.eu/publications/eafnd-projects-brochure_en (Europe)

Annex 6. Examples of multifunctional farming.



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MULTIFUNCTIONAL ACTIVITIES

Education



- <http://www.agriturismolucatello.it/tuscany-last-minute-offers-arezzo-bed-and-breakfast-week-end-casentino.asp?sezione=2> (Italy)
- Naturhautnah (Nature hands on): <https://www.molkeprodukte.com/>;
<https://www.bregenzerwald.at/s/en/culture/-/food/culinary/dairy-farming-up-close> (Austria)

Agri Kindergardens



- http://guida.agr.univpm.it/guida.php?id=3&grafica=1&id_insegnamento=1083&id_facolta=3&id_aa=15&id_docente=318 (Italy)
- <http://www.ilcavalloadondoloagrino.it/> (Italy)

Annex 6. Examples of multifunctional farming.



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FARMING AND TYPES OF ECOSYSTEM SERVICES¹

SERVICE	Sub-category	DEFINITION
Provisioning services - the goods or products obtained from ecosystems		
Food	Crops	Cultivated plants or agricultural produce which are harvested by people for human or animal consumption
	Livestock	Animal raised for domestic or commercial use
	Capture fisheries	Wild fish captured through trawling and other non-farming methods
	Aquaculture	Fish, shellfish and plants that are bred in ponds and other forms of fresh or salt-water confinement for purposes of harvesting
Fibre	Timber and wood fibres	Products made from trees harvested from natural forest ecosystems, plantation or non-forested lands
	Other fibres (cotton, hemp, silk, ...)	Non-wood and non-fuel based fibres extracted from the natural environment for a variety of uses
Biomass fuel		Biological material derived from living or recently living organisms (plant and animal) that serves as a source of energy
Fresh water		Inland bodies of water, groundwater, rainwater and surface waters for household industrial and agricultural uses
Genetic resources		Genes and genetic information used for animal breeding, plant improvement and biotechnology
Biochemicals, natural medicines and pharmaceuticals		Medicines, biocides, and other biological materials derived from ecosystems for commercial or domestic use

¹ Ranganathan et al. (2008). Document from World Resource Institute. Retrieved from <http://www.wri.org/publication/ecosystem-services>.

Annex 7. Tables on farming and ecosystem services.



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FARMING AND TYPES OF ECOSYSTEM SERVICES¹

SERVICE	Sub-category	DEFINITION
Regulating services – the benefit obtained from an ecosystem’s control of natural processes		
Air quality regulation		Influence ecosystems have on air quality by emitting chemicals to the atmosphere (source) or extracting chemicals from the atmosphere(sink)
Climate regulation	Global	Influence ecosystems have on the global climate by emitting greenhouse gases or aerosols to the atmosphere or by absorbing greenhouse gases or aerosols from the atmosphere
	Regional and local	Influence ecosystems have on local or regional temperature precipitation and other climatic factors
Water regulation		Influence ecosystems have on the timing and magnitude of water runoff, flooding and aquifer recharge, particularly in terms of the water storage potential of the ecosystem or landscape
Erosion regulation		Role vegetative covers play in soil retention
Water purification and water treatment		Role ecosystem plays in the filtration and decomposition of organic wastes and pollutants in water
Disease regulation		Influence that ecosystems have on the prevalence of crop and livestock pests and diseases
Pollination		Animal-assisted pollen transfer between plants
Natural hazard regulation		Capacity for ecosystems to reduce the damage caused by natural disasters such as hurricanes and tsunamis and to maintain natural fire frequency and intensity

Annex 7. Tables on farming and ecosystem services.



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FARMING AND TYPES OF ECOSYSTEM SERVICES¹

SERVICE	Sub-category	DEFINITION
Cultural services – the nonmaterial benefits people obtain from ecosystem services		
Ethical values		Spiritual, religious, aesthetic, intrinsic or other values people attach to ecosystems, landscapes, or species
Existence values		The value that individuals place on knowing that a resource exists, even if they never use that resource
Recreation and ecotourism		Recreational pleasure people derive from natural or cultivated ecosystems
Supporting services – the underlying processes that are necessary for the production of all other ecosystem services		
Nutrient cycling		Process by which nutrients (such as phosphorus, sulphur and nitrogen) are extracted from their mineral, aquatic or atmospheric sources or recycle from their organic forms and ultimately return to the atmosphere, water or soil
Soil formation		Process by which organic material is decomposed to form soil
Primary production		Formation of biological material through assimilation or accumulation of energy and nutrients by organisms
Photosynthesis		Process by which carbon dioxide water and sunlight combine to form sugar and oxygen
Water cycling		Flow of water through ecosystems in its solid liquid or gaseous forms

Annex 7. Tables on farming and ecosystem services.



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TERMINOLOGY

Terminology in countries	Slovakia	Germany	Spain	Slovenia	Italy
	<p>A family farmer is a self-employed farmer, a natural person who meets the conditions of a micro- or small enterprise within the meaning of the European Commission recommendation no. 2003/361/EC and performs agricultural production as a business. At least 2 family members are in a direct or subsidiary relationship, including husband and wife.</p> <p>A small agricultural enterprise – a self-employed farmer (micro-enterprise or small enterprise within the meaning of European Commission Recommendation no. 2003/361/EC) – does business in primary production.</p> <p>A young farmer is a self-employed farmer (micro-enterprise or small enterprise within the meaning of Commission recommendation no. 2003/361/EC) who performs primary agricultural production as a continuous and separate activity under his/her own name, on his/her own responsibility, and in order to obtain profit, which is the main source of income. At the time of submission of the application for a non-repayable financial contribution, the farmer is no more than 40 years old and has the corresponding professional skills and abilities, and for the first time establishes the agricultural enterprise as its sole and highest representative.</p>				
Small / family farms/farmers					Law Decree of 18 May 2001, no. 228
Young farmers	<p>Agricultural Paying Agency of the Slovak Republic (terms are mentioned here)</p> <p>Law on Private Business Activities Act no. 105/1990 Coll.</p>	<p>Förderprogramme für Ländlichen Raum, Landschaft und Landwirtschaft Maßnahmen- und Entwicklungsplan Ländlicher Raum Baden-Württemberg 2014–2020 (MEPL III)</p> <p>(terms are mentioned here)</p>	<p>National Royal Order 1075 of 19 December 2014 regulating direct aid for farmers, defines a Simplified Scheme of Small Farmers.</p>	x	<p>Orientation and modernisation of the agricultural sector in accordance with Article 7 of the Law of 5 March 2001 no. 57 (The definition of an agricultural entrepreneur, instead of the general term of farmer).</p>
Landscape character	<p>Agricultural Paying Agency of the Slovak Republic</p> <p>The Act on Nature and Landscape Preservation</p>	x	x	x	<p>National Landscape Observatory (NLO)</p>
The quality of landscape type	x	<p>Die Landesforschungsanstalt für Landwirtschaft und Fischerei</p>	x	x	<p>National Landscape Observatory (NLO) & Rural Development plans</p>
Added value of landscape Values of landscape	x	x	x	x	<p>National Landscape Observatory (NLO) & Rural Development Plans</p>

Annex 8. The comparison of terminology supported by legislation or defined by state bodies, national agencies and research institutions in FEAL partners' countries.



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TERMINOLOGY

Historical features of landscape	Agricultural Paying Agency of the Slovak Republic	x	x	x	Ministry of Cultural Goods and Activities and Tourism
Multifunctional farming	Agricultural Paying Agency of the Slovak Republic	x	Andalusia Ministry of Agriculture, Fishing and Rural Development	Ministry of agriculture, Forestry and Food	National and regional laws
Sustainable farming	Agricultural Paying Agency of the Slovak Republic	x	Andalusia Ministry of Agriculture, Fishing and Rural Development	Agency for Agricultural Markets and Rural Development	Regional Rural Development Plans
Agritourism Rural tourism	Agricultural Paying Agency of the Slovak Republic	x	Andalusia Ministry of Agriculture, Fishing and Rural Development	Law on additional activities on farm & Agency for Agricultural Markets and Rural Development	Law Decree of 18 May 2001, no. 228 Orientation and modernisation of the agricultural sector Laws on agritourism (Law 730/1985 and Law 96/2006)
Traditional products	European Commission, List of registered, published and applied designations				
	Agricultural Paying Agency of the Slovak Republic	Map of all traditional and protected products	web link above	Agency for Agricultural Markets and Rural Development	web link above
Genepool diversity as heritage	Agricultural Paying Agency of the Slovak Republic	The Leibniz Institute of Plant Genetics and Crop Plant Research	Andalusia Ministry of Agriculture, Fishing and Rural Development	Agency for Agricultural Markets and Rural Development	x
Local producers Direct marketing	Agricultural Paying Agency of the Slovak Republic	Die Landwirtschaftskammer Nordrhein-Westfalen	Andalusia Ministry of Agriculture, Fishing and Rural Development	Agency for Agricultural Markets and Rural Development	laws on agritourism (Law 730/1985 and Law 96/2006) and their regional articulation, and direct selling (Art.4)
Organic farming	Agricultural Paying Agency of the Slovak Republic	Biologischer Landbau	Andalusia Ministry of Agriculture, Fishing and Rural Development	Ministry of agriculture, Forestry and Food	National action plan Support under the EU rural development programme

Explanation:

X – no information about legal or official definition

Annex 8. The comparison of terminology supported by legislation or defined by state bodies, national agencies and research institutions in FEAL partners' countries.



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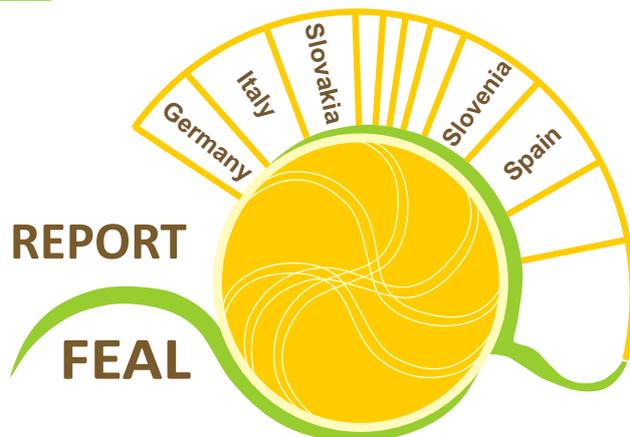


multifunctional Farming for the sustainability of European Agricultural Landscapes

Project N°: 2016-1-SK01-KA202-022502

SUMMARY REPORT

FEAL



Title: Summary Report.

The State of the Art of the relation between sustainable/multifunctional farming practices and European Agricultural Landscapes.

Editors: Institute for Research on European Agricultural Landscapes (EUCALAND e.V.) & the Technical University in Zvolen (TUZVO)

Authors: Alexandra Kruse, Hans Renes, Bénédicte Gaillard, Maurizia Sigura (EUCALAND e.V.); Martina Slámová, Ingrid Belčáková (TUZVO); Ana Ambrožič, Rock Finale (Biotehniški center Naklo, BC Naklo); Massimo Canalicchio (Lag Middle Tiber); Ignacio Rojas Pino (Union De Agricultores Y Ganaderos-Jovenes Agricultores De Jaén, COAG-Jaén); Johannes Dreer, Jonathan Wenz (Hof und Leben GmbH, HuL)

with contribution of partners from the European Landowners Organisation (ELO) Servane Morand and Marie-Alice Budniok

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