



# multifunctional Farming for the sustainability of European Agricultural Landscapes

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



## THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL

An agricultural landscape – an opportunity for  
diversification of farming activities



Funded by the  
Erasmus+ Programme  
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# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## Description of the module

Overview: This module explains how a knowledge on landscape values of European agricultural landscapes (EALs) might open new horizons for the establishment of a farm performing different non-agricultural activities thus, realizing multifunctional agriculture. Awareness of the landscape quality by farmers and stakeholders aims to tackle challenges of the European Landscape Convention (CoE, 2000).

- Learning objectives

### *Knowledge*

- ✓ *Understanding typology of EALs and attributes making EALs multifunctional.*
- ✓ *Know-how to apply multifunctional activities within different EALs.*

### *Skills*

- ✓ *Recognizing a landscape type – EAL and values of different EALs and their landscape character.*
- ✓ *Practisizing multifunctional farming in coincidence with characteristics of a particular EAL*
- ✓ *Providing adequate maintenance to EALs, preserving EALs values and improving their quality.*

### *Attitudes*

- ✓ *The awareness to improve EALs quality and maintenance in a sustainable way regarding traditional land uses based on deep ancestral knowledge of the environment preserving the landscape character.*

*The training module is linked with [Summary report - Case studies - E-atlas](#).*



# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## Index

- International context of EALs presented in case studies
- EALs presented in case studies
- National context of EALs presented in case studies
- Advanced multifunctional entrepreneurship based on EALs values
- Attractive landscape as a result of multifunctional and sustainable farming and as an asset for the further entrepreneurship development
- Maintenance and preservation of EALs values
- Sharing and distribution knowledge on EALs values



# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## International context of EALs presented in case studies

### *Why a farmer needs knowledge on different EALs?*

#### Expected knowledge

- Finding inspirational ideas in case studies across Europe within the same EAL
- Know the landscape potential for the establishment of particular non-agricultural activities on farms
- Dealing with natural conditions and constraints using traditional agricultural techniques making the landscape more fertile and agriculture sustainable as well as maintaining cultural and historical heritage.



#### Targeted improvement of the landscape quality

International context  
allows international knowledge exchange



Advanced multifunctional  
entrepreneurship



Sustainable agricultural systems  
based on inherited knowledge transformation to  
modern agricultural systems

*EALs of higher quality mediate more opportunities for business expansion and diversification of entrepreneurship in the countryside.*



# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## International context of EALs presented in case studies

*Why a farmer needs knowledge on different EALs?*

### Understanding of EAL attributes

#### Typical features = similarity

A farm takes care about typical attributes of the EAL and this similarity allows comparison of multifunctional activities with other farms in the same EAL accross Europe.



#### Distinctive features = differences

They rise from specific farming activities related to natural, cultural and historical heritage and/or landscape identity making the EAL valuable at regional, national or international level.

*A farm performs multifunctional activities comparable at international level within the same EAL*

*A farm is a unique entity making individual multifunctional activities which can be interesting for other farms.*

#### Example of EAL: Pasture

Less fertile land not suitable for crops cultivations or haymaking  
Grazing grasslands by cattle  
Horse breeding  
Challets



Transhumance pastoral systems in mountains  
Extensively grazed NATURA 2000 habitats and other protected sites  
Grazing grasslands on alluvial flats with waterlogged soils  
Grazing orchards



# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## EALs presented in case studies

### Dehesa

*M<sup>a</sup> Jesús  
Gualda (ES)*



### Delta landscapes

*Jesús Villena  
(ES)*



### Heathland and huertas

*Francisca  
Ruiz Requena  
(ES)*



### Highlands

*Emiliano  
Brandimarte  
Az. Agr.  
(Sibillini  
Ranch)  
(IT)*



[Go to E-Atlas to read the EALs definitions!](#) [Check detailed characteristics of EAL in case studies!](#)





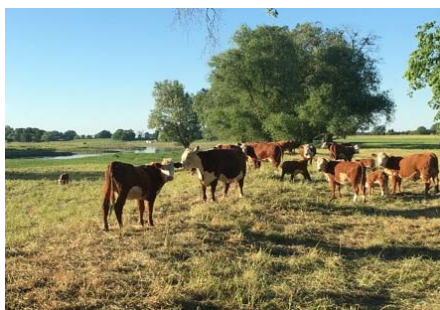
# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## EALs presented in case studies

### Farmland

*Graditz  
Stud  
Farm (DE)*



*Bio-  
Saalberghof  
Berghaus  
(DE)*



*Farm  
Crone  
(DE)*



*Haetteli farm (DE)*



*Inmaculada Jiménez - a  
beekeeper (ES)*



*VčelíkRaj  
(SK)*



*Farma pod  
Melichovou  
skalou (SK)*



*Farma  
Etelka  
(SK)*

[Go to E-Atlas to read the EALs definitions!](#) [Check detailed characteristics of EAL in case studies!](#)



# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## EALs presented in case studies

### Meadow

*Maridiana (IT)*



### Open fields



*Farm of Joseph  
Lehmenkühler  
(DE)*

### Semi-bocage

*Farm of Joseph Lehmenkühler (DE)*



*Farma AFRA  
Odorica  
(SK)*



*Aboca  
(IT)*

[Go to E-Atlas to read the EALs definitions!](#) [Check detailed characteristics of EAL in case studies!](#)





# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## EALs presented in case studies

### Orchards

*Haetteli  
Farm  
(DE)*



*Jesús  
Villena  
(ES)*

*Eredi Gradassi Andrea s.s. (IT)*



*Bodegas Netares Rincón (ES)*



*Esteban Moya (ES)*



[Go to E-Atlas to read the EALs definitions!](#) [Check detailed characteristics of EAL in case studies!](#)





# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## EALs presented in case studies

### Pasture



*BioLiebert - organic  
farm of the Liebert  
family (DE)*

*Marekov  
Dvor (SK)*



*Maridiana (IT)*



*Šenk Farm (SI)*



*Gregor Gomol (SI)*



[Go to E-Atlas to read the EALs definitions!](#) [Check detailed characteristics of EAL in case studies!](#)



# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## EALs presented in case studies

### Rural areas

*Torre Colombaia (IT)*



*Vrhovc Farm (SI)*



*Crone Farm (DE)*



*Marijan Bavcon (SI)*



[Go to E-Atlas to read the EALs definitions!](#) [Check detailed characteristics of EAL in case studies!](#)





# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## EALs presented in case studies

### Terraced landscapes

*Esteban Moya (ES)*



*Eredi Gradassi Andrea s.s. (IT)*



*Farma AFRA Odorica (SK)*



[Go to E-Atlas to read the EALs definitions!](#) [Check detailed characteristics of EAL in case studies!](#)





# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## EALs presented in case studies

### Vineyards

*Bodegas Nestares Rincón (ES)*



*Srečko Trbižan (SI)*



### Wooded grasslands

*Caprinatura  
SL (ES)*



*Torre  
Colombaia (IT)*



[Go to E-Atlas to read the EALs definitions!](#) [Check detailed characteristics of EAL in case studies!](#)



# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## National context of EALs presented in case studies

The database of EALs that was developed by the EUCALAND (Pungetti & Kruse, eds., 2010; Kruse et al., 2011) was consolidated with national types of agricultural landscapes.

### *From European to local landscapes*

*geographic identification is important*

5 basic landscape types in Europe

Meeus, J.H.A. (1990): „Pan-European landscapes“. Landscape and Urban Planning, Vol. 31, Issues 1-3: p 57-59.

**Corine Land Cover Map 2006 - 44 land cover types in Europe**

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

**EUCALAND glossary - 44 typov European types of agricultural landscapes**

*integrated into*

national typologies

national typologies

national typologies

- *Primarily, the application of classifications including aspects of landscape values, traditions, and heritage and these which are available through WMS connectors or public maps.*

[Read more about types of cultural landscapes in the Summary Report, p. 39-43!](#)





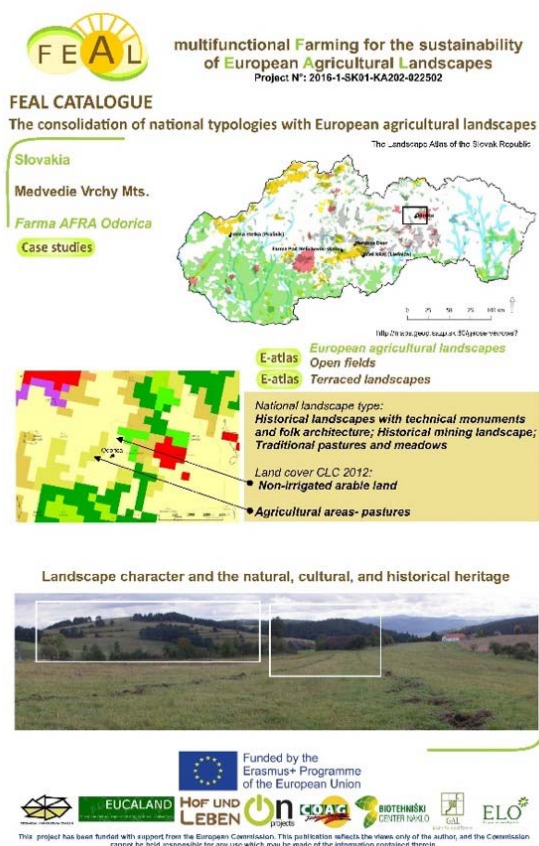
# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



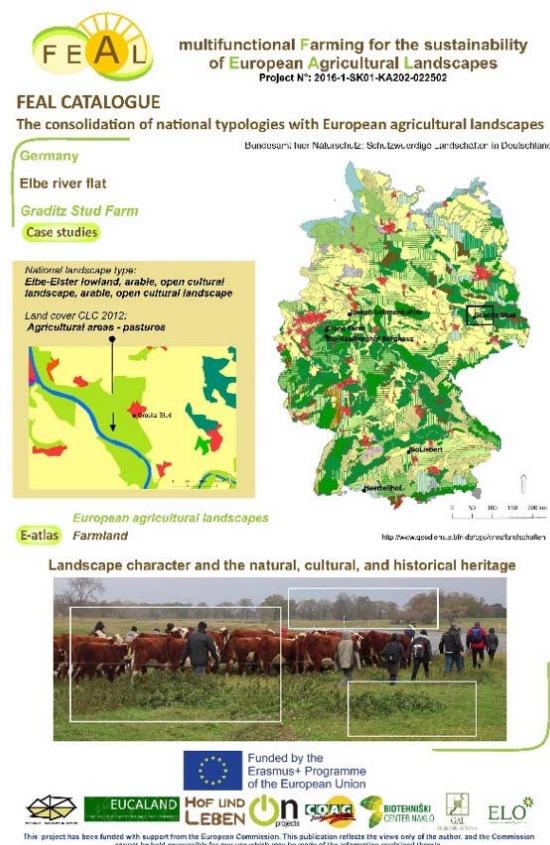
## National context of EALs presented in case studies

European and national landscape classifications are visualized in interactive pdfs developed particularly for each case study demonstrating a large variety of EALs and distinctive features of their landscape character.

### Slovakia



### Germany



*[Learn more how to use interactive pdfs in E-Atlas!](#)*



# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



TECHNICAL UNIVERSITY IN ZVOLEN

## National context of EALs presented in case studies

European and national landscape classifications are visualized in interactive pdfs developed particularly for each case study demonstrating a large variety of EALs and distinctive features of their landscape character.

### Spain

**FEAL** multifunctional Farming for the sustainability of European Agricultural Landscapes  
Project N°: 2016-1-SK01-KA202-022502

**FEAL CATALOGUE**  
The consolidation of national typologies with European agricultural landscapes

Spain  
The Sierra Mágina Natural Park  
Esteban Moya  
Case studies

Atlas of the Landscapes of Spain

E-atlas  
Orchards  
E-atlas  
Terraced landscapes

European agricultural landscapes  
National landscape type: Mountainous massifs and high ranges of Subbetic-Probetic Mountains, mountain ranges of the Betic Mountains  
Land cover CLC 2012:  
Olive groves

Landscape character and the natural, cultural, and historical heritage

Funded by the Erasmus+ Programme of the European Union

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**FEAL** multifunctional Farming for the sustainability of European Agricultural Landscapes  
Project N°: 2016-1-SK01-KA202-022502

**FEAL CATALOGUE**  
The consolidation of national typologies with European agricultural landscapes

Italy  
The plateau of Castelluccio di Norcia  
Emiliano Brandimarte Az. Agr. (Sibillini Ranch)  
Case studies

Administrative units of the central and northern part of Italy

E-atlas  
Highlands [EN]  
E-atlas  
Meadow [EN]

European agricultural landscapes  
Administrative unit: Region: Umbria; Province: Perugia; Municipality: Norcia  
Land cover CLC 2012:  
Agricultural areas - non-irrigated arable land;  
Forest and semi natural areas - scrub and/or herbaceous vegetation associations, natural grasslands;  
Agricultural areas - pastures

Landscape character and the natural, cultural, and historical heritage

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### Italy

[\*Learn more how to use interactive pdfs in E-Atlas!\*](#)





# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## National context of EALs presented in case studies

European and national landscape classifications are visualized in interactive pdfs developed particularly for each case study demonstrating a large variety of EALs and distinctive features of their landscape character.

### Slovenia

multifunctional Farming for the sustainability  
of European Agricultural Landscapes  
Project N°: 2016-1-SK01-KA202-022502

FEAL CATALOGUE  
The consolidation of national typologies with European agricultural landscapes

Slovenia  
Kamnik Savinja Alps  
The Šenk Farm  
Case studies

Landscape types in Slovenia

European agricultural landscapes  
Rural areas  
Pasture

National landscape type:  
Alpine mountains; Secluded mountain farms

Land cover CLC 2012:  
Agricultural areas - pastures

Landscape character and the natural, cultural, and historical heritage

Funded by the  
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EUCALAND HOF UND LEBEN ELO

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[Learn more how to use interactive pdfs in E-Atlas!](#)



# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## Advanced multifunctional entrepreneurship based on EALs values

*Why a farmer shall recognize natural, cultural and historical characteristics of EALs?*

### Natural environment

- Basic constraints and advantages

### Historical land uses and cultural traditions

- Traditionality and landscape identity



*Knowledge system on landscape inherited from generations of ancestors is very important for the current management.  
Historical landscape was multifunctional and farming methods were usually nature friendly and sustainable.*

### Example of EAL: Terraced landscape



Soil looses and erosion prevention

Increasing insulations for cultivated plants

Stone terraces built with different techniques

Seasonal dwellings on terraces

[You can read more about very interesting historical genesis of EALs in the Sumary Report p. 8-10!](#)



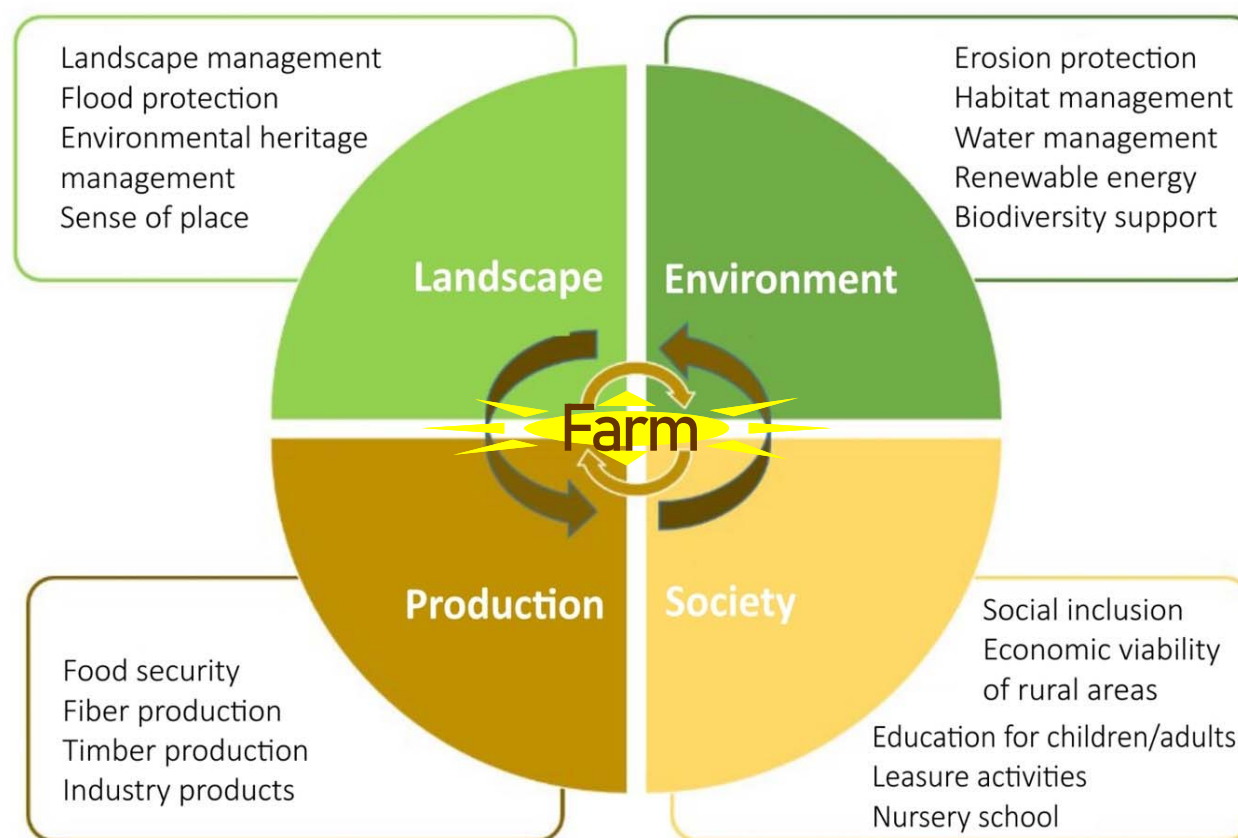
# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## Advanced multifunctional entrepreneurship based on EALs values

A framework of interfaces between a farm and a landscape.

- *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.*



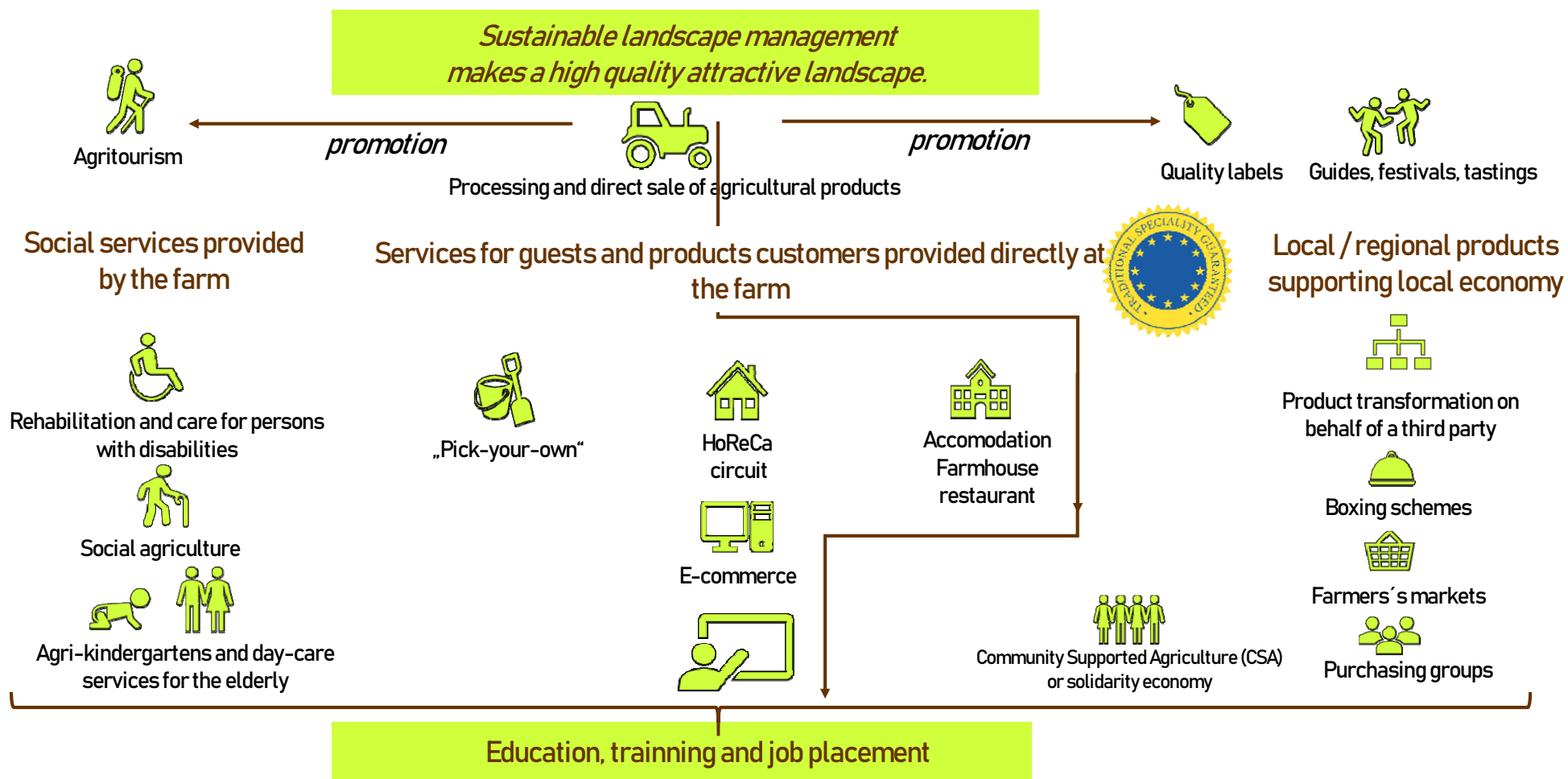
[You can read more about interactions of farms and their environment in the Summary Report, p. 21-22; 28!](#)



# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## Advanced multifunctional entrepreneurship based on EALs values



*[Find more information about challenges of multifunctional agriculture in the Summary Report, p. 24-27!](#)*





# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



Attractive landscape as a result of multifunctional and sustainable farming and as an asset for the further entrepreneurship development

## Priorities of values maintenance in different EALs

- *Preservation of natural heritage and biodiversity*
- *Traditional extensive pastures*
  - *Challets and haymaking structures*

Highlands  
Mountain landscapes  
Meadows  
Pasture  
Heathland  
Wooded grasslands  
Dehesa

- *Landscape diversity*
- *Historical vegetation forms*
- *Historical irrigation systems*
  - *Folk architecture*

Rural landscapes  
Farmland  
Semi-bocage  
Huertas  
Terraced landscapes

- *Genopool diversity and heritage*

Delta landscapes  
Open fields  
Orchards  
Vineyards

*Preserved rural landscapes 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 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 (Summary Report, p. 54).*

[Find more information about challenges of multifunctional agriculture in the Summary Report, p.24-27!](#)



# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## Maintenance and preservation of EALs values

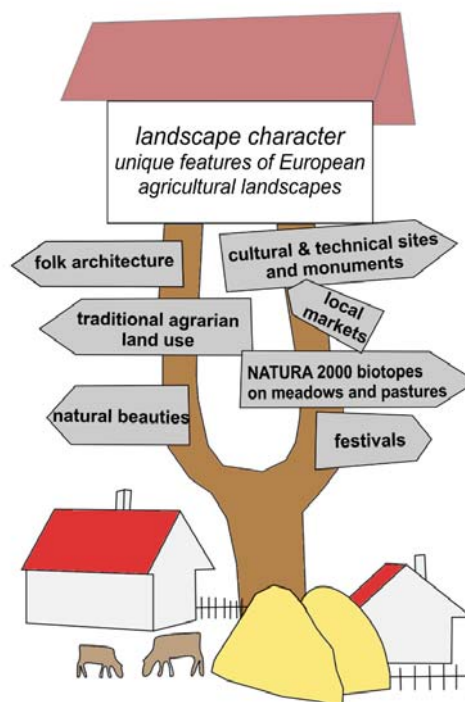
Which attributes of EALs shall be preserved?

nice and attractive

Original tasty

relaxing

inspirative



What can a farm do?

- Maintain traditional land uses.
- Preserve natural, cultural and historical heritage and the landscape character.
- Organic farming.
- Cultivating local / regional plants and breeding animals (genopool heritage preservation).
- Extensive, soft tourism activities and family friendly programs on the farm for visitors.
- The implementation of knowledge about farm eco-functions and traditions into eco-museum conceptions.
- The implementation of high-tech and eco-friendly agri-technologies into modern landscape design conceptions.

*[Find more information about challenges of multifunctional agriculture in the Summary Report, p. 52-54!](#)*

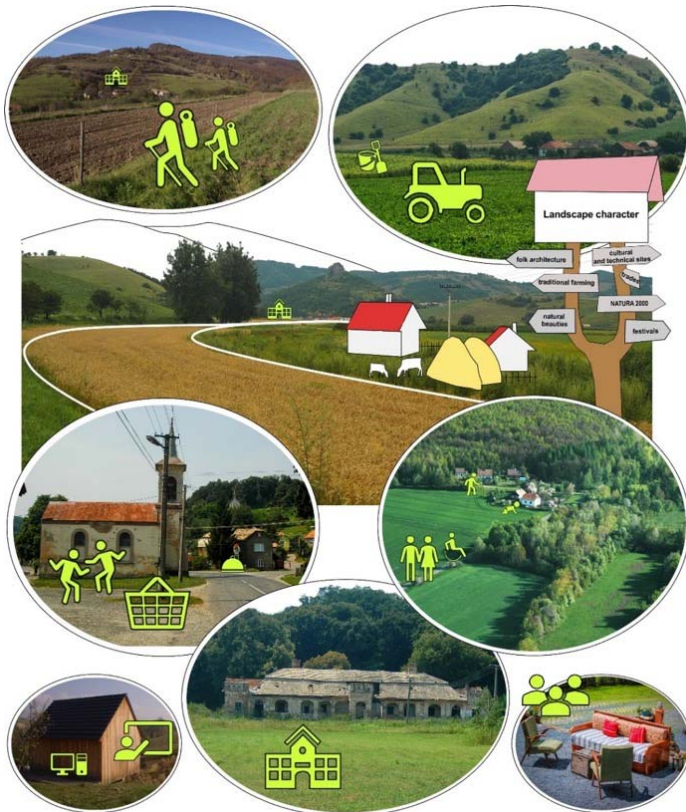


# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## Maintenance and preservation of EALs values by farms

*A key task is setting up a farm as a hotspot of bussiness and touristic infrastructure in the countryside.*



- **Natural heritage** preservation requires extensive and eco-friendly agricultural activities (organic farming, apiculture etc.).
- **Traditional extensive pastoral systems** are maintained by continuous non-intensive grazing of ecologically vulnerable grasslands by different kinds of animals, removing shrubs and successive woody plants.
- **Biodiversity and landscape diversity:** a farm provides daily maintenance on land cover. For instance, for meadows it is expected two or four times yearly a grass cutting and haymaking.
- **Genopool heritage and diversity of cultivated plants** is performed by a farm preferring biological prevention against pests and diseases and producing local eco-products.
- **Historical elements of vegetation** require maintaining their primary form and functions by removing successive plants or planting /cultivating new ones.
- **Historical irrigation structures** require active usage, cooperation of land-owners in preservig their continuity among land parcels, grass cutting, removing woody plants and reconstruction of channels.
- **Historical artificial terraces** on slopes require removing successive woody plants and reconstruction.
- **Traditional challets, haymaking structures and folk architecture** require active usage and reconstruction regarding their cultural and historical features and in some cases also adoption to a new function.

*Find links among different EALs and variety of bussines models in case studies!*

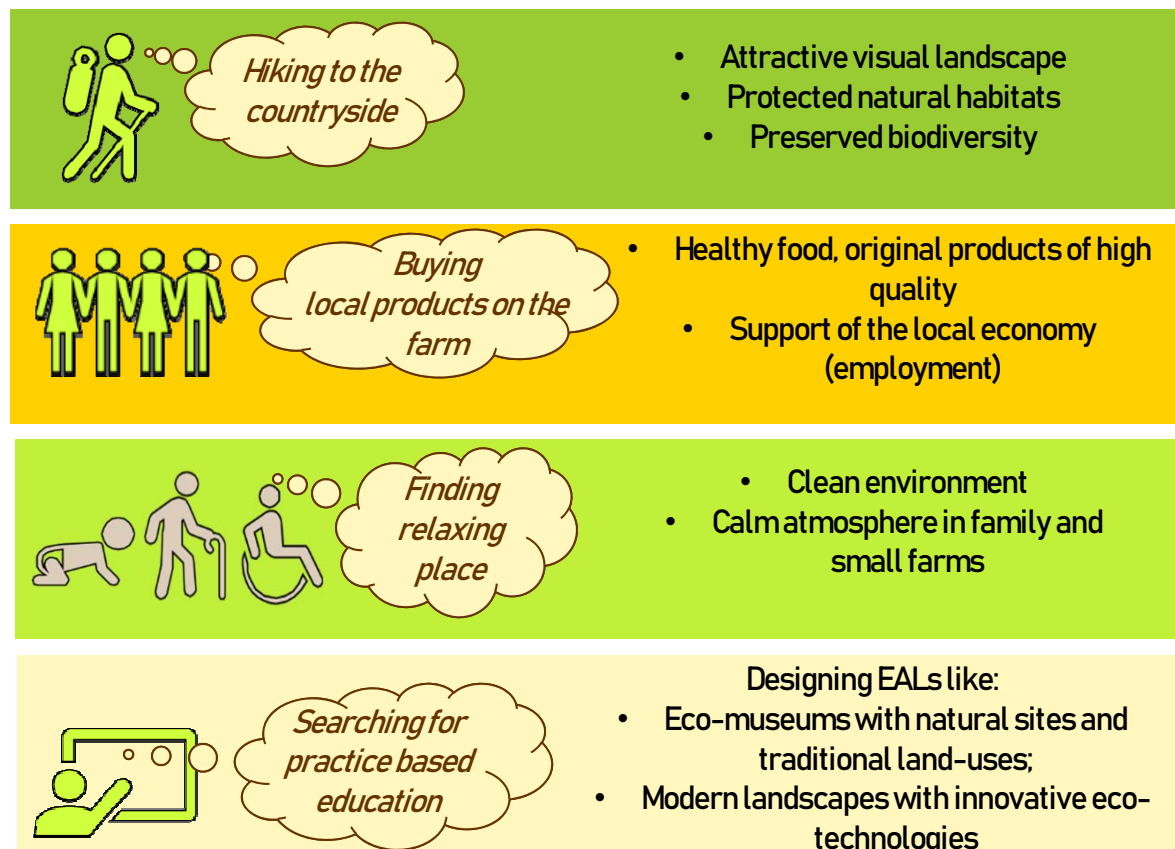


# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL

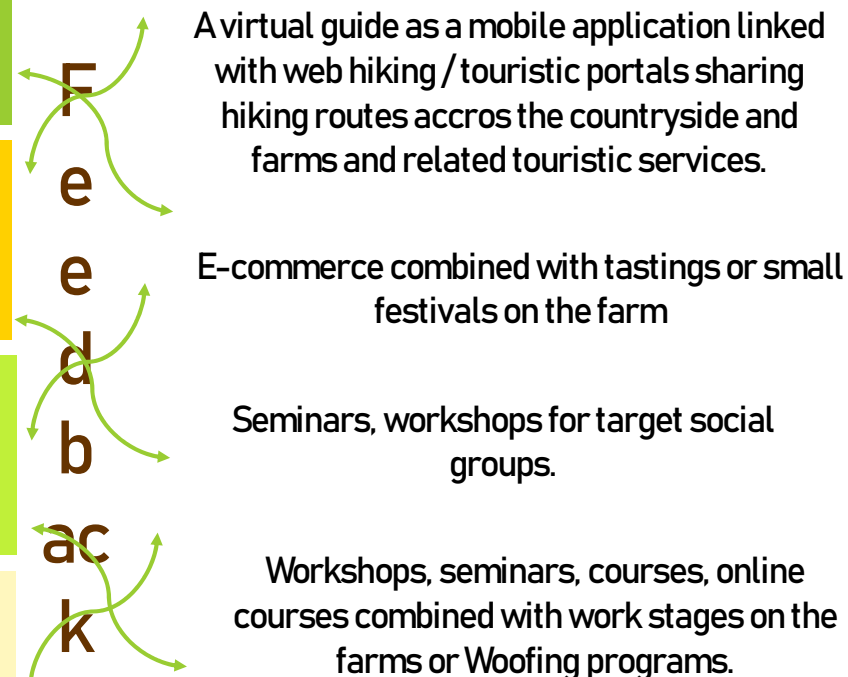


## Sharing and distribution knowledge on EALs values

### Customers, visitors and their activities



### How a farm can share knowledge?



*Find links among different EALs and variety of bussines models in case studies!*





# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## References/Links

- [Council of Europe \(CoE\). \(2000\). The European Landscape Convention, ETS No. 176. Retrieved from http://www.coe.int/t/dg4/cultureheritage/heritage/Landscape](http://www.coe.int/t/dg4/cultureheritage/heritage/Landscape)
- [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.](#)
- [Pungetti, A. & Kruse A. \(Eds.\) \(2010\). European Culture Expressed in Agricultural Landscapes. Perspectives from Eucaland Project. Roma, Palombi Editori.](#)



# THE PRINCIPLES OF MULTIFUNCTIONAL AGRICULTURE AND EAL



## Conclusions

*Landscape is being shaped by types of behaviour intimately connected with the culture of images. Landscapes are sculpted by habits, and never before have these been so strongly influenced by appearances.*

*Prof. Arch. Juan Manuel Palerm Salazar  
Universidad de Las Palmas, Gran Canaria, Spain  
Essey „On Silence in the Landscape“*

The current state of the health of the agricultural landscape does not meet the criteria for optimal and ecological land use in many EU regions. This statement especially applies for traditionally farmed landscapes where the main problem is land abandonment. 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.

Therefore, the training module explains successful realizations of multifunctional agriculture on farms and brings inspirational ideas for other farms in similar landscape types from different European countries. It provides knowledge how farmers could be more independent from unpredictable natural conditions (disasters) and economic obstacles (for instance products trading that is influenced by global prices) as well as it brings ideas how a multifunctional farming can lead to win-win situations presented in case studies. Well-educated farmers are able to identify financial potential of EAL and to implement this knowledge into their successful business plans.