



Learning Area "Sítio de Monfurado" (Portugal)

INNOVATION EXPERIENCES AND NEEDS

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Introduction and contents

This report looks at innovation that supports HNV farming in **Sítio de Monfurado** and identifies the types of innovation that are missing and needed in order to secure a sustainable future for HNV farming.

We present examples of innovation existing in this Learning Area (LA) and examples more widely in Portugal that could usefully be transferred to address challenges in the LA.

Types of innovation that seem to be absent in Portugal, and that we would like to explore in other countries of the HNV LINK network, are also summarised.

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The challenges facing HNV farming in Sítio de Monfurado

- ▶ In our LA the Montado is particularly prone to **intensification**:
 - ▶ Over-exploitation of the tree cover (unbalanced cork harvest and pruning for charcoal production)
 - ▶ Intensification of activities in the undercover (Mechanized ploughing and consequent irreversible damage of the tree root system; Overgrazing without a correspondent investment on the improvement of pastures)



These may hinder natural regeneration of the trees and create both homogeneous stands and “clear areas” which ultimately will induce decline of the Montado.

Land management and management practices are, among all, the most important drivers for Montado decline.

Main problems to overcome in the Montado of Sítio de Monfurado

- Low soil fertility
- Lack of new oak trees
- Undifferentiated products
- Resistance to multi-functionality
- Economic agenda supporting productivism and specialization farming
- Lack of investment of farmers in improving management practices

Overview of innovation in Sítio de Monfurado

There is no overall project to support the HNV farming system in Sítio de Monfurado.

Examples of innovation are not frequent and are mostly related to initiatives driven by individual farmers/managers.

There has been a LIFE program (2003-2008) and a consequent management plan with recommendation for management of natural values, however with little or no impact on farmers management decisions.

There are some signs of increasing innovation at the present time with some collective initiatives related to the Montado, promoted by the municipalities and other institutions such as the University of Évora.



Overview of the innovation situation

There has been a LIFE Project (2003-2008) – “GAPS - Site of Monfurado Active and Participated Management”, with the objective of improving the conservation status of the Annex I habitats and Annex II species present in the LA. Out of GAPS an important guidance management plan for the natural values of the LA was produced, however no practical instruments for its implementation are in place.

There are few examples of innovation within the LA, which are mostly related to individual initiatives rather than collective and or social and institutional innovations.

Collective initiatives related mostly to social innovation and also markets and products have been driven by the Municipality of Montemor-o-Novo, LAGs acting in the territory of the LA and also the *Universidade de Évora*.

Innovation examples in Sítio de Monfurado: what are their strengths and weaknesses for HNV farming?

- Production and direct meat sales - from the pasture to your table
- The multifunctional Montado
- A healthy soil as the core of the Montado production system
- The acorn week
- Montado monitoring system



Strengths

- There is a general strong concern among producers with soil management and therefore the initiative to discuss and spread knowledge on management practices oriented to soil fertility is relevant, however limited in its scale of effective operation.
- There are intentions and also some attempts to improve the promotion and marketing of products from the Montado.

Weaknesses

- Some innovations are individual –one farm – initiatives (e.g. *The multifunctional Montado*) or of limited scale (e.g. Production and direct meat sale), operating with only 5 farms.
- One innovation, "*Montado monitoring system*", is under development presently, therefore not yet operating.

What are the main innovation needs in the Sítio de Monfurado, and how could they be addressed?

Social and institutional innovation

Social and institutional - innovation needs	Possible approaches
To embrace multifunctionality	Training and rural extension to provide technical advise to farm managers
<i>Low investment of farmers in improving management practices</i>	<i>Promote discussion groups and cross visits with inspiring examples (e.g. Tertúlia do Montado)</i>
Consult local farmers in design of support measures, application of rules (e.g. grazing management).	University and regional and national authorities establish dialogue with local actors for development of approaches.

Regulatory framework innovation

Regulatory framework - innovation needs	Possible approaches
Resolve the existing tensions between the environmental agenda and the economic agenda for the Montado	National authorities in collaboration with local actors adapt/create public policies specifically for the Montado
Use agri-environmental measures to support HNV Montado system on large scale, particularly for soil management practices, oak recruitment and grazing management.	Co-construction of a proposal for a specific agri-environmental measure that will contribute to the sustainable management of Montado as an agro silvo pastoral system. This would be carried out by local actors and a representative from the Politics and Planning office of the Ministry of Agriculture.
To operationalise the post Life "Intervention Plan on the Rural Area of Monfurado"	Regional authorities integrate the "Intervention Plan on the Rural Area of Monfurado" on the municipality development plan document.

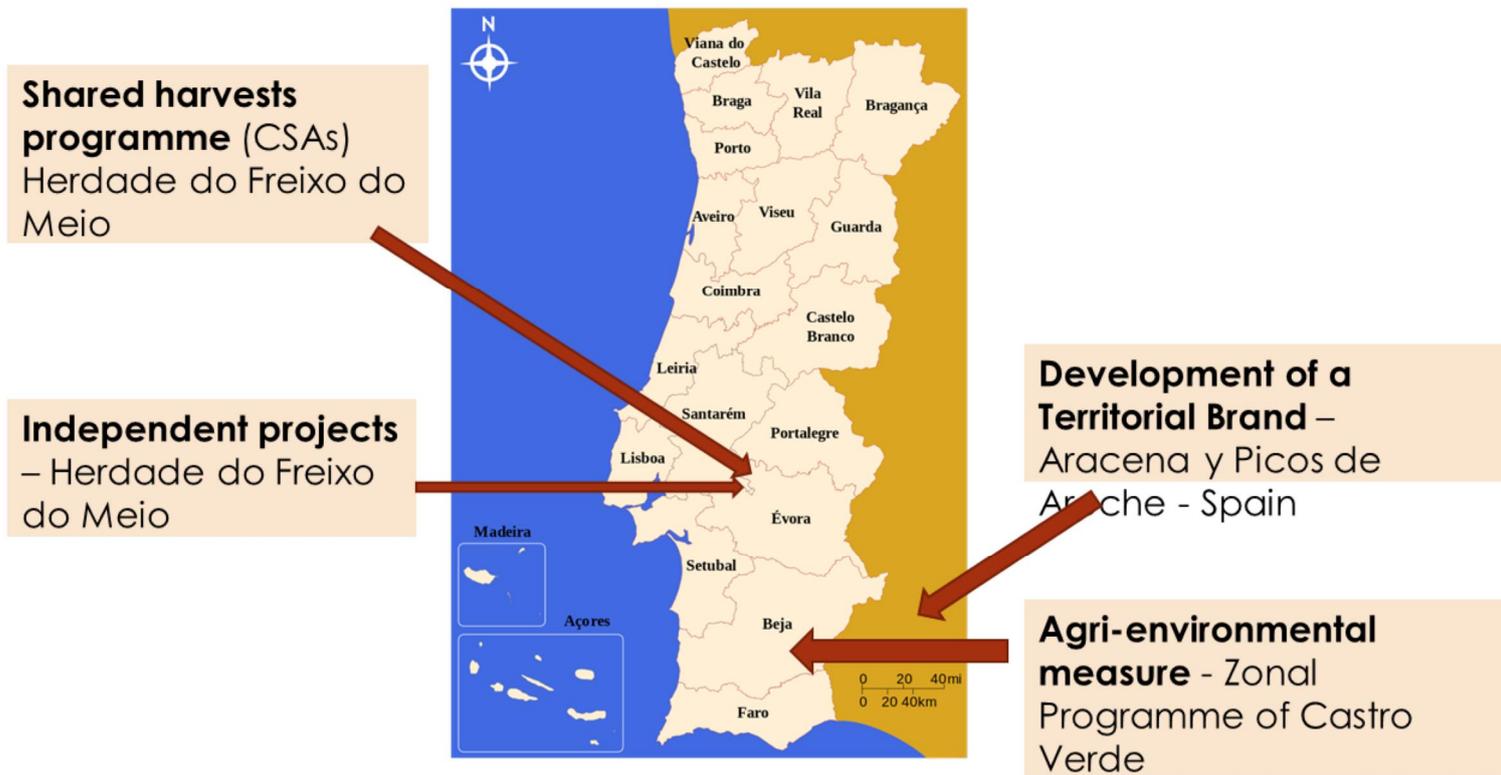
Products and markets innovation

Products and markets - innovation needs	Possible approaches
Promote the HNV Montado system as a unique ecosystem	Create a territorial brand eventually associated to the current application of Montado as a cultural landscape (World heritage – UNESCO)
Promote the products and services from HNV Montado evidencing their uniqueness and excellence.	Re-vitalize existing product brands such as “cabrito do Montado” and develop others through intense collaboration among actors, probably led by existing LAGs.
Valorization of Montado products within the territory in order to retain that added value closer to the producers.	Create a territorial and/or an HNV Montado brand that will support the valorisation of the production system Montado.

Farm techniques and management innovation

Farm techniques and management - innovation needs	Possible approaches
<i>Soil management to restore and gain fertility</i>	Training and capacity building coupled with agronomic advise directed to individual farm settings. This could be promoted by farmers associations supported by a regional project.
<i>Mechanisms to promote oak recruitment protection of regeneration</i>	<i>Use of tree protectors promoted by an agri-environmental measure type RBPS that would reward successful oak recruitment.</i>
Adapted grazing management	Development of a web/mobile tool to monitor pasture/animals under Montado to support management decisions
Management for multifunctionality	Training and capacity building coupled with agronomic technical advise directed to individual farm settings. This could be promoted by farmers associations supported by a regional project.

Innovations from outside the LA that could help address LA needs



- Shared harvests: Community supported agriculture (CSA) initiative for commercialization of farm products – Herdade do Freixo do Meio – Alentejo
- Independent projects: Autonomous projects, complementary to the host farm - Herdade do Freixo do Meio - Alentejo
- Development of a Territorial brand: Marca parques naturales – Sierra de Aracena y Picos de Aroche – Andaluzia – Spain
- Zonal Programme of Castro Verde – Agri-environmental measure – South Alentejo

Innovation examples for which Sítio de Monfurado is looking to other Member States

- ▶ Locally co-construction of agro environmental measures that set objectives related to conservation and resilience of HNV systems with the users, and apply a « payment for results » approach to promote these objectives
- ▶ Implementation of a long lasting system of assistance and technical advice and capacity building directed to farm managers
- ▶ Development of a prestigious brand/brands for the products and services of an HNV farming system

INNOVATION FICHES FROM PORTUGAL

- 1) **A healthy soil** as the core of the Montado production system
- 2) **Agri-environmental measure** - Zonal Programme of Castro Verde - within the Natura 2000 payments (Zonal supports)
- 3) **Independent projects** – The case of Herdade do Freixo do Meio

Portugal – innovation example 1)

A healthy soil as the core of the Montado system – Informal group

- **Location:** Central Alentejo, Portugal
- **HNV system:** Extensive grazing under Montado but also forage production
- **Scale of operation:** Alentejo region, distributed among 15-20 farms, supported by an informal group of farmers and a researcher specialist in soil conservation and field techniques from the University of Évora.
- **Timespan:** Operating for approximately 15 years.
- **Keys to success:** Availability of agronomic knowledge and willingness for its sharing and application in the field conditions of Alentejo both by the group promotor (researcher from UE) and from the farmers. Improvement of economic viability of the farms as a result of the knowledge shared and applied within the group.
- **For more info:** <https://parceriaptsolo.dgadr.pt/9-ano-internacional-dos-solos/344-prof-mario-de-carvalho-e-o-grupo-informal-de-evora-promocao-e-divulgacao-da-agricultura-de-conservacao>



Problems addressed by this example

- Poor soil fertility
- Low soil organic matter content
- Reduced pastures productivity
- Poor economic viability of extensive grazing Montado farms

Story in a nutshell

A group of Alentejo farmers, concerned about the economic and environmental sustainability of their farms and in particular the risk of soil degradation, have abandoned the conventional system of planting crops with the use of soil conventional tillage and moved to conservation agriculture.

This informal group gathers around a field researcher who is largely respected both among the researcher's and farmer's community and functions as the "leader" of the group. The group have been meeting for about 15 years to share experiences, knowledge and technical and scientific support from a this specialist from the University of Évora – Mário de Carvalho.

A significant part of the group work in the Montado system applying the principles of conservation agriculture within the Montado mainly through improvement of soil fertility using mineral correction with no tillage, direct seeding and grazing management to increase soil organic matter, soil fertility and pasture productivity.

What does the informal group achieve for HNV farming?

- ▶ Recovery of generally poor and degraded soils
 - Reduce soil erosion
 - Correction of frequent problems (soil acidity and Mn toxicity)
 - Increase soil organic matter content
 - Avoidance of oak root damage – no tillage



- ↑ Pasture productivity
- ↑ Oak tree productivity and thus health
- ↑ Other cultures productivity

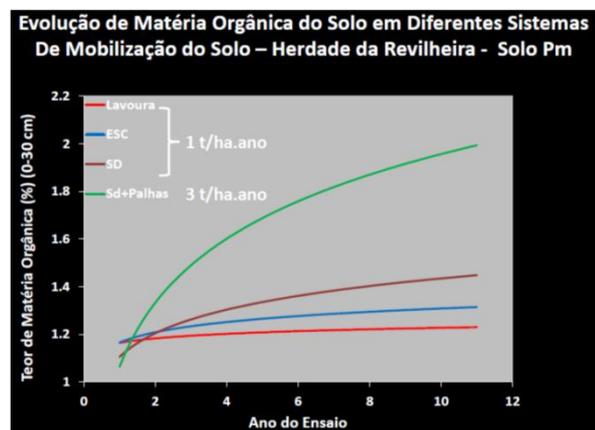


Increased economic and environmental sustainability of the system



Achievements

The informal group has a fluctuating number of farmers. Data resulting from field experiments on the effect of different tillage practices on soil organic matter (OM) content have shown significant increases over a period of 10 years associated to no tillage, direct seeding and culture residue incorporation in the soil (data from Mário de Carvalho, the promotor of the informal group).



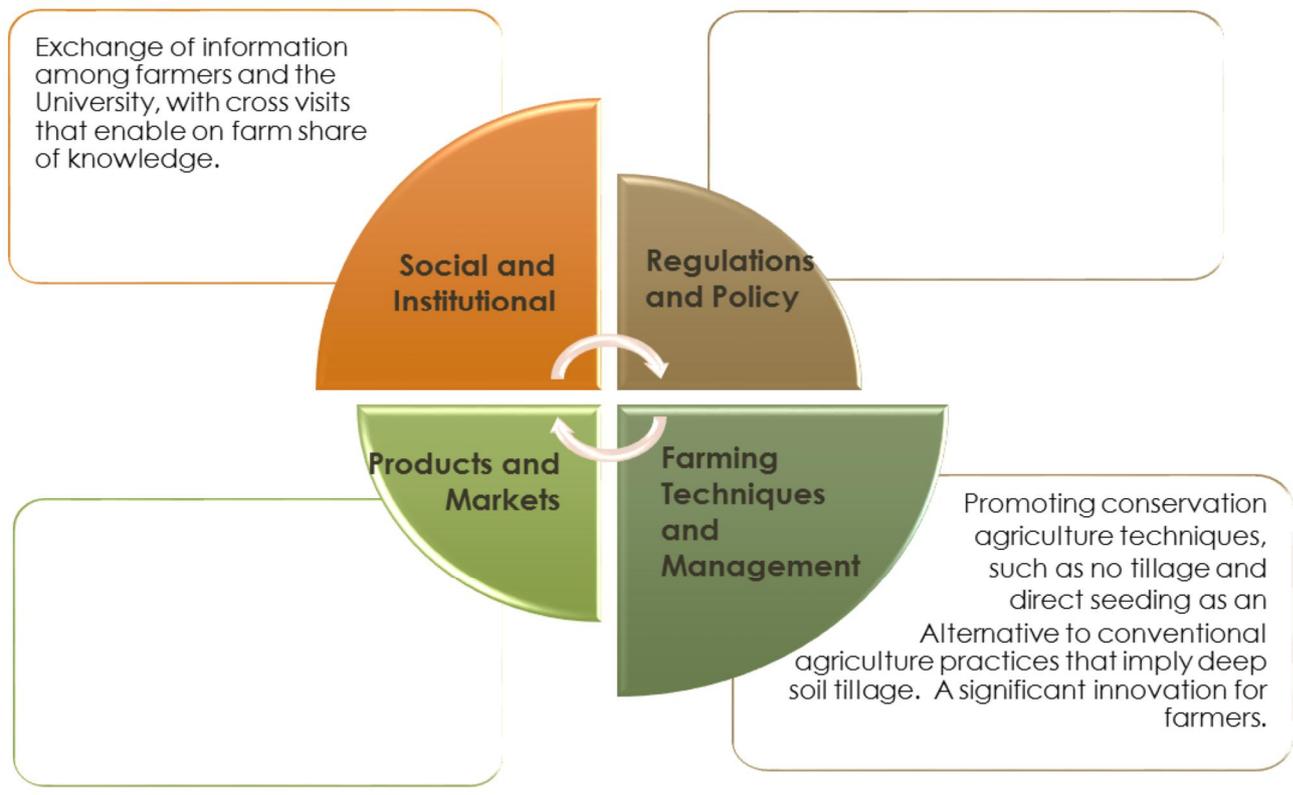
Economics of HNV farming

Data on the economic impact is mostly available from the individual farmers that participate in this informal group.

Maintaining or improving HNV values

The informal group was not implemented to achieve specifically HNV objectives, however soil conservation, soil fertility improvement and efficient use of production factors are clear objectives of this informal group. The fact that oak tree health and regeneration, which are relevant problems within the Montados, are not a direct concern within this group is a drawback.

How does the informal group “conservation agriculture” respond to the HNV LINK innovation themes?



The process that made it happen and critical factors for success



Key actors: The group on conservation agriculture is assumed as informal, and is very much dependent on the expert (from the University of Évora) that gathers and supports the knowledge application in each particular case. Access to specialised technical/agronomic knowledge is therefore critical for this innovation. However the exchange of knowledge happens between all group participants.

There is no real institutional support from anywhere, apart from the University of Évora, and there is no funding to support meetings or even travelling expenses.

The critical factor is probably the high reliance on a single person. The fact that there is a long lasting experience of group discussion with experience/problems sharing among all farmers and expert is an important factor for success. Replication of such an experience requires funding for specific training in order to be able to prepare field technicians capable of provide the technical assistance with a similar structure.

Lessons learnt from this innovation example, and its potential replication

- ▶ Main required conditions for the adoption of conservation agriculture practices



- ▶ Access to specialised knowledge and its adaptation to each farm conditions it is mandatory.
- ▶ Continuous technical assistance in the field.

Replication of this experience implies specialised training and specific funding for preparation of field technicians capable of assisting a larger

- Overall lessons from this example, especially from point of view of HNV farming?

Conservation agriculture and its approach to soil management is undoubtedly more knowledge demanding than the conventional agriculture approach. Access to technical and agronomic knowledge is the limiting factor to the generalisation of this innovative approach.

- Is the innovation unique to its territory and its characteristics, or is it replicable in other areas?

The informal group is unique, however it is replicable through the use of specialised training to prepare field technicians capable of disseminating the soil management approach used under conservation agriculture.

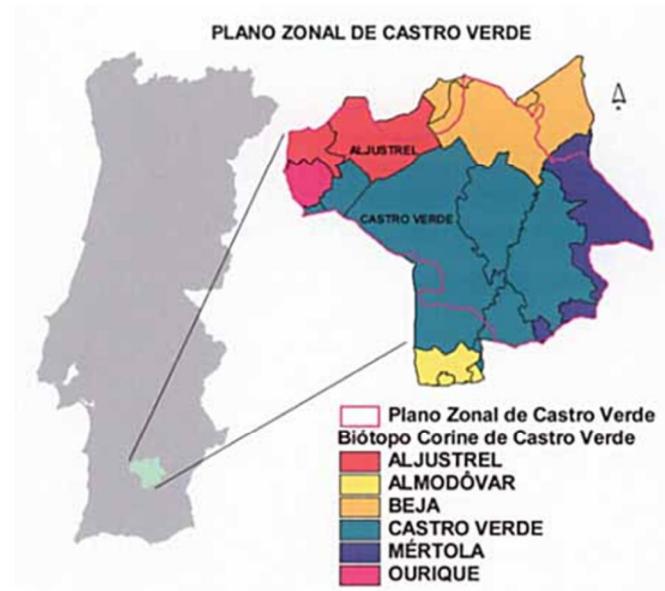
- Could it be rolled out on a bigger territorial scale? What would be needed to do this successfully?

Yes, soil management for conservation within the Montado is considered extremely relevant by most farmers and so it is the access to technical advice across time. To replicate successfully this experience, funding for specific training in order to be able to prepare field technicians capable of provide the required technical assistance across time and to support the periodic cross visits.

Portugal – innovation example 2)

Agri-environmental measure - Zonal Programme of Castro Verde - within the Natura 2000 payments (Zonal supports)

- **Location:** South Alentejo, Castro Verde, Portugal
- **HNV system:** Cereal steppes
- **Scale of operation:** 85 000 Ha
- **Timespan:** Operating for approximately 25 years.
- **Keys to success:** Public awareness related to a charismatic conservation species - the Great Bustard; The united action of three organizations: the NGO Nature protection league (LPN), the Municipality of Castro Verde and the Farmers Association of Campo Branco.
- **For further info:** <http://www.pdr-2020.pt/site/O-PDR2020/Arquitetura/Area-3-Ambiente-Eficiencia-no-Use-dos-Recursos-e-Clima/Medida-7-Agricultura-e-Recursos-Naturais/Acao-7.3-Pagamentos-Rede-Natura/Operacao-7.3.1-Pagamentos-Rede-Natura-Pagamento-Natura>



Problems addressed by this example

- Endangered cereal steppe birds within an important agricultural area were declining fast.
- Avoidance of afforestation (by the paper industry) of a large important area for cereal steppe birds conservation.
- Low income of farmers with holdings in that areas when following conservation supporting agricultural practices (extensive cereal production)

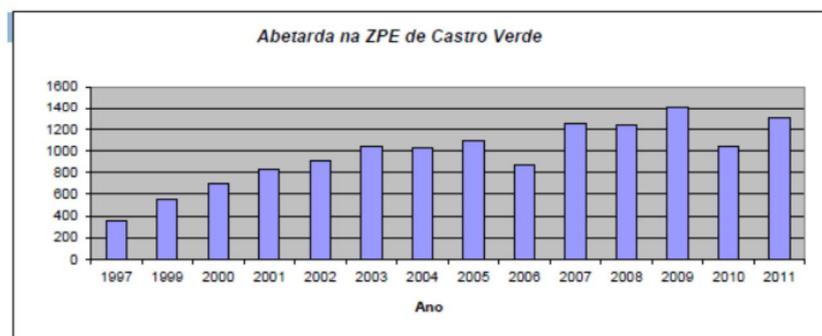
Story in a nutshell

In the late 80s, a very important area of private farmland for the conservation of endangered “cereal steppe” birds, in Castro Verde Municipality was bought by the paper industry for planting eucalyptus. The eminent disappearance of such an important ecosystem led to a united reaction by several private and public institutions led by the NGO Nature protection league (LPN) and including the Municipality of Castro Verde and the Farmers Association of Campo Branco.

LPN developed a strong and very successful awareness campaign in favour of conservation of the Great Bustard. The united efforts resulted in: (i) the interdiction of afforestation of such lands through municipality mechanisms; (ii) submission of a LIFE project for acquisition of part of those farmlands by LPN and the submission of a proposal for the creation of a zonal plan for Castro Verde by the farmers Association which became the main nature conservation instrument for that area.

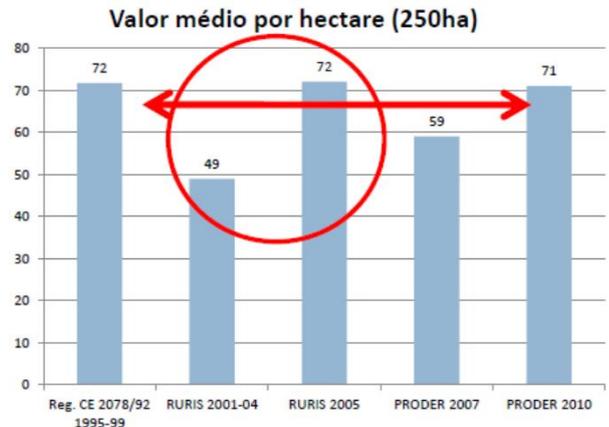
What does the Zonal Programme of Castro Verde achieve for HNV farming?

- Promotes nature conservation through the maintenance of habitat and quantitative improvement of cereal steppe avifauna.
- Minimizes income losses of farmers resulting from the commitment to keep agricultural practices compatible with nature conservation
- Contributes to the conservation of Cultivated areas of HNV.



Achievements

Continuous, though variable support to farmers, through different agri-environmental schemes, since 1995. This financial support is very relevant to minimize the income losses of farmers resulting from the commitment to keep agricultural practices compatible with the conservation of endangered "cereal steppe" birds.



Economics of HNV farming

In:Sequeira (2011)

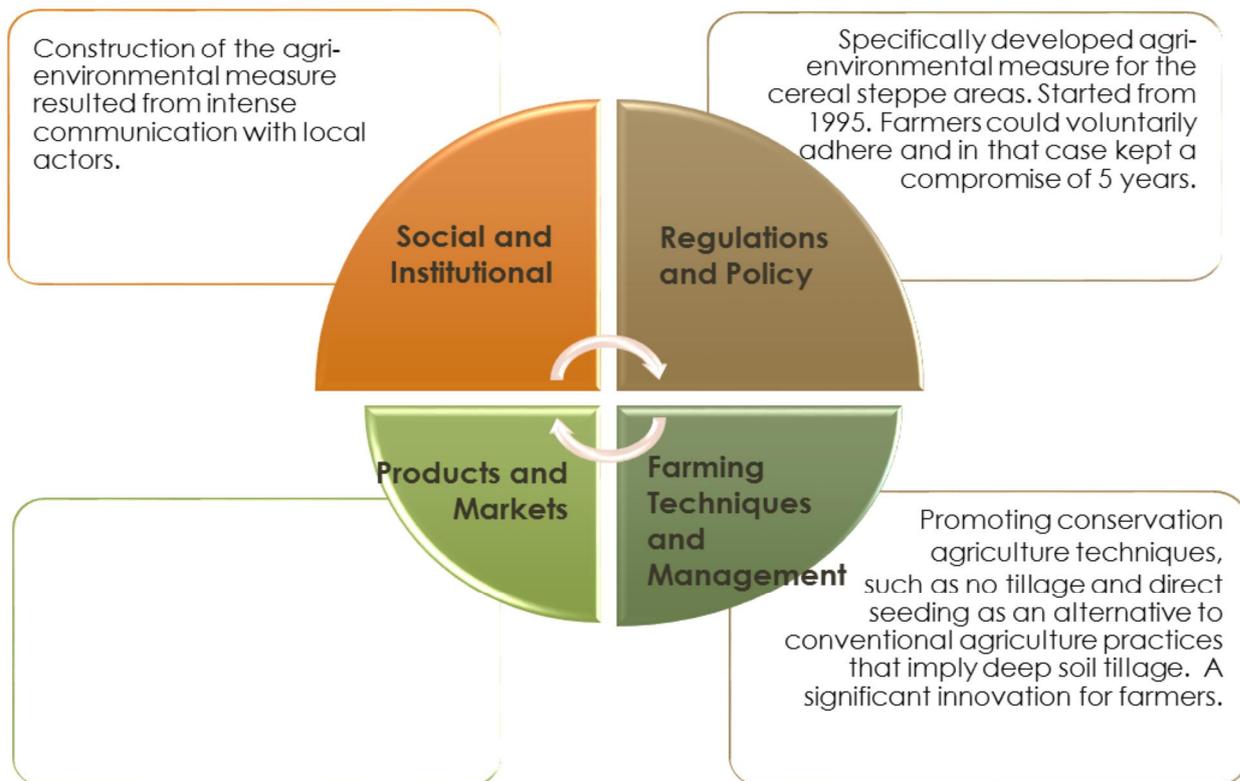
By 2012, the average payment provided by the agri-environmental measures was 71 euros/ha, for an average farm dimension of 250 ha.

Maintaining or improving HNV values

The agri-environmental measure was effective in enabling the recovery of different endangered cereal steppe birds, namely the bustard (*Otis tarda*) and lesser kestrel (*Falco naumanni*). Furthermore the environmental investment have resulted in different actions that greatly contributed to local development mostly related to environmental tourism and all the necessary infrastructures associated.

Reference: Sequeira, Eugénio (2011). *Agricultura e conservação da biodiversidade. Castro Verde*, 8 de Julho 2011. <http://www.icnf.pt/portal/pn/biodiversidade/ei/unccd-PT/pancd/resource/doc/seef/2012fev29/projetos/120229-biodiversidade-castro-verde-eugeniosequeira>

How does the Zonal Programme of Castro Verde respond to the HNV LINK innovation themes?



The process that made it happen and critical factors for success

1990s:

- Conversion of agricultural area into forest (paper industry)
- Irreversible loss of habitat
- Loss of biodiversity in danger of extinction
- Increase in rural abandonment and depopulation

LPN acquires land (1800 ha) considered a priority for bird species conservation – reserves of biodiversity.

Research and conservation projects: 3 Lifes + R&D projects



Municipality of Castro Verde interdicts afforestation of the conservation areas. Classification as Natura 2000.



Plano zonal de Castro-Verde Agri-environmental measure implementation (1995).

Present management:
Farmers association – Campo Branco



The process of development and implementation of the presently named zonal support of Castro Verde has gone through many different phases over the last 25 years.

Critical factors for success were the active participation of many different actors, in a mostly bottom up process of construction of the agri-environmental measure.

Actors involved include the NGO- Nature protection league that triggered the process and has been the leader of most actions, the Farmers Association of "Campo Branco", the Municipality of Castro Verde, different research institutions as Universities and research institutes and the Portuguese General Direction of Agriculture and General Direction of Environment.

Factor of success: The fact that there was, from the beginning, a great involvement of farmers mostly through the Farmers Association of Campo Branco, and that the management of the Agri-environmental measure is under the responsibility of the Farmer's association, is considered an important factor of success for the engagement of individual farmers and thus for the effectiveness of the measures.

Lessons learnt from this innovation example, and its potential replication

- ▶ To use research results as a support for the construction of agri-environmental measure is fundamental.
- ▶ The multiactor approach resulting in a continuous collaboration among civil society, research and academia and local and central administration.



- Overall lessons from this example, especially from point of view of HNV farming?

Multiactor approach is fundamental for the development of such a measure; The existence of a charismatic conservation species is very relevant for creating public awareness and engage all type of stakeholders.

- Is the innovation unique to its territory and its characteristics, or is it replicable in other areas?

It is probably replicable in other areas, as long as similar conditions can be found, mostly related to the existence of charismatic conservation species.

Portugal – innovation example 3)

Independent projects – The case of Herdade do Freixo do Meio

- **Location:** Central Alentejo, Portugal
- **HNV system:** Agrosilvopastoral system Montado
- **Scale of operation:** Initiative of one farm, involving at present 8 independent projects
- **Timespan:** Operating for approximately 10 years.
- **Keys to success:** The strong initiative of the promotor - Freixo do Meio Farm Manager. The widely known principles of management and production of the Freixo do Meio (biodynamic and organic agriculture and permaculture principles), through its various initiatives within the field of sustainable production respecting the Montado Natural values.
- **For more info:**
<https://www.herdadedofreixodomeio.pt/site/programa-partilhar-as-colheitas-csa>



Problems addressed by this example

- Need to increase diversity of products out of a farm system
- Need to progress in recovering soil fertility within the farm system
- Need to increase human presence in the farm (for safety reasons)
- Social concerns as guidance principal of farm function

Story in a nutshell

The Herdade do Freixo do Meio houses small independent projects, under certain rules (agroecology principles of production and common objectives with Freixo do Meio), and mostly complementary to its own productions.

The objective is to act appropriately within the social and economic current situation, taking advantage of existing potentials and strengthening the Freixo do Meio project as a whole.

There are presently 9 autonomous projects installed. The first was implemented by Mr. Antonio Abel, formerly in charge of the homestead, who, upon his retirement, undertook an artisanal honey production / transformation independent project.

What does the Independent projects of Freixo do Meio achieve for HNV farming?

- ↑ Production of goods and services in accordance with agroecology principles
- ↑ People leaving and working in the Montado
- ↑ Diversification of products and services within a farm unit



Contributes to the social (directly) economic (indirectly) and environmental (directly) sustainability of the system (within Freixo do Meio)

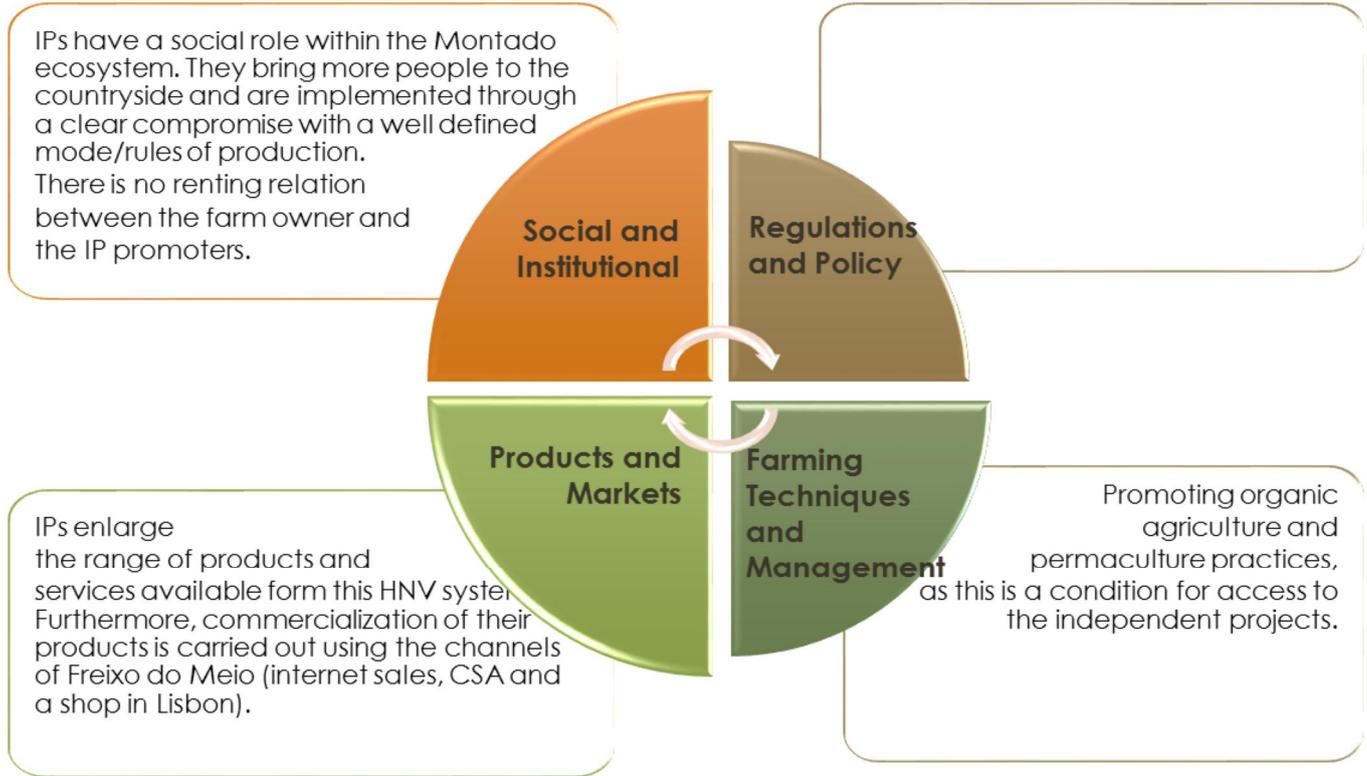


Achievements

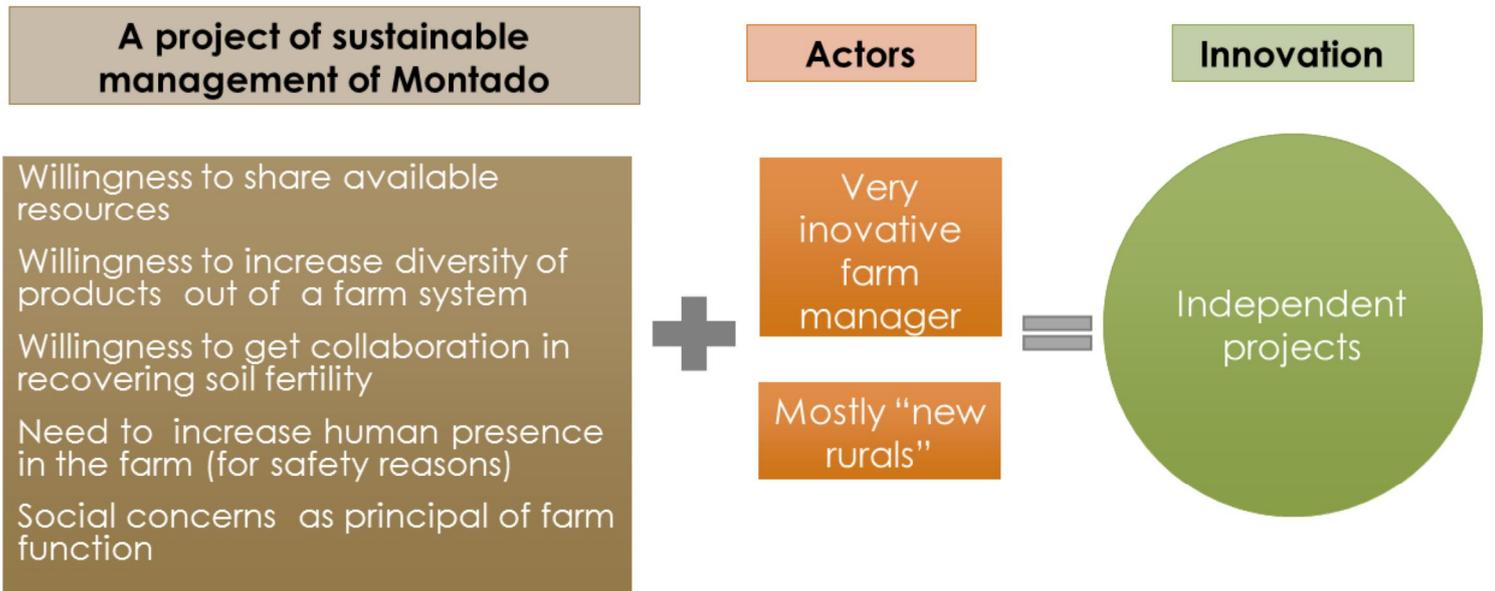
Since 2008, HFM acts as an economic active agent by embracing autonomous but complementary projects that strengthen the system as a whole and increase the amount of products available from the farm.

Among others, the independent projects include a 4.5 ha aromatic and medicinal garden (2011), home-made bags and complements (2011), 2 ha of a horticulture garden and 5 ha of orchards (2011), free-range chicken production with a movable chicken house (2012), a centre for artistic animations, storytelling and pedagogical workshops (2012) and a industrial kitchen that prepares ready made meals.

How does the Independent projects (IP) of Freixo do Meio respond to the HNV LINK innovation themes?



The process that made it happen and critical factors for success



The independent projects from Freixo do Meio are, so far, a one farm innovative initiative that results from a unique farm setting that characterizes Freixo do Meio.

Although there is no such legal relation as a renting contract or any financial retribution, there is a legal written agreement that defines rules of functioning.

There is no specific funding associated to this initiative, however the independent projects promoters have used CAP funds for installation of their independent projects.

Lessons learnt from this innovation example, and its potential replication

- ▶ Very successful initiative, but so far dependent on a single farm/farm manager
- ▶ For replication of IP within other Montado farms, the involvement of a farmers association could be importante for legal support for both the farm manager and the IP promoters.

VIVEIRO FREIXO DO MEIO

Projectos Independentes da Herdade do Freixo do Meio

Independent Projects in Herdade do Freixo do Meio



herdade do
Freixo do Meio
AGRICULTURA BIOLÓGICA

-Overall lessons from this example, especially from point of view of HNV farming?

The implementation of independent/autonomous projects is a very effective way of engaging new HNV farmers, as the host farm sets the rules for functioning of those IPs.

-Is the innovation unique to its territory and its characteristics, or is it replicable in other areas?

The IPs is so far a unique example within Alentejo, and it is an individual farm initiative, however it is replicable to other farms, as the farm structure – mostly large dimension farms – is the most common in the region.

-Could it be rolled out on a bigger territorial scale?

Yes, after dissemination of the success of this initiative within Freixo do Meio.

-What would be needed to do this successfully?

Probably the engagement of a farmers association for the dissemination of the initiative and its advantages and drawbacks.

Legal support on the setting of the rules for the establishment of the agreement for Independent projects in each farm.