



THE HNV-LINK COMPENDIUM

Comparative collection of High Nature Value
innovations, experiences, needs and lessons from
10 European “Learning Areas”

Deliverable D 2.6.1

Date: October 2017

Lead Partner: Guy Beaufoy (EFNCP)



This project has received funding from the European Union Horizon 2020 research and innovations program under Grant Agreement No. 696391

Disclaimer: *This report represents the views of the authors. The Research Executive Agency is not responsible for any use that may be made of the information it contains*

Deliverable 2.6.1 - HNV-Link 2017 – A H2020 Project Grant Agreement n° 69 63 91

Lead Partner : Guy BEAUFOY, EFNCP, with the editing support of Claire BERNARD-MONGIN, CIHEAM-IAMM

The report should be cited as follow :

Beaufoy, G. (ed), HNV-Link Partners. (2017). *THE HNV-LINK COMPENDIUM. Comparative collection of High Nature Value innovations, experiences, needs and lessons, from 10 European “Learning Areas”*. Cuacos (Spain) : EFNCP & Montpellier (France) : CIHEAM-IAMM, (HNV-Link H2020 Project). HNV-Link WP2, deliverable 2.6.1

Associated authors :

Vyara Stefanova, Yanka Kazakova, Maria Yunakova, Mariya Peneva (Bulgaria)
Guy Beaufoy, Pedro M^a Herrera Calvo (Spain)
Sébastien Girardin, Lucie Noël, Emmanuelle Genevet, Catherine Cazals (France)
Dimitris Goussios, Theodossia Anthopoulou, Ioannis Faraslis, Dimitra Gaki, Labrini Triantou and George Vlahos (Greece)
Maria Roglic (Croatia)
James Moran, Brendan Dunford (Ireland)
Isabel Ferraz de Oliveira (Portugal)
Diana DUMITRAȘ, Ionel-Mugurel JITEA, Valentin MIHAI (Romania)
Lars Johansson, Magnus Ljung, Tove Ortman (Sweden)
Gwyn Jones and John Waldon (UK)

Introduction and contents

This Compendium is the main written output from WP2 of HNV-LINK, focusing on learning about innovation at the grassroots. It brings together the results of the work done in the 10 Learning Areas (LA), analysing innovation from the perspective of High Nature Value (HNV) farming.

For each LA, we look at the local context for innovation in support of HNV farming, and analyse examples of innovation that are working (or have worked) in this regard within the LA and more widely in the country. We also identify the main innovation gaps that need to be addressed in order to make HNV farming sustainable.

The Compendium starts with an overview of findings from the 10 LA and the main lessons learned. This is followed by the individual reports from the LA, including a set of innovation examples using a common format (the innovation fiches).

Contents

Framing HNV innovation	p. 4
The HNV-LINK innovation themes	p. 5
Overview of findings	p. 6
Scoring of LA innovation by themes	p. 7
Social and Institutional innovation needs	p. 8
Regulatory framework innovation needs	p. 9
Products and markets innovation needs	p. 10
Farm techniques and management innovation needs	p. 11
Key lessons	p. 12

The LA Innovation Reports

<i>Western Stara Planina</i> – Bulgaria	p. 13 – 44
<i>La Vera</i> – Spain	p. 45 – 76
<i>Causses et Cévennes</i> – France	p. 77 – 101
<i>Mountains of Thessalia</i> – Greece	p. 102 – 140
<i>Dalmatian Islands</i> – Croatia	p. 141 – 179
<i>The Burren</i> – Ireland	p. 180 – 229
<i>Sítio de Monfurado</i> – Portugal	p. 230 – 256
<i>Dealurile Clujului Est</i> – Romania	p. 257 – 294
<i>Dalsland</i> – Sweden	p. 294 – 326
<i>Dartmoor</i> – United Kingdom	p. 327 – 366

Framing HNV innovation

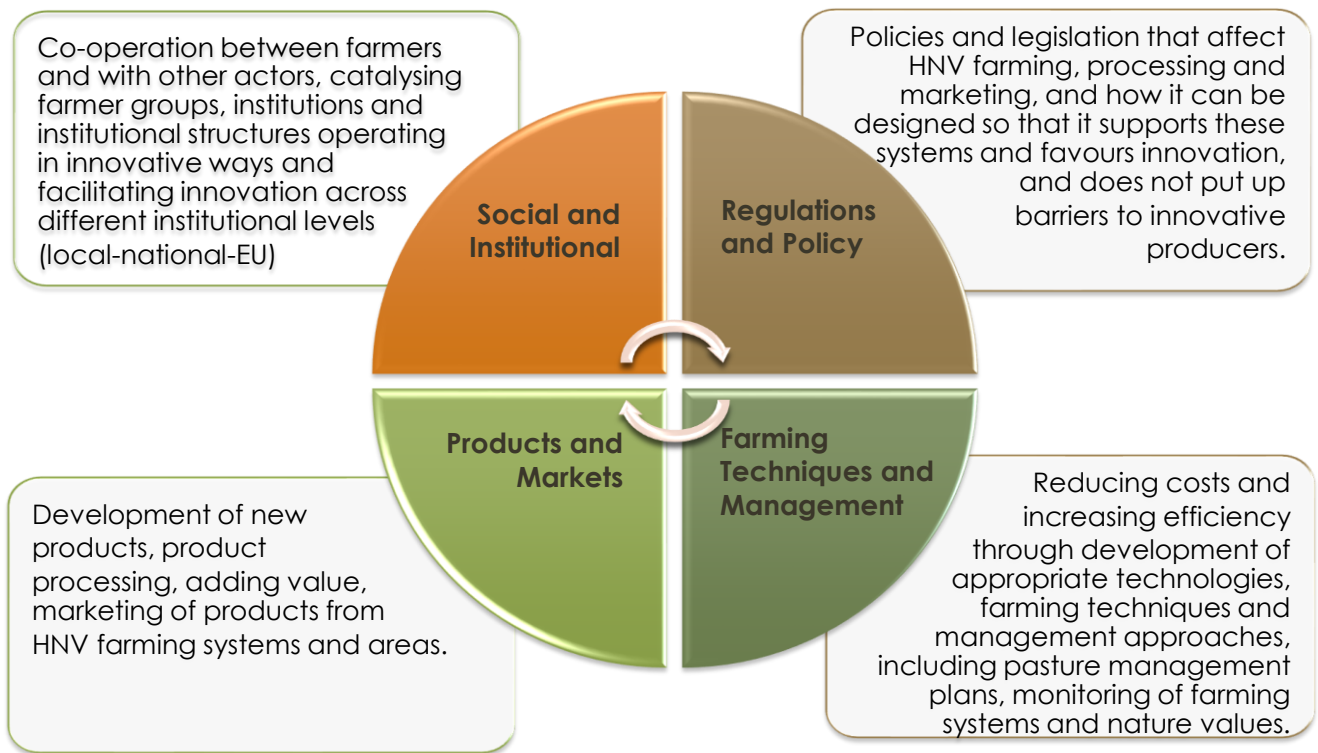
“HNV innovation” is defined in the project as a change in the social, institutional, regulatory, market or farming approach that makes it better able to conserve HNV farming and its characteristics.

An HNV innovation does not necessarily have an explicit nature conservation objective, but it does have the effect of maintaining high nature values, even if as a side-effect of another objective (e.g. socio-economic viability of HNV farms).

Some examples of innovation in the report are not currently applied specifically to HNV farming, but could usefully be targeted at HNV farming and would be expected to produce a positive result for conserving HNV values.

Innovation is a relative notion, and we should keep in mind the context of a given area, at a given time: an innovation in one country might be an already established approach in another country, and vice versa.

The HNV LINK innovation themes



We look at innovation through the optic of the four themes identified by the EIP Focus Group on HNV farming <https://ec.europa.eu/eip/agriculture/en/focus-groups/high-nature-value-hnv-farming-profitability>

- 1) Social and Institutional Innovation.
- 2) Regulatory Framework and Policy Innovation.
- 3) Products and Markets Innovation.
- 4) Farm Techniques and Management Innovation.

The categories are intended to help in our understanding and compilation of innovation examples and needs. They are not separate, unrelated “boxes”, in fact the themes are often mutually supporting, and many examples of HNV innovation include aspects under multiple themes.

The diagram (above) is used in the LA examples to illustrate the relative balance of themes in each case.

Overview of Findings

We identified a wide range of examples (63 in the LA and a further 80 beyond the LA), with some outstanding initiatives occurring in all countries to a greater or lesser extent.

Many farmers and NGOs are doing innovative things that are helping to maintain HNV farming. In some cases, governments are also being innovative, and supporting innovation on the ground, but these cases are concentrated in certain countries and are largely absent in some others.

Some LA are suffering from an extreme lack of Social/Institutional and Regulatory/Policy innovation. Institutional and regulatory barriers are preventing support from going to HNV farming, whilst also blocking innovation on the ground from farmers and other actors in civil society.

Addressing the challenges of HNV farming through innovation is not merely a question of individual initiatives. The reality is more complex - different types of innovation feed off each other, creating synergies. In the most successful cases there is a long-term, multi-actor "HNV innovation process" integrating the four innovation themes.

Scoring of LA innovation by Theme

Member State of LA	Social/ Institutional	Regulatory framework	Products/ Markets	Technical/ Management
BG	2	3	2	2
HR	2	1	3	2
FR	3	3	4	4
IE	4	3	1	2
GR	3	1	3	3
PT	2	1	2	1
RO	1	3	1	1
ES	1	1	1	1
SE	2	3	2	3
UK	4	2	1	3

Assessing the size of the innovation gap

For each LA we wanted to understand the scale of current innovation, relative to the needs of HNV farming, under each of the 4 themes. And thus also the extent of the need for more innovation. For each of the 4 themes, each LA was given an estimated score to indicate the extent to which current innovation in the LA responds to the scale of the HNV needs under this theme. The guidance to the LA for estimating their scores was as follows:

- 0 - Insignificant, nothing is happening to address the needs of HNV under this theme.
- 1 - Few innovations and overall impact very small, many HNV issues not addressed at all.
- 2 - Several innovations, with some positive effects for HNV, but not at the necessary scale; many HNV issues not addressed effectively.
- 3 - Several significant innovations, with at least some of them addressing HNV issues at the necessary scale; but some important issues need to be addressed more effectively.
- 4 - Many significant innovations, the main HNV issues are addressed at the necessary scale; but there are still some smaller issues that need to be addressed more effectively.
- 5 - Innovation is addressing effectively all the main HNV issues under this theme, needs are being met right across the LA. There are no apparent gaps.

In total, the table shows 40 scores (4 themes x 10 LA). There are no cases where all HNV issues under a theme are being adequately addressed in an LA (score 5) and only 4 cases where the main issues under a given theme are being addressed at a sufficient scale (score 4). By contrast, there are 24 cases where many HNV issues under a theme are not being addressed at all, or insufficiently (scores 1 and 2). In the following 4 slides we look at these gaps under each theme in more detail.

Social and institutional innovation needs

Examples of needs identified by LA	Examples of approaches
Improved representation and empowerment of HNV farmers, e.g. through specific associations, Operational Groups, local projects and processes	IE, UK
Institutional dialogue with HNV farmers on policy issues such as animal health, Natura 2000 plans	RO, UK
Outreach, advisory services, local projects targeted at supporting HNV farmers	BG, ES, IE, GR
Integration across institutions to develop a coordinated approach to extensive pastoralism at regional level	FR
Civil society and local administration (e.g. municipalities) coming together to establish local strategies for pastoralism	FR, SE
Improved quality of working life to attract young people into HNV farming	GR

Social and Institutional Innovation Needs

This theme covers two areas: social aspects such as farmers’ working conditions and self-organisation (cooperation, representation, etc.); and the functioning of public institutions, especially in their approach towards HNV farmers and farming systems. A crucial interface between the two areas is where HNV farmers and public institutions interact: facilitating improved dialogue specifically between HNV farmers and authorities is a key concern in many LA, both through empowerment and better representation of HNV farmers’ groups, and through a more innovative institutional approach that reaches out to HNV farmers and engages with them specifically.

Regulatory and Policy innovation needs

Examples of needs identified by the LA	Examples of approaches
Adapt CAP Pillar 1 rules to the characteristics of extensive grazing land	FR
Use CAP Pillar 2 options to support extensive grazing for delivery of other policy aims (biodiversity, fire prevention)	BG, IE, RO, UK
Develop locally led HNV projects, with payment to farmers for biodiversity results	IE, UK
Adapt the implementation of food hygiene rules and other legislation that creates barriers to innovative processing and marketing of livestock products	FR
Adapt animal health campaigns (e.g. for eradication of TB) to the realities and needs of extensive grazing systems on common pastures with wild fauna vectors	UK
Adapt national and regional rules, e.g. for grazing and management of municipal pastures	BG

Regulatory and Policy Innovation Needs

There are three main aspects to the identified needs:

- Making innovative use of policy measures to directly *support* HNV farming. AEM and Natura 2000 payments are an obvious option, but some countries (Spain, Greece) are barely using them, in stark contrast to many others. The most innovative use of Pillar 2 measures are the locally led schemes in Ireland, with payments for biodiversity results. There are also important opportunities for innovation under Pillar 1, such as targeting coupled payments specifically at grazing systems, rather than at all livestock.
- Integrating policy areas, e.g. using CAP/RDP to promote Natura 2000 objectives for habitats maintained by HNV farming, an approach that is still surprisingly absent in some Natura 2000 areas dominated by grazed habitats.
- Adapting rules and regulations so that they do not prejudice HNV farmers and farming systems. This includes a wide range of rules, such as CAP eligibility rules for pastures, and rules for food hygiene and animal health. Often it is national or regional interpretation of EU rules that is rigid and non-innovative, as in the case of food hygiene rules as they are applied to artisan cheese dairies and on-farm slaughtering in some countries.

Products and Markets innovation needs

Examples of needs identified by the LA	Examples of approaches
Branding/marketing/certifying products from extensive grazing systems (differentiation from intensive livestock)	FR, GR, HR, RO, SE
Joint farmers' marketing and/or processing (e.g. farmers running small-scale local abattoirs)	BG, FR
Farmers' markets specifically for products from HNV-type systems	BG
On-farm processing and direct sales from the farm	PT, SE
Alternative products e.g. environmental services, HNV agri-tourism	HR

Products and Markets Innovation Needs

Improving the economics of HNV farming is a key objective, and one strategy is to add more value to the products, and to retain more of this value on the farm. Innovations are therefore needed in areas such as on-farm processing, differentiation of the products from HNV systems, direct sales and product diversification.

Technical and Management innovation needs

Examples of needs identified by the LA	Examples of approaches
Improved efficiency and reducing costs through better infrastructure, technical developments and organisation.	RO, SE
Better management on extensive and common pastures for animal health control.	UK
Management plans for pastures, especially integrated planning for production and environmental services, including common pastures.	FR, RO
Efficient and nature-friendly improvement of pastures, especially scrub and fire control methods.	UK
Technical development of small-scale, low-impact processing, including mobile dairies and abattoirs	BG, SE

Farm Techniques and Management Innovation Needs

This theme includes technical developments both in HNV farming and in processing systems that are adapted to HNV farming needs. Management and planning of large-scale and/common pastures is a particular area of concern, especially for the integration of objectives such as production, fire prevention, animal health and biodiversity.

Key lessons

The LA reports (below) show that many **innovative solutions are possible** for HNV farming, and they are happening in certain areas.

However, nowhere is innovation happening on a sufficient scale to respond to the range of challenges facing HNV farming. There are **many needs still to be addressed**. For practically all the gaps that we identified, examples of relevant **solutions exist** in other locations.

This suggests that the main challenge is to **spread existing innovative approaches more widely**. For this to happen, social, institutional and regulatory **conditions must be made favourable** for innovation, requiring institutional understanding of HNV farming's particular challenges, plus regulatory adaptability.

In order to create and sustain an effective **HNV innovation process**, there need to be informed and motivated “animateurs” working locally with HNV farmers, with a **continuity of personnel** over several years. This in turn requires continuity of **institutional cooperation and support**.



Learning Area “Western Stara Planina” (Bulgaria)

INNOVATION EXPERIENCES AND NEEDS

Contribution to deliverable D2.6.1

Date: October 2017

Authors: Vyara Stefanova, Yanka Kazakova,
Maria Yunakova, Mariya Peneva



This project has received funding from the European Union Horizon 2020 research and innovations program under Grant Agreement No. 696391

This report represents the views of the authors. The Research Executive Agency is not responsible for any use that may be made of the information it contains

Introduction and contents

This report looks at innovation that supports HNV farming in **Western Stara Planina (WSP)**, 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 **Bulgaria** that could usefully be transferred to address challenges in the LA.

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

Contents

Slide 2: Introduction and contents

Slide 3: The challenges facing HNV farming in Western Stara Planina

Slide 4: Overview of innovation in Western Stara Planina

Slide 5: Innovation examples in Western Stara Planina

Slide 6: Social and institutional innovation needs in Western Stara Planina

Slide 7 Regulatory framework innovation needs in Western Stara Planina

Slide 8: Products and markets innovation needs in Western Stara Planina

Slide 9: Farm techniques and management innovation needs in Western Stara Planina

Slide 10: List of innovations from outside LA

Slide 11: List of innovations examples for which Western Stara Planina is looking to other Member States

Slide 12: Innovation fiches from Bulgaria

Slide 13-17: Bulgaria– innovation example 1) RDP Natura 2000 measure for agricultural land: annual payments for restrictions laid down in designation orders of Natura 2000 sites

Slide 18-22: Bulgaria – innovation example 2) Linbul farm

Slide 23-27: Bulgaria – innovation example 3) Farmers association "Food from the mountain"

Slide 28-32: Bulgaria – innovation example 4) Mobile advisory teams for HNV farmers

The challenges facing HNV farming in Western Stara Planina

The HNV system, especially cattle and sheep grazing, are to a large extent dependant on national and EU support schemes and access to municipal (common) grasslands.

The drastic decrease of the livestock after 1989 led to abandonment of the HNV grasslands, which resulted in scrub encroachment, transformation into forests and closure of the mosaic landscape. As a consequence many of the grasslands (especially HNV ones) are not included in the UAA – LPIS layer for “Land in good agriculture conditions”.

The majority of the farms are small both in size or as economic units - below the threshold for CAP support of 1 ha, thus the access to municipal land is crucial. Aging and decreasing population, resulting in limited work force (especially for shepherding) are a constant problem for HNV farms, where mechanization is limited by the mountainous relief.

National regulations for direct sales and coupled support schemes are welcome tools but still need to be adapted to the regional conditions of the WSP.



Challenges facing HNV livestock farming in Western Stara Planina (WSP)

The utilized agricultural area in the LA is dominated by pastures and meadows (63%) many of which are public (72%). Historically, they were used as common grasslands but the introduction of the CAP Pillar I payments led to changes in the use. The rules for the allocation of municipal pasture are changing constantly and although current rules give priority to livestock farmers from the municipality, the contracts are for maximum 5 years and after this period the allocated land may change, which prevents farmers from investing in shelters and watering points for the animals. The rules for allocating municipal grasslands (grazing area per livestock unit) still do not distinguish between grasslands that are HNV or are in Natura 2000, but only according to land quality.

The frequent changes in the legislation and support measures/payment levels are one of the biggest problems for livestock farmers. It not only prevents them from longer planning of the farm's business; but also puts them in demanding compliance situations. The procedures and rules for farmers have to be simplified, which requires coordination between different instruments: support mechanisms, advisory services, subsidies, etc. Support for livestock breeding is insufficient in comparison to support for arable farming. Coupled support for livestock farmers was only introduced in the last couple of years and led to increase in the number of the grazing animals. However, the coupled support schemes are designed at national level and require equal productivity from the in-door animals and the grazing ones, which HNV farmers can't meet.

Direct sales legislation rules were recently changed, which enabled the on-farm processing of milk, but rules for direct sales of meat from farm animals and processed plant products still do not exist.

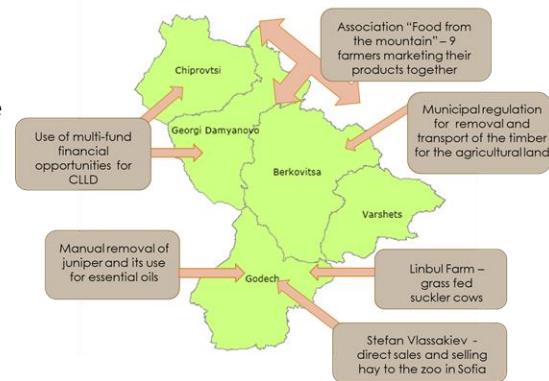
Overview of innovations in WSP

The territory has a certain social dynamic which nourishes various innovative ideas for development. Some of the most innovative HNV farming initiatives have developed in WSP mainly for two reasons:

- The conservation importance of the region attracts the focused efforts of multiple environmental NGOs that promote and support sustainable economic development through the implementation of projects focused on HNV grasslands conservation;
- The initiatives of local farmers who had spent some years working abroad (in various sectors) and came back to the area to start farming.

Some social and regulatory innovations were initiated by the NGOs working in the area, but further initiatives to tailor the legislation to the needs of the HNV farmers and support the cooperation between different actors in the area are still needed, now that their projects are over.

Modernization and introduction of new HNV oriented technologies is of crucial importance for the long term viability of HNV farms



Identified HNV innovations in WSP

Innovation examples in WSP: what are their strengths and weaknesses for HNV farming?

- Association “Food from the mountain” – nine farmers market their products together;
- Linbul Farm – grass fed suckler cows on HNV grasslands and on-line sale of meat;
- Vlassakiev Farm - direct sales and sale of hay to Sofia zoo;
- Manual removal of juniper and its sale for production of essential oils;
- Municipal regulation for removal and transportation of timber out of the agricultural land;
- Use of multi-fund financial opportunities for CLLD.



Strengths

- The HNV and the outstanding beauty of WSP attracted the conservation NGOs. Several projects for conservation of biodiversity rich and common grasslands were implemented there. Two of them supported the economic viability of the HNV farmers through investment support and pilot AE and Natura 2000 schemes. The projects also raised the knowledge of (some) farmers on the HNV farming practices and acted as catalyst for joint marketing initiatives and cooperation between farmers.
- Several innovative HNV farmers act as ‘transmitters’ of the innovation ideas.
- Some regulatory innovation at national level (for example allocating the municipal grasslands to the livestock breeders without tender procedure) were initiated in this region.
- One of the two existing LAGs in the region intends to use the funds of the environment operational programme for management of priority habitats in Natura 2000 sites.

Weaknesses

- The existing innovations are still limited in scale, compared with the scale of the challenges.
- Currently the HNV-Link project is the only project in the region focusing on HNV innovations; meanwhile the 5-year project focused on HNV territories, and implemented by a consortium of conservation NGOs, funded by Bulgarian-Swiss funding (BG-Swiss project) has ended.
- A lot of institutional and regulatory innovations, as well as adaptation of the existing regulations and support schemes to HNV farming practises, are still needed.
- No advice or technical support is available to farmers to address the challenges facing small-scale processing and sales of products from the HNV system.

What are the main innovation needs in WSP, and how could they be addressed?

Social and institutional innovation

Social and institutional - innovation needs	Possible approaches
Cooperation between farmers	Animate creation of marketing and farmers associations ; EIP operational group linking farmers, research institution, business, etc.
Information and training of HNV farmers and regional authorities	Set up of mobile advisory teams for HNV farmers
Consult local farmers during the design of support measures, application of rules, Natura 2000 requirements	Animate the dialogue between farmers and national, regional and local authorities
Improvement of the quality of life of HNV farmers.	Look for funding to improve the quality of life in HNV farming areas

Social and Institutional Innovation Needs

One of the biggest challenges in the LA is the need to improve the quality of life of HNV farmers, and to make the farming activities more attractive for young farmers open to innovative ideas. A local project could be developed under one of the two local development strategies (only the Strategy of LAG Godech-Berkovitz is approved at the moment) focusing on improvement of the working conditions of the employed in agriculture.

Recently an association of nine HNV farmers has been established in the LA. They participate in organized farmers' markets and intend to develop touristic routes between their farms. Animation of similar associations will help marketing not only HNV products, but the benefits of the HNV farming systems as a whole. An interesting opportunity is the establishment of an EIP operational group. Currently this is hampered by limited interest of the national authorities in the implementation of this RDP measure.

A mobile advisory team for HNV farming functioned in some parts of the LA under a GEF funded project (2007-2012) for conservation of grasslands. Although it was highly appreciated by the HNV farmers and the regional authorities, the team stopped its activities after the end of the project. Such teams are needed in WSP and other HNV farming areas. Targeted and thematic workshops with participation of all stakeholders are needed for knowledge transfer and constructive dialogue between different actors for adaptation of the existing legislation to the regional needs of the HNV farmers and promotion of innovative solutions.

Regulatory framework innovation

Regulatory framework - innovation needs	Possible approaches
Adapt the rules of Pillar 1 support schemes to the needs of HNV farmers	Gather proposals of HNV farmers and present them to the Ministry of Agriculture
Long-term contracts (minimum 10 years) for the use of the municipal (common) grasslands by farmers with grazing livestock	Make a proposal for changes of the Law on land use and the respective municipal regulations
Adapt the requirements of livestock coupled support schemes to grazing livestock in mountainous regions	Propose the current requirement of 70 l/year/ewe to be reduced to 50 l/year/ewe for the livestock farmers in mountainous LFA
Direct sales legislation for meat and processed plant products	Lobby for regulation on the direct sales of meat and processed plant products
Use of EU funding opportunities for conservation of Natura 2000 sites	Work with LA municipal authorities and farmers for the development of project proposals for Natura 2000 sites.

Regulatory Framework Innovation Needs

Farming activities in WSP are “subsidy driven” and to a great extent dependant on Pillar 1 support schemes. Most of the farmers try to “fit” the grasslands to the criteria for Pillar 1 payments and “clean” the grasslands with mulching machines and shredders. The mowed grass is left on grasslands by the so called “subsidy farmers”.

There is a need to adapt the criteria to the needs of the ‘real’ HNV livestock farmers. For example the rules for allocating municipal grasslands to the livestock farmers (grazing area per livestock unit) do not make a distinction between livestock kept in-door or only grass-fed; nor between plain areas and mountains, where the pasture are less productive; etc..

Similar situation is observed for the requirements for the coupled support schemes in sheep breeding. Sheep breeding farmers in WSP can hardly reach 50 litres/year/ewe, but the requirement of 70 litres/year/ewe is unified for the whole country.

All these changes in the legislation and adaptation of the rules of the supporting schemes are an important need for the HNV farmers in WSP and the whole country.

Products and markets innovation

Products and markets - innovation needs	Possible approaches
Promote direct sales from HNV farms	Replicate the experience of the 'Food from the mountain' association of farmers and create more farmers associations
Regional/ product brand for grass-fed livestock breeding and its benefits for the humans and the environment	Promote the benefits of the grass-fed livestock products and develop a product brand
Creation of (real) farmers' markets	Support creation of farmers' markets in the municipal centres and assist participation in farmers' markets in Sofia
Cooperation for processing and marketing of milk and meat products	Support the cooperation for processing of milk and meat products

Products and Markets Innovation Needs

Cooperation for small processing capacities for the local HNV products (meat, milk) is identified as an innovation need in WSP. Such cooperation was already initiated by the innovative farmers in some parts the LA. This good practice can be replicated only if there is mutual trust between the farmers. This would help small farmers to process their raw products and increase their added values.

Development of a regional/product brand for HNV farmers is seen as an important innovation in the LA. However, the existing experience shows overexploitation and loss of trust in the so called 'Natural products' brands. It was recommended by the farmers that promotion of the benefits of grass-fed livestock farming for the human health could increase the demand for the HNV products.

Currently farmers' markets are organized mainly in the big cities (Sofia, Plovdiv, Varna). Similar activities in the towns in WSP would provide additional market outlets for HNV farmers in WSP. In addition, farmers' markets could be organized during the traditional festivals in the region, that attract visitors from outside the LA territory.

Farm techniques and management innovation

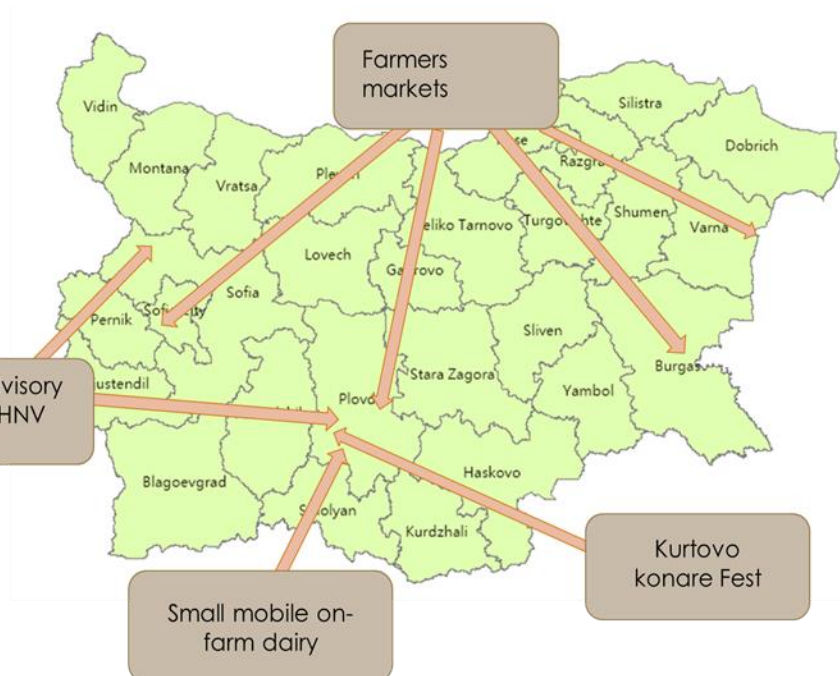
Farm techniques and management - innovation needs	Possible approaches
Improve farm productivity and modernization of the HNV farms	New farming technologies and equipment adapted to Natura 2000 requirements
Prevent/reduce the diseases on grazed animals and extensive crop production	Natural plant and animal health protection products for HNV farming practices
Improve infrastructure for livestock and for graziers on the municipal (common) grasslands	Long term contracts for the use of municipal grasslands could motivate the farmers to improve grasslands infrastructure
New nature friendly technologies for removal of juniper and bracken from grasslands	Recommend good practices for removal and use of juniper and bracken

Farm Techniques and Management Innovation Needs

The most important technical innovation need is related to modernization of the existing farms with technologies and equipment that complies with Natura 2000 requirements. New nature friendly and more efficient technologies for removal of scrub, bracken and juniper could improve the grasslands situation without negative impact for their biodiversity.

In 2016 part of the cattle in Bulgaria was affected by the Lumpy skin disease (LSD), which led to vaccination of the threatened cattle in some parts also in WSP. The meat and the milk of the vaccinated cattle cannot be sold on the EU markets for a certain period, which affected the income of the livestock farmers. Transhumance practices were also not allowed in the regions where the disease was found. Approaches for health control using natural products in extensive pastoral systems can prevent the negative effects caused by vaccination of the animals.

Innovations from outside the LA that could help address LA needs



National regulatory innovations for HNV farming systems

- Legislation for allocation of municipal grasslands in favor of livestock breeders;
- RDP Agri-environment measure for restoration and maintenance of HNV grasslands;
- RDP Natura 2000 measure;
- RDP Agri-environment measure supporting traditional seasonal grazing practices in National parks
- Direct sales regulation for animal products (without meat)

National regulatory innovations supporting HNV farming practices:

- RDP Agri-environment measures for maintenance and restoration of HNV grasslands and traditional seasonal grazing (mountain pastoralism) in national parks that is planned for extension in mountainous Natura 2000 areas too;
- RDP Natura 2000 measure: annual payments for restrictions laid down in designation orders for Natura 2000 sites;
- National legislation for allocation of municipal grasslands to local livestock farmers without tender procedure;
- Direct sales regulation on animal products (meat and processed plant products currently are not covered by this regulation);

Other HNV innovations:

- Mobile advisory teams for HNV farmers;
- Farmers' markets organised in the big cities (Sofia, Plovdiv, Burgas, Varna);
- Kurtovo Konare fest: combination of cultural celebration and direct sales of local and HNV food products;
- Small mobile on-farm dairy in Rodopi municipality

Innovation examples for which WSP is looking to other Member States

- Marketing initiatives for HNV products, including collaboration between farmers and logistical organization;
- Technical innovations for scrub and encroachment control; as well as slaughtering and processing of meat on the farms;
- Locally-led projects that set objectives for pastoral land with the users, and apply a «payment for results » approach to promote these objectives
- Approaches dealing with animal health in extensive systems on common land using natural products.

INNOVATION FICHES FROM BULGARIA

- 1) Natura 2000 measure offering compensatory payments for the land use management restrictions set in the designation orders;
- 2) Linbul farm – direct sales of grass-fed beef meat;
- 3) HNV Farmers' association "Food from the mountain";
- 4) Mobile advisory teams for HNV farmers.

Bulgaria – innovation example 1)

RDP Natura 2000 measure for agricultural land: annual payments for restrictions laid down in designation orders of Natura 2000 sites

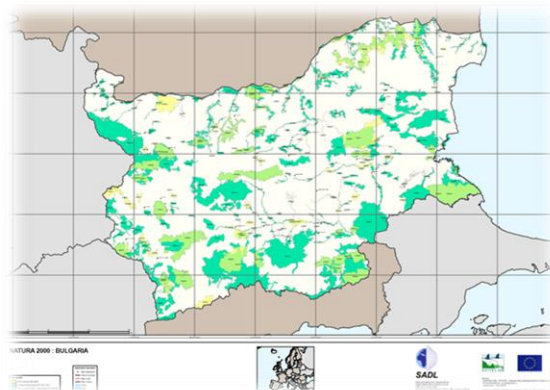
Location: Natura 2000 designated sites in Bulgaria (33% of the national territory)

HNV system: Extensive grazing and mowing

Scale of operation: 333,884 ha in Natura 2000 areas were supported in 2014. The number of the applicants was 10,217.

Timespan: The measure was implemented for the first time in 2011 and will be in force till the end of the current programming period (2020).

Keys to success: Government commitment and funding, annual payments that don't bind farmers with long-term commitments, NGO insistence on implementing the measure.



Natura 2000 sites in Bulgaria
(Source: EU Commission)

Problems addressed by this example

Natura 2000 measure offers support for HNV farmers in Natura 2000 areas. Farmers can apply for support even if their land is not eligible for direct payments.

Natura 2000 measure compensates the farmers in designated Natura 2000 sites for the following restrictions:

- Ban on the removal of landscape features (hedges, single and group trees);
- Prohibition of mowing before 1 July;
- Prohibition of ploughing and afforesting meadows, pastures and commons and turning them into arable land and/or permanent crops;
- Prohibition on the use of pesticides and mineral fertilisers in pastures and meadows;
- Prohibition of mowing before 15 June or 15 July (depending on the region) from the periphery to the centre with fast-moving technology.

Story in a nutshell

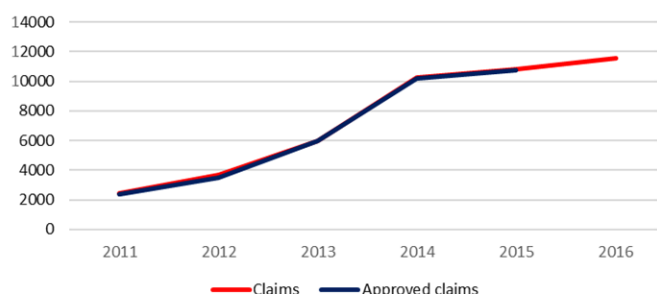
Natura 2000 measure is designed for sites with designation orders in force and where there are specific restrictions on agricultural land use. The payments depend on the restrictions that are listed in the designation orders as well as the geographical location of the site. Currently the measure covers only the SPAs. For grasslands the payments vary between €17 and €108/ha. Payments for Natura 2000 sites in ANC are lower than the areas that are not designated as ANC (the assumption being that the loss of income is lower). Similar RDP measure is implemented only in 14 member states.

What does Natura 2000 measure achieve for HNV farming?

- HNV farmland covered by this measure constantly increases. In 2015 410,442 ha were supported (an increase of 18 % compared to 2014).
- Natura 2000 measure supports also grasslands outside of SAPS Pillar 1 eligibility layer

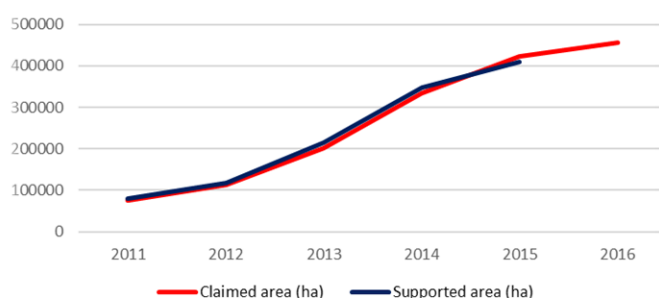
Claims (submitted and approved)
under Natura 2000 measure

Source: RDP Annual implementation reports



Claimed and supported area under
Natura 2000 measure

Source: RDP Annual implementation reports



Achievements

The interest for this measure constantly increases. In 2016 the claims for support were 11,543, compared to 10,787 in 2015. The measure is probably the one with easiest application procedures and is preferred by farmers in HNV and Natura 2000 areas. The measure also increases indirectly the knowledge of farmers about nature friendly farming practices.

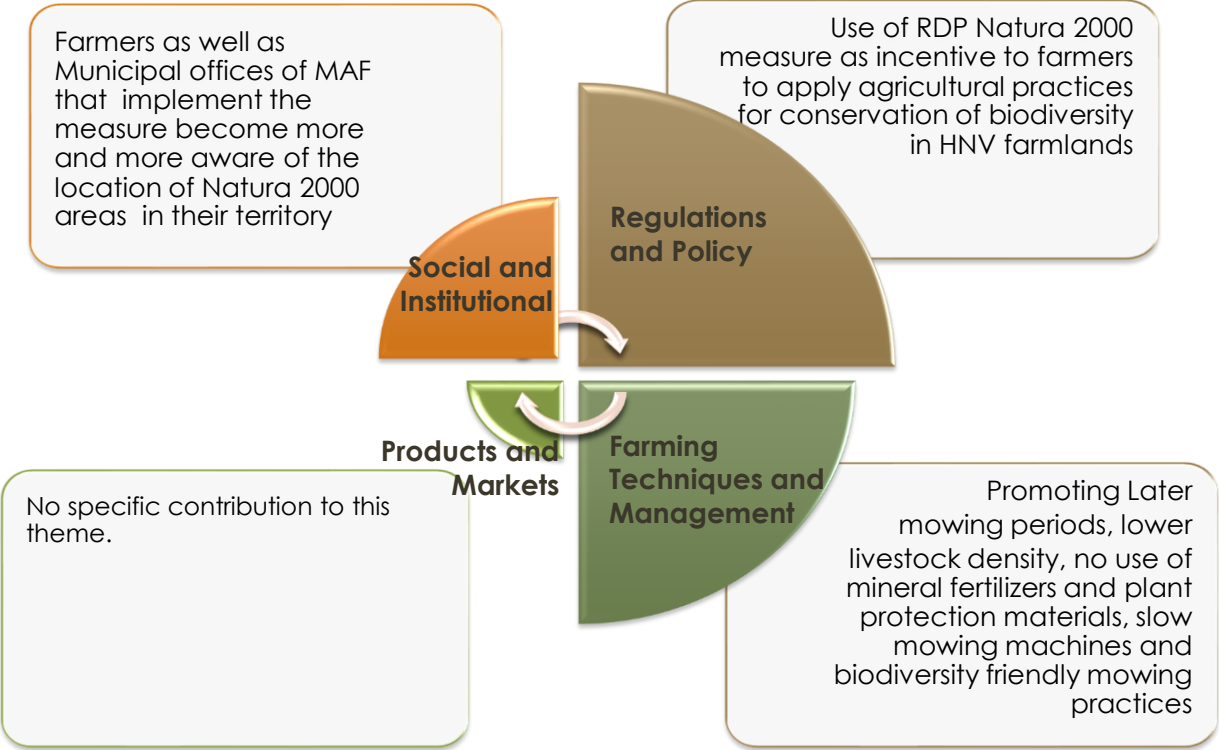
Economics of HNV farming

Currently the measure covers only the SPAs. For grasslands the payments vary between €17 and €108/ha; but these are provided irrespective of the intensity of the farming system.

Maintaining or improving HNV values

The measure was specifically designed to achieve Natura 2000 conservation objectives for agricultural land, by supporting farmers to implement nature (biodiversity) friendly agricultural practices. However, the payments are not sufficient to motivate the farmers to claim their land for support only under this measure and in many cases they try to make the land “fit” to receive also payments under Pillar 1 support schemes, which means clearance of scrub and trees.

How does Natura 2000 respond to the HNV LINK innovation themes?



The process that made it happen and critical factors for success

- The implementation of Natura 2000 measure was initiated by conservation NGOs and it was piloted in WSP and Besaparski hills SPAs by a GEF funded project, implemented by BSPB.
- Natura 2000 LPIS layer was incorporated in the LPIS thus making the application procedure very simple and understandable by the farmers
- The commitments under Natura 2000 measure are annual, so that many farmers prefer to apply for that measure rather than undertaking a five-year agri-environment commitment although, payments under Natura 2000 measure are lower than those available in the HNV AE scheme.

Table 5 AES of the Bulgaria Grasslands Project Grant Scheme

Measures	Activities
Area-based measures – Compensatory payments per unit of area paid annually	
A. Natura 2000 compensatory payment	A1. Grasslands management through grazing of habitats with codes 6210 Semi-natural dry grasslands and scrubland species on calcareous substrates, 6220 Pseudo-steppe with grasses and annuals of the Thero-Brachypodietea, 6240 Sub-pannonic steppe grassland, 6250 Pannonic loess steppe grasslands, 6240 Eastern sub-Mediterranean dry grasslands, 6200 A2. Grasslands management – habitats with codes 6510 Lowland hay meadows and 6520 Mountain hay meadows through mowing A3. Grasslands management – habitats with codes 6510 Lowland hay meadows and 6520 Mountain hay meadows through grazing
B. Agri-environment payment	B.1. Transformation of arable land into extensive grasslands aimed at conservation of biodiversity. B.2. Reseeding the grasslands with hayseed in Bessaparski Hills
Investment measures – financing (90%) is based on approved projects	
C. Non-productive investments	The purchases of C.1. Slow grass cutting machines; and C.2. Electro-pastures; The establishment of: C.3. Shelters (cattle-pens) and huts for herds and people in the mountains aimed at stimulating pasture in remote areas; C.4. Watering-places; C.5 Pits for disinfection and prophylactics of the animals. The placement of C.6. Visibility signs; and C.7. Bird cages, platforms and perching posts; C.8. Designation of pedestrian and cycling routes; C.9. Maintenance and C.10. Construction of small natural water basins in the grasslands; C.11. Planting of trees (single or group of trees) from local species and their maintenance for 2 years; C.12. Purchasing of shepherd dogs;
D. Productive investments	D.1. Modernization and improvement of the milk farm production D.2. Grassland management D.3. Activities connected with diversification of the agricultural activities and conservation of the local products D.4. Public awareness activities – brochures, open days for demonstration and popularisation of traditional products. Design and maintenance of the farm web site, on-line sales, etc.

Source: Evaluation of the overall implementation, impact and results of the project pilot grant scheme for support of HNV farmers in three Natura 2000 sites in Bulgaria: SPA "Ponor", SPA "Bessaparski Hills" and SPA "West Balkan Mountain", Kazakova Y. (2012)

BSPB pilot grant scheme that initiated the development of RDP Natura 2000 payments

Actors and roles: Bulgarian Society for Protection of Birds, supported by the Bulgarian Ministry of Agriculture implemented a pilot grant scheme under a GEF funded project "Conservation of globally important biodiversity in HNV semi-natural grasslands through support for traditional local economy" that tested Natura 2000 measure in Ponor and Bessaparski hills SPAs. Meanwhile a working group with wide stakeholders' participation was created in the Ministry of Agriculture which helped the design the measure and its implementing procedures.

Institutional context that made it possible

The measure's development is a result of the joint efforts of the Ministry of agriculture and food (MAF) and the Ministry of environment and waters (MoEW) on one side, and the conservation NGOs from the other. The measure was also used to promote the benefits from Natura 2000 sites designation.

Resources: BSPB GEF supported project and working staff in MAF and MoEW

Processes: The measure is implemented since 2011 (RPD 2007-2013) and continues in the current RDP (2014-2020)

Limiting factors, actual/potential problems, and how could they be overcome?

Farmers' lack of information and/or interest. More importantly support does not distinguish between intensive and extensive farming systems and may lead to intensification of land use in some areas and farms.

Lessons learnt from this innovation example, and its potential replication

- Farmers want simple and understandable measures. They prefer short term commitments from their side rather than long-term ones on the same land.
- Although eligibility criteria for grasslands under Natura 2000 measure are less restrictive, the farmers still want to make their grasslands 'fit' to the rules for Pillar 1 SAPS support schemes. A possible approach to solve that is to increase Natura 2000 payments for areas that are not eligible for SAPS support.



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

Natura 2000 measure could be an efficient instrument to support both biodiversity conservation and farmers income in HNV farmland, but payments need to be re-calculated to take into account SAPS eligibility conditions of grasslands and intensity of farming systems.

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

Currently the measure is implemented only in SPAs. It can be replicated for SCIs, when their orders for designation come into force.

Could it be rolled out on a bigger territorial scale?

Yes, the measure can be further elaborated to support also the recommended activities under Natura 2000 sites management plans.

What would be needed to do this successfully?

MAF experts should make efforts to follow and include in the measure the recommended activities of the approved management plans of Natura 2000 sites. Farmers should be better informed about the eligible conditions and the benefits of both nature and farming.

Bulgaria innovation examples 2)

Linbul farm: an HNV farm near the sky and online sales of grass fed beef

Location: Petrohan area (1400 m a.s.l.), Western Stara Planina, Bulgaria

HNV system: Extensive grazing, beef cattle on rough upland pastures

Scale of operation: The farm manages 40 ha with 60 suckler cows

Timespan: Created in 2010 with 30 COWS

Keys to success: Farmers enthusiasm, commitment and persistence, use of agri-environment HNV support and Natura 2000 support, on-line sales of the meat



<https://petrohan.wordpress.com/>



Problems addressed by this example

The innovation is a response to the need to utilize feasibly the alpine HNV grasslands. The usual practice in the 2000-2006 period was that these grasslands were abandoned and scrub encroachment and loss of important habitats occurred. The introduction of new farming system (beef cows) plus the new rotation grazing techniques contributed to the conservation of more than 300 ha of HNV farmland. The online sales are a new tool for marketing the produce of the farm.

Story in a nutshell

Both Linbul farm owners (Pavlin and Sonya) come from the construction business. When creating the farm they decided to raise free range beef cows in a country and area where the majority of the cows are dairy ones and the consumption of veal and beef meat is limited (not traditional). The first year they finished dairy bulls for slaughtering to explore the climate and the grass and their effect on the cows. Their main aim was to create a herd of beef suckler cows by finishing the offspring. They bought their first 30 Aberdeen Angus cows in the autumn of 2011. Currently they have 60 beef cows and manage 40,5 ha of municipal HNV grassland. The farmer is applying rotational grazing system and believes that this makes the cows happier, improves the value of the grassland and the quality of the meat. They are processing and selling on-line the meat to customers in Sofia. The farm has its own blog (<https://petrohan.wordpress.com/>) and facebook page where Pavlin and Sonya share their active position on the continuous changes in Bulgarian legal acts and procedures that have negative impact on the HNV grasslands systems. For Bulgaria, living and working in a farm outside the settlement is an innovation in itself. The farmer believes that it is an innovation for Europe to rear young beef fed only by grass without corn. The farmers think that they have succeeded to motivate other young families to try their lifestyle and way of farming.

What does Linbul farm achieve for HNV farming?

- The farmer restored 300 ha of common HNV grasslands which after 5 years were let out to another farmer. Now he is managing and restoring other 40 ha of municipal HNV farmlands.
- The farmer is one of the first participants in the Agri-environmental scheme for maintenance of HNV grasslands. He suffered from the improper functioning of the LPIS system and the implementation of the "infamous" CAP eligibility rule of 'maximum 50 trees and bushes per ha'.
- The farmer is sharing his position openly and tries to influence the decision makers to introduce the necessary changes in the grasslands legislation and implementation procedure in favour of the extensive grazing and livestock breeding.



Achievements

The overall achievements of the innovation are the introduction of new farming techniques for beef cattle; promotion of rotational grazing as a farm technique, including changes in the initial rules of the Paying agency that wanted to have grasslands as in a golf field during all seasons; restoration and management of HNV grasslands in remote alpine area; participation in/organization of joint activities with locals, changing the status quo – strengthening local human capital and networking; on-line sales and marketing of meat products; tasty veal meat from grass-fed cattle; blog and facebook followers.

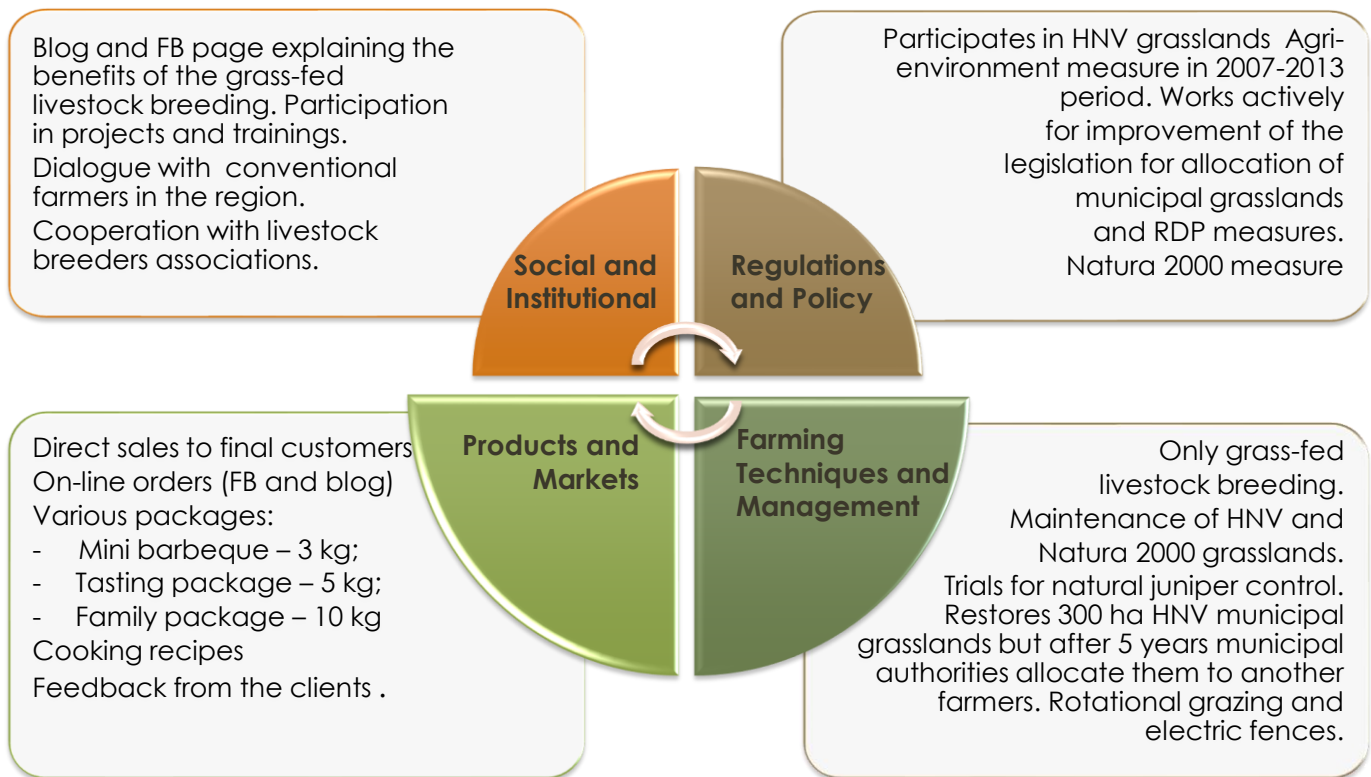
Economics of HNV farming

The innovation is a good example of how dedicated farmers can survive and develop their farms in a HNV mountain area outside the villages. They motivate other families that the sustainable and nature friendly approach can be successful. Currently the socio-economic viability of the farm is stabilised, but it is still dependent on the direct payments and Natura 2000 payments. Maintaining the HNV grasslands and the amazing landscape in the area is also a precondition for developing alternative tourist activities in the region.

Maintaining or improving HNV values

The farmer was one of the first participants in the Agri-environmental scheme for maintenance of HNV grasslands. He spent 5 years (2009-2016) maintaining and restoring the rented municipal HNV grasslands in Petrohan area. When his contract with the municipality expired he was not allowed to rent the same grasslands. He was offered to rent 120 ha grasslands fully encroached by juniper. The farmer refused to rent them and currently manages only 40 ha grasslands, all of which are in Natura 2000 area.

How does Linbul farm respond to the HNV LINK innovation themes?



The process that made it happen and critical factors for success

- The main initiators were the farmers that decided to rent municipal grasslands and to rear beef cows. Their main motivation was to live in harmony with nature.
- ICT developments and social networks expansion allowed on-line sales.
- Rising awareness of the society about food quality, taste and safety (Linbul's recipes are very well accepted).



Pavlin and his guarding dog



Their daughter already helps with farming activities

<https://www.facebook.com/LinbulFarm/>

Actors and roles: Before starting the direct sales in 2013, Pavlin and Sonya, together with chefs, bloggers and magazines promoted beef meat taste and quality; which is not consumed traditionally in Bulgaria. There was a lack of trained butchers knowing how to prepare beef steaks, so they had to train them.

Institutional context that made it possible: CAP measures had positive and negative impacts on farm development.

Resources: funding, staff etc.: Initially they had 1 co-worker that helped them. Currently they manage the farm only within the family.

Critical factors for success: The key success factor is the motivation and decisiveness of the farmer. He is sharing his position openly and tries to influence the decision makers to introduce the necessary changes in the legislation and its procedures in favour of extensive grazing and livestock breeding. Implementation of AEM and Natura 2000 measure (it is stated that socio-economic viability of the farm is dependent on them) despite the heavy administrative procedures.

Limiting factors, actual/potential problems, and how could they be overcome? Institutional and administrative procedures, especially changes in procedures for renting municipal grasslands by livestock farmers, not allowing them to continue managing the same grasslands after the first contract expired. Pavlin has again to start cleaning the newly rented grasslands, without long-term guarantee what will happen when his new contract expires. This is one of the reasons why he is currently applying for the Natura 2000 annual payments instead of undertaking new long-term agri-environment commitments for which he cannot secure the same pastures in the long-term.

Lessons learnt from this innovation example, and its potential replication

- Farmers' commitment, skills and personal belief are crucial for maintaining a HNV farm and farming systems
- Education, self-training and training and knowledge sharing are needed to improve the understanding of the High Nature Value grasslands and their maintenance requirements.



Pavlin always participates in on the farm trainings

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

A key lesson is that farmers' commitment, skills and personal belief are crucial for maintaining an HNV farm and farming system. Pavlin really works in harmony with the nature and does not save his efforts to change the existing legal framework in favour of nature friendly grazing practices.

The constant changes in the existing legislation often demotivate farmers. For example, the lack of a provision giving a priority access to the municipal grasslands to farmers that managed them previously, demotivated them to improve the grasslands and prevent the encroachment.

Education and knowledge sharing are a key factor and driving force for the innovation described. Pavlin and his family invest and continuously improve their knowledge about HNV farming, marketing and cooking. They are open-minded and participate in projects with researchers, different field visits and discussions with farmers. They are willing to share this knowledge and to educate the others along the food chain – consumers, chefs, butchers and local farmers, even if with different opinion.

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

The innovation could be replicated in other HNV grassland areas.

Could it be rolled out on a bigger territorial scale? The innovation potentially can be replicated by more farmers nationally.

What would be needed to do this successfully? Motivation and enthusiasm of young farmers and a different life-style in harmony with nature.

Bulgaria – innovation example 3)

Farmers association “Food from the mountain”

Location: Western Stara Planina, Bulgaria

HNV system: Extensive grazing, mainly sheep and goat on upland pastures, family gardens and orchards, extensive vineyards, forest fruits, honey, dairy cows

Scale of operation: 9 farmers in 4 municipalities in WSP

Timespan: Created in 2016, formal registration at the beginning of 2017

Keys to success: Commitment of members, their enthusiasm to work together for establishing a regional brand, developing the region and helping each other. The forthcoming funding opportunities (RDP, LAG, etc.) also motivated the formal aspect of the establishment of an association.



Goats of a member of the association

Problems addressed by this example

The main problem of people living and working in this HNV area is receiving fair payment for their high quality products and diversifying their business activities. The association is perceived as an entity which will facilitate both: i) helping producers to produce better quality, innovative products and selling them at a competitive price, and ii) diversifying the sources of income by developing tourist product «wine and food trail in Western Balkan mountain (WSP)», bringing families with children for on-the-farm experience.

Story in a nutshell

The association of farmers and small business operators from WSP mountain region «Food from the mountain» was established in 2016. The association has 9 founding members with the following profiles: Farmer, raising Replyana local sheep, managing HNV pastures under agri-environment measures and producing sheep cheese and yogurt, lamb and sheep meat; the sheep are grazing April until December; Farmer raising cows in HNV grasslands area; extensive grazing; forthcoming production of hard cheese, cream and butter; Farmer raising goats, extensive grazing, HNV pastures management; production of pressed cheese caciota type and white Bulgarian cheese; Farmer raising sheep and cows – extensive grazing; production of cheese and yogurt; Farmer raising cows extensively; production of several types of kashkaval; Goat farmer; extensive grazing; production of pressed goat cheese French style; Honey producer – in conversion to organic honey; Producer of jams and marmalades from forest fruits; Wine producer; small quantities wine from own vineyards in the region;

The association aims to promote the region as an area of alternative tourism offering clean food, traditional products, food and wine tasting, guided tours, and to preserve natural resources on which their businesses depend. Currently the members of the association participate together in weekly farmers' market in Sofia, national fairs and events.

What does farmers' association “Food from the mountain” achieve for HNV farming?

- The association helps HNV farmers to receive fair income for their farming practices and to diversify their activities. Farmers participate as association in the open days and farmers markets – one or two farmers travel to the destination and sell the products of all farmers.



Spring farmers market in Sofia



Milk from the mountain label



Saturday farmers market in Sofia

Achievements

The innovation has just started so it has not achieved a lot for HNV farming yet, but it has the potential to make HNV farming (livestock grazing in semi-natural pastures) more profitable and thus preserve it from extinction. It also promotes the ideas of pro-biodiversity businesses, sustainable community development and nature protection.

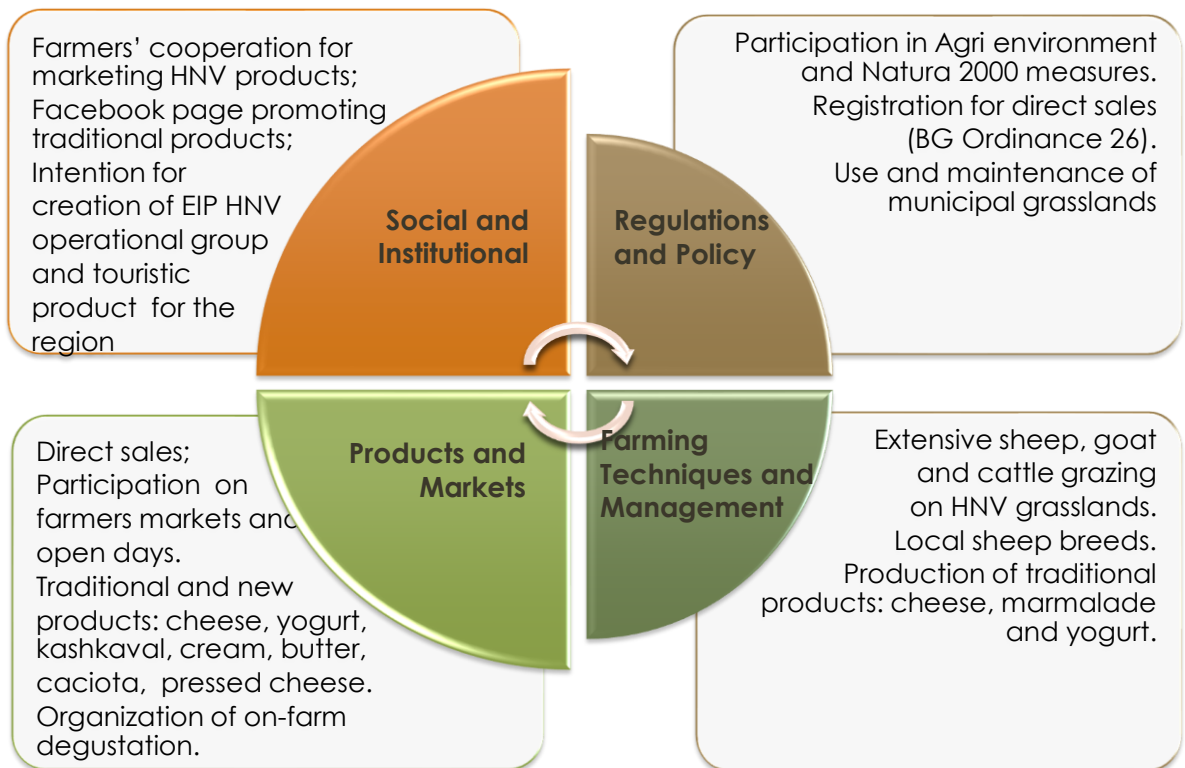
Economics of HNV farming

It is expected that the innovation will help achieving better prices and lower costs (economy of scale thanks to joint marketing efforts) of HNV farms. It also creates diversification in income, developing regional image as area for clean local food and wine tasting, alternative tourism, support to pro-biodiversity business which rely on good quality natural resources.

Maintaining or improving HNV values

Preserved nature is perceived as a main asset by the members of the association and its preservation is a focus of its activities.

How does “Food from the mountain” association respond to the HNV LINK innovation themes?



The process that made it happen and critical factors for success

- The main driver of the innovation to happen was the 9 year work of Bulgarian society for protection of birds (BSPB) in the region aiming to support HNV farmers to add value to their products, close the production cycle and gain fair payment for their work, thus preventing them from ceasing their businesses.
- Mutual trust between farmers is a key factor for the success of the innovation.



Sheep herd of a member of the association



Farmers market in Sofia

Actors and roles: Most of the members of the association have been supported by an NGO project « Linking nature protection with sustainable rural development», a BG-Swiss project. Based on mutual trust and common ideas for development, part of the project beneficiaries decided to create an association.

Institutional context that made it possible: The forthcoming funding opportunities (RDP, LAG, etc.) also motivated the formal aspect of the innovation, i.e. the establishment of an NGO (association).

Resources: funding, staff etc.: The transaction costs for establishing the association are within EUR 250 ; members volunteered to do the job associated with registration. In the near future a part time project manager will be required to organize all common activities. Funding will be sought from the RDP – measure 16.4 and other possible NGO funding sources. There is a LAG in the region, which could also provide funding for part of the ideas of the association.

Processes: There are 3 lead figures – sheep and goat farmers – who proposed to establish an association and 6 other farmers and small businesses were enthusiastic to join this common initiative. Several meetings took place, one of the farmers undertook the task to prepare all the documents.

Critical factors for success: The main enabling factor was the commitment of members, their enthusiasm to work together, establish a regional brand, develop the region where they live and work, and help each other in all possible ways. Mutual trust was built during the last four years of participation in common activities (BG-SWISS project), farmers markets, fairs and festivals.

Limiting factors, actual/potential problems, and how could they be overcome: An important limiting factor in achieving the goals of the association is shortage of funding. Access to NGO type of funding is not easily available, but the prospects that funding will be secured are good at least for some of the activities of the association. Funding will be raised also from commercial and marketing activities.

Lessons learnt from this innovation example, and its potential replication

- Mutual trust and knowledge of each others' products, production capacity and attitude towards quality have been essential for the association to happen. Unifying factors are:

- Similar size of business;
- Similar attitude towards nature, good farming practices , good production practices;
- Same level of understanding of what is a good quality product;
- Being proud of what they do and the quality of their product;
- Professional attitude towards their work;
- Cooperative, supportive and helping people.



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

Support to local farmers and small businesses – both technical and financial – have been very important for their development and sophistication. Study tours in Bulgaria and abroad in the framework of the BG-Swiss project have played important role in the development of the attitudes of each individual member of the association. Each member is proud of what he/she produces and does not compromise with hygiene and quality of production.

With positive results, more members could be attracted but after careful screening – members must share common understanding of the process of associating, to have the same goals for development, for sustainability, etc.

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

The innovation is replicable to other HNV areas, but so far it is the only formal HNV farmers association in Bulgaria.

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

The innovation can be replicated in other areas of Bulgaria, but specific conditions will be required – some platform to help people to know each other in a positive way; of course not all people could work together, this is a bottom-up process and should not be forced down by a project, funding or any artificial means.

Bulgaria – innovation example 4)

Mobile advisory teams (MAT) for HNV farmers

Location: Ponor SPA and Bessaparki hills SPA

HNV system: Extensive grazing, extensive and organic orchards and gardens

Scale of operation: 2 mobile teams working in 2 regions in Bulgaria, 200 farmers consulted

Timespan: Operated for approx. 5 years 2007-2011, ended due to the end of GEF funded project, implemented by BSPB

Keys to success: Real commitment and skills of BSPB local team to promote HNV farming practices, existing GEF funding both for the mobile advisory teams and the AE and Natura 2000 pilot grants schemes



Operation areas of the mobile advisory teams

Problems addressed by this example

The innovation of setting up mobile advisory teams is a response to farmers' needs for adequate and on-time advice, information and consultation (on biodiversity conservation and links between farming activities and nature conservation, funding opportunities, etc.) in the HNV areas, where the project operated without additional expenses for farmers to visit services usually provided in the municipality/district centres.

Story in a nutshell

The mobile advisory teams were created in the framework of project „Conservation of globally important biodiversity in high nature-value semi-natural grasslands through support for the traditional local economy”, funded by the Global Environment Facility (GEF) and United Nations Development Programme (UNDP) and implemented by Bulgarian Society for Protection of Birds (BSPB) during 2007-2011 period.

The aims of the mobile advisory teams were to consult farmers on new knowledge and skills for HNV farming practices; funding opportunities; preparation of business plans; compliance with the EU standards in the dairy sector (good hygiene practices; production practices, storage and use of manure; good agricultural practices, etc.); marketing activities (direct sales; advice on design and standardization of the jars' shape and labelling; linking farmers and consumers, organization of joint visits at fairs and exhibitions, etc.).

What does mobile advisory teams achieve for HNV farming?

- The mobile advisory teams gained the trust of farmers and became part of their daily life: "These people have entered into our daily lives, their contacts are on top of our contact lists", shared one of the consulted farmers.
- More than 200 farmers were consulted. 83 projects were approved to participate in the HNV pilot grant scheme as a result of their work.



Achievements

In the period 2007-2011, the mobile advisory teams promoted nature-friendly farm techniques. They assisted the development and implementation of pilot AE and Natura 2000 grants schemes for HNV conservation, tailored to the specific regional conditions. Implementation Natura 2000 RDP scheme was initiated and tested by the project team. MAT also promoted the national AE measure for restoration and maintenance of HNV farmland, and gathered proposals for simplification of the rules and the procedure for its implementation.

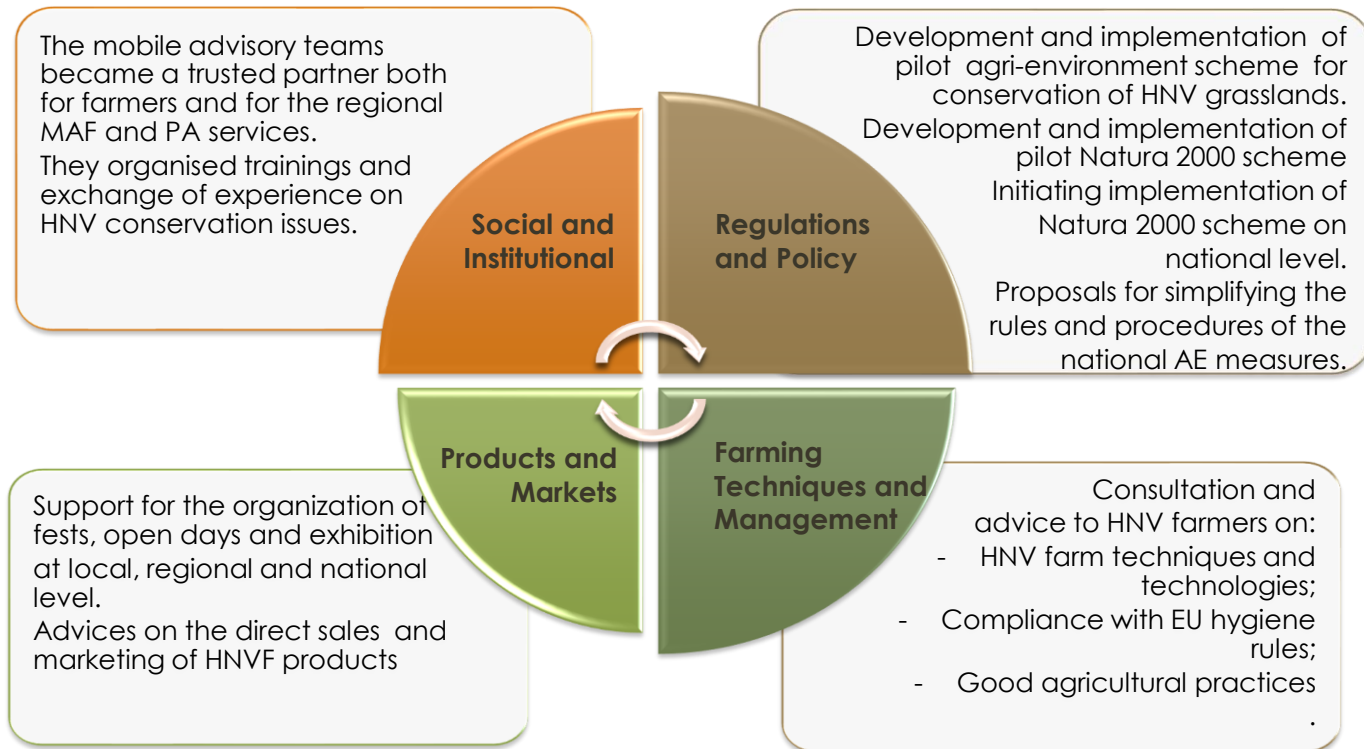
Economics of HNV farming

The overall amount of the approved projects under the pilot scheme for support of HNV farms was 213 017 EUR. At the same time, the mobile advisory teams provided support to farmers for their applications in the national support schemes as well as compliance with newly introduced legislation. This helped many farmers to remain in business, instead of closing down.

Maintaining or improving HNV values

By the end of 2011, the farmers that were consulted were aware how to maintain the high nature value on their grasslands and why this was necessary. The terminal evaluation of the project reported that the project has directly contributed to the conservation of 36 000 ha of HNV farmland.

How do mobile advisory teams respond to the HNV LINK innovation themes?



The process that made it happen and critical factors for success

- GEF funding for the project so that BSPB could hire experts for the mobile advisory teams
- The skills, personal belief and motivation of the teams helped them to gain the trust of the HNV farmers and the regional MAF authorities.
- The grant schemes that were implemented were tailored to the local conditions and the needs of the HNV farmers.
- But the innovation would not have been successful without farmers' commitment to maintain HNV farming systems.



Actors and roles: The initiator was BSPB. The original project proposal envisaged only one mobile advisory team to serve both project areas. The adaptive management of the project decided to create two teams in each pilot region to respond better and timely to farmers' needs. The skills, personal belief and motivation of the team helped them to gain the trust of the HNV farmers and the regional MAF authorities. However the innovation would not have been successful without farmers' commitment to maintain HNV farming systems.

Institutional context that made it possible:

The innovation was funded under GEF and UNDP funded project „Conservation of globally important biodiversity in high nature-value semi-natural grasslands through support for the traditional local economy”.

Resources: Each mobile advisory team had three experts. Each expert worked approximately 60 months during the project. The average monthly operational costs of the mobile teams were 1300 EUR excluding experts salaries.

Processes: The mobile advisory teams were created during the project but the previous work and contacts with the farmers/locals and administration/institutions facilitated the process.

Critical factors for success: The skills and the commitment of the experts of the mobile teams were a key factor for success of the innovation.

Limiting factors, actual/potential problems, and how could they be overcome?

The project funding ended, and unfortunately, this innovative approach was not taken up by the government. Institutional and administrative procedures/ burdens/ bureaucracy of the national and EU support schemes and the discrepancies in the LPIS created mistrust amongst the farmers and made them reluctant to participate in the national level schemes.

Lessons learnt from this innovation example, and its potential replication

- Face-to-face contact and farm-specific advice are required to effectively engage farmers and local authorities in conservation of HNV farming systems;
- HNV mobile advisory teams have proved to be an efficient and respected partner both for the farmers and the regional MAF and PA services and could an important part of the delivery mechanism of the future AES.



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

Advisory services and consultation for HNV farms are better done by a small teams of experts that have background and experience both in agriculture and biodiversity conservation. Direct advices and on-the farm discussions are preferred by farmers and save them time and financial resources.

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

This innovation can be replicable in other areas.

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

HNV MAT at national level should be created for securing long-term viability of the HNV farming systems. However, these teams have to believe in the future of the HNV farming systems.



Learning Area “La Vera” (Spain)

INNOVATION EXPERIENCES AND NEEDS

Contribution to deliverable D2.6.1

Date: October 2017

Authors: Guy Beaufoy,
Pedro M^a Herrera Calvo

entretantos



This project has received funding from the European Union Horizon 2020 research and innovations program under Grant Agreement No. 696391

This report represents the views of the authors. The Research Executive Agency is not responsible for any use that may be made of the information it contains

Introduction and contents

This report looks at innovation that supports HNV farming in **La Vera**, 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 **Spain** that could usefully be transferred to address challenges in the LA.

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

Contents

Slide 1: Introduction and contents

Slide 2: The challenges facing HNV farming in La Vera

Slide 3: Overview of innovation in La Vera

Slide 4: Innovation examples in La Vera – strengths and weaknesses for HNV farming

Slide 5: Social and institutional innovation needs

Slide 6: Regulatory framework innovation needs

Slide 7: Products and markets innovation needs

Slide 8: Farm techniques and management innovation needs

Slide 9: Innovations from outside the LA that could address LA needs

Slide 10: Innovation examples for which La Vera is looking to other Member States

Slide 11: List of innovation fiches from Spain

Slides 12-16: Example 1) Plan 42 integrated programme to reduce fire risk through support for extensive grazing

Slides 17-21: Example 2) QueRed national network of artisan cheese makers

Slides 22-26: Example 3) Mosaico landscape-scale project with local participation

Slides 27-31: Example 4) Finca Casablanca HNV dehesa farm, sustainable management, grass-fed, direct sales

The challenges facing HNV farming in La Vera

The HNV system, especially goat grazing, is in severe decline. Scrub encroachment and closure of the mosaic landscape are widespread, leading to considerable losses of Natura 2000 values and increasingly damaging wild fires.

Farms struggle with poor economic viability and harsh living and working conditions. They receive very limited support from the CAP (Pillar 1) and RDP compared with other sectors and other Member States.

They face a stifling regulatory system (food hygiene, animal health, Natura 2000, land-use planning) that closes down most of their options for improving the economics of the system.



The challenges facing HNV farming in La Vera

Goat and sheep numbers in La Vera have fallen by 50% in the past 15 years.

Pastures are mostly in shared use (public and private) and are in very poor condition and suffer competition from hunting use. Of the 31 public pastures, only one has a management plan. Authorities do not invest enough in improving pastures and facilities. Farmers face Natura 2000 restrictions on their activities. Moving to indoor feeding systems is the obvious alternative to the many challenges of extensive grazing on unfenced pastures.

On-farm processing (e.g. cheese) and direct sales cannot develop due to rigid rules and bureaucracy. Milk is sold mostly to bulk buyers at low and highly unstable prices. There is a lack of product differentiation for cheeses and goat meat from grazing systems, compared with intensive indoor feeding.

Currently, goat farms are suffering the effects of a very severe, top-down campaign by the regional authorities to eradicate TB. Thousands of goats are being slaughtered, but the test being used has a high incidence of false positives, and TB is carried by increasing populations of wild boar and deer, for which there is no TB eradication or testing programme.

Regional government policy has no vision for the future of upland grazing systems, rather there is a fragmented and dysfunctional set of parallel policies for agriculture, forests, hunting, animal health and nature conservation that between them are driving the HNV system and associated public goods into terminal decline.

Overview of innovation in La Vera

There is no overall project to support the HNV livestock system in La Vera.

Institutional and regulatory innovation are sorely absent, with rigid, top-down structures that create major problems for HNV farming.

There are tentative signs of increasing private innovation at the present time, for example organisation of farmers' associations.

Overall, there is massive scope for increased innovation in support of HNV farming, but first the institutional and regulatory barriers must be unlocked.



Overview of the innovation situation

HNV-LINK is really the first attempt to evaluate the HNV farming situation in La Vera and to try to propose comprehensive solutions. There has been a LAG since the early 1990s, but its approaches to rural development in the district have been far from innovative, acting primarily as a grant-giving body for local businesses. The LAG has supported only one very limited innovative project for livestock farming, aiming to link farms, cheese production and tourism, a project which was not continued (CarpeQuania – see next slide).

Innovation examples in La Vera: what are their strengths and weaknesses for HNV farming?

- CarpeQuania: LAG project for integration of pastoralism, cheese dairies and tourism
- Caprites: internet sales for Verata goat breed
- Coolosar: cooperative project for micro cheese dairies
- El Berenjenal: CSA consumers' group
- Preventive burning: by forestry authorities in consultation with local cattle graziers



Strengths

- There are some initiatives to support the local goat breed (the breed is typical of the HNV system BUT many HNV graziers do NOT have this pure breed, so these initiatives do not support the whole system).
- There are some attempts to improve the marketing of local livestock products and to organise alternative relations between consumers and producers.
- There is a pilot project by the authorities to control scrub encroachment through managed use of fire, involving some consultation with local graziers.

Weaknesses

- These existing innovations are on an extremely limited scale, compared with the scale of the challenges.
- Two of them (CarpeQuania and Coolosar micro cheese dairies) are historic innovations, they ceased to exist some years ago.
- These examples of innovation do not address the main challenges facing HNV farming.
- Nor do they address the main challenges facing small-scale processing and sales of products from the HNV system.

What are the main innovation needs in La Vera, and how could they be addressed?

Social and institutional innovation

Social and institutional - innovation needs	Possible approaches
Establish long-term HNV “animation” project for La Vera, employing a project officer	Design a Project for LAG funding
Establish a common voice for goat farmers to communicate with authorities at different levels	Create an association of goat farmers. Possible EIP Operational Group
Integrate the approach of government departments towards pastures and pastoralism	Regional authorities develop a strategy and a cross-departmental working group
Consult local farmers in design of support measures, application of rules (e.g. animal health), Natura 2000	Regional authorities establish dialogue with local actors for development of approaches

Social and Institutional Innovation Needs

Local development agents are employed in some municipalities, and the LAG exists since the early 1990s, but these do not have the traditional livestock system as an objective for support. There is no group or project with this focus. To establish a long-term HNV livestock project, employing a dedicated project officer to work hand-in-hand with farmers and authorities, would be a key innovation.

A livestock farmers’ association has been formed recently, in response to a highly problematic campaign from the authorities aimed at eradicating TB. The HNV-LINK team in La Vera is encouraging this as far as possible, and working to improve the voice of goat farmers in particular. The Association could apply for EIP funding as an Operational Group.

Several government departments have a role in the future of pastures and grazing systems, but there is no joined-up approach. The public grazings, that make up a large part of the pasture resource, are under the competence of the Forest department; whereas livestock are the competence of Agriculture; and the SAC which covers most of the upland pastures is under the Conservation authorities. There is an urgent need for these authorities to work together to develop an integrated strategy for the area and its grazing systems.

The different authorities apply their policies without talking to local farmers about best approaches. This creates major problems, and ineffective programmes. A very significant innovation would be for the authorities to engage with local farmers in designing and implementing policies.

Regulatory framework innovation

Regulatory framework - innovation needs	Possible approaches
Solve the severe limitations of Pillar 1 support to extensive grazing systems, especially goats and woody pastures	National government increases goat coupled payment to EU average; and adapts eligibility rules using EU options.
Use RDP measures to support HNV grazing systems on large scale, for biodiversity and fire prevention	Regional government implements the agri-environment measure that is in the RDP, targeting it on upland areas.
Adapt application of food hygiene rules to facilitate small-scale and on-farm processing (e.g. cheese)	Training for officials and producers so that they are aware of the flexibility including in the EU rules.
Adapt application of TB eradication programme to address the key problem of wildlife vectors	National and regional governments design a new programme in consultation with graziers and experts.
Make a clear plan for Natura 2000 pastoral habitats, with objectives and funded measures	Based on current plan, identify target habitats, define objectives and use RDP to implement measures.

Regulatory Framework Innovation Needs

Economic support for extensive grazing systems is far lower in Spain than in most Member States. Goats are especially discriminated against, because the coupled payment is very low in Spain (7 euros per head compared with 15 euros in France and 23 euros in Bulgaria) and because they are specialists in exploiting woody pasture, which is heavily penalised by the Spanish application of CAP pasture eligibility rules. The Spanish authorities have the competence to change this situation, by allocating a larger part of the Pillar 1 budget to goat and sheep payments, and applying a much better adapted eligibility system, e.g. following the French model.

Compared with most other Member States, Spain makes very limited use of Pillar 2 measures for supporting extensive grazing systems. The Extremadura RDP includes a measure for this purpose, but it has not been implemented. An additional problem is that the Spanish authorities apply the same eligibility rules to Pillar 2 payments for farmland as they apply to Pillar 1 payments. The extent of land potentially eligible in Extremadura is so large that it would make sense to target the measure on Natura 2000 and upland areas. Forest authorities have invested in grazing on public land in the past, but the new CAP does not allow RDP measures to be applied on permanent pastures by the forest authority.

Implementation of food hygiene rules is done in a way that prevents innovative small-scale processing of HNV products.

Natura 2000 is implemented in a top-down and rigid manner, with no involvement of the actual users and managers of the land. The management plan for the main SAC in La Vera includes many laudable objectives for pastoral habitats, but no concrete measures or quantified targets. There is an urgent need to use RDP measures in support of Natura 2000 objectives.

Products and markets innovation

Products and markets - innovation needs	Possible approaches
Promote (legal) on-farm cheese dairies	Grants (e.g. from LAG) to establish new on-farm dairies or convert existing unlicensed dairies into legal dairies.
Promote (legal) direct sales of cheese and meat by producers	Campaigns to inform producers and consumers of the possibilities for direct sales. Could be funded by LAG
Marketing initiatives for local goat meat and cheese, to improve demand and prices	Information campaigns, e.g. with restaurants and tourist offices, could be funded by LAG

Products and Markets Innovation Needs

Goat meat is not promoted as a local delicacy. The price received by producers is so low that it barely covers the costs of feeding the kid goat.

Milk is sold mostly to bulk buyers at low and highly unstable prices. There are only 3 licensed cheese dairies in the district, and these are semi-industrial. There are no artisan dairies selling high value cheeses through direct sales, only unlicensed producers.

There is a lack of product differentiation for cheeses and goat meat from grazing systems, compared with intensive indoor feeding.

The closure of local abattoirs due to strict hygiene and animal health rules, plus economic competition, has been a widespread phenomenon in Spain, as in the rest of the EU.

Farm techniques and management innovation

Farm techniques and management - innovation needs	Possible approaches
Integrated management plans for the approx. 30 public grazing lands in La Vera (only one plan exists at present)	Pilot Project for integrated approach to be started by HNV-LINK. Regional authorities are putting out tenders for conventional management plans
Public authorities carry out pasture improvements, in full consultation with graziers	Management plans should be agreed first. Measures can then be programmed under RDP
Improve infrastructure for livestock and for graziers on common grazings	Ditto
Use grazing as a tool for reducing fire risks in critical areas	Start with Pilot Projects to test the approach. Funding from RDP or possibly from LAG

Farm Techniques and Management Innovation Needs

The extensive grazing system depends largely on the shared use of large, unfenced pastures, whether in public or private ownership. Graziers pay for the use of the land, but have a very limited say about their management, maintenance of infrastructure, and restrictions on their use. The pastures generally are in poor condition, due to scrub encroachment and deteriorated infrastructure, but also in some cases due to inappropriate grazing patterns. These issues should be addressed through long-term participatory management plans and corresponding investments in improved infrastructure and improved management practices.

Other areas for potential innovation include stock management through techniques like GPS tracking and electric fencing; mechanical milking systems (as many as 50% of goat farms still use manual milking, which is highly labour-intensive); and new developments are needed in the field of cheese-making, such as mobile dairies for accompanying seasonal movements of flocks, and low-energy dairies that can operate without mains electricity.

Innovations from outside the LA that could help address LA needs



Landscape-scale integrated fire-prevention projects

Mosaico: landscape project across several municipalities with local participation, Sierra de Gata and Hurdes - Extremadura

Plan 42: fire prevention through integrated support programme for grazing systems – Castilla y León

Payment for environmental services

RAPCA: results-payments for fire prevention through grazing – Andalucía

Market differentiation initiatives

Quebrantahuesos project, Picos de Europa: marketing local livestock products through restaurants, linked to conservation - Asturias

DeYerba: internet sales of grassfed products – National

Innovation at scale of individual farms

Finca Casablanca: HNV dehesa farm developing sustainable management with organic beef production, grass-fed fattening, direct sales, agritourism - Extremadura

Cabrero de Bolonia: HNV farm and cheese dairy, direct sales - Andalucía

Innovation examples for which La Vera is looking to other Member States

- Use of RDP payment schemes to support HNV grazing systems on a large scale, especially on common land
- Locally-led projects that set objectives for pastoral land with the users, and apply a « payment for results » approach to promote these objectives
- Flexibility in the application of food hygiene rules to small-scale, on-farm processing units.
- Approaches to dealing with animal health controls (TB) in extensive systems on common land with wild fauna vectors.

INNOVATION FICHES FROM SPAIN

- 1) Plan 42 - integrated programme to reduce fire risk through support for extensive grazing
- 2) QueRed – national network of artisan cheese makers
- 3) Mosaico – landscape-scale project with local participation
- 4) Finca Casablanca – HNV dehesa farm developing sustainable management, grass-fed fattening, direct sales

Spain – innovation example 1)

Plan 42 - integrated programme to reduce fire risk through support for extensive grazing

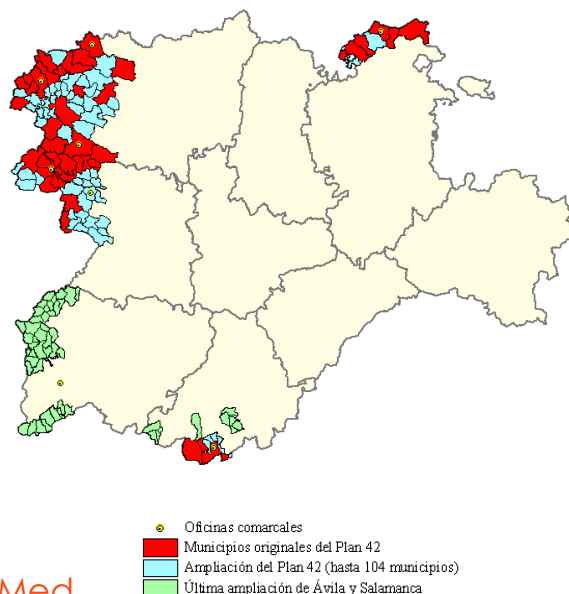
Location: Castilla y León, Spain

HNV system: Extensive grazing, mainly beef cattle on rough upland pastures

Scale of operation: 42 administrative districts, 1,300 holdings and 250,000 ha of grazing land

Timespan: Operated for approx. 10 years from 2002, ended due to lack of funding, no longer running

Keys to success: government commitment and funding, local project officers, dialogue with graziers, integrated approach, use of RDP funds for incentive payments to graziers



<http://www.medioambiente.jcyl.es/web/jcyl/MedioAmbiente/es/Plantilla100/1132926921318// / />

Problems addressed by this example

Increasing incidence of wild-fires, high prevalence of farming-related wildfires, difficulty of engaging graziers in efforts to stop use of fire as pasture regeneration tool, decline of grazing and pastoral farming, scrub encroachment, loss of pastures, poor valorisation of livestock products. The programme targeted the 42 districts with the highest incidence of wild-fires, and was later extended to more municipalities.

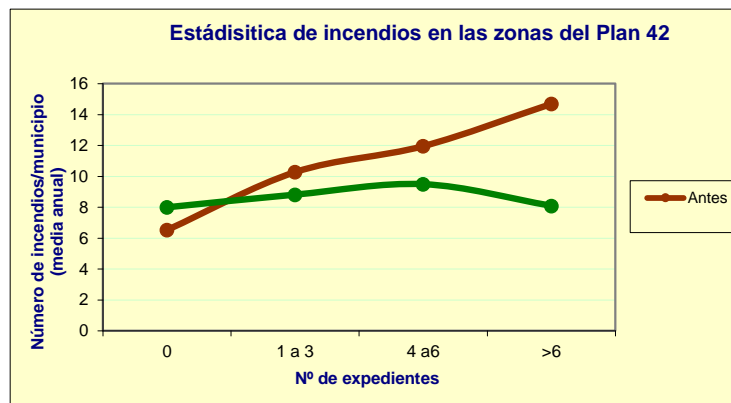
Story in a nutshell

This was an integrated programme for fire prevention, set up and run by the regional environment authority. The programme approach was focused on social aspects of wildfires. A key action was trying to build an alliance with graziers through dialogue and by helping to address their problems, in order to get cooperation from the graziers in reducing fire risks.

The programme worked directly with graziers through local project officers, with the incentive of RDP aids for mechanical scrub clearance and pasture improvement, as a substitute for traditional use of fire as a management tool, and as part of locally-developed pastoral planning. It included marketing initiatives (direct sales, funding for a shop), and organisation of graziers' access to land owned by absentee owners.

What does Plan 42 achieve for HNV farming?

- Impact on 1,300 holdings and 250,000 ha of grazing land.
- Reduced incidence of wildfires in the target districts (see graph).
- Greatly improved level of dialogue and understanding between the authorities and farmers.
- A more positive and optimistic vision of the future.



Achievements

In the period 2002-12, the action targeted 42 administrative districts (later extended to more) and had an impact on 1,300 holdings and 250,000 ha of grazing land.

Plan 42 helped to start innovation and development initiatives related to extensive farming and community-based natural resources.

At least 5 farmers' associations and a federation integrating all of them were promoted by Plan 42.

Economics of HNV farming

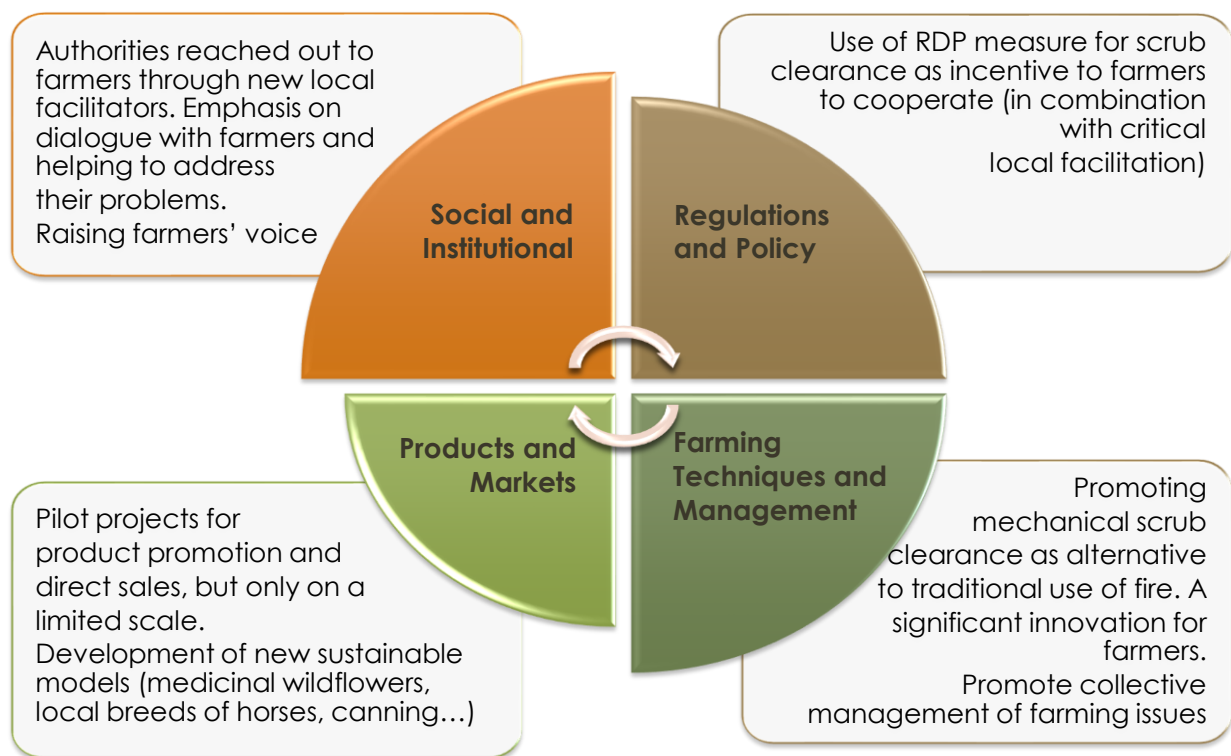
Data is not available on the economic impact of the programme for HNV farms.

Maintaining or improving HNV values

The programme was not designed to achieve specifically HNV or conservation objectives, but probably had benefits as a result of maintaining extensive grazing systems and reducing scrub encroachment.

The main landscapes targeted belong to Natura 2000 sites, contributing to preserve them from damaging wildfires. Potentially the programme could have been adapted to give it a more explicit HNV focus, for example, with greater involvement of the nature-conservation authorities.

How does Plan 42 respond to the HNV LINK innovation themes?



Social and institutional: Developing farmers' associations and building their capacity, promoting social linkages between stakeholders. While using a large set of classic measures for fire prevention - such as firebreaks, infrastructure and preventive silviculture – Plan 42 was focused on the use of social tools as instruments of change. They introduced new approaches to intervene in rural areas, including the proximity between technicians and population, restoring effective links between people and their environment, networking and a long-term focus and on local active agents. The participatory work with local people typified by Plan 42 allowed a wildfire prevention approach that focused on governance, development and sustainability. Those factors were shown to be inseparable from the social context where wildfires spread. As a result of these works a great number of people's proposals were gathered from participatory activities. Participatory works with people in Plan 42 were started by technicians working to mobilize local populations into fire prevention. Coordinators of the programme started to hire a cluster of small companies with experience in mediation and facilitation of participatory processes. The collaborative work between participation professionals and local technicians was successful in terms of social involvement, developing new ideas.

Regulations and policy: The measure for scrub clearance is not innovative in itself, but the way it was integrated with local facilitation and the other social aspects of the project created an innovative synergy.

Products and markets: Other initiatives included developing new markets for horse meat (training local restaurants and butchers on meat preparation, promoting trademarks, communicating their HNV advantages), promoting conversion to organic farming.

Farming techniques and management: Also developing farmers' animal health associations (ADL), developing training with specialists (reproduction, parasitism...); developing participatory plans for scrub clearing and grazing-maintained clear-cuts around villages.

The process that made it happen and critical factors for success

- It emerged from a small group of people in the regional environment administration, championed by the Director General and his advisor. It was set up by this administration, with its own staff and funds
- The strong social focus grew from involvement of individuals with a background in environmental education and public participation.
- Staff living on the ground in the targeted districts created a participatory framework to regain control of land, and rebuild social fabric and relationships among farmers and other stakeholders.
- Collaboration between civil servants, project staff and external consultants, and improving coordination between local and regional authorities, led to agreements on land management.



The key for success was betting on professionals living in the local areas, specifically trained to develop this project, supported by external consultants and inserted in the local networks. The implementation of participatory frameworks allowed farmers and other stakeholders to be directly involved on decision-making. The participation of extensive farmers was a first for these areas, and established new paths of dialogue. The creation of farmers' networks was another great success of the project, farmers started to visit other farmers, share their problems and strategies and plan a new model of representation.

The locally-based action of technicians and professionals and the specifically designed training for them in group dynamics, participatory processes and communication helped to boost the project's outcomes. At the peak there were 8 technical staff living in the targeted communities and 4 consultants developing specific tasks (participatory planning, training, supporting activities).

Workgroups with farmers were pivotal to develop most demonstration and pilot projects, some of the farmers associations created by the project are still running. The use of participatory tools led to a better understanding between technicians and farmers. When they began to meet, graziers scoped a more active role in fire prevention and technicians developed a better understanding of the farmers' situation. An unexpected benefit of Plan 42 was its influence in the organization of extensive livestock farmers. Early in the participatory processes some groups of extensive livestock farmers started to ask for separate meetings and social organization among them emerged.

The support of the regional government was key for the relationships with municipalities, starting new collaboration processes that eventually engaged other actors.

Lessons learnt from this innovation example, and its potential replication

- The coming together of certain people in the “right place at the right time” is a key factor.
- Commitment from the administration is essential, as is coordination among government levels.
- The social approach is a cheap and effective approach to wildfire prevention
- Local population can take back control of their territory, establishing alliances with key stakeholders to maintain its values and services. The role of graziers is central in this scheme
- Extensive farmers and shepherds play a star role in land management and wildfire prevention, as they can intervene in broad sections of land and move among them



The overall lesson of Plan 42 was that social approaches to prevent wildfires are cheaper, more effective and successful than conventional lines of work. The involvement of farmers and stakeholders led directly to reduce the incidence of wildfires. The implementation of participatory strategies, developed collaboratively with local population and stakeholders, can be developed as the main tool for preventing wildfires.

The role of graziers was fundamental in both wildfire prevention and land management. Early diagnostics already defined their main role in the current situation, but also the decline of their activity, improving sustainable livestock extensive farming (making it more profitable, more sustainable and more land-based) produced immediate benefits in wildfire prevention and consequently in HNV conservation

This kind of innovation is highly replicable, as the participatory framework adapts solutions implemented in each territory to their own characteristics. To replicate this kind of solution you need, at least, stability and long-term vision, local people involved from the very beginning, technical capacity on participation and land management and a minimum of resources to develop the main agreements.

The main threat for Plan 42 was always the lack of political vision from the regional government; once the main promoter was separated from the Directorate General, the project started to decline, and eventually ended with the financial crisis.

Another question that hindered the process was the lack of understanding of timing and needs: participatory processes in such abandoned areas, with small populations and very conservative, wary and individualistic farmers take a long time to form and stabilise. The pressure for short term results, the lack of confidence and eventually the government ending its commitment gave the project a bitter end.

Spain – innovation example 2)

QueRed association of artisan cheese makers

Location: National network (also part of a European network FACE)

HNV system: Dairy (goats, sheep, cows), farms are mostly grazing systems

Scale of operation: 300 members throughout Spain (200 are producers)

Timespan: Established in 2013

Keys to success: Association directed by small-scale producers with full transparency, independent from government and public funds, active members encouraged by a dynamic director, low members' fees at the beginning.

www.redqueserias.org



QUESERÍAS DE
CAMPO Y ARTESANAS
RED ESPAÑOLA

Problems addressed by this example

One of the main problems for HNV Farming is the economical weakness of farms. One way to become more profitable is adding value selling cheeses or meat in short supply chains. But the poorly adapted legal framework (especially the implementation of EU food hygiene rules) is a real constraint for small-scale producers that face expensive requirements that make business unfeasible. This is the problem addressed by QueRed.

Story in a nutshell

QueRed is a national association of artisan cheese producers for the adaptation of rules and bureaucracy to the reality of artisan cheese dairies. The association also organises training for producers, exchanges among producers in a googlegroup, collective participation in cheese festivals and markets, looking for collective contracts for transport and insurance. Besides cheesemakers, QueRed has also an important group of future cheesemakers that find in the association support and help from more experienced producers, and it is also a way to assure the continuity of the association. QueRed is the only association in Spain that represents the interests of small-scale cheese dairies at national level and in 4 years of life has achieved legal reforms that are improving the situation of farmers on the ground.

What does QueRed achieve for HNV farming?

- Specific legal changes in Spain.
- Publication with official approval of several crucial documents on adaptation of rules and bureaucracy to the reality of artisan cheese dairies (see notes).
- Training for producers, exchanges among producers, collective participation in cheese festivals and markets, looking for collective contracts for transport and insurance.
- Support for future cheesemakers.



Achievements

Approval and publication, by the Public Health Ministry, of a document with examples of interpretation of EU food hygiene rules in small-scale cheese dairies. This work was done by QueRed and negotiated with national (Public Health Ministry (Aecosan), Agriculture Ministry (Mapama) and regional competent authorities).

http://www.aecosan.msssi.gob.es/AECOSAN/web/noticias_y_actualizaciones/noticias/2017/aplicacion_higiene_queserias.htm

Guidelines for the improvement of the hygiene package implementation and proposals of exceptions and adaptations for farmhouse and artisan cheese dairies. This work was done in collaboration with Slow Food Italy, Slow Food Macedonia and Ardahan University (Turkey) and the aim is to help EU candidate countries to implement EU Food Hygiene Regulations in a adapted way for small-scale productions. <http://www.pmproje.com/upload/icerik/flex.pdf>

Approval of the European Guide for Good Hygiene Practices in the production of artisan cheese and dairy products. https://ec.europa.eu/food/sites/food/files/safety/docs/biosafety_fh_guidance_artisanal-cheese-and-dairy-products.pdf

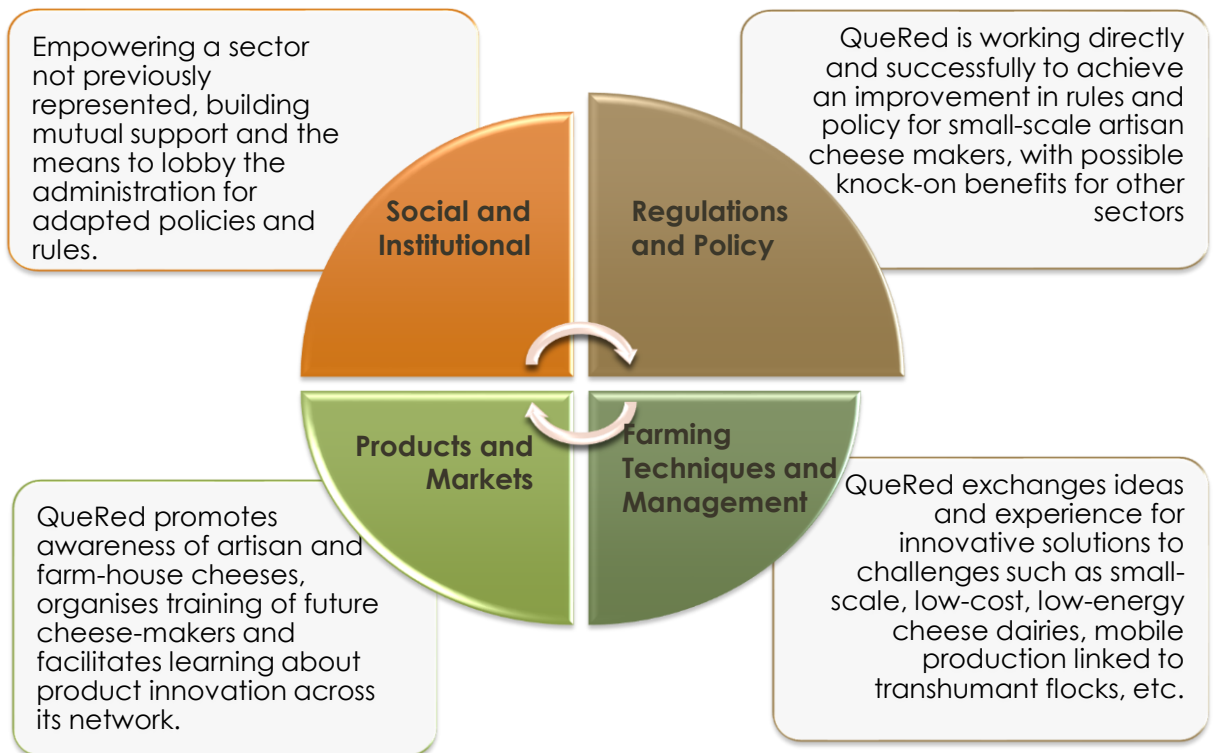
Economics of HNV farming

Data is not available on the economic impact of QueRed's work for HNV farms, but positive effects can be expected for farms that choose to develop small-scale cheese-making.

Maintaining or improving HNV values

Indirectly, the work of QueRed should help to maintain some individual HNV farms.

How does QueRed respond to the HNV LINK innovation themes?



The process that made it happen and critical factors for success

- ▶ A brave and risky beginning, starting without funds, and undertaken actions of a high level.
- ▶ Independent from government and public funds.
- ▶ Association managed and directed by small-scale producers, with complete transparency.
- ▶ Active involvement of members, encouraged by a dynamic director.
- ▶ Low members' fees at the beginning, to recruit members and show them over time that the association is working well.

INTERPRETACIÓN DE LAS NORMAS
HIGIÉNICO-SANITARIAS EN PEQUEÑAS
QUESERÍAS Y PROPUESTAS DE
MEDIDAS DE FLEXIBILIDAD

*DIRIGIDO A QUESERÍAS, ASESORÍAS Y
AUTORIDADES COMPETENTES*



Lessons learnt from this innovation example, and its potential replication

- QueRed could be replicated in other countries and also for other kinds of products, not only cheese.
- It is important to have a technical team of a high level for preparing reports and proposals to administrations, showing the problem but also offering the solutions.
- With transparency and good purposes, interesting supporting people approach the association ready to help.

Spain – innovation example 3)

Mosaico landscape-scale project for fire prevention

Location: Sierra de Gata and Hurdes, Extremadura

HNV system: Extensive goat grazing, trees crops (e.g. chestnuts)

Scale of operation: 24 municipalities

Timespan: Started in 2015, funding is secured until 2018

Keys to success: The trigger was a massive wild fire in 2015. University academics put together the project and convinced the Regional authorities to support and fund it. Funding is key, but equally the dedication of specific individuals who set up the project and the positive response of the local population and institutions.

<http://www.mosaicoextremadura.es/el-proyecto/>



Problems addressed by this example

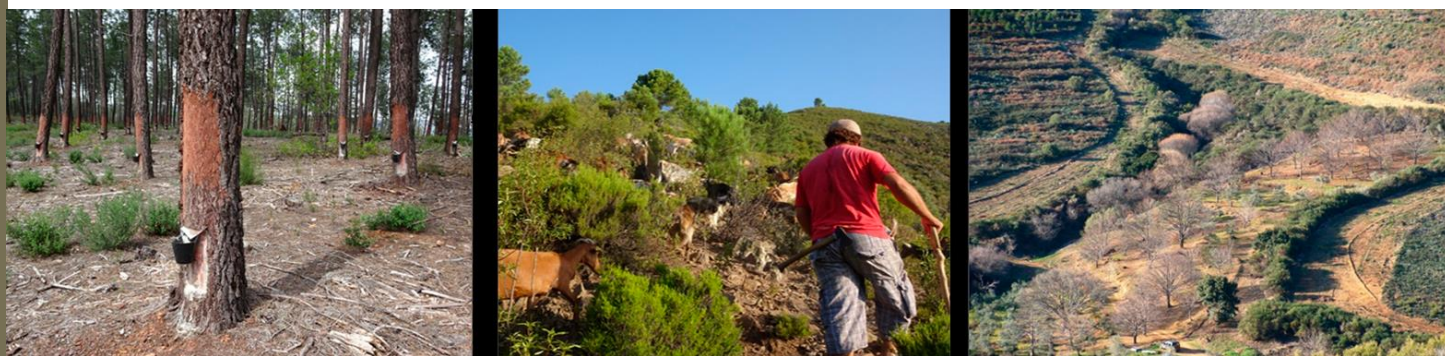
The project addresses the problem of wild fires, by going to the root cause: the gradual abandonment of the traditional mosaic landscape and the farming systems that constitute this landscape. The project provides a support service to help local people to overcome barriers, such as bureaucracy and market limitations, that prevent the continuation of small-scale farming systems.

Story in a nutshell

Multi-actor project aiming to restore productive and fire-resistant mosaic landscapes in a very large area that has been suffering from severe wildfires in recent years. The project is highly participatory, involving the local population. The project supports individuals and communities that wish to start or maintain appropriate farming or forestry activities that will contribute to creating and maintaining a mosaic landscape.

What does Mosaico achieve for HNV farming?

- New social dynamic in the area, with the local population and authorities working together to maintain a mosaic and fire-resistant landscape.
- New forest management associations and restoration plans for the burnt area, incorporating farmland as fire-breaks.
- Collaborative projects with 3 municipalities and with NGOs to undertake planning and restoration.
- More than 100 individual projects in the pipeline, including a pilot project with 8 goat farmers for fire-prevention grazing.



Achievements

To-date, the main achievement is a new and extremely positive and optimistic social dynamic in the area, with the local population and authorities working together with the regional government to address the question of how to maintain a mosaic and fire-resistant landscape. There have been numerous workshops and public meetings to generate ideas and actions. Many individual projects are now in the pipeline.

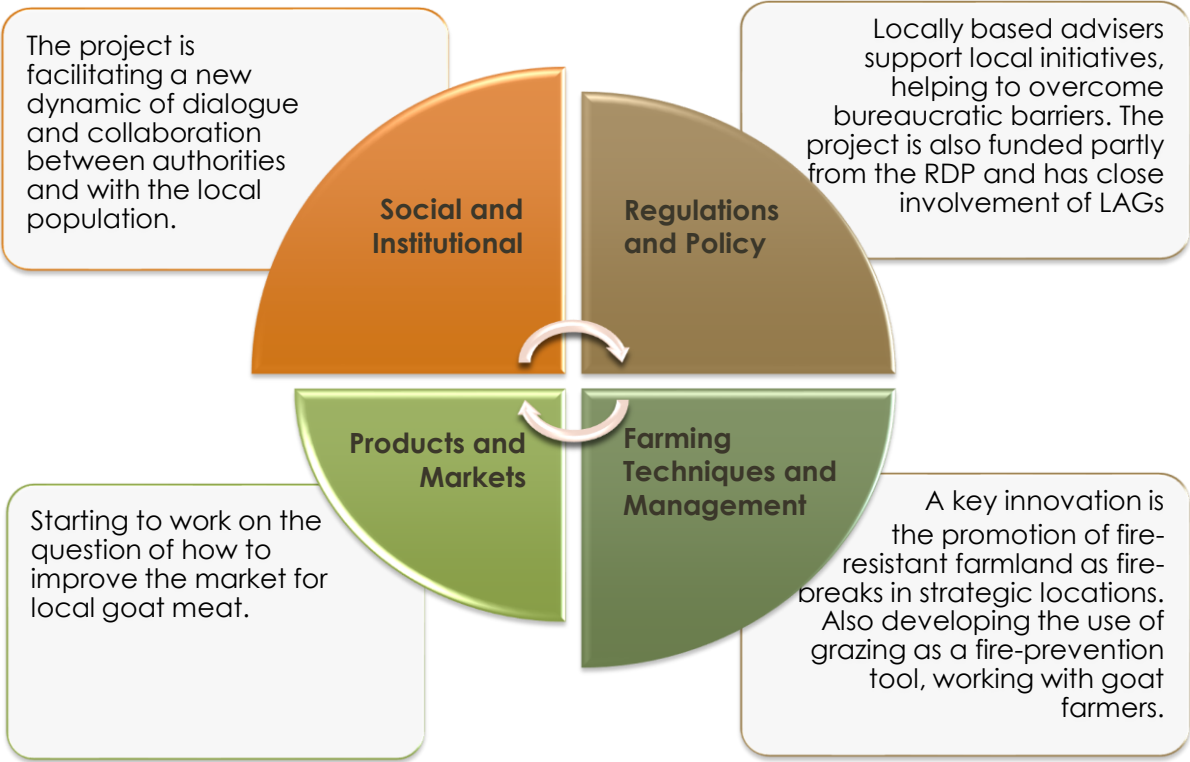
Economics of HNV farming

Data is not available on the economic impact of the programme for HNV farms.

Maintaining or improving HNV values

The project is not designed to achieve specifically HNV or conservation objectives, but undoubtedly has important potential benefits in terms of maintaining extensive grazing systems and traditional tree crops.

How does Mosaico respond to the HNV LINK innovation themes?



The process that made it happen and critical factors for success

- The catalyst/trigger for the initiative was the disaster of a massive wild fire in 2015.
- Key actors are the University academics who put together the project and convinced the Regional authorities to support and fund it.
- Funding is a key factor, but also the dedication of specific individuals who set up the project, and the positive response of the local population and institutions.
- Different levels of government are showing willingness to work together.



The project is run by the University of Extremadura (Forest Faculty), with funding from the Regional Government (Department of Environment, Rural Development and Agriculture). It is truly a multi-actor project (University; Regional, Provincial and Local authorities; 2 LAGs).

Support for projects from local people is delivered by 4 dedicated project officers at local level, offering a range of technical, administrative and commercial advice.

The main problems have been the very slow pace of the public administration, and the lack of training of the local people with an interest in developing projects (the intention of Mosaic is to harness the ones with most knowledge to train the others).

Lessons learnt from this innovation example, and its potential replication

- ▶ Very good potential for replication in all areas of extensive livestock grazing.
- ▶ Requires funding and institutional commitment over the long term.
- ▶ Needs dynamic and committed individuals with a clear vision and ability to convince and collaborate with different institutions

Spain – innovation example 4)

Finca Casablanca dehesa farm developing a sustainable model

Location: Oliva de Plasencia, Extremadura

HNV system: Extensive beef cattle and native pigs in dehesa. Olives.

Scale of operation: Single farm 400ha

Timespan: Started 20 years ago, developed steadily since then

Keys to success: A private initiative, not supported directly by projects or institutions. The farmer is highly motivated and collaborates with the University of Extremadura and NGOs

<http://dehesando.com/>



Problems addressed by this example

Unsustainable practices in many dehesas (e.g. overstocking, lack of tree regeneration), lack of economic viability (which also drives the unsustainable intensification).

Story in a nutshell

Dehesa farmer practising low-density grazing system to facilitate tree regeneration, local transhumance, grass-based fattening, own butchery, direct sales of organic beef and pork (including to CSA groups), and rural tourism. Also collaborating as a field site for research on management for tree regeneration and into organoleptic qualities of meat.

What does Casablanca achieve for HNV farming?

- The farm began to operate as an organic system 20 years ago.
- Collaborative work with the University of Extremadura began 10 years ago, including ground-breaking work to develop a practical grazing model that facilitates tree regeneration.
- The farm fattens its own stock from pasture, which is very innovative for the region.
- He also maintains traditional seasonal stock movements (local transhumance).
- He has developed direct sales and his own butchery in the face of numerous bureaucratic barriers.



Achievements

The farm has a philosophy of sustainability (ecological and economic) and is innovative in its management, diversification, processing and marketing, all developed gradually over many years.

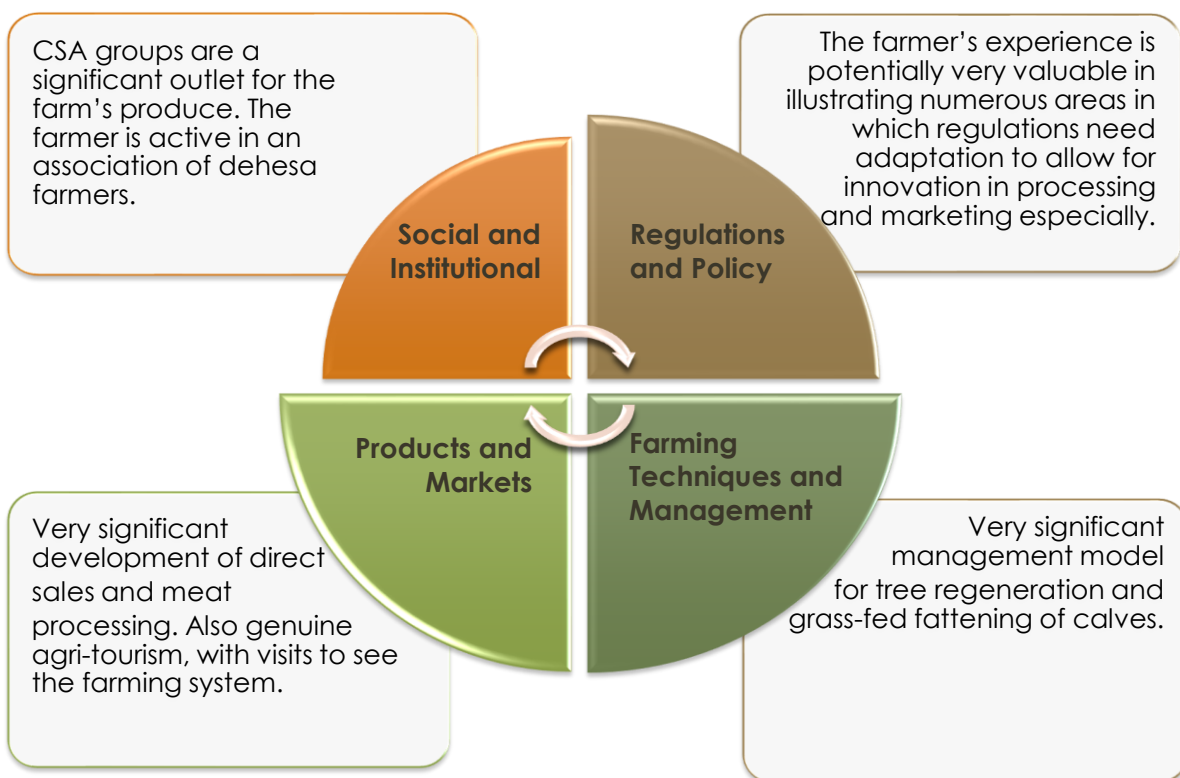
Economics of HNV farming

Data is not available on the economic impact of the farming system.

Maintaining or improving HNV values

The farm is in many ways a model of HNV dehesa farming, with a low stocking density, seasonal withdrawal of stock to mountain pastures, both of which prevent any overgrazing of the pastures and facilitate tree regeneration.

How does Casablanca respond to the HNV LINK innovation themes?



The process that made it happen and critical factors for success

- A private initiative, not supported directly by projects or institutions.
- The farmer is highly committed and motivated.
- Collaboration with the University of Extremadura and NGOs is a source of extra motivation
- Major bureaucratic barriers (see below)

The farmer faced repeated administrative barriers to his plans for processing and selling his own meat, e.g. rules for the transport of meat and establishment of a butchery do not contemplate his type of small-scale operation as an adjunct to the farm business. The farmer was obliged to establish a separate business as a butcher. The government campaign to eradicate TB in livestock is causing additional problems for his transhumance and meat sales.

Lessons learnt from this innovation example, and its potential replication

- Potentially very valuable as a demonstration farm, e.g. for more sustainable grazing systems and managed tree regeneration.
- The farm provides a potential model for testing innovative policy measures, such as payments for biodiversity results
- The business is a test case for potential adaptations to food hygiene and animal health regulations.



Learning Area “Causses et Cévennes” (France)

INNOVATION EXPERIENCES AND NEEDS

Contribution to deliverable D2.6.1

Date: October 2017

Authors: Sébastien Girardin, Lucie Noël,
Emmanuelle Genevet, Catherine Cazals



This project has received funding from the European Union Horizon 2020 research and innovations program under Grant Agreement No. 696391

This report represents the views of the authors. The Research Executive Agency is not responsible for any use that may be made of the information it contains

Introduction and contents

This report looks at innovation that supports HNV farming in **Causses and Cevennes**, 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 **France** that could usefully be transferred to address challenges in the LA.

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

Contents

Slide 2: Introduction and contents

Slide 3: The challenges facing HNV farming in Causses and Cevennes

Slide 4: Overview of innovation in Causses and Cevennes

Slide 5: Innovation examples in Causses and Cevennes : what are their strengths and weaknesses for HNV farming?

Slide 6: What are the main innovation needs in Causses and Cevennes, and how could they be addressed? Social and Institutional

Slide 7: What are the main innovation needs in Causses and Cevennes, and how could they be addressed? Regulatory framework innovation

Slide 8: What are the main innovation needs in Causses and Cevennes, and how could they be addressed? Products and markets innovation

Slide 9: What are the main innovation needs in Causses and Cevennes, and how could they be addressed? Farm techniques and management innovation

Slide 10: Innovation from outside the LA that could help address LA needs

Slide 11: Innovation examples for which Causses and Cevennes are looking to other Members States

Slide 12: Innovation fiches from France

Slide 13 to 17: France – Innovation Example 1: Regional procedures supported by elected representatives and local stakeholders

Slide 18 to 23: France – Innovation Example 2: Collective approaches by breeders

Slide 24: Interview list

Slide 25: Links and references

The challenges facing HNV farming in Causses and Cevennes

Two major risks on the C&C:

- The abandonment of land that is difficult to access and manage mechanically and which produces little.
- The intensification of land suitable for agriculture.

Substantial sheep flocks (dairy and meat sheep).

Important pastoral practices: transhumance, herding, grazing in woody pastures.

Partly abandoned built heritage.

A mosaic of landscapes ensures rich biodiversity.



Challenges facing HNV livestock farming in Causses and Cevennes

The Causses and Cevennes region is characterised by two main risks:

- The abandonment of land that is difficult to access and manage mechanically, and which produces little;
- The intensification of land that is suitable for agriculture.

Breeding is still well represented throughout the region but the surface area of agricultural land that is utilised is rapidly decreasing (-7% between 1988 and 2010), rangelands tend to be enclosed and woodland is being extended.

Throughout the region, many ancestral pastoral practices need to be protected (transhumance, herding, grazing woody pastures) and the built heritage must be conserved (dry stone walls, chestnut drying houses, “*lavognes*” – stone-paved drinking ponds, “*clapas*” – dry stone huts). These elements, together with the breeders’ practices, contribute to preserving the landscape mosaic that guarantees the extremely rich biodiversity of the region.

The farms are small in the valleys of the Cevennes and are larger in scale on the Causse. Sheep production is dominant, whether for milk (Causse) or for meat (Cevennes); sheep and cattle are also present and horses are found for use for leisure activities or for endurance.

The mountain areas are eligible for funding and specific aid that provides a major contribution to the breeders’ income but which are not always sufficient to bring added value to pastoral practices as they are, or used to be, carried out.

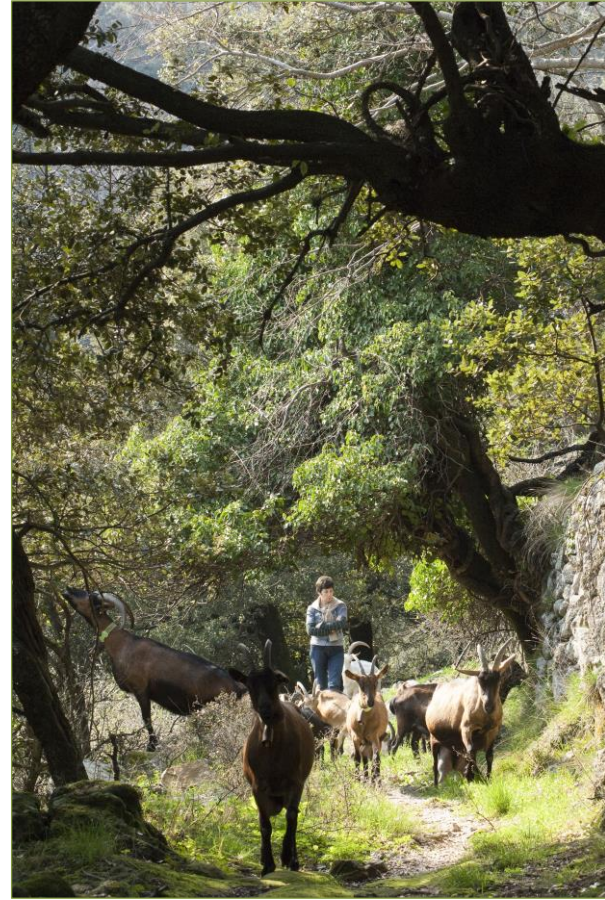
Overview of innovation in Causses and Cevennes

There is no overall project to support the HNV livestock system in Causses and Cevennes.

In France there are several structures that work with agriculture and each one, at its own level, may work on topics relating to support for HNV livestock farming.

A number of innovations have been adopted by structures that already exist or that have been created for and by the project in question.

The lack of funding is a problem for organising the different sectors and structures. Yet without organisation, the structures lose a core part of their activity.



In France and in the region under consideration there are a number of different innovations. These may relate to several themes, involve a greater or lesser number of farmers and receive varying levels of funding but they are often supported or put into practice by an already established body or one that is constructed for the project in question. Bodies may be approached at different strategic levels for support for an innovation: scientific research (Idele, INRA, Institut de Recherches et Développement, etc.), technical bodies (Chambers of Agriculture, management bodies, genetic selection organisations etc.), commercial structures, State institutions, breeders' collectives or veterinary groups.

The many elements of this complex organisation may be working on problems that relate to HNV farming but there is no single structure dedicated to this type of agriculture.

The most frequent problem is the reduction or loss of organisational funding which gives rise to tensions within individual roles and increasingly aggressive commercial strategies for activities that used to be freely available to breeders.

Innovation examples in Causses and Cevennes : what are their strengths and weaknesses for HNV farming?

■ Examples of innovations in the Causses and Cevennes region:

- The collective management of summer pastures and the legal instruments resulting from the Pastoral Law of 3 January 1972.
- Development of new sectors and added value for co-products.
- Procedure for recognition of the quality of pastoral breeding products.
- An innovative institutional framework for management of the UNESCO Site.
- Dispensation for oak and chestnut woods to be considered as pastures for CAP direct payments.



Shepherd's hut



Strengths:

A number of bodies are involved in pastoralism, with the farming profession well represented to relay the wishes of the profession.

Many innovations in the region at farm level as well as the structures and the breeders' groups.

There are innovations in the challenges that are encountered in the region, such as installation of young farmers, access to land and the structuring of collective instruments.

Weaknesses:

The structure of the agricultural world is complex (multi-layered administration).

Some innovations have not been stabilised in time (e.g. the CAP dispensation for oak and chestnut wood pastures).

The structuring of new sectors and new instruments implies the active commitment of the breeders who often lack time and communication skills in particular.

What are the main innovation needs in Causses and Cevennes, and how could they be addressed?

Social and institutional innovation

Social and institutional - innovation needs	Possible approaches
The breeder's job lacks appeal.	Reduce constraints by improving replacement services (e.g. to allow farmers to take holidays) and employer groups for easy employment procedures), using technology, improving buildings, opening access to certain farms, increased Internet and phone provision to the areas that have no coverage.
Loss of the notion of the multifunctional nature of breeding.	Work with civil society and public policies to increase recognition.

Social and Institutional Innovation Needs

The number of farms decreases each year, so one of the challenges in the region is to renew the generations. The profession of breeder is not always attractive to young people especially due to the considerable constraints, social conditions (no weekends or holidays, blank zones for Internet or the phone network), uncertain pay, inaccessibility of some farms or working conditions that are too hard (many jobs are done manually on farms in the Cevennes). There should be a new framework for the installation of young people, with technical and technological improvements to reduce constraints and make the work easier (GPS collars, invisible fencing, up-to-date equipment, increased mechanisation), to improve the profession's social conditions (development of employer groups, permitting easy employment procedures, and replacement services, permitting easy replacement during holidays, work stopping due to disease...) and to open up access to some of the farms (especially with improved road and telephone networks).

In addition, breeding is no longer sufficiently recognised for its externalities, but solely for its products and co-products (meat, dairy, leather, wool and manure), whilst the presence of farms in a region is a vehicle for economic activities (community services, schools), social connections, landscape maintenance, support for biodiversity, etc. Work must be done with public policies and Civil Society to permit recognition of these externalities.

Regulatory framework innovation

Regulatory framework - innovation needs	Possible approaches
Predation and legal protection of the wolf: the presence of wolves is not compatible with pastoral practices	Change the status of the wolf in the Berne Convention (according to breeders) and allow flocks to be protected effectively
Development of public policies and CAP subsidies in support of pastoralism	Improved targeting and adaptation of the Agri-Environmental and Climatic Measures (MAEC). Focus on financial support for small-scale farms.

Regulatory Framework Innovation Needs

Predation in the region calls into question the future of many of the heavy grazing systems whose function in conserving nature value of the land is extremely positive. In fact the presence of wolves is considered by farmers to be incompatible with today’s pastoral practices in the region. Technical innovation could be considered but French breeders are calling for a review of the status of this predator in the Berne Convention.

The Agri-Environmental and Climatic Measures (MAEC) permitted contractual agreements to be drawn up with breeders for the benefit of natural environments. It is advisable to improve the focus of the MAEC in order to support pastoral practices that are best suited to maintaining open environments that are rich in biodiversity, and in order to support more breeders in the area.

Maintenance of the French Compensatory Indemnity for Natural Handicaps (ICHN, the Areas with Natural Constraints measure in EU terminology) and livestock payments should also be defended in the framework of the next CAP and special attention needs to be paid to very small farms in the Cevennes, which are particularly penalised by the change in the method of calculating the ICHN.

Products and markets innovation

Products and markets - innovation needs	Possible approaches
The loss of collective facilities such as the Vigan slaughterhouse	Support from the State or local authorities preserves indispensable facilities such as mobile slaughter units, on-farm slaughter.
Develop direct distribution and sales.	Extend and publicise the Agrilocal distribution network.

Products and Markets Innovation Needs

The region has some collective equipment available for the slaughtering and processing of products (butchery facility, dairy, cheese-making) and each of these is an essential link in the region’s economic chain and brings added value to local produce. The Vigan slaughterhouse is currently closed but a breeders’ collective has been formed to try to take over the facility as has been done in other regions of France. However, if the project were not successful, other initiatives might be looked at such as a mobile slaughter unit or on-farm slaughter.

Several initiatives for direct distribution or sales have been developed by local structures. Special mention must be made of the Agrilocal digital platform managed by the Departments, which brings together producers and institutional catering purchasers for the inclusion of local products in catering. Several meetings will need to be held with the various stakeholders to raise awareness of the Agrilocal network.

Farm techniques and management innovation

Farm techniques and management - innovation needs	Possible approaches
Lack of research into the consequences of climate change	Research on the behaviour of semi-natural vegetation in the light of climate change, especially for rangeland and woods.

Farm Techniques and Management Innovation Needs

Climate change has an impact on semi-natural vegetation on the region’s rangelands and in woods but no scientific study focuses on the issue; the future evolution of these environments is unknown despite the fact that for many it is an essential food resource for flocks.

Innovations from outside the LA that could help address LA needs



Some innovations have been recorded outside our study region:

The **Domaine de Mirabeau** hopes to become an agro-ecological and social pole of excellence. A vineyard was created in 2017 and its first three employees have just been taken on in the framework of a programme of social integration.

Abattoirs managed by breeders as in the towns of Die and Guillestre where the breeders themselves slaughter their animals in the facility.

Shepherds' schools already exist, dedicated to training students to work with grazing flocks, whether they are in a transhumance programme or not. There are several schools in France, where the training is based on theoretical classes as well as internships on farms and summer pastures.

Innovation examples for which Causses and Cevennes is looking to other Member States

- **Greece:** GPS – Tracking for extensive livestock

- **Romania:** SMS Family farms of Romania

- **Abattoirs**

- Portugal: Project for the development of a mobile poultry processing unit
- Spain: Local small-scale slaughterhouse
- Sweden: Hälsingestindan a mobile abattoir

INNOVATION FICHES FROM FRANCE

Examples that will be presented in the fiches

- 1) Innovative regional procedures supported by elected representatives and local stakeholders
- 2) Collective approaches by breeders

France – innovation example 1)

Innovative regional procedures supported by elected representatives and local stakeholders:

Intercommunal Pastoral Agreement (Pacte Pastoral Intercommunal - PPI)

Land control and collective land management

- **HNV system:** a project instigated by breeders; extensive grazing and rangelands, specific grazing zones, pastoral usage, development and transmission of pastoralism.
- **Region:** Causses and Cevennes region.
- **Time scale:** 3 years for the PPI, 99 years for the civil law partnership *Terres du Larzac* and the Agricultural Land Groups - GFA (long-term lease signed in 1985).
- **Keys to success:** Territorial procedures based on a bottom-up approach and jointly constructed by regional stakeholders.



Problems addressed by this example

Access to land is a priority issue for maintaining pastoralism in the region, in particular for setting up young farmers. The mobilisation of breeders, with the support of local elected representatives, professional agricultural bodies and researchers has led to the establishment of a regional dynamic around pastoralism.

The story in a nutshell

The Intercommunal Pastoral Agreement (PPI) is a collective regional approach and a project jointly constructed by breeders, researchers and elected representatives. It has enabled the formalisation of local commitment to maintain and develop pastoral activity in the region and was adopted by a ruling of the Community of the Communes of Causses, Aigoual, Cevennes Terres Solidaires in 2015.

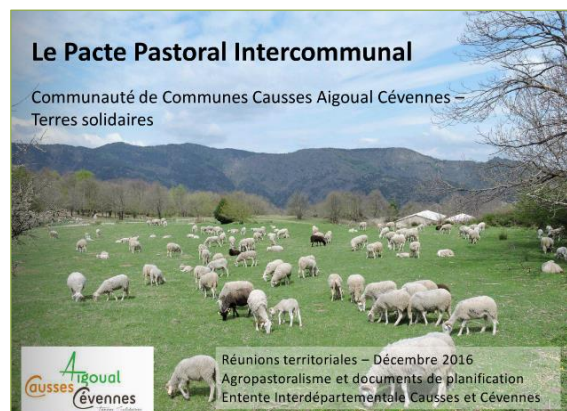
Pastoralism was declared as being of public interest and the principal measures of the Agreement are true legal innovations: grazing rights on all areas suitable for pastoral usage – a pastoral priority clause in all property transfers – specific pastoral zoning in planning policy documents.

Another innovative action in regional procedure relates to collective land management by private structures such as civil law societies. In the 1970s, in opposition to the plan to extend the Larzac military camp, farmers worked together to fight against expropriation of their lands. This led to the creation of 4 Agricultural Land Groups (*Groupements Fonciers Agricoles* - GFA) by Larzac activists in order to block State acquisitions; the 4 GFA were subsequently merged and became the Civil Law Partnership for Larzac Land Management (*Société Civile Gestion Foncière Agricole du Larzac* – SC GFA Larzac). In parallel, in 1984, the civil law partnership for Larzac Land (*Société Civile des Terres du Larzac* - SCTL) was created and signed a 99-year long-term lease with the French State, permitting the State to make Larzac land available to smallholders.

What do new territorial approaches achieve for HNV farming?

Intercommunal Pastoral Agreement :

- This resulted in a feasible action plan in 2016: to make pastoral land available; to ensure the continuation and revival of pastoral activities; organisation of the Agreement. Implementation is planned for 2017-2018.



Land control and collective land management:

- The SCTL manages 6,300 ha, 56 rural leases, 28 loans for usage and 11 hunting leases; creation of the Les Bois du Larzac association (The Larzac Woods association).
- The SC GFA Larzac: acquisition of over 1,400 ha for the installation of new smallholders.



The PPI resulted in March 2016 in a feasible 1-year action plan with 3 strategic priorities:

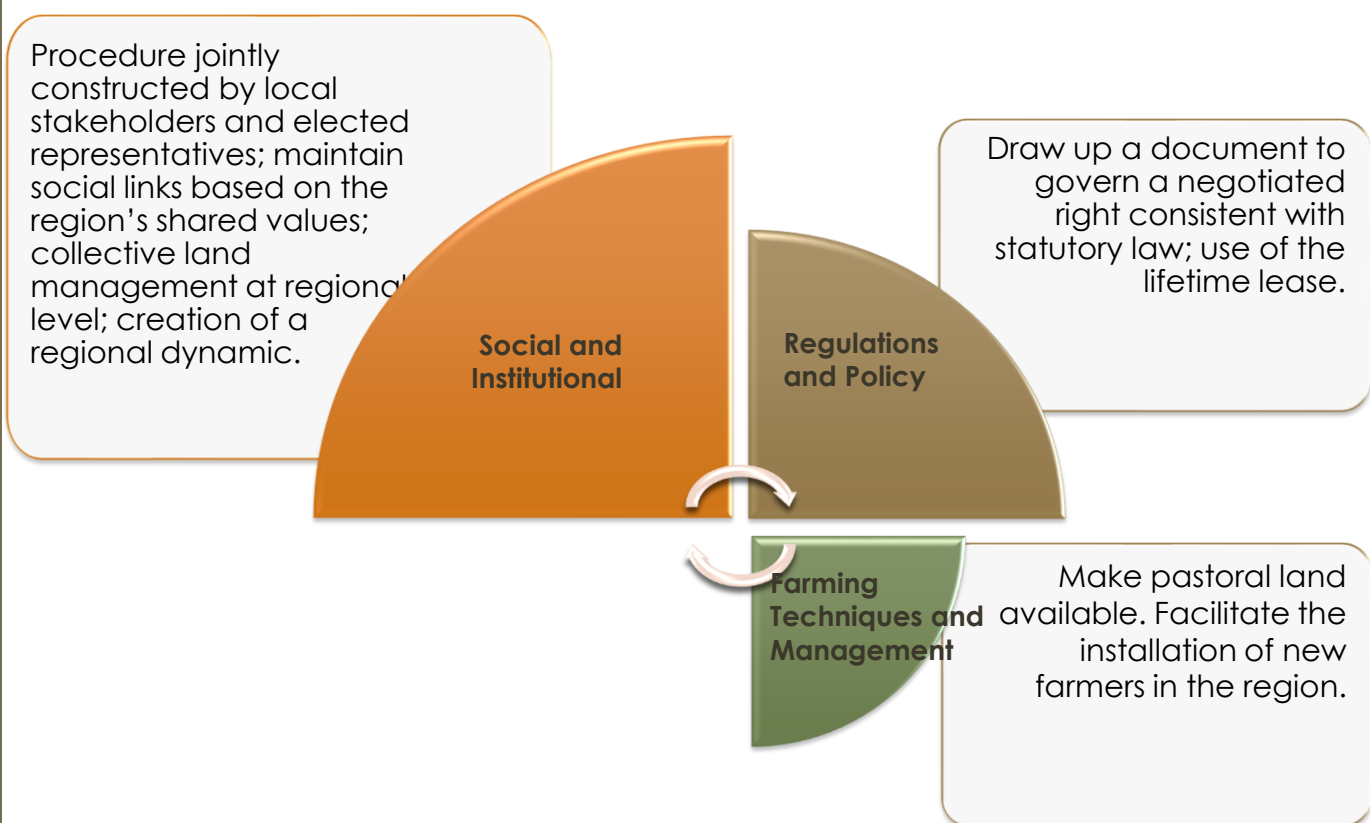
To make pastoral land available: support for local communities in drawing up their planning policy document and for maintenance and repair of the *drailles* (drove roads).

Ensure the continuation and revival of pastoral activities: support for a project for setting-up (installation) in an area of pastoral land recovery, secure the land through pastoral diagnostics, etc.

Implementing the Agreement: employment of an organiser to implement and monitor the programme during 2017-2018.

The SCTL decided to allow all its farming members to benefit from working-lifetime leases, long-term rural leases that guarantee farmers the right to remain on their farm until they reach retirement age, enabling them to invest more heavily than they would with a classic lease (for pens, fencing, drinking troughs, etc.). This led to 56 rural leases being drawn up. Additionally, loans for usage with buildings available for use by non-farmers were signed, as were hunting leases with communal hunting associations.

How do new territorial approaches respond to the HNV LINK innovation themes?



Social and institutional:

The PPI is a procedure that has been jointly constructed by breeders, researchers and elected representatives, also involving departmental, regional and national institutions. Working groups, public meetings and other encounters permitted the validation of the various successive versions of the Agreement which was finally adopted by a ruling of the combined communes in May 2015. Collective management of the land by the two land associations (SCTL and SC GFA Larzac) has permitted the creation of a genuine regional dynamic that fosters many other collective instruments in the Larzac: economic interest groups (GIE), farmers' markets, the *Marché Paysan* (smallholders' market) in Millau, the Larzac shepherds' cooperative (*Bergers du Larzac*). Outside the region another structure, the "*Association Terre de Liens*", also makes use of working-lifetime leases to support small farmers.

Legal and statutory:

The Agreement is not binding for third parties; it is an appendix to the planning document that is taken into consideration in public policies by the Gard Department, the Region and the State. The design of the Agreement is experimental and innovative and constitutes a "negotiated right" agreed by all the region's participating stakeholders. The SCTL has put in place lifetime leases for farmers. These are linked to the working life of the lessee for a minimum of 25 years, ending at the end of the growing year during which the lessee reaches retirement age. Land security for the lessee is guaranteed.

At the technical level:

The two tenure structures on the Larzac are dynamic instruments for land acquisition for setting up new smallholders and have enabled 20 more farmers to set up in the region.

The process that made it happen and critical factors for success

Intercommunal Pastoral Agreement

Procedure jointly constructed with regional stakeholders around a shared heritage.

Procedure adopted by local elected representatives and supported by the researchers.

Document taken into account in public policies by the Gard Department, the Region and the State.

Control and collective management of land

Mobilisation of smallholders in the Larzac has mobilized activists nationally.

Instruments that are suited to the specific context and to the region: land management structures, career leases.

Lessons learnt from this innovation example, and its potential replication

Intercommunal Pastoral Agreement

Create a methodology guide for the procedure and replicate it in other intercommunal regions. Form a small working group to raise the awareness of other intercommunal bodies.

Land control and collective land management

Collective land management is possible through a civil law partnership or an association such as *Terre de Liens* or a local community and can be replicated in other regions as a response to the problem of access to land and the installation of young farmers.

The goal is to create a methodology guide for the procedure and replicate it in other regions. The process of joint construction of the procedure with the support of researchers and elected representatives permits the project to be better taken on board and accepted by the local stakeholders who have been associated with it throughout working meetings and at public meetings.

A small working group will be set up to raise the awareness of other intercommunal bodies in the Causses and Cevennes region concerning the methodology for this innovative procedure.

Collective land management can also be put into practice by a local community. This has been done by a Commune on the Causse that owns land and took the opportunity to put in place a Natura 2000 contract with the support of the Grands Causses Regional Natural Park and other partners, in order to prepare parcels of grazing land and permit the installation of a herd of cattle in satisfactory economic conditions on a site of exceptional biological diversity.

Collective approaches by breeders

Location: Throughout France and in the Causses and Cevennes.

HNv system: All types of system. In the examples that are presented, mostly in pastoral systems.

Scale of operation: Large scale

Timespan: Depending on the individual projects, from several years (for studies) to several decades (SIQO, direct distribution)

Keys to success: Mainly the involvement of breeders and their basic willingness to take action plus, in second place, mobilisation of funding and communication about the projects



Problems addressed by this example

Collective approaches by breeders correspond to needs that have been identified by the breeders themselves: the need for improved enhancement of their products; the desire to improve their practices; the wish to create social links and to create added value on their farms; the need for recognition of their practices. There are a variety of difficulties but the assessment is often the same: working collectively enables the delivery of projects that a breeder cannot carry out alone.

Story in a nutshell

The breeders' collective approaches combine several categories of example which have become fairly current in France over a number of years:

- Product quality: Official labels identifying quality and origin (*Signes Officiels de Qualité et de l'Origine* - SIQO) and brands;
- Product enhancement: direct distribution, farm shops, Agrilocal distribution network;
- Organisation of the sector: local slaughterhouses, achieving dispensation for oak and chestnut woods in CAP areas;
- Improved agricultural practices: the Robustagno Operational Group, an Economic and Environmental Interest Group (*Groupeement d'Intérêt Economique et Environnemental* - GIEE).

What do collective approaches by breeders achieve for HNV farming?

- Collective approaches by breeders have existed in the region for a very long time, almost 100 years for the Roquefort AOP (*Appellation d'Origine Protégée* label indicating origin) but some are very recent (for example, the GIEEs)
- 2 IGP (*Indication Géographique Protégée* label indicating protected geographic origin) – 2 AOP – 1 Label Rouge (Red Label quality mark) – 2 brands
- **Collective direct distribution:** *Boutiques Paysannes* (Farm shops), *Bienvenue à la Ferme* (Welcome to the Farm), *Agrilocal*
- **Collective approaches for sector organisation:** slaughterhouses have been taken over by breeders in the towns of Die and Guillestre (Outside the LA)
- **Approaches linked to practices:** the Robustagno operational group (GO), GIEE (22 in the 4 regional Departments)



Boutique paysanne in Ganges

Achievements

The SIQO quality labels have been remarkably successful throughout France for the commercial recognition they convey. Consumers perceive them as a guarantee of quality. Direct distribution is increasingly popular with consumers who prefer a direct link with producers.

The slaughterhouses that have been taken over by breeders outside the LA are still in operation and one has even increased its tonnages.

The GIEEs and the GO enable breeders to reconsider their practices and there is a significant pool of breeders who are motivated to work within these groups.

Economics of HNV farming

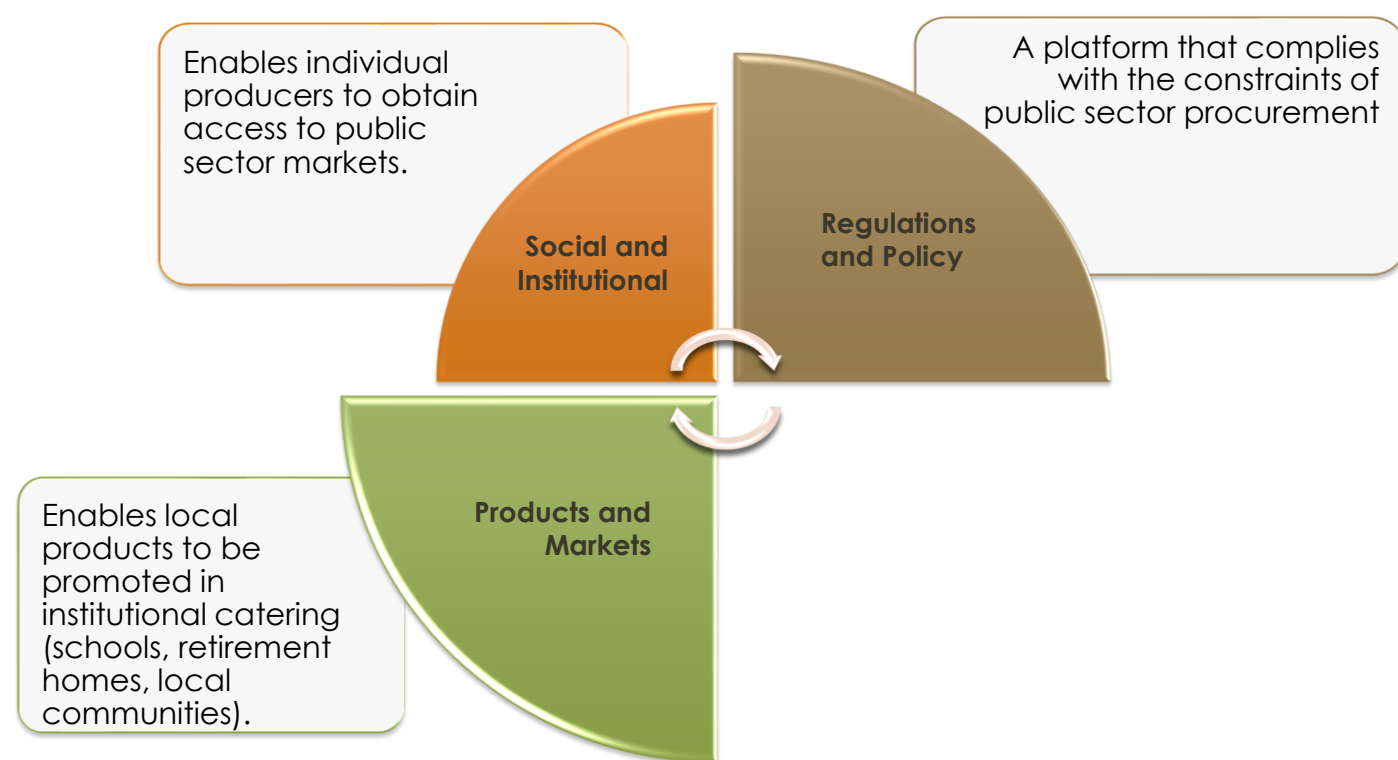
The principal and secondary objectives of most of the collective approaches of the breeders are to improve the added value of farm products and so improve profitability on the farm (but we have no exact figures for this).

Maintaining or improving HNV values

The approaches are linked to extensive systems using local resources and so support for this type of farming permits the continuation of forms of HNV farming in the region. However, certain initiatives, such as the SALSA project, have a clear agro-ecological objective.

How does collective approaches by breeders respond to the HNV LINK innovation themes?

Example : Agrilocal distribution platform



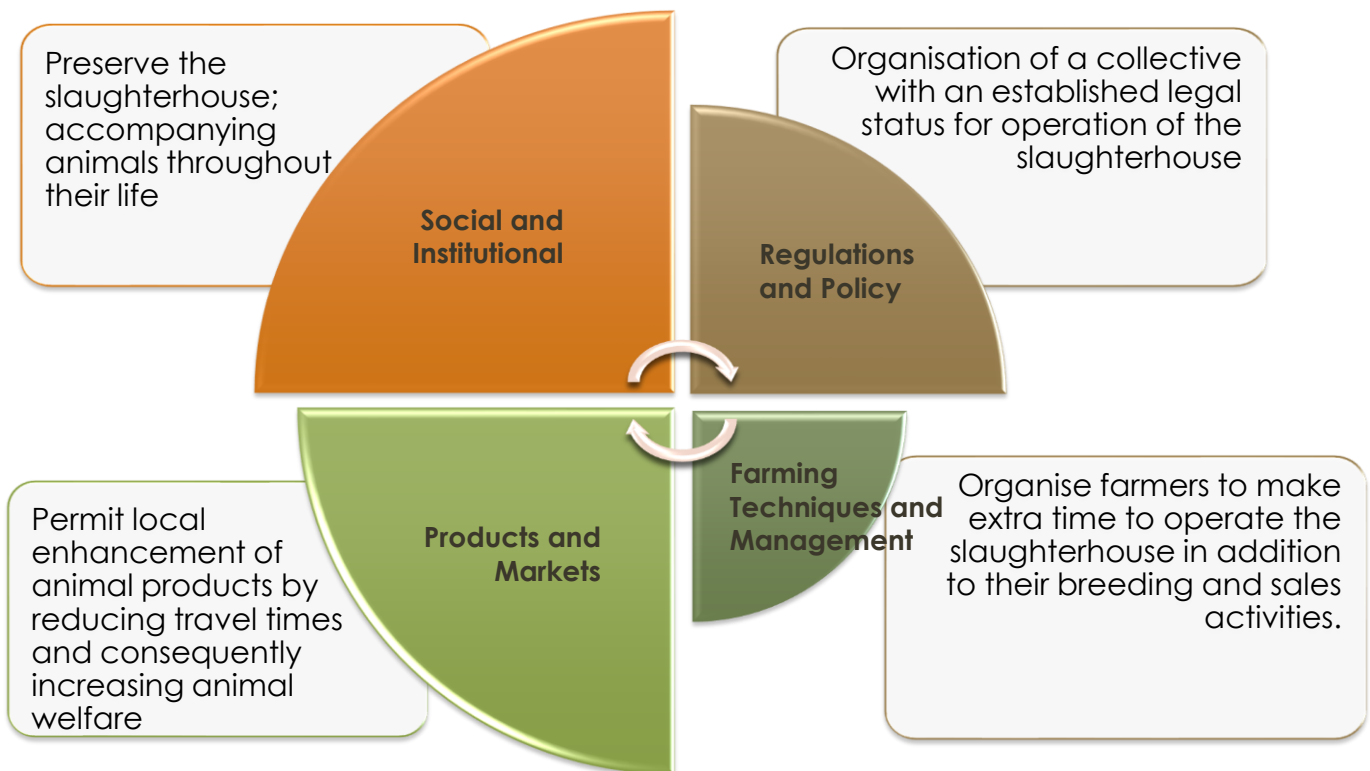
Agrilocal is a platform that brings together suppliers of local products (farmers, food professionals, local shops) and institutional catering purchasers (schools, retirement homes, etc.) in a simple, direct and instant relationship that ensures respect for the public procurement code (*Code des Marchés Publics*). The concept was developed in 2011 by the Puy de Dome and Drome departments and was then extended to the Lozere and Herault departments in particular.

This approach permits promotion of agricultural produce via direct distribution, providing added value to the products and additional income for farmers, as well as developing the principles of “eating well” and “eating local food” within institutional catering.

The approach is particularly innovative regarding produce and markets and the regulatory framework but also, to a lesser extent, with respect to social and institutional aspects. On the other hand, for the time being it does not involve changes in farming practices (other than with respect to the requirements for organically farmed produce).

How does collective approaches by breeders respond to the HNV LINK innovation themes?

Example : Slaughterhouses managed by breeders (outside the LA)



The breeders form a collective in order to take over a slaughterhouse that has been closed or that is threatened with closure and they organise themselves to be able to operate it and participate in the work of slaughtering. Several small local slaughterhouses have been saved in this way by breeders in France. A collective was created and a project mounted to take over the slaughterhouse which closed down in 2017 in Vigan, in the research region.

Such local slaughterhouses are small but they are essential for breeders in isolated mountain areas, particularly for direct distribution sales that not only bring improved value to products but also create social links with consumers.

This is a social and institutional innovation since the breeders' collective permits preservation of the slaughterhouse and the associated economic activities (direct sales from the farm, selling at markets, festival barbecues, tasting sessions, etc.). The creation of a collective and its operation requires a great deal of commitment and goodwill on the part of the breeders. It is also an innovation for their products to be sold through direct distribution. It additionally needs a legal structure that satisfies certain requirements to make the takeover operation possible. For breeders to be available to operate the slaughterhouse means they must organise themselves individually on their farms in order to generate spare time for the work.

The process that made it happen and critical factors for success

The main keys to success:

- The **motivation and mobilisation of the breeders** who make up the collective;
- **Support of the collective** from suitable, competent structures and people;
- **Public policy and funding** support.

Breeders in the Raiolaine collective –
Source www.raiolaine.org



Breeders in the collective Aubrac farm meat – source www.boeuffermieraubrac.fr



The innovations described here are based on the breeders' willingness to form a collective in response to a difficult situation. Their approach is supported by technicians, project managers, organisers, funding bodies, etc. It is frequently necessary to form a legally established structure with a Chairperson to make decisions with the support of a supervisory board. In France the agricultural world is highly structured and it is unusual for a farmer not to belong to at least one collective or other structure.

For the Pelardon AOP, a core group of breeders formed the *Association de Défense du Pélardon*, an association for the protection of Pelardon goat's cheese through the attribution of an AOP label guaranteeing the origin of the cheese. Following the award of the AOP label in 2001, the Association became the *Syndicat des Producteurs de Pélardon*, (Union of Pelardon Producers) and acts as the body that controls the cheese-making specifications. Through the *Syndicat des Producteurs de Pélardon* the collective is able to employ a technician to investigate funding, partnerships, ensure communication about the product and provide technical support to the breeders. Training the collective enables the acquisition of resources and permits action to be taken that would normally be completely beyond the scope of a single farmer. Collectives are a strength.

Funding can be European, national, regional, local and/or private depending on the situation.

The principal risks for collectives are misunderstandings within the collective that could lead to its dissolution or to the exclusion of specific people from the collective as well as the lack of funding of the organisation since, if it is not organised, a collective is no longer effective.

Lessons learnt from this innovation example, and its potential replication

► Collective approaches by breeders:

- Can be replicated
- Are adaptable
- Are increasingly agro-ecological

But they must continue to evolve.

Organisation as a collective is a strength and can easily be replicated elsewhere on condition that there is a legal framework that permits this to happen, in other words to be able to form an association, a union, a civil law partnership, a cooperative, etc.

Almost all the initiatives may be replicated by adapting the rules and their conditions of implementation and the AOP procedure is fairly easy to reproduce (even though preparing the application is tedious and it takes a long time to be processed), as is setting up a smallholders' shop (Boutique Paysanne) or the validation of a GIEE. Whilst the problems for breeders are evident, (they should be motivated and committed and be supported by competent people), they can achieve nearly all these projects. Nevertheless, some projects may fail because of funding, regulatory or societal obstacles. A collective must therefore work with regional bodies and communities as well as with Civil Society to mount projects.

Breeders must constantly regroup and create collectives based on new themes in order to maintain the dynamics of the region.

Collectives are increasingly created with clearly stated agro-ecological objectives (for example the GIEEs).

People interviewed

- **AUBRON Claire** – Supagro, teacher researcher
- **BARRIERE Olivier** – IRD, researcher
- **BOUVIER Laurence** - Reconquest farm in Montbrun, farmer
- **BUCHERT Julien** – Cevennes National Park – Agropastoralism project manager
- **BUSSIÈRE Jérôme** - Grands Causses Regional Natural Park – project manager
- **DUCROS Julie** - Raïolaine – technician
- **FIOLLET Martine** – Association of Raïoles, Caussenarde of Garrigues, Rouge of Roussillon sheep breed and breeder
- **GRESSIER Estelle** – Association of Veterinaries and breeders in Millauvois (AVEM), technician
- **HUBY Sophie** – Coop de France, Sheep sector project manager
- **LAUNEY Fabienne** – IDELE, researcher
- **MICHEL Jean-Luc**, Town Hall of Montbrun, mayor
- **PICHEREAU Frédéric** manager and **LIQUIÈRE Bruno**, technician – Confédération Roquefort
- **PODEUR Cécile** – AOP Pélardon, technician and animator
- **RICEZ Ghislaine, ALVERGNAS Chantal, GREFFIER Damien** - Civil Society of the Larzac Region
- **VALETTE Christine** – Civil Society GFA Larzac, employee
- **VALLEIX Laurette** – Cevennes National Park– Agri-environmental technician
- **ZINGSSTAG Georges**, breeder

Links and references

- www.inao.gouv.fr
- www.agriculture.gouv.fr/systemes-agro-ecologiques-laitiers-du-sud-aveyron-salsa
- www.agriculture.gouv.fr/les-groupements-dinteret-economique-et-environnemental-giee
- www.supagro.fr/capeye
- <http://blogs.parc-du-vercors.fr/alimentation-sante-territoire/les-acteurs-et-experiences-du-monde-agricole/l-abattoir-de-die.html>
- www.boutiquespaysannes.fr
- www.agriculture.gouv.fr/pac-surfaces-pastorales-prorata/IMG/pdf/Guide_national_-_metropole_cle4c5818.pdf
- www.avem12.org
- www.scopela.fr
- www.paturajuste.fr
- www.idele.fr
- www.allier.chambagri.fr/fileadmin/documents_ca03/juridiques/Les_baux_a_long_terme.pdf
- www.franceinter.fr/emissions/comme-un-bruit-qui-court/comme-un-bruit-qui-court-28-mai-2016
- www.agriculturepaysanne.org/files/1306-LMH-article-financy-abattoirs.pdf
- www.lejsl.com/edition-autun/2016/09/26/le-premier-abattoir-mobile-de-france
- www.roquefort.fr/informations-utiles/interprofession
- www.caussesaignoualcevennes.fr/connaitre-communes
- 2017. *Domaine de Mirabeau: création d'un pôle d'excellence agroécologique et sociale.* Investissement d'avenir, Sites pilotes pour la reconquête de la biodiversité. Note synthétique.



Learning Area “Mountains of Thessalia” (Greece)

INNOVATION EXPERIENCES AND NEEDS

Contribution to deliverable D2.6.1

Date: October 2017

Authors: Goussios Dimitris, Anthopoulou Theodossia,
Faraslis Ioannis, Gaki Dimitra, Triantou Labrini, Vlahos
George



This project has received funding from the European Union Horizon 2020 research and innovations program under Grant Agreement No. 696391

This report represents the views of the authors. The Research Executive Agency is not responsible for any use that may be made of the information it contains

Introduction and contents

This report looks at innovation that supports HNV farming in **LA Thessalia**, 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 **Greece** that could usefully be transferred to address challenges in the LA.

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

Contents

Slide 2: Introduction and contents

Slide 3: The challenges facing HNV farming in LA Thessalia

Slide 4: Overview of innovation in LA Thessalia

Slide 6: Innovation examples in LA Thessalia: what are their strengths and weaknesses for HNV farming?

Slide 7-10: What are the main innovation needs in LA Thessalia, and how could they be addressed?

Slide 11: Innovations from outside the LA that could help address LA needs

Slide 12: Innovation examples for which LA Thessalia is looking to other Member States

Slide 13: Innovation fiches from Greece

Slide 14-21: Greece – innovation (1) _ Terra Thessalia, a territorial cluster for dairy products of pastoral livestock

Slide 22-29: Greece – innovation (2) _ Participatory Guarantee System

Slide 30-34: Greece – innovation (3) _ Public participation and consultation 3D-Mapping tools

Slide 35-39: Greece – innovation (4) _ GPS-Tracking to monitoring and certification of extensive livestock-farming

The challenges facing HNV farming in LA Thessalia

- Recovery dynamics of upland LA supplied by the lowland communities (diaspora*).
- Management of the significant HNVF potential and renewal of its human resources
- Interest shown by policies and consumers for HNVF of mountainous areas
- Disorganization trends of the inherited communal systems for the management of natural resources
- Acquiring capacity from LA to coordinate :
 - ✓ the participatory planning for the balanced recovery of the LA's area
 - ✓ actions to preserve HNVf and enhance the viability of farm units
 - ✓ highlighting the value of HNVf's products and recognition from quality markets

** Diaspora referring to 3 scales: international, within the county , regional*

Challenges facing HNV livestock farming in La Thessalia

LA has a great tradition in pastoral-permanent and transhumant- livestock as well as in small HNV agricultural holding (polyculture). Despite the rural exodus and its reduction, this potential is still remarkable.

Within this framework the prospects to support HNVf are connected to:

- a. the latest reinforcement and renewal of human resources due to the crisis, through the presence and establishment of new farmers from the communities of the diaspora who choose to adopt such systems,
- b. communities' capacity due to the presence of the diaspora and its participation in the development of agritouristic activities,
- c. the turn of consumers towards quality and identity products.

Therefore, the main challenge for the LA is to acquire the capacity, through new cooperation and coordination forms (governance), to design and implement the balanced recovery of the area as multifunctional and HNV area, utilizing the will of some people to establish there permanently, the return of new farmers and entrepreneurs, new policies, consumers' interest. Utilizing the area's HNV character requires the ability to plan and implement actions that will preserve the HNV character of the production systems (emphasizing the planning of land use and pasture management at the scale of the holding, the community and the LA) combined with the promotion of their products in the markets.

Overview of innovation in LA Thessalia

❖ General innovation deficit

- lack of an integrated policy for the mountainous areas
- non specific orientation of the RDP towards HNVF in the LA
- lack of an innovation pole in the Region of Thessaly

❖ Innovations in the LA:

- Transition from private to collective innovative initiatives in the areas of:
 - ✓ *cooperation (creation of new social bodies)*
 - ✓ *coordinating multi-stakeholder cooperation (Municipalities networking, Cluster)*
 - ✓ *utilizing the multifunctionality of the space (HNVF and rural tourism)*
 - ✓ *PDO products and new guarantee systems for HNVf products,*
 - ✓ *diagnosis and participatory planning methods and tools*
- These innovations build a favorable environment for more innovations

Is there a lot of innovation, or not much?

A small number of innovative initiatives are being recorded. These concern: a) the form and the way Development Agencies are functioning (ANKA and KENAKAP), b) adopting new flexible cooperation forms (women's cooperatives, social economy) based on the new institutional framework, c) improvements at the level of the holding (milking machines), d) initiatives to increase the value and promote local products and services such as small festivals for agricultural products, PGIs and PDOs (feta, Agra cheese, wine) and e) complex coordination initiatives of multi-stakeholder cooperation such as local quality agreement and a cluster in agritourism and the dairy sector,

Is there an overall, integrated project to support HNV farming in the area?

Recently, HNV-Link project launched an initiative to design an integrated HNVF support programme under the auspices of Pindus Network, run by the Municipalities of the LA, responding in this way to the lack of an integrated policy for the mountainous areas and HNVF. The initiative utilizes multi-stakeholding (diaspora, producers and agritourism entrepreneurs), the multifunctionality of LA's space and the dynamics of settling new farmers and developing agritouristic activities in order to coordinate partnerships that aim at the preservation and management of LA's HNVf.

Are there social and institutional innovations, or just individual examples of actions e.g. single farms?

Social and institutional innovation in the area is considered: the creation of Development Agencies, "PINDOS" network created by the Municipalities of the LA, Terra Thessalia Cluster and the new functions undertaken by LEADER groups and individuals within the framework of these collective initiatives.

By utilizing LEADER programmes and RDP, individual innovation actions have been developed in two levels: a) **collective**: Social Cooperative Enterprises (CSEs), local quality agreements, events for HNV products etc. and b) **individual**: in the level of the holding and the business (milking machines, small machinery, sites for the promotion of farm products etc.) through funding aiming at their sustainability (improvement plans, processing, promotion, agritourism etc.).

How do the existing innovations fit under our 4 themes ?

The search for specific elements in order to support competitiveness imposes the need to promote the value of HNMF and biodiversity by leading part of the research and innovation towards this direction.

- In the category “Social and institutional”, the new organization forms for producers and entrepreneurs (SCEs, PLC, cooperatives etc.), favoured by the new institutional framework, contribute to the creation of circumstances and conditions (trust building, improvement of social capital) for the creation of multi-stakeholder cooperation (governance). These partnerships expand the functions of the local social system, they use education and seek the actor's active participation in multi-objective interventions that incorporate HNMF management.
- In the category "Regulatory Framework" innovation deficits are linked to the non-activation of the measures 1, 2, 7, 8, 16 of the RDP concerning conservation and biodiversity improvement, Natura 2000 areas, landscapes etc. Terra Thessalia has submitted suggestions for the change and completion of some regulations (raw milk). The regulatory framework for GI products has been utilized in the case of the following PDO products : feta and Kasserli, Graviera of Agrafa, Meteora wine and Mesenikolas black wine.
- In the category “Products and Markets” innovations (LA and country) cover: a/ GI products, b/ development of short chains aiming at the diaspora and consumers' cooperatives as loyal product markets (alternative markets), c/ research for quality markets-Terra Thessalia is already trying it-utilizing new cooperation forms, new tools, local Leaders etc.
- In the category: “Farm techniques and management” progress/diffusion of innovation is limited due to the frail connection between the scientific and production community. The main innovation is the development and integration of methods and technological tools in the participatory procedures : a) for the management of land use and b) the support of practices and techniques on grazing management of pastoral herds, creating sustainability conditions (economical and environmental) for the managed resources (pastures, waters, forage production...).

Is innovation increasing or stagnated?

There is a slow but steady reinforcement of innovation, with its main characteristic being a turn towards more collective initiatives supported by Development Agencies and university research laboratories through the implementation of large and targeted European programmes (LIFE, ENPI MED, HORIZON etc.) on issues around environmental protection, introduction of organizational innovation and technological tools.

Innovation examples in LA Thessalia: what are their strengths and weaknesses for HNV farming?

- Territorial Cluster “Terra Thessalia”: cooperation of small dairy territories aiming at increasing the added value of dairy products focusing on the specificities of pastoral holdings



- Participatory Guarantee System (PGS): control and guarantee tool for the HNV specifications of the HNV holdings



- GPS tracking: tracking tool of the grazing system



- Consultation tools: 3D Mapping tools in Public participation procedures



Strengths

- They approach and cover the organization and operation spectrum of HNV holdings (upstream) and their place in the local and regional dairy chain (downstream),
- They contribute with diagnosis methods and tools to the producers' active participation in consultations, planning and implementation of management plans for natural resources
- They facilitate interdisciplinary and corporate cooperation creating groups that include producers, researchers, technicians and representatives of the territory and all the links of the value chain
- They contribute to the densification of focused meetings and regular consultation procedures
- They contribute to the development and continuous enrichment of a territorial marketing for the promotion of products produced by HNVF
- PGS favors and continuously creates new research and evaluation fields associated with HNVF (specific resource components, endemic plants, their nutritional value, grazing systems)
- They make the area a laboratory of interdisciplinary approach for the problems and osmosis of traditional and new research knowledge
- They can be implemented with a low cost in every scale: LA, community and holding
- The innovative initiatives are relatively recent and oriented towards the support of HNVf

Weaknesses

- Their implementation requires specialized support groups (technicians, facilitators, researchers)
- Cluster's development depends on the success of marketing and the sale of products
- Their expansion and coverage of more holdings, particularly the new ones, is affected by the lack of strong professional and multi-stakeholder partnerships
- There is a need to constantly adapt technological tools

What are the main innovation needs in LA Thessaly, and how could they be addressed?

Social and institutional innovation

Social and institutional - innovation needs	Possible approaches
Lack of experience in the operation of multi-holding cooperation and coordination forms (governance) that integrate HNVf	Utilization of LA's multi-holding and institutional framework of decentralization and RDP, transfer of experience from other countries
Lack of a support structure for a long-term HNV "animation" project for the LA	Organization of a Coordination Center (Development Agencies, university and technical institution laboratories etc)
Organization of local groups for the management of land use and natural resources (HNVf, Natura 2000, rural tourism) at the scale of the community and the Municipality	Local assembly of producers, entrepreneurs, the Diaspora, representatives of the community Networking new farmers is a driving force for the support of LA's HNVf
Reinforcement of producers and actors participation in planning and management procedures concerning land use, pastures and biodiversity	Development of interactive spatial tools to support procedures of consultation, decision making, preparation and implementation of management plans

Need for a social and institutional innovation

1. Supporting the involvement of local actors in an innovative governance structure focused on HNVf

The experience related to LA's HNVf is linked to the implementation of various actions under EU programmes. Today, the stabilization of livestock population and the dynamics of the multifunctionality of LA's space require a new integrated intervention. The purpose of this integration will be the coordination of building new forms of land use management at the community, Municipality and LA scales, and also the active participation of local societies (producers, entrepreneurs, diaspora, elected).

2. Ensuring an animation and coordination structure of the HNV actions by utilizing local support bodies and by securing continuous presence, knowledge transfer and support of the producers for their active participation in diagnosis, planning and decision making.

There is a strong need to support the orientation of new farmers towards HNVF and the production of local products that the authorities do not support. Development Agency of Karditsa has developed a support ecosystem but will have to adjust it to the needs of HNVf. Experience is offered by the support structure organized by Terra Thessalia, based on the cooperation of local and regional support bodies.

3. Active participation of local actors (farmers, diaspora, residents, associations etc.) and competent bodies in processing and implementation procedures of land use and natural resources management in the scale of the community

Rural exodus and the reduction of agricultural activities have led to the disorganization of the local landuse management systems, a gap covered by competent services (Forestry, Agriculture etc.). There is the need to organize local society and producers at the scale of the community and the Municipality, claiming their re-participation in landuse and resources management (pastures, forest extension, utilization of parcels that belong to the diaspora, access to abandoned agricultural zones for which there is an interest for agricultural use, management of the relationship production-biodiversity) by activating the planning tools available to the authorities.

4. Ensuring new tools that will support actors' participation in the management of the relationship HNVf-biodiversity. Development of a specialized educational procedure for the learning and use of tools.

The effectiveness of these cooperation forms requires the reinforcement of applied research, the establishment of a multidisciplinary and technical support group for training and implementation.

Regulatory framework innovation

Regulatory framework - innovation needs	Possible approaches
Recognition of the LA as HNV area	A procedure that PINDOS network will promote through the activation of the 7.1 measure of RDP
Utilization of RDP measures to support the HNV agro-pastoral farming systems and biodiversity	Combination of the planning tools offered by the new extended Municipality and the competent Ministries (Spatial Plans, Pasture Management Plans, terroirs, habitats...)
Enhancement of the HNVf dimension of the guarantee systems within the LA	Enrichment of HNVf criteria and indicators and their integration in PGS Compatibility and connection with the national certification systems
Lifting the ban for the production of cheese with raw milk	Scientific documentation and monitoring of the animal control and ripening period of the product with the active participation of producers

Regulatory Framework Innovation Needs

LA's recognition as HNV area will contribute to sustainable development and the increase of the value of products and services. Mobilization and commitment of all the bodies and actors is required in order to secure a) the management of HNVf from local actors themselves and b) the guarantee of the connection between HNV characteristics and local products (action plan, documentation, tools).

Biodiversity measures of RDP are considered to be a secondary priority by Authorities due to the economic crisis, among other things, and thus they remain deactivated. Therefore, the intervention of PINDOS network-initiated by the Municipalities of the LA-for the activation of the 7.6 RDP measure is of strategic importance. It will enhance the organizational and technical capacity of the LA in order to implement an integrated action plan for the utilization of measures and funding from the first pillar and RDP on pastures and biodiversity. The effectiveness of this intervention will depend on the utilization of the national institutional framework related to the preparation and implementation of the required management plans as well as the general support of HNVf through LA's local structures.

There is a need to a) better integrate HNVf aspects in the bottom-up participatory product guarantee systems for the better emergence of its relationship with the products they produce and b) adjust and complement the institutional framework of the existing certification systems operating at national and regional scale in order to combine them with local guarantee systems.

Removing the obstacles for dairy products with raw milk in Greece and the LA is of strategic importance (i.e. increase in the international demand for these products). The obstacles are (1) animal diseases and their transmission through grazing and (2) the opposition of big industries. However, surveys confirm that respecting the traditional ripening period makes the product safe without the need to pasteurize it. The whole procedure requires innovative solutions for the control of the herds and the exclusion of the infected ones during grazing for the acceptance of the change in the relevant regulatory framework.

Products and markets innovation

Products and markets - innovation needs	Possible approaches
Strengthening the ability of the Value Chains to support and promote the product-HNVf relationship and their ties with the LA	Territorial development and territorial resources approach. Strengthening the monitoring role and promotion of the Participatory Guarantee Systems
Creation of an HNV place of origin Label for the goods and services that are offered	Combined exploitation of LA's recognition as HNV and the experience of Terra Thessalia (Participatory Guarantee System)
Development of a territorial Marketing that will incorporate the HNV characteristics of the LA's holdings	Navigation tool for the consumer in the relational route: product-production system- biodiversity
Utilization of local, regional and national markets and also direct sales from farms through territorial marketing	Utilization of Terra Thessalia's experience, the Diaspora, sale points, Delicatessen, alternative solidarity markets, consumer cooperatives etc.)

Products and Markets Innovation Needs

The objective to support HNV holdings through recognition of their products' value by consumers faces the competitiveness of the products coming from the intensive agricultural model of production and a promotion-advertizing which often misleads consumers. There is therefore a need for a different and innovative effort for the promotion of the wealth and HNVF values and the search for a more effective way of meeting and informing consumers. The effort must be assumed by each value chain through "territorial marketing", the development of which is based on the ability of local actors to guarantee with their own means and procedures (PGS) the connection of their products with HNVF.

The basic principle for the development of a new "territorial" marketing for HNV areas and their production systems is to promote not only the product but especially the place and the production method of the products and services they offer to consumers. So the successful promotion of locally produced products to consumers (diaspora) and faithful markets like the No Middlemen market, Consumer Cooperatives) requires: a) the development of GPS in order to demonstrate in a documented way the links of these products and services with the production place and the HNVf (e.g. pastoral sheep and goat breeding, environment and biodiversity protection etc.) and b) the active participation of the directly involved actors.

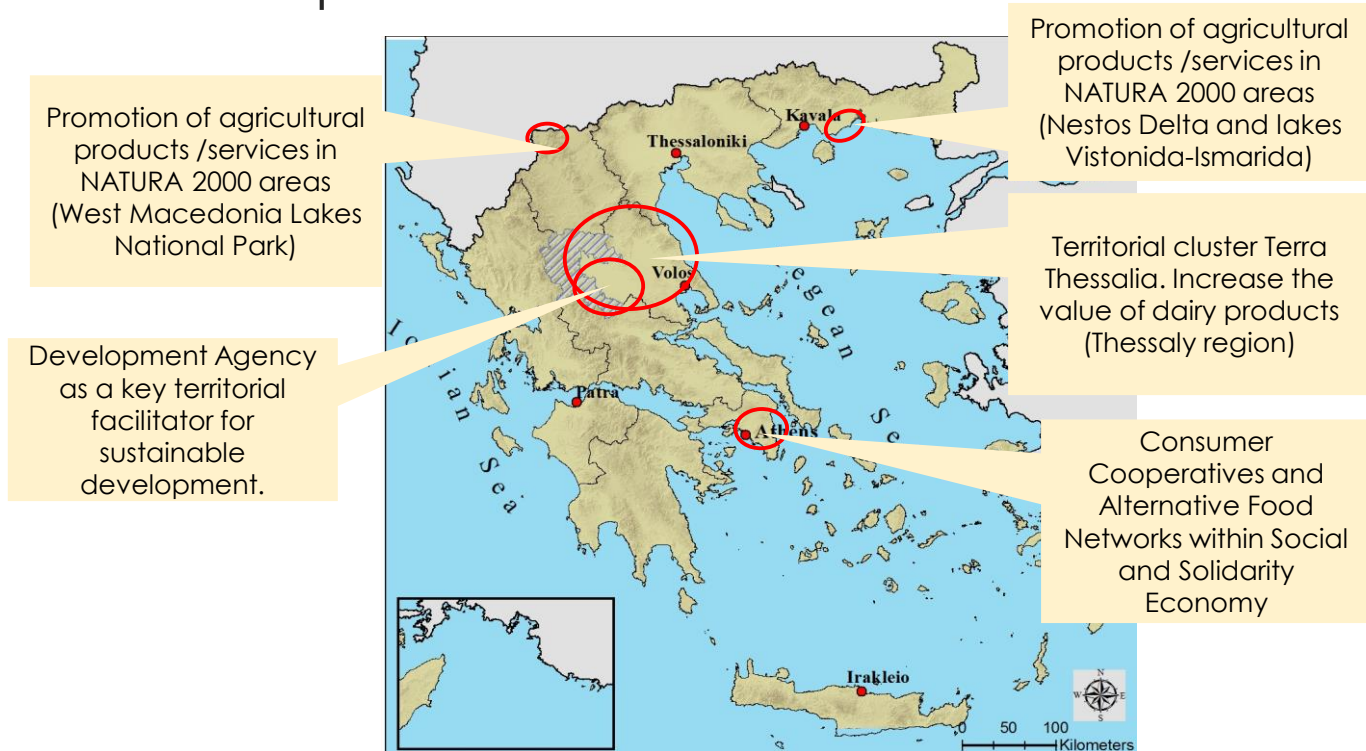
Farm techniques and management innovation

Farm techniques and management - innovation needs	Possible approaches
Research for the improvement of the HNVf operation and the contribution of biodiversity in its productivity	Transformation of the LA into a research laboratory in cooperation with research groups and osmosis of research with inherited knowledge (grazing practices etc.)
Access to the technology and necessary HNVF diagnosis, management and monitoring devices and their relationship with biodiversity (land use, pastures, ecological corridor etc.)	Adaptation and integration of technological tools into an integrated methodology for the planning/ implementation of management actions at the scale of the holding and the community Creation of learning processes

Both the advisory system and research, during the last decades were oriented towards the support of the intensive agricultural model. Nowadays it is necessary that they turn more intensively and coordinated towards HNVF, focusing on the internal organization and operation of farm units and their relationship with the natural environment. In this respect, LA, supported by the cooperation and coordination structures and the HNV holdings as well, can become an interdisciplinary research and implementation laboratory that will attract specialized research laboratories, funded by RDP and other national and European programmes..

This research needs to contribute to the emergence of the biodiversity-HNVF relationship and the assessment of biodiversity’s contribution to HNVf productivity. At the same time, for the needs of both research and the implementation of its results, an integrated methodology should be developed - a guide to better organize and monitor the systems and grazing practices, guaranteeing at the same time the pastoral character of sheep and goat breeding and the HNV character of agricultural holding generally.

Innovations from outside the LA that could help address LA needs



- Development Agency: the case of Development Agency of Karditsa – Thessalia
- Consumer Cooperatives and AFNs (Alternative Food Networks) within Social and Solidarity Economy newly emerged in Greece amidst economic crisis: Metropolitan Area of Athens
- Territorial cluster: Terra Thessalia, to increase the value of dairy products (Thessalia)
- Certification schemes aiming at the promotion of agricultural products produced and services provided in NATURA 2000 areas : two Natura 2000 areas in Northern Greece:
 - Prespa area and Nestos Delta and
 - West Macedonia Lakes

Innovation examples for which LA Thessalia is looking to other Member States

- Structures and support tools
- Institutional and regulatory framework on land use
- Biodiversity conservation plans (grazing)
- Promotion of HNVF products
- Support of HNVF by social actors (communities, consumer cooperatives)

Structures and support tools

- Assistance and technical advice for breeders (Life+ Mil'Ouv)
- Local Management and support Structure
- Montado monitoring system

Institutional and regulatory framework on land use (pastures)

- Creation of governance for the management of the Causses and Cévennes Site
- Dartmoor Commoners Council & Scottish common grazings governance
- Collective approaches which allowed the maintenance of pastoral activities: «Pasture Groups » and «Pasture land associations »
- Inter-municipal pastoral pact
- Facilitation of collaborative land use management (FOCLUM)

Biodiversity conservation plans with grazing practices

- Integrated management plan for the Easter Hills of Cluj (Natura 2000 site)
- Agri-environmental measures & Results-based payments system

Promotion of HNV products

- website Caprites - internet marketing of local-breed products
- Quebrantahuesos & DeYerba internet sales of grassfed products
- Improved marketing strategy and tools for farmers to access markets
- Slow Food Pelješac: fostering HNV products and practices
- Economic association Naturbeteskött (Natural grazing meat)

Support of HNVF by social bodies (communities, consumer cooperatives)

- CSA Community supported agriculture & CSA El Berenjenal CSA group

INNOVATION FICHES FROM GREECE

Strategic innovation : utilization of HNVf within sectors with the active participation of LA's producers and actors

1. Terra Thessalia – a territorial cluster

- Cooperation and coordination forms

2. Participatory Guarantee System (PGS)

- obligations monitoring of every holding
- guarantee of the close relationship between goods and services, HNVF and production area

3. Public participation and consultation 3D-Mapping tools

- Diagnostic and participatory planning tools

4. GPS Tracking

- Monitoring and certification of extensive livestock-farming

The presented innovation examples were developed in Thessaly and the LA under the initiative of research laboratories with contributions from local development agencies and bodies, and were funded by EU programmes (Novagrimed, Lactimed, Horizon 2020). This intervention is part of a strategy to promote the sustainable development of HNV mountainous areas and its objective is to strengthen the organizational and operational capacity of local actors and HNVf producers to manage and use their territorial resources.

The 1st concerns the creation of Terra Thessalia "Territorial Cluster", based on the idea that the recognition by consumers of the value of products and services offered by HNV holdings is key to their future. It builds new forms of cooperation and coordination, combining multifunctionality, multi-holding and socio-institutional specificities (role of the diaspora, dynamic coexistence of formal rules and informal standards).

The 2nd concerns the development of a Territorial Participatory Guarantee System that allows local actors to organize their own ways of controlling and transparently guaranteeing HNVf specifications, supplementing the certification systems by third parties and feeding at the same time the content of a territorial marketing that promotes the close relationship between HNVf and produced products.

The 3rd concerns the development of spatial tools (3D-GIS) that contribute to representing and simulating the space in which relations between actors and producers are being recorded (imprint) through HNVf activities. The innovative aspect is the contribution of these tools to training/learning/activating producers' participation in the processes of diagnosis, consultation and decision making around problems related to their space and to planning and implementing HNVf management and promotion actions.

The 4th example is one of the applications that responds to the need for a reliable tool to monitor and guarantee the grazing of the herds and to be accessible to consumers.

Greece – innovation (1): Terra Thessalia a territorial cluster for valorisation of HNVF

Location: Thessaly, Greece

HNV system: Shepherded sheep and goat farming system. Potentially all HNV farming systems

Scale of operation: 7 small dairy territories (approx 7 km²)

Timespan: The Terra Thessalia cluster as an institutional entity is the output of the strategic MED programme LACTIMED (2013-2015). This is an ongoing project (started in late 2016). Today the actors involved assume the Terra Thessalia initiative to promote their local dairy products.

Keys to success: funding from the European programme ENPI MED, value chain approach, cluster with a territorial dimension, development of a participatory guarantee system, recognition by the market of the value of products with pastoral origin, redistribution system

The 7 small dairy territories in Thessaly



Scale of operation

The cluster includes 7 small dairy territories, approximatively 500 pastoral farms, 7 family artisan dairies, a number of supporting agencies (LAGs, Cooperative Banks, Industry and Commercial Chambers, Public Research Laboratories). A general problem is being addressed (HNVf marginalization and lack of reward of their multi-functional role and the of their products' quality), through a localized example at the optimal geographic scale (organizationally in a regional level and productively at the level of small territories and HNV holdings)

Problems addressed by this example

- Deficit in the horizontal and vertical cooperation of local and public bodies
- Risk of losing heritage resources (landscape, pasture biodiversity, identity dairy products, traditional techniques, etc.) and environmental degradation
- Lack of visibility of the specific quality of GI dairy products on the market through a guarantee system
- Risk of usurpation of cultural resources (e.g. PDO label)
- Lack of professionalization of traditional pastoral activity
- Lack of access of remote farms and artisanal dairies in HNV pastoral areas to market channels
- Need to enhance the spirit of cooperation and networking of territorial actors
- Lack of awareness by local actors regarding close links between HNV-specific product quality-consumers
- Continuous decrease on the value of pastoral products

Story in a nutshell

Creation and adaptation of a territorial dairy cluster integrating, in an innovative way, local productive forces as well as small dairy territories of Thessaly Region. Improvement of the image and promotion of the HNV character of localized pastoral farming systems to support and preserve them through a new organizational structure of the dairy sector, support and consultancy services, and a Territorial Participatory Guarantee System regarding the distinctiveness of origin-placed dairy products.

Keys to success:

- The auspices, the prestige and the funding provided by the European program ENPI CBC MED; the support of the laboratories of 3 Universities; the participation of all directly and indirectly involved actors and in the value chain
- The creation and integration of three bodies within a governance structure that covers and represents: a) the territory, b) support and research bodies and c) producers and processors
- Crisis revealed market distortions and thus the importance of cooperation; consumers are turning to local and Greek food products (value for money)
- Asymmetrical power relations in the governance of the value chain of PDO cheeses, and in particular of the popular Feta cheese being in a growing demand, in favor of large industrial dairies and distribution networks (oligopolistic market structures).
- Active involvement of producers in a process, not of radical changes in the organization of the pastoral system, but of improving, guaranteeing and highlighting attributes and practices already existed in farms of HNV type.
- The innovative role of PGS combines simultaneously the respect for HNV specifications on behalf of livestock breeders and consumers' expectations
- Positive reaction of quality markets.

What does «Terra Thessalia» achieve for HNV farming?

- Key points: Organization of 3 bodies, provision of services, creating a multi-actor platform for dialogue, development and implementation of a Participatory Guarantee System and territorial Marketing, product sale
- 7 small historical dairy territories, 500 holdings and 7 artisanal dairies 100,000 sheep and goats (pilot application in 60 herds- 13,000 animals)



General achievements of the action

- Creation and operation of a flexible governance form based on three bodies that represent the territory (a Territorial Assembly which function and objectives are governed by a Charter), the services (Terra Thessalia, Non-profit Company) and the production/marketing of products (Trade Thessalia Lactis- Private Limited Company)
- The ability of producers and processors to guarantee themselves the relationship between HNVf and the quality of their products was reinforced with the implementation of the Participatory Guarantee System (PGS)
- The new organization and support structures have developed techniques in order to improve grazing practices, ration etc.
- Local actors engaged in Terra Thessalia (breeders, cheese makers) have perceived the importance of pastoral system.
- The first tentative market sales (niche markets) abroad and in the domestic market under the Terra Thessalia label confirm the interest of consumers for place-based quality cheese.
- Implementation of a redistribution system of the surplus.

Does it improve the socio-economic situation of HNV farming? examples

Pilot actions have shown a reduction on the production cost due to the improvement of pastures and secondly due to the configuration of a balanced and adjusted ration in cooperation with the Agricultural University of Athens, local zootechnicians and livestock farmers. The guarantee of extensive production systems through the PGS, increased the value of the products. Particularly for holdings with strong orientation towards HNV systems (transhumance, locale race etc.) the increase in the final price appears much bigger.

A system for the redistribution of a part of the added value allowed by the increase in the value of Terra Thessalia HNVf products has been foreseen and agreed for the benefit of these farms

Does it maintain or improve HNV values? Examples

Nowadays, the local actors engaged in Terra Thessalia (breeders, cheese makers) have perceived the importance of local breeds, grazing and traditional practices to enhance the value of the dairy product and thus the viability of the production unit. There is now a commitment, that is already being realized, to enrich the PGS with criteria and indicators that will promote the relationship between biodiversity and HNVf (grazing management plans, ecological corridors, hedges etc.)

Does it include conservation of nature values as an explicit objective?

There is a strict commitment that the production and promotion of dairy products from TERRA THESSALIA concerns only pastoral herds of local breeds. What is more, TERA THESSALIA's entire marketing policy is based on preserving and promoting the HNV character of the production systems of these collaborating holdings.

The charter for the small dairy regions and the PGS specifications, explicitly mention the respect of the objective above, alongside the implementation of a redistribution system of profits for the support of the bodies that are involved with specific actions in preserving the HNV character of the production systems. The value of the pastures, for the animal welfare and the product quality, is highlighted.

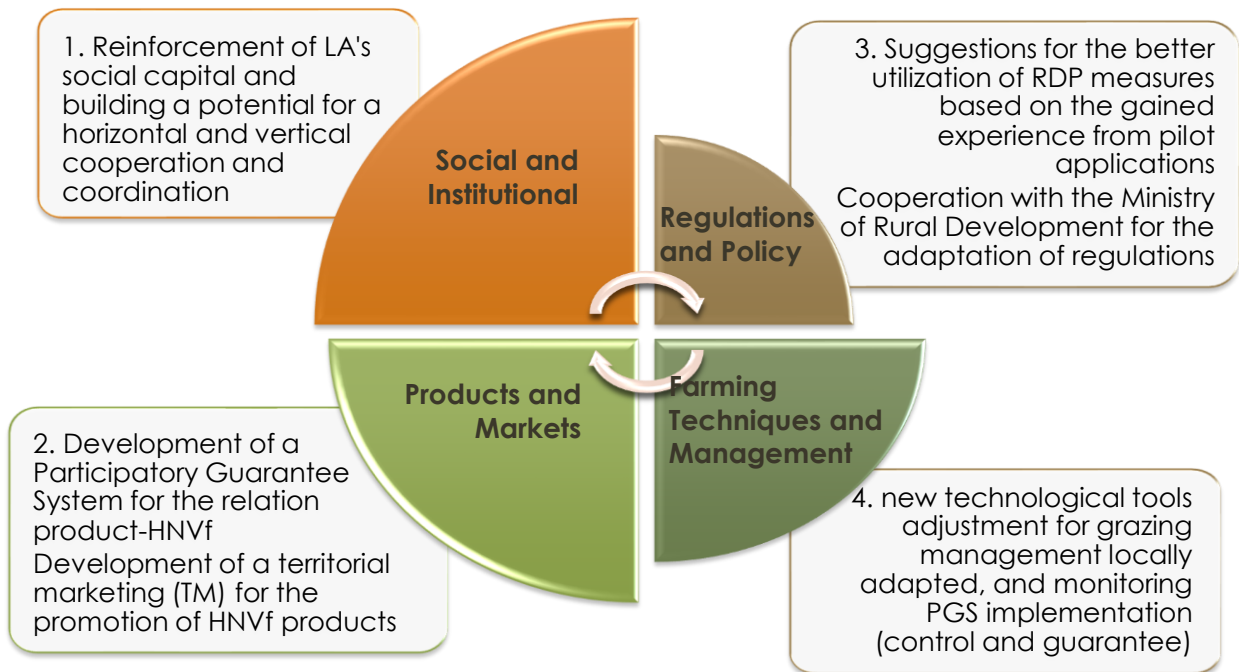
Also the spring season milk and cheese are promoted as of the highest quality due to the flora and biodiversity associated with the particular agro-ecological context of PINDOS (a specific mixture of Mediterranean biodiversity and flora).

Could the innovation be made more directly beneficial for HNV farming and nature values? If so, how?

The most direct benefit for HNVf depends on:

- the amount of value that Terra Thessalia can redistribute to livestock breeders and hence the success of the promotion of its products through a territorial marketing. The expected increase of economic benefits will have a positive impact on strengthening the role of HNVf and its values and also on the efforts that are made in order to manage.
- The cooperation with collective territorial bodies from HNV areas (e.g. PINDOS network) in order to a) utilize the "Cooperation" measure of RDP, b) extend the application of the PGS in the agro-ecological field and enrich it with more HNVf criteria and indicators c) enrich training with issues like the connection of biodiversity and HNVf and d) broaden the marketing strategy with the incorporation of HNVf services (pastoral tourism).

How does «Terra Thessalia» respond to the HNV LINK innovation themes?



The main theme *Social and Institutional* gives priority to the organization of the livestock farmers with other actors (creation of a Territorial Cluster). The creation of TPGS, the construction of a common product etc. cover the theme *Products and Markets*, while the services that are offered by the cooperation structure come under the theme *Farm Techniques and Management*.

1. The coexistence of 3 bodies and their functional articulation reflect the balanced institutional representation of all the actors involved (in the value chain but also in marginalized and unrewarded pastoral farming: producers, pasture management or pastoral heritage management bodies). Terra Thessalia contributed to the establishment of regular consultations and the multiplication of thematic meetings between actors and special scientists (zootechnicians, range scientists, NTIC technologies, facilitators etc.) with the support of innovative diagnosis and planning tools.

2. The bottom-up development of the tools PGS and TM contributes (through the use of new spatial representation technologies, multi-media etc.) to the promotion of territorial resources and products connecting to HNVf. They function as a mean through which consumers can enter and navigate in the HNVf world. The function of Terra Thessalia contributes to the development of new products under its label, to create added value through a marketing of products from HNV farming systems and areas.

3. Terra Thessalia, based on its services (grazing, local breeds, ration, etc.), its pilot projects (native pastures improvement, demo. pastoral farm) and policy proposals to the Ministry of Agriculture (entering local legume plants in the Nat. Catalog, producing raw milk cheese), contributes to the effectiveness of RDP regulations and strengthens the position of HNVf and pastoral farming.

4. The use of new technological tools functions here as a means that will amplify the ability and skills of actors, especially breeders, to actively participate a) in diagnosis procedures and development plans concerning grazing management systems and HNV farmland, contributing in this way significantly to the facilitation of cooperation in thematic and multi-stakeholder meetings (researchers, technicians, public services) and b) in PGS implementation as monitoring system.

The process that made it happen and critical factors for success

Definition and implementation of a territorial cluster capable of reinforcing and revealing the values and the qualities of HNV products

1. Cluster's territorial dimension:

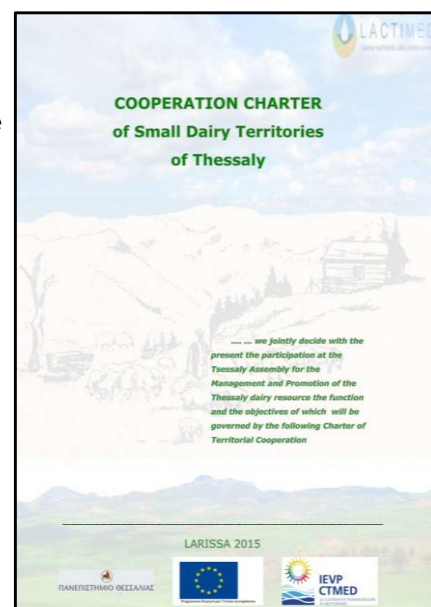
three different (institutional framework, objectives) cooperation forms that organize the relationship of the Value Chain with territories, HNVF and consumers

- Territorial Assembly: governed by a Charter
- Terra Thessalia: provision of services
- Trade Thessalia Lactis: marketing and markets

2. Participatory Guarantee System : bottom-up development and implementation (specification control)

3. territorial marketing : contribution to market recognition of the value that derives from the product-HNVf link

4. Redistribution system of profits in favour of HNVf holdings



Actors and roles: who made it happen, who talked to whom, what roles were played by each key actor?

The driving force was the Laboratory of Rural Space, University of Thessaly and the multidisciplinary team that was formed with the participation of the Agricultural University of Athens (milk sector, pasture management, organization of the livestock farms), Panteion University of Athens (label, certification, PDO, PGI, marketing) and the local Development Agencies. So the first actor, the Laboratory of Rural Space, was the organizer/facilitator of the meetings and the consultations and responsible for the coordination concerning the integration of researchers and technicians from other institutions. The actors involved were a) livestock farmers' cooperatives, b) small cheese makers that retain their artisanal character, c) public services, d) associations of pastoral communities, e) all the representatives of local authorities, f) cooperative banks and g) chambers of Commerce and Industry.

Institutional context that made it possible

The initiative was favored by the institutional framework of decentralization (stronger Municipalities) and the creation of more flexible cooperation forms (professional, multi-stakeholder etc.) and the RDP regulations (quality systems).

Territorial Assembly does not constitute a recognized institutional form. All the representatives of small dairy territories, links of the dairy chain coming from regional and national bodies (Region, Union of Hellenic Chambers, Association of Thessalian Enterprises and Industries, Cooperative Banks of Thessaly, Development Agencies and 3 universities) participate in the assembly. Its function and role are governed by the obligations and objectives set out in the Charter (monitoring the territorial strategy for the dairy chain). Its contribution to the support of the Territorial cluster and its dynamic presence rely on the social moral burden of the bodies within every small territory (Municipalities, Development Agencies, cultural associations etc.).

Terra Thessalia is a non-profit legal entity and organizes the various support services (technical and advisory) throughout the Value Chain (livestock breeders, PGS implementation, marketing). Its members are representatives of the supporting mechanisms (Research Laboratories, Development Agencies, Cooperative banks, Chambers) and Trade Thessalia Lactis, which is the third structure. This is a Private Limited Company charged with marketing and that is why its members are limited to livestock cooperatives and the group of small cheese-makers. In order to avoid conflicts the owner of Terra Thessalia brand name is Terra Thessalia.

Resources: funding, staff etc

The progress of the programme was made without problems due to funding from the ENPI MED. The creation of a multidisciplinary team has played a decisive role.

Processes

The building process was the following: a) creation of the three bodies, b) networking and pilot actions to support pastoral holdings (pastures improvement, ration, information on local breeds etc.), c) PGS planning and application and d) development of a "territorial" marketing for the promotion of Terra Thessalia and its products. Organization and establishment of numerous consultations that contributed to the familiarization between the various partners and actors and their integration in an institutional learning procedure (organization and operation of the cluster, operation of multi-stakeholder groups) and transfer of specialized knowledge

Critical factors for success: opportunities, threats, timing, individuals, continuity...?

The redistribution system that was adopted works in favor of all those involved directly in the HNVF management and reflects the coherence of cooperation constituting a powerful tool for the success and continuation of this action. Recognition by the public bodies (Region, Ministry of Rural Development). An important factor regarding the active participation and commitment of livestock breeders was the fact that for them the organization and management of an HNV system is part of the knowledge, the practices and the experiences that they inherited. All actors know that the new expectations by an increasing part of the consumers link the quality and the identity of the product with the HNV systems and areas. New opportunities arise by the forthcoming activation of RDP measures (Cooperation, actions to strengthen biodiversity etc.), by the possibility of funding exports by local cooperative banks and from the better organization of the products' distribution networks. Also, new farmers are playing and will keep playing an important role.

Limiting factors, actual/potential problems, and how could they be overcome?

- The mismatch between timetables for the implementation of support and funding policies. Despite the fact that the cooperation was ready to move to actions since the beginning of 2015, the relevant measures of the 2014-2020 RDP had not yet been activated in mid-2017
- Restrictions due to the crisis, imposed by memorandums (lack of bank borrowing, over-taxation of SMEs, farmers)
- Difficulty of local actors to cooperate and be flexible due to long persistence in individual strategies which is interpreted by the long-term marginalization of pastoral farming by national policies (reservation towards policies, bureaucrats and services) and by geographical isolation (mountainous areas)
- In this context, the interaction within the successive instances of rapprochement between different stakeholders (dairy actors, local development agencies, commercial and industrial chambers, cooperative banks, municipal services, etc.) on a wider regional level might create reciprocity and a spirit of cooperation, and restore the territorial anchorage of collective knowledge and practices. This process also brings local actors closer to the service sector and helps them become familiarized with the institutional environment of the public sector and existing policies

Lessons learnt from this innovation example, and its potential replication

- ❖ The effort to support HNVf through consumer society requires:
 - ▀ mobilizing the actors of the value chain and the territory
 - ▀ control and guarantee of the HNVf links with its products as a prerequisite for the adoption of a competitiveness based on the specificity of these links
- ❖ The promotion of a cluster that incorporates principles, values and institutions outside the classical business and economical framework requires time since it is based on social relationships and trust building
- ❖ the innovation is transferable due to the low cost and favorable environment (policies and consumers)

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

Strengthening the marginalized HNV pastoral holdings that face the competition of the respective intensive holdings in the plain, depends on the ability of the territorial cluster to:

- intervene in the entire range of the dairy value chain
- link the increase of their products' value with the HNV characteristics of the holdings
- orientate part of the profits towards the reproduction of the HNV pastoral systems on which the above increase of value is based
- ensure the link between the farmers' inherited knowledge and practices with the new scientific knowledge through the cooperation of the research and support bodies (e.g. research related to the link of biodiversity and HNVf productivity)

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

This particular innovation, being mainly organizational and immaterial, can be transferred to other HNV areas without high cost. Its representatives are determined to maintain HNVf and invest in the management and promotion of its relationship with the agri-foods they produce

Could it be rolled out on a bigger territorial scale?

Yes, as long as we separate the coordination-supporting aspect that can be developed at the scale of the Region (as Operational Partnership) from the productive aspect that should be handled by each territory separately according to the homogeneity of its HNVF heritage

What would be needed to do this successfully?

Cooperation with the regional and central services for an effective combination of motives and regulatory frameworks such as consulting services, training, financial motives, support of the market etc. Commitment of all the directly or indirectly bodies involved in the value chain to cooperate for the management of HNVf and the adoption of a strong tool for the specifications' control. Utilization of RDP funding tools.

Greece – innovation (2): Participatory Guarantee System (PGS)

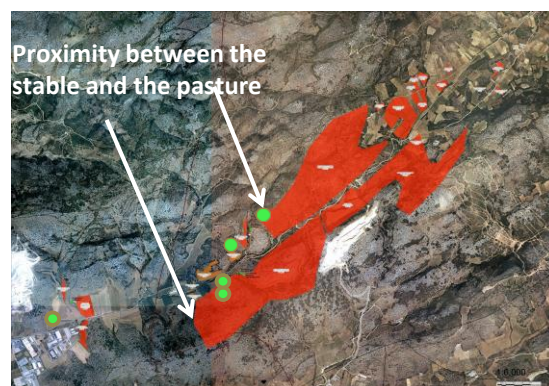
Location: Thessaly, Greece

HNV system: Shepherded sheep and goat farming milk system, Potentially all HNV farming systems

Scale of operation: On the scale of every holding (herd and parcel for forage) integrated in Terra Thessalia

Timespan: Tool developed and implemented as a pilot project by the Laboratory of Rural Space (University of Thessaly) within the framework of the Lactimed programme between 2015 and 2016

Keys to success: a) funding by the European programme ENPI MED, b) integration actors specialised in the services of herd management, livestock feed, diet, etc., c) new technology integration d) strengthening of small territorial chains without assuming an additional legislative certification



Scale of operation

After pilot implementation of the PGS in 15 herds (4,500 animals), its effectiveness was proved and can be now implemented in a larger scale: within a group of livestock breeders or a livestock cooperative but also within the limits of a community

Problems addressed by this example

- Asymmetrical power relations in the governance of the value chain of PDO cheeses (Feta cheese) do not promote the local specificities or guarantee that the characteristics of the dairy product, both inherent and extrinsic, are linked to HNVF holdings, operating thus in favor of large industrial dairies and distribution networks (oligopolistic market structures).
- Inability of the pastoral holdings, despite the high quality of the produced milk, to tackle the continuous decrease on the price of the milk and compete the intensive holdings,
- Lack of a monitoring system (herd management, local livestock feed, diet, etc) for the respect of the specifications that define the holdings' HNV character
- The asymmetry of the information relationship (particularly about the HNV character of the holdings and the "artisanal" character of small dairies) that influences the producer-consumer relationship

Story in a nutshell

A key objective for Terra Thessalia was to develop a way to continuously enrich and update quality claims related to place-based attributes. For this purpose, Terra Thessalia has undertaken the implementation of a Participatory Guarantee System (PGS) whose goal is to reveal and guarantee the specific characteristics of the dairy resource as well as to foster it.

This System is defined as a means of utilizing the dairy resource and the HNVf. Its objective is twofold:

- a) to observe, support and control the implementation of the obligations that every pastoral holding has and
- b) guarantee at the consumers the HNV character of pastoral holdings and its sustainable links with their operating place.

PGS adopts an integrated methodology that combines consultations, a monitoring system using technological tools whose data are displayed in a database and the Terra Thessalia site that is accessible to consumers. All the actors of the dairy chain and a group of scientific and technical support (interdisciplinary and technical working group) participated in its implementation

Keys to success:

- Objectives, layout and timetables of the LACTIMED project (European programme ENPI CBC MED). The role of the working group with the support of specialists from specialized laboratories and local development agencies (organizational, scientific and technical support)
- Specialization of the Laboratory of Rural Space (University of Thessaly) in the development and implementation of technological tools in order to support educational, consultation and monitoring needs (3D spatial representation, GIS, satellite imagery etc.). These tools contributed in the function of the PGS as a support tool for the strengthening of active participation and as a technique for the creation of trust.
- Organization of regular and continuous information meetings, educational cycles and consultations
- Connection of the livestock breeders' participation in the PGS with the redistribution system of the profits deriving from the increase of the products' value
- PGS ability to support the development of a territorial Marketing
- Ability to substitute or/and supplement the certification standards by third parties
- The procedure and guarantee means have a low cost because they are based in soft rather than hard technology and in organizational innovation but also because the tool guarantees practices and actions that producer is already implementing within his HNVf.

What does «PGS» achieve for HNV farming?

Key points :

- Effective monitoring and guarantee of the organization and function of HNV livestock farm units
- Producers' active participation in issues a) farm unit managing and b) documentation of the HNVf character
- Successful pilot application in 15 sheep and goats herds (4.500 animals)

The geographical location of a holding



General achievements of the action

- A guide (methods, tools) for diagnosis, evaluation and guarantee procedures
- Educational material in order to train farmers and producers to actively participate in the guarantee of the HNVf-product relationship
- PGS contribution in the development of a territorial marketing for the promotion of HNVF products in niche markets under the Terra Thessalia label

Does it improve the socio-economic situation of HNV farming? examples

It is an information, education and training tool for the producers on issues of HNVf improvement and management. At the same time, it functions interactively as a forum where producers and researchers/technicians can meet and exchange knowledge and experiences, familiarizing at the same time producers with the knowledge and use of new technologies. PGS contributes to the promotion of the value of products produced by HNV holdings and indirectly in the viability of HNVf production unit. Its pilot application has proved its contribution through the expression of interest on behalf of markets and consumers

Does it maintain or improve HNV values? Examples

PGS as a basic guarantee instrument for the connection between the quality of the product and holding's HNV characteristics, a connection that promotes to consumer society, it contributes to the recognition of the value of the HNV dairy product. This is a two-way process so that consumers and producers can actually understand the importance of local breeds, grazing and traditional practices

Does it include conservation of nature values as an explicit objective?

PGS was implemented only in HNVF holdings (only pastoral herds with local breeds) following TERRA THESSALIA's marketing policy which is based on preserving and promoting the HNV character of its collaborating holdings production systems. The charter signed by the small dairy territories, explicitly mentions the respect of the objective above and the adoption of a redistribution system in favor of the bodies that are involved with specific actions in preserving the HNV character of those production systems.

Could the innovation be made more directly beneficial for HNV farming and nature values? If so, how?

HNVF can directly benefit by the implementation of the tool because it also functions as an adoption guide of HNVF by the new entrant farmers. What is more PGS funding will reinforce its capacity to broaden and deepen the guarantee fields and promote more effectively the HNVF image and the multifunctional role of farm units, helping thus to better inform consumers on the value of HNVf and the products it produces.

The cooperation with collective territorial bodies (e.g. PINDOS initiative) that represent HNVf areas can utilize PGS as a policy tool (monitoring, control and reward of services and also support of a wider marketing strategy). Technically, strengthening this role of the PGS is possible without a big cost. It is necessary to strengthen the technical support group, implement a diagnostic study for every area or group of holdings, secure a specialized training (registration of information, use of technological tools etc.). Finally, this tool can also be used for the development of pastoral tourism as an important promotion part of HNVf values.

Already, the collaborating laboratories within the framework of Terra Thessalia aim to enrich PGS with criteria and indicators that will promote on one hand the relationship between biodiversity and HNVf (grazing management plans, ecological corridors, hedges etc.) and on the other hand the research promotion for the relationship biodiversity and farm unit productivity.

How does «PGS» respond to the HNV LINK innovation themes?



- **Social and Institutional:** PGS works as a new cooperation form which ensures that all the actors of the value chain and the research/support group will meet aiming at the bottom-up capture, planning and implementation of ways and means that will guarantee the holdings' HNV character.

- **Farming techniques and management:** PGS functions as a diagnosis and monitoring tool of the holdings' organization. It gets support from technological tools, its multidisciplinary team (zootechnicians, range scientists, computer specialist, etc.), education and regular meetings. The use of new technological tools functions also here as a means of strengthening the capacity of livestock breeders to actively participate in the diagnosis and planning of spatial interventions, a fact that facilitates cooperation with experts and public services.

- **Products and market:** PGS contributes to the promotion of HNV territorial resources and products, based on new spatial representation technologies, multi-media etc. PGS, with the tools it uses, can locate and guarantee elements and practices that can attribute to the product properties and characteristics connected to HNVF (e.g. spring grazing milk, movement, high-quality pastures etc.). These data are then used to shape the label and enrich the promotion message (visual and written). The innovative role of PGS is reinforced since it also functions as a two-way route of exchange, contacts and navigation in the world of HNVF for consumers.

- **Regulations and Policy & Products and market:** PGS contributes to the adaptation of certification standards to small scale specificities based on the experience and active participation of the actors, directly and indirectly involved in the production procedure (raw material & final product). These specification standards can also complement the control generalizations and weaknesses of the standards offered (or imposed) by third parties. Increasing the value of the products promoted by PGS + activation of RDP measures will contribute to a more balanced contribution of PGS in "Regulations and Policy and Farming techniques and management" as a diagnosis and monitoring-control tool of the holdings' HNV characteristics and their relationship with biodiversity with the potential to enrich relevant criteria and indicators in the scale of the holding and the community.

The process that made it happen and critical factors for success

- Project and technical support team
- Identification of elements directly linked to the relationship of the final product and HNPF and which can be guaranteed by the PGS
- Organization of training, consultation and implementation of action cycles for the producers by utilizing new tools
- Implementation of PGS with a monitoring form for the control, guarantee and supply of the territorial marketing



Actors and roles: who made it happen, who talked to whom, what roles were played by each key actor?

The driving force was the Laboratory of Rural Space, University of Thessaly and the multidisciplinary team that was formed with the participation of the Agricultural University of Athens (milk sector, pasture management, organization of the livestock farms etc.), Panteion University of Athens (label, certification, PDO, PGI, marketing) and the local Development Agencies.

The first actor, the Laboratory of Rural Space, contributed with the development of technological tools concerning 3D spatial representations, territorial diagnostic etc.

Next, the implementation team was organized with the participation of researchers and technicians from those institutions and members of livestock cooperatives, small cheese makers that keep their artisanal character.

After that there was a series of regular and continuous information meetings, training cycles.

Institutional context that made it possible

The institutional entity of Terra Thessalia and the institutional recognition status of the operation of some research laboratories as certification centers

Resources: funding, staff etc.

The progress of the programme was made without problems due to funding from the ENPI MED

Processes

The building process that was followed concerns 3 sectors:

1. Organization and implementation of PGS : a) creation of a project team that integrates the services of the actors involved in the fields of research, organizational and technical support etc., b) definition of guarantee sectors and fields that are linked to the HNV characteristics of the area and the holdings and refer to environmental values (print, sustainability, HN VF etc.), c) creation of an integrated diagnosis and guarantee methodology (sources, methods and integration of technological tools developed and adapted by LPS) and d) organization of regular and continuous information meetings, training cycles and consultations.
2. Evaluation-Guarantee : a. implementation of a monitoring system, b. storage and processing of data in a database-portal at the University of Thessaly, c. issuing guarantee certifications for every thematic (grazing, management, local breeds practices, origin of forage, HNV level etc.)
3. Supplying a "territorial" marketing for the promotion of its basic products in the market: a. data on quality and identity characteristics of the final products, b. integration of these elements in the label and packaging shaping and also the promotion message (visual and written)

Critical factors for success: opportunities, threats, timing, individuals, continuity...?

The intensification of competition (expansion of the dairy companies and intensification of livestock holdings), the economic crisis, the failure to organize the feta PDO status in national level so that a higher value can be secured were the main factors that favored the adoption of PGS of the different actors in the value chain.

New opportunities arise by a) the fact that despite the crisis consumers are turning to local and Greek food products (value for money) and b) the forthcoming activation of RDP measures (creation of Label systems, actions to strengthen biodiversity etc.).

Also, new entrant farmers will play an important role in the adoption of PGS due to their orientation towards HN VF and the production of territorial products. The redistribution system adopted in the framework of Terra Thessalia reinforces the role of PGS making it necessary for producers while it secures recognition among consumers. This responds to the new expectations by an increasing part of the consumers that link the quality and the identity of the product with HNV systems and areas.

Limiting factors, actual/potential problems, and how could they be overcome?

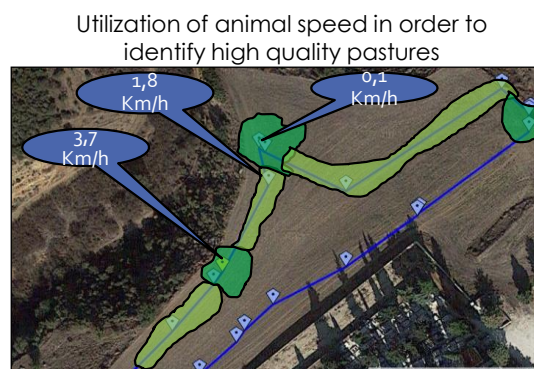
The adoption of the tool by an increasing number of producers depends largely on the response of consumers and markets. It is necessary to continuously improve and adapt the technological tools on monitoring and control issues.

Also the expansion of the tool creates the need to expand the members of the scientific and technical team as a response to the continuous emergence of new research, evaluation (pasture quality, endemic plants, nutritional characteristics of plants etc.) and guarantee fields.

Finally, delays in the activation of national and European funding tools (e.g. RDP) is the main restrictive factor. However, as the value of the promoted products in quality markets increases, at the same time the possibility of at least self-financing the PGS application will also increase.

Lessons learnt from this innovation example, and its potential replication

- The ties between products and HNvf can be substantiated by producers themselves if they are provided with means, training and support
- The functional incorporation of adjusted technologies in PGS transforms them into popular communication and learning tools
- The recognition of the value of HNvf products by the market upgrades the value of HNvf itself in the eyes of consumers, producers and local actors



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

If we adapt and integrate new technologies (GPS, 3D, Internet, satellites etc.) in a functional and targeted tool they can become a great instrument of a) informing, raising awareness and training producers and processors, b) farmers' active participation in control and guarantee systems of their holdings' HNvf characteristics. In this case due to these technologies PGS transforms into an interactive tool that allows also the participation of local consumers (taste control, respect of traditional techniques, ethical aspects linked with the processing phases of the final product) reinforce the effectiveness and legitimacy of PGS.

Local actors' participation in documenting and guaranteeing the specificities of a territorial resource (HNvf), aiming at informing consumers and supporting a competitiveness based on discretion, is more effective than certification systems by third parties.

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

Expanding PGS is easy and relatively inexpensive due to the immaterial technology that is used. Its implementation in other areas requires above all the agreement between producers and one or more cheese-makers, then securing a technical coordination and monitoring body for the implementation of the PGS and the utilization of its results. The tool can be applied to all types of agri-food.

Could it be rolled out on a bigger territorial scale?

PGS can be applied at the scale of the holding, a set of cheese-maker's holdings, the community or the LA

What would be needed to do this successfully?

Training the participating producers, creation of a central support group and small thematic structures of technicians and researchers (pastures, ration, local breeds etc.). Utilization of RDP funding.

Greece, innovation (3): Public participation and consultation 3D-Mapping tools

Short name: PP & 3D-Mapping

Location: Thessaly

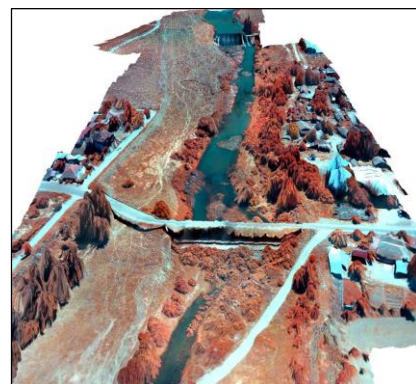
HNV farming system: Improvement of the pasture management. Reinforcement of cooperation between producers and all the other actors

Scale of operation: Ability to change the scale of application (pastures in the entire LA-Thessaly). The most common application scale is the community

Timespan: Over 15-year application and implementation of "PP & 3D Mapping" at community level for the settlement of spatial problems (pasture overgrazing -land use conflicts etc.).



3D interactive model-3DGIS



Problems addressed by this example

Addressing the stocking density issue in the grazing zones that are close to the limits of settlements and livestock facilities.

Reduction of conflicts between producers (livestock breeders, farmers, beekeepers) and public services (forestry department, Ministry of Agriculture etc.)

Reduction of disputes between farmers, residents and the municipality, on the movement of the herds.

The story in a nutshell

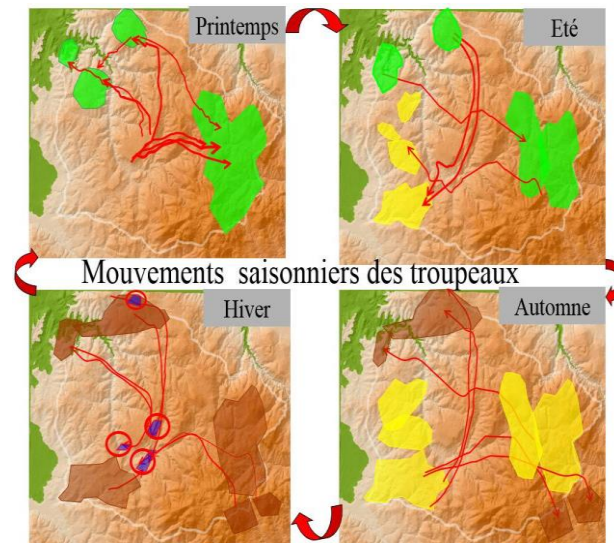
Within the framework of rural multifunctionality the Laboratory of Rural Space (LRS), Department of Planning and Regional Development of the University of Thessaly, has focused (for the last 15 years) on the development of innovative methodologies to enhance participatory planning and consensus. In this context the LRS has developed and implemented an innovative methodology of three dimensional interactive representations by using GIS & Remote Sensing and 3D computer graphics.

This is essentially the creation of "3D Virtual Worlds" with the ability to change scale, viewing position and virtual tour. The "PP & 3D-Mapping" is a Multi-stage Collaborative 3D Mapping tool for supporting public Participation for landcover/Landuse management. The interactive representations offer a communication language between the various actors. The objective of the innovation is dual:

- to strengthen the participation-communication of all the bodies (and producers) in the management of pastures and generally the HNV areas and
- the "bottom-up" collection of information, reliable and updated (creation of gea-database), concerning the area where local society takes action, aiming at an on time and valid addressing of problems

What does «PP & 3D-Mapping» achieve for HNV farming?

- **Pasture management:** Participation of livestock breeders in the dialogue for the rational use of grazing areas .
- **Training the producers** in order to understand the multifunctionality of the space : Reduction of the conflicts between the various production groups but also creation of new cooperation opportunities (livestock breeding & rural tourism)



What's the issue that prompted the innovation?

The innovation was realized due to the need for a strong spatial tool (3D-GIS) that would support education/learning/activation of producers' participation in consultation procedures and decision making, around problems and interventions related to their space (diagnosis, evaluation, HNV management).

Achievements?

- Functional incorporation of Geo-Informatics and 3D visualization into an integrated diagnosis and planning methodology in HNV areas
- Enhancement of participation and development of a dialogue between local production teams (livestock breeders, farmers etc.) and public bodies and specialists
- Mitigation of contradictions and understanding of the problems on space management between the involved bodies (forestry department, municipality, livestock breeders etc.)
- "Building" trust between groups with conflict of interests.

Economics of HNV farming

Indirect economic benefits: Optimization of livestock breeding through the implementation of pasture management plans = minimizing the basic cost that a pastoral holding has, buying forage

Maintaining or improving HNV values

Implementing the innovation contributes directly to the :

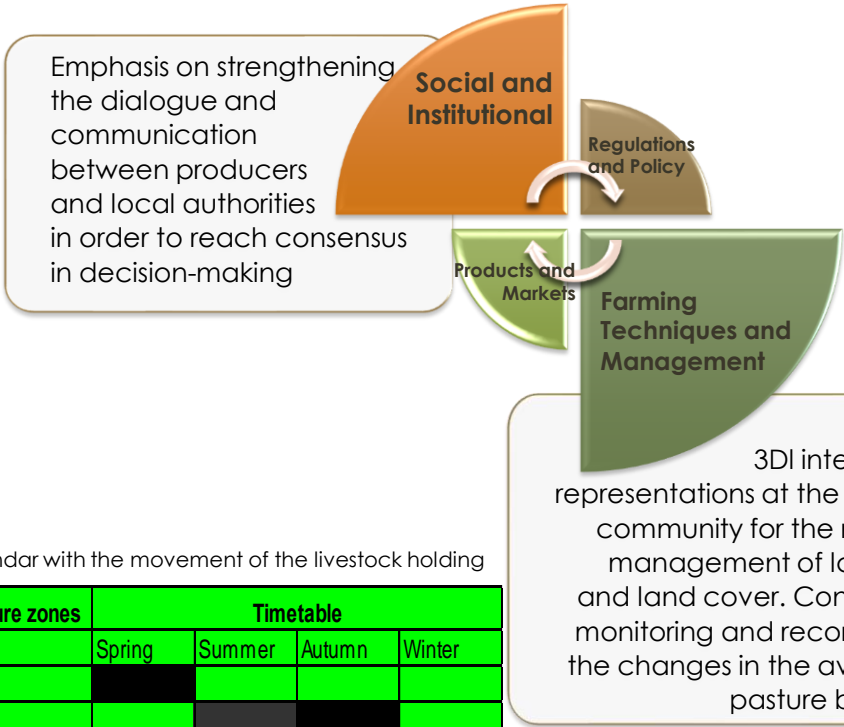
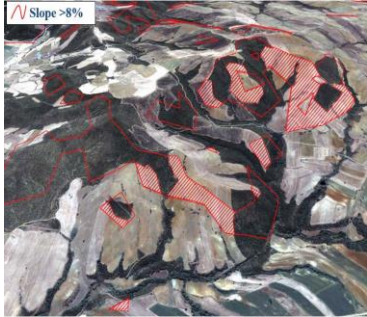
- improvement of pastures' biodiversity: rational grazing plans resulted in minimizing stocking density phenomena, avoiding degradation & abandonment of remote pastures
- education and creation of sensitive, well informed and with active participation producers, on issues concerning sustainable management of the relationship between the holding and the natural environment.

How does «PP & 3D-Mapping» respond to HNV LINK innovation themes

Public-Participation in Ellinopirgos village



Localization of disadvantaged areas for cultivations



Calendar with the movement of the livestock holding

Pasture zones	Timetable			
	Spring	Summer	Autumn	Winter
A				
B				
C				
D				

Social and Institutional

“PP & 3D-Mapping” innovation provides local authorities with a communication and information tool for the producers and other actors that are active in the area (NGO's, environmental associations, etc.)

Familiarizing local societies with advanced technological tools like 3D interactive mapping for the diagnosis and management of the space favors:

- (a) Improvement of spatial perception and the knowledge that inhabitants have for the place they live
- (b) Participation of actors in high scale participatory procedures like: cooperation and transfer of power

Farm techniques and management

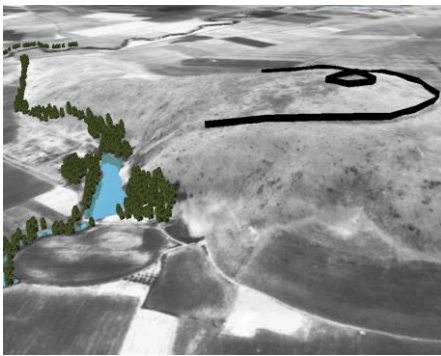
“PP & 3D-Mapping” innovation contributes:

- (a) to the continuous collection of new information in the database with no particular cost, resulting in the direct knowledge of the problems that occur (drought, floods, erosion phenomena)
- (b) to the estimation of forage biomass for animals in the grazing zones depending on the climate conditions
- (c) to the delimitation of exclusion/suitability zones to avoid conflicts between the various production groups

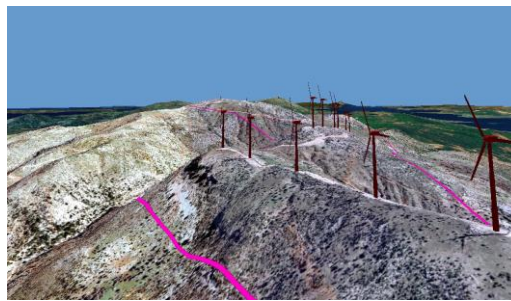
The process that made it happen and critical factors for success

- Participation of a support body in the installation and operation of “PP & 3D-Mapping”
- Engagement of local society in the various stages of the creation of the 3D interactive Virtual World
- Coverage of the fixed and operational costs for the installation, operation and maintenance of “PP & 3D-Mapping”

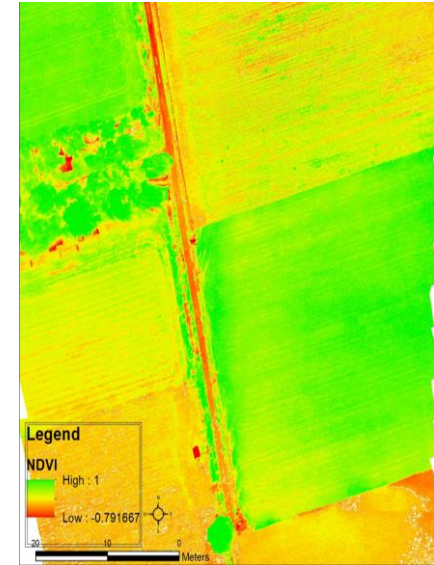
Scenario: Lake Reconstruction



Scenario: Wind farm installation



Drone mapping: Biomass estimation



Technological Issues

- The cost of the supporting software and hardware. Funding is required for the installation and operation of the system at the level of the Municipality
- The cost to get high resolution geospatial data: Aerial Photos /Satellite images /Digital Elevation Models (DEM)
- The relationship between the accuracy of the model and its construction cost

GIS-Remote Sensing technologies are becoming more and more friendly and easy to use. New trends: (a) Open source software that support 3D-GIS public participation procedures and (b) Free disposal of high resolution geospatial data by government bodies.

Technology is evolving fast:

- New, high resolution and low cost digital backgrounds are emerging in the market, creating new spatial visualization possibilities
- New, low cost technologies provide very high spatial resolution data offering at the same time the ability to perform multiple surveys in one day (Drones)

Methodological Issues

For the completion and effectiveness of the tool to be achieved three stages are required:

- Participation of a group of producers in the enrichment of the three-dimensional background with auxiliary information (place names, changes in land use, areas of particular interest etc.)
- Participation of a group of producers for the recording and representation of the spatial and temporal management system concerning land use (routes and grazing-crop areas)
- Training and acceptance, by the area's participants, of the use of three-dimensional visual representations as a tool of: (a) communication and dialogue, (b) collecting accurate data

Lessons learnt from «PP & 3D-Mapping» and its potential replication

- Successful implementation and operation of “PP & 3D-Mapping” depends on its integration into collective coordination and cooperation plans like Terra Thessalia
- 3D representations give the opportunity to extract a huge amount of information from local society. Its coding and utilization is a big challenge.
- The basic advantage of “PP & 3D-Mapping”: application ability at both local and regional scale.



Lessons learned

- (a) The greater the detail and fidelity in spatial 3D representations, the more active the participation of the livestock breeders/farmers in the diagnosis, consultation, planning and management procedure.
- (b) A need for more detailed 3D representations, especially for the creation of location scenarios and decision making. Otherwise there is rejection and failure of the consultation process
- (c) Even people with lower spatial perception can understand the space in which they live and participate in consultations and discussions using the 3D interactive representations
- (d) Good preparation is required for the real-time recording of the very large amount of information given by the participants during the consultations.
- (e) Slow response to the imprinting of information; this slows the dialogue and participants get tired

Replicable in other areas?

The municipalities and other collective organizations (social, professional) can adopt the innovation "PP & 3D Mapping" as a tool of spatial management and reinforcement of participatory procedures in their regions. The whole project's success will depend on the possibility to create a technical support team in cooperation with research bodies. In this case it is suggested that the municipalities set up communication and cooperation centers with area's local bodies equipped with a 3D interactive GIS. These centers will be responsible for: a) "educating" and familiarizing the residents and producers of the municipality with 3D representation of the space in which they live enhancing their participation in local meetings and b) encouraging the citizens (especially producers) to participate in the enrichment of the 3D model with information (recording of pollution incidents) helping thus to better manage space.

Greece – innovation (3): GPS-Tracking for monitoring and certification of extensive livestock-farming

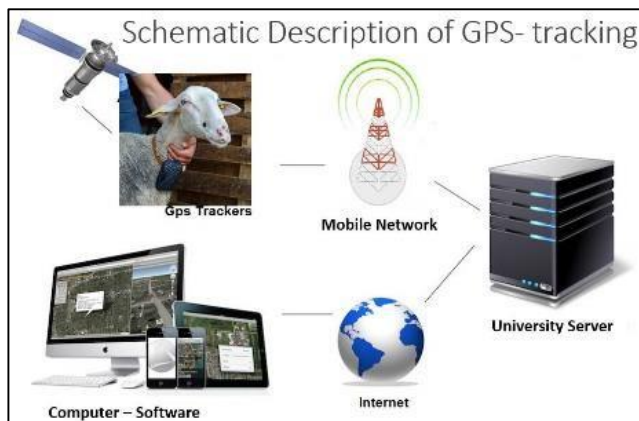
Short name: GPS- tracking of extensive livestock (GPS-tracking)

Location: Thessaly (LA)

HNV farming system: Certification of the holding's pastoral practices in the market. Monitoring the implementation of a grazing plan.

Scale of operation: On the scale of a livestock farming level

Timespan: Tracking the movement of 15 extensive holdings for 2015-2016 under the Lactimed programme. Today, Terra Thessalia has assumed this application



Problems addressed by this example

- (a) Certification of the herd's extensivity in order to support the effort to increase the added value of the raw material (milk, meat) and the final dairy products
- (b) Tackling conflicts between farmers-livestock breeders, using GPS geofences and other functions
- (c) Rapid troubleshooting for free-range cattle

The story in a nutshell

Within the framework of the European programme Lactimed, the Territorial Participatory Guarantee System (TPGS) was developed, part of which is the GPS-tracking system. Initially a monitoring platform (server, softwares, etc.) was created in order to record the geographical position of the moving herds in a daily basis. At the same time, the livestock breeders that participated in the programme, were trained in the use and good operation of the GPS in their animals.

The aim of this innovation is manyfold:

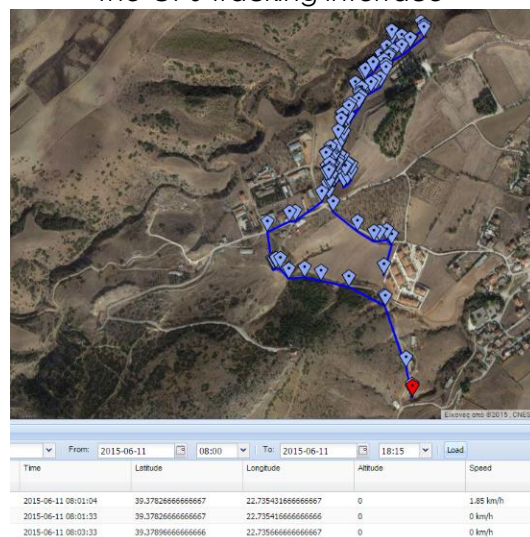
- (a) to certify the extensive livestock (sheep farming in mountain and semi-mountain areas) giving the added value to the corresponding dairy products (marketing);
- (b) to understand and facilitate livestock movement;
- (c) to prevent conflicts between farmers and forestry services using GPS geofences and other functions;
- (d) to strengthen the active participation of the producers in the management of HNV areas;
- (e) to collect data for the control of the pasture quality (quantity of biomass, biodiversity/plant species) by specialists (range scientists, environmentalists etc.)

What does «GPS-tracking » achieve for HNV farming?

- Market/products: using GPS-tracking undeniably contributes
 - to the guarantee of extensive pastoral practices
 - to the reinforcement of the confidence with consumers
- Management of the holdings:
 - Identification of quality pastures based on animal behaviour
 - Contribution to the design and implementation of spatial and temporal grazing systems
- Creation of an application team with the participation of producers, researchers and technicians



The GPS-tracking interface



What's the issue that prompted the innovation?

The application was implemented due to the need for a reliable tool accessible to consumers that would also guarantee the grazing of the herds.

Achievements?

- Successful implementation of GPS-tracking on all 15 holdings revealed the interest of livestock breeders to promote the practices and values of their pastoral system by adopting advanced technologies, aiming at the same time at a more directly informed consumer.
- Informing livestock breeders about the reasons for installing GPS-tracking on their holding and its contribution to the implementation of the participatory guarantee system helped them shape a more optimistic view for the future of their business and at the same time show interest for the continuation of the monitoring programme.
- Continuous feeding of a geographic database with information concerning the grazing profile of every holding on a daily basis. These data can be used by a range of scientists and specialized zootechnicians to analyze ration.

Economics of HNV farming

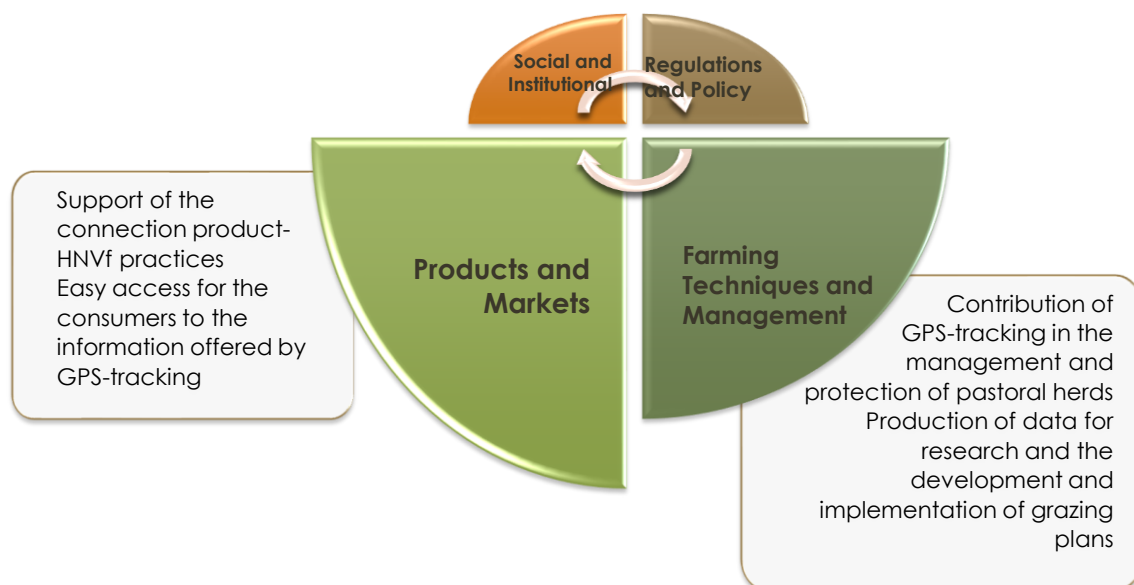
Direct financial benefits: GPS-tracking, as a certification tool for the grazing of the herds, contributes to the increase of products' added value.

Indirect financial benefits: Especially in cattle holdings, tracking the movement of the animals in the countryside (free range for approximately 6 months) helps to save sick-trapped animals, minimizing the cost from animal losses (sometimes this is equivalent to a few thousand euros).

Maintaining or improving HNV-values

The implementation of GPS-tracking in animal movement contributes directly to the improvement of biodiversity in the pastures. Recording the routes and grazing zones, thus stocking density, would potentially help to better manage pastures and avoid their marginalization and land abandonment.

How does «GPS-tracking» respond to the HNV LINK innovation themes?



Products and markets

GPS-tracking innovation offers to the market a reliable certification tool for the products coming from pastoral and free-range holdings.

Potentially this innovation contributes to the reinforcement of the trust between the most demanding consumers, who seek the distinction between HNVf products, and those from holdings with intensive production systems.

Farm techniques and management

GPS-tracking innovation contribution:

- (a) Better monitoring of the herd in the difficult and demanding environment of the semi-mountainous and mountainous regions (grazing management, estimation of the forage biomass consumed by animals)
- (b) Familiarization of producers with advanced technological tools on diagnosis and space management (using GPS - tablet – smartphones)

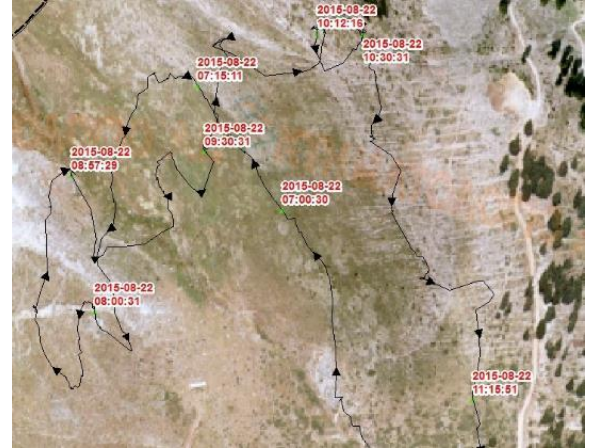
The process that made it happen and critical factors for success

- A support body for the installation and operation of the “GPS-tracking” was secured
- Provision of information and breeders' acceptance for the adoption of a GPS-tracking system
- Coverage of fixed and operational costs of the GPS-tracking system

Information activities (working groups)



GPS record: Spatiotemporal movement of a flock



Basic issues that need to be resolved:

- Increasing the battery life before its next charging process, keeping at the same time the system's cost and weight low. Experiments are underway to expand the GPS operation, from 15 days to 3-4 months.
- The cost for special GPS that meet specific protocols and guarantee their good operation in difficult weather conditions (strong sunshine, rainfall etc.)
- It is necessary to train livestock breeders:
 - (a) on the operation and use of the GPS (battery charging) in order to prolong its life expectancy
 - (b) on the tracking of the herd (use of tablet - smartphone). However, in many cases new farmers are familiarizing quickly with new technologies minimizing thus the learning curve
- Finding the funds for the installation and operation of the system. Fixed costs: buying a server, GPS devices and their between interconnectivity for the operation of the GPS-tracking system. There are also operational costs linked with the daily monitoring of the GPS function, its maintenance and a monthly mobile telephone subscription.

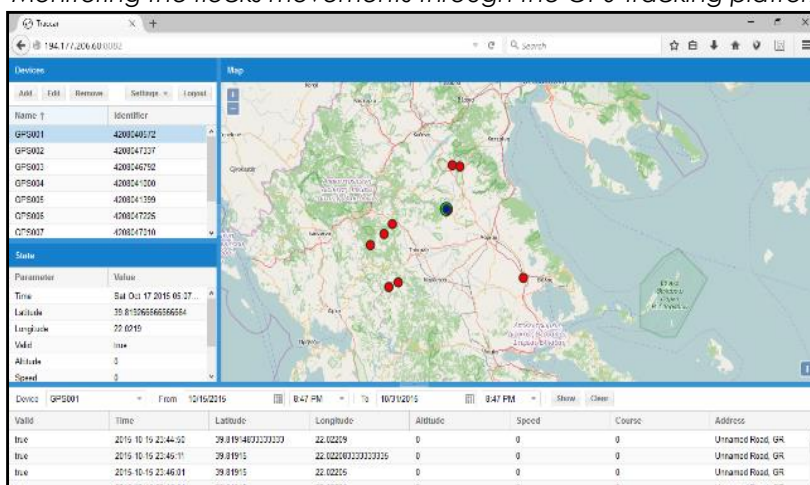
Lessons learnt from this innovation example, and its potential replication

- The successful implementation of "GPS-Tracking" depends on its integration in a collective cooperation and coordination plan like for instance Terra Thessalia or in an integrated guarantee system.
- "GPS-Tracking" innovation is an educational process for the introduction of a new technology adapted in the management and promotion of the HNVf character .
- GPS-Tracking" system can be implemented in every region

The GPS device



Monitoring the flocks movements through the GPS-tracking platform



Overall lesson

"GPS-Tracking" innovation is for the breeders a collective educational and practical process of learning and using a powerful technological tool in order to highlight themselves the HNV characteristics of their holding and the specificities of their products.

Replicable in other areas?

GPS-tracking can be installed on any extensive livestock holding within the Greek territory provided there is a GSM signal (Global System for Mobile communications).

The movements will be recorded on a server while at the same time every breeder will be able to control, almost in real time, the movement of his herd.

The recording and management of the data could be carried out by a certification body for the extensiveness of the herd.

This body would provide support to the breeders and specialists by supplying the spatial and temporal data from the herd's movement.



Learning Area “*Dalmatian Islands*” (Croatia)

INNOVATION EXPERIENCES AND NEEDS

Contribution to deliverable D2.6.1

Date: October 2017

Authors: Maria Roglic



This project has received funding from the European Union Horizon 2020 research and innovations program under Grant Agreement No. 696391

This report represents the views of the authors. The Research Executive Agency is not responsible for any use that may be made of the information it contains

Introduction and contents

This report looks at innovation that supports HNV farming in **Dalmatian islands** (LAG Brač, LAG Škoji, LAG 5), and identifies the types of innovation that are missing and needed in order to secure a sustainable future for HNV farming (HNVf).

We present examples of innovation existing in this Learning Area (LA) and examples more widely in **Croatia (specifically coastal and island area)** that could usefully be transferred to address challenges in the LA.

Types of innovation that seem to be absent in **Croatia (specifically coastal and island area)**, and that we would like to explore in other countries of the HNV LINK network, are also summarised.

Contents

Slide 2: Introduction and contents

Slide 3: The challenges facing HNV farming in Dalmatian islands

Slide 4: Overview of innovation in LA Dalmatian islands

Slide 5: Innovation examples in LA Dalmatian islands

Slide 6: Social and institutional innovation

Slide 7: Regulatory framework innovation

Slide 8: Products and markets innovation

Slide 9: Farm techniques and management innovation

Slide 10: Innovations from outside the LA that could help address LA needs

Slide 11: Innovation examples for which LA Dalmatian islands is looking to other Member States

Slide 12: Innovation fiches from Croatia

Slide 13-17: Croatia innovation example 1: Oživi održi otok – Action plan for sustainable use of resources of Murter region

Slide 18-22: Croatia innovation example 2: Multistakeholder organizations: fostering HNV products and practices

Slide 23-27: Croatia innovation example 3: HNVf as a tourist activity: SMS Vlaho Komparak, SMS Eko Škoji, Olive oil museum

Slide 27-31: Croatia innovation example 4: Drystone walls: keystone for mosaic HNV

Slide 28-37: Croatia innovation example 5: Nursery of indigenous species “Anemona”

Slide 37: Photo credit

Slide 38: Bibliography

The challenges facing HNV farming in Dalmatian islands

The HNV system is under pressure from tourism development and its infrastructure on one hand and land abandonment and the consequent closure of the mosaic landscape on the other. It results in an increasing number of wild fires and loss of biodiversity as the agricultural land and habitats become recolonized by the maquis and then by forest.

Livestock farming is facing a stifling regulatory system (food hygiene, animal health, land ownership and management, land-use planning, inconsistency in policies and subsidies on different governance levels) that closes down most of their options for improving the economics of the system.

Due to fragmented, small parcels and an unreliable land ownership system farms struggle with poor economic viability. They receive very limited support from the CAP (Pillar 1) and RDP compared with other sectors and other Member States.



Challenges facing HNV farming in Dalmatian islands

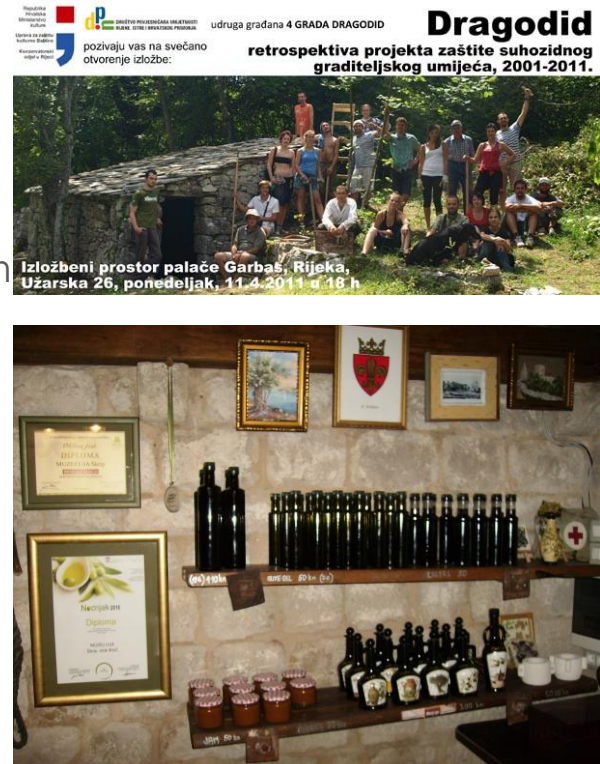
Depopulation of the islands and land abandonment is an ongoing trend with more and more people shifting from agriculture to tourism. Agricultural land cover represents 5,8% of the total LA surface with an average size of cultivated land being 1,7 ha. The majority of the land is used for olive groves (53%), vineyards (21%) and karst pastures (15%). From the overall 57 566 living in the LA total number of domestic animals in households is 32 652 . 45% sheep, 49% poultry, 5% goats and 1% cattle. Data limitations exist with respect to spatial coverage of agriculture.

Before the area had intensive livestock activity on all the islands (mostly goats and sheep) but with the decrease of the population and the abandonment of the agricultural land, the habitats are recolonized by the maquis and then by forest. As a long term result of the agrarian reforms in 1945 and 1953 between 1960 and 1990 the percentage of farms size of 3 ha or less increased from 55% to 70%. The growth of tourism compensated the declining part of agriculture in economy.

Although there is a strong demand for the local products by restaurants that want to offer local menu to the tourists there is a great problem in obtaining local lamb as in the Dubrovnik-Neretva county there is only one slaughter house and it is located on the island of Korčula (Smokvica). On the Pelješac peninsula there is no veterinarian and the breeders need to pay for their arrival from the mainland (Metković). On-farm processing (e.g. cheese) and direct sales cannot develop due to rigid rules and bureaucracy.

Overview of innovation in LA Dalmatian islands

There is no overall project to support the HNV farmland in the area but there are multiple private, public and civil sector initiatives that aim to promote HNV and HNVf practices. These examples include products from HNVf practices, agro tourism that use HNVf as part of the touristic experience, or activities of a non-profit organisation that has been working on the protection of the mosaic landscape, its drystone walls and the transfer of its building know-how for the new generations.



Overview of the innovation situation

- Learning area of Dalmatian islands is a highly touristic area that covers 7 islands, a peninsula and a coastal municipality.
- Development is seen as the driver that will meet the needs of the present generation without compromising the ability of future generations to meet their own needs. It is an area of mosaic landscape and low intensity farming activity.
- There are not a lot of innovation in terms of HNVf as a concept that is being deliberately promoted, but there is broad range of practices and products that have the potential to revitalize HNV farming systems and its natural area.
- HNV-LINK is a first attempt to create a network aiming to coordinate different actors, actions and projects that will foster HNVf in Croatian islands and link it to sustainable tourism development.
- Sustainable tourism development as a paradigm that refers to *"meeting the needs of present tourists and host regions while protecting and enhancing opportunities for the future. It is envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems"* (Norrby et al., 2003:11)
- The innovations being presented are the innovation that foster HNV farming type 2 that is "mosaic landscape" and the practices of sustainable tourism development in the learning area.

Innovation examples in LA Dalmatian islands: what are their strengths and weaknesses for HNV farming?

- LEADER as a tool to foster HNV: LAG 5
- Slow Food Pelješac: fostering HNV products and practices
- Dry stone walls: keystone for mosaic HNV
- Doing agriculture as a tourist activity
 - SMS Vlaho Komparak
 - SMS Eko Škoji
 - Olive oil museum
- Nursery of indigenous species: Anemona



Slow Food® Pelješac



Strengths

- There are several organisation in the area that support HNV practices
- There are several producers that are producing in line with HNVf practices
- There are multiple initiatives aiming to improve marketing of local products
- There is a demand by the local restaurant for local livestock and other HNVf products (honey, olive oil....)
- Beekeeping is increasing and it is fostering the productivity of fruit cultivations

Weaknesses

- The existing innovations are on an extremely limited scale, compared with the scale of the challenges (that is reconstruction and maintenance of the dry stone walls as one of the main characteristics of the HNV landscape in the islands)
- Two innovations are just beginning (Slow food Pelješac and nursery of indigenous species Anemona) and need additional institutional push and subsidies to enhance their HNV impact
- There is a problem of specialization (small farmers don't posses bureauratic knowledge needed to apply for subsidies that would foster their HNVf practices)
- The existing innovations do not adress the main challenges facing HNV farming that is land abandonment and land stewardship

What are the main innovation needs in the « Dalmatian islands » & how could they be addressed?

Social and institutional innovation

Social and institutional - innovation needs	Possible approaches
Establish long-term HNV “animation” project for LA Dalmatian islands	Design a project for RDP measure 16.1.1.
Integrate the approach of government departments towards mosaic agriculture	Regional authorities develop a strategy and a cross-departmental working group with island LAGs
Create an online and transparent platform for acquiring state land for stewardship	National authorities establish dialogue with local actors for development of approaches
Sharing of good farming practices	Capacity building in the form of exchange of good practices should be provided associated to subsidies for HNV farming.

Social and Institutional Innovation Needs

In the area there have been several initiatives and projects aiming at promoting and revitalizing mosaic landscape and HNVf but there were no multistakeholders group other than civil society individual projects or small scale farmer initiatives focusing on the issue of long term strategic revitalization of mosaic agriculture.

In the island of Korčula and Pelješac peninsula there is an active beekeepers association that has helped to boost the honey production and has brought many positive side effects in terms of enhanced environmental services. On the island of Brač there is an active livestock farmers association whose professionalization would help to promote small scale farmers interests from the islands (cheese production especially).

On the national level it is necessary to establish a uniform and transparent system that would speed the process of state land allocation to local farmers and foster giving land to HNVf practices as its environmental services would significantly lower the risk of fires that are quite high in the area.

The different authorities apply their policies without talking to local farmers about best approaches. This creates major problems, and ineffective programmes. A very significant innovation would be for the authorities to engage with local farmers in designing and implementing policies.

By designing a project that would create a group of designated actors with an “innovation action plan” that would state concrete actions to be done in the area would mean a significant shift forward in revitalising HNVf as key in protecting both the natural and cultural heritage of the islands that make them so attractive to tourists.

Regulatory framework innovation

Regulatory framework - innovation needs	Possible approaches
Solve the severe limitations of Pillar 1 for support to mosaic agriculture	It is necessary to establish an operational group within the National rural network that would draft policy recommendations that are adapt to the realities of mosaic agriculture and insularity
Use RDP measures to support HNVf on large scale, for biodiversity and fire prevention	Advocate for a modifications in submeasures 4.4.1. and Measure 10. Additional points for HNVf activities funded through measure 6.1; 6.2; 6.3; 4.1.1; 4.1. Changes in measure 4.3.2. that foster land management by farmers
Implement sustainability criteria in state-owned land	Monitoring of lands given for concession in order to preserve agricultural landscape patriomony and foster biodiversity

Regulatory Framework Innovation Needs

CAP Pillar 1 gives direct support per hectare that is not applicable to HNVf type 2 in the islands. Mosaic agriculture that is characteristic for the area is based on small agricultural parcels that have a wide variety of species.

Land management of mosaic landscape is much more work intensive and it is necessary to implement these type of specificities when developing Pillar 1 subsidies. Pillar 1 needs to foster extensive land management and give support to practices that will slow down land abandonment.

Republic of Croatia is implementing its 1st Rural development programme that is Pillar 2 and has drafted specific sub measures for reconstruction and maintenance of dry stone walls and terraces as traditional HNV landscape, still there are some inconsistencies in the implementation of policies on different government levels and a discrepancy between the local needs and policy that should be fixed for the next financial perspective through closer communication with the local stakeholders and scientific institutions that have done research on the topic (See Andlar 2002; 2007; 2012).

As there is no monitoring of lands given under concession it is necessary to either implement the sustainability criteria for state owned land given up for renting or concession or develop a specific HNVf program for state-owned land that would help farmers with HNVf friendly project to get access to those lands (Abdesater et al, 2017:143).

Products and markets innovation

Products and markets - innovation needs	Possible approaches
Promote HNVf products and practices	Establish a centre for agrobiodiversity of the islands: educational, economical and tourist development centre for preservation of agrobiodiversity and the promotion of elements of traditional agricultural cultures
Develop certifications	Design a certification for the islander HNVf products and specific support marketing and distribution measures for the holders of the certificate
Laboratory for HNVf fostering tourism	Create a collaborative platform of multistakeholders from the islands that will develop HNVf friendly tourist products and services and create an overarching marketing strategy for the area
Developing volunteering tourism	Introduce voluntourism as a way to battle lack of labour force

Products and Markets Innovation Needs

Innovations identified in this domain are responding to the innovation gap related to branding and promotion of HNVf products and are trying to propose solutions to the identified gap in terms of insufficient labour force and the pressure posed to the environment from the misbalance between tourism and agriculture.

In order to answer to the proposed innovation gaps it is necessary to engage a wide range of stakeholders on different scales and sectors.

- For the viability of the HNVf practices and products in the area it is necessary to have an educational centre who will provide the know-how set and the tools for doing HNVf.
- It is also necessary to have a support system around certifications that will show to the producers that their labels have substance in terms of the services and market position that goes with it. Differentiation on the market through certificate itself isn't enough (as has been shown in the example of the label "Croatian Island Product").
- The issue of land abandonment and consequent lack of labour force could be solved through the promotion of voluntourism as a platform for finding people that would help with herd management and restoration/maintenance of terraces (Abdessater et al.,2017).

Farm techniques and management innovation

Farm techniques and management - innovation needs	Possible approaches
Use grazing as a tool for reducing fire risks in critical areas	Identify key actors in the area and develop specific programmes and legislative framework with local and regional authorities that would support this type of activity
Reconstruction and maintenance of dry stone walls	Establish unformal education in order to preserve that knowledge as well as to identify bio-cultural hotspots and visitor infrastructure as to ensure its economical viability
Reintroducing animals	Develop project on the LAG level that would promote reintroduction of breeding at a scale of a SMS in order to preserve ecologic balance.

Farm Techniques and Management Innovation Needs

Dalmatian island are scarce in arable agricultural land and prone to wild fires. Agricultural land is man made through the process of cleaning the land from rocks and building dry stone walls to prevent erosion. The role of dry stonewalls was a way of defining ownership and system for livestock management. These practices with land abandonment and forestation of agricultural land are being ever more forgotten and it is necessary to promote those practices and implement them in the “modern” agricultural holdings that are more prone grinding the soil then building dry stone walls. These modern practices foster soil erosion and loss of habitats.

Reintroducment of animals will answer to major problems such as wild fires and los of biodiversity due to the closing dynamics of the abandoned landscape. The area has a potential for breeding to enhance the biodiversity of the are but there are 2 major constraints, lack of funds and lacko of workforce on the other.

Following the example of what was done in Bulgaria and Romania to protect traditional forms of breeding (WWF-DCP/EFNCP, 2008), it seems that more could be done by national authorities in Zagreb to create legal and other incentives for the preservation of these practices. In this case, it could take the form of facilitation in use of abandoned land, status for shared herds (as it exists e.g. in France). This would maybe require some lobbying effort from local entities, which could include the LAGs, but also actors involved in these activities, even indirectly – like tourism actors working with animals, in actuality or potentially (Abdessater et all., 2017:145)

Innovations from outside the LA that could help address LA needs

1) Webshops of HNV products

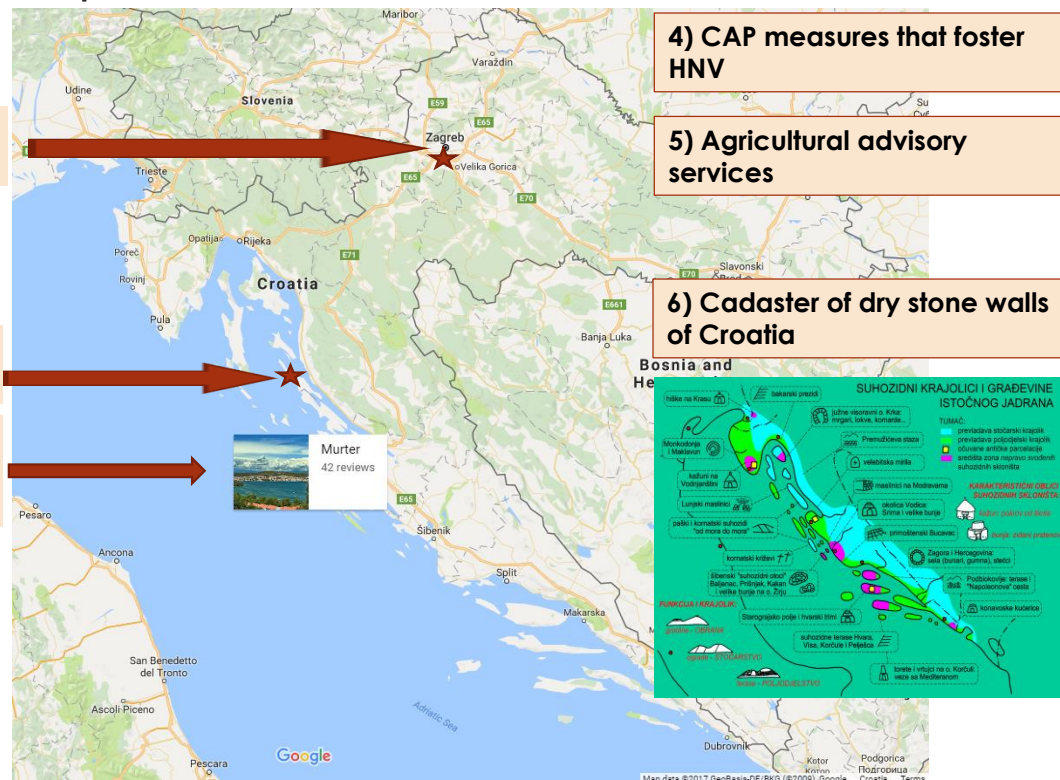
2) "Island of Pag lamb" certificate of origin

3) Oživi održi otok – Action plan for sustainable use of resources of Murter region

4) CAP measures that foster HNV

5) Agricultural advisory services

6) Cadaster of dry stone walls of Croatia



- 1) Web shop of organic and HNV products: Greencajg.hr is a newly opened web shop that is situated in the capital but is selling products from small scale farms thorough Croatia that have "eco" or any kind of "organic" certificate
- 2) "Island of Pag lamb" certificate of origin
- 3) Oživi održi otok – Action plan for sustainable use of resources of Murter region that documented local resources in terms of natural resources and biodiversity friendly practices and innovations linked to it. It underlined the key elements for revitalization and sustainable use of local resources "open eco museum" of the Murter region.
- 4) CAP measures that foster HNV: Agri-environmental measures- IAKS measures and sub-mesure of measure 4 for stonewalls
- 5) Agricultural advisory services: 2 types of AKIS governmental services that have local branch offices. One is on the scale of the region the other is one the scale of an island/peninsula. The first is to give advice and share knowledge in livestock breeding, the latter in sustainable agricultural practices
- 6) Drystone walls: keystone for mosaic HNV

Innovation examples for which LA Dalmatian islands is looking to other Member States

- Locally-led projects that set objectives for pastoral land with the users, and apply a « payment for results » approach to promote these objectives
- Flexibility in the application of food hygiene rules to small-scale, on-farm processing units.
- Approaches to dealing with animal health controls (TB) in extensive systems on common land with wild fauna vectors.
- Land management system for confused land ownership land
- Creation and implementation of a local brand
- Creation of formal local value chains

INNOVATION FICHES FROM CROATIA

- 1) Oživi održi otok – Action plan for sustainable use of resources of Murter region
- 2) Multistakeholder organizations: fostering HNV products and practices
- 3) HNVf as a tourist activity: SMS Vlaho Komparak, SMS Eko Škoji, Olive oil museum
- 4) Drystone walls: keystone for mosaic HNV
- 5) Nursery of indigenous species ''Anemona''

Croatia – innovation example 1)

Oživi održi otok – Action plan for sustainable use of resources of Murter region

Location: island of Murter, National park Kornati, Nature park Vransko lake

HNV system: mosaic agriculture and extensive grazing, mainly sheep on eumediterranean grassland

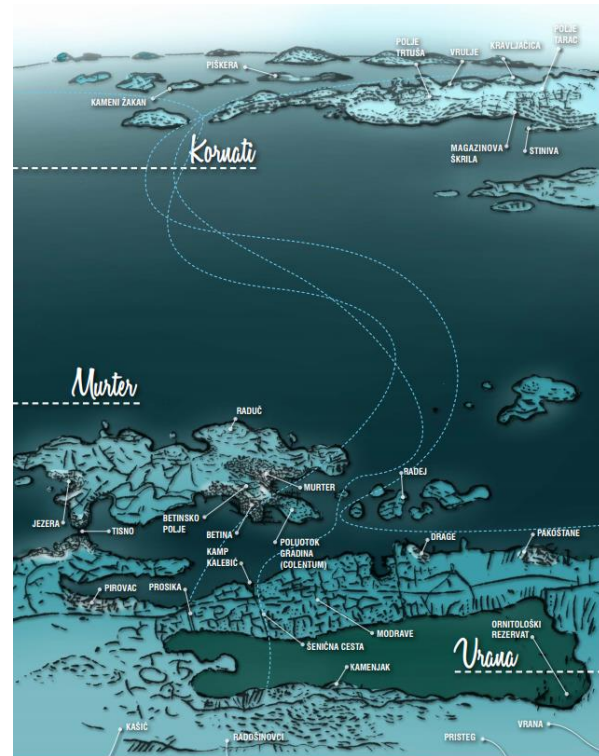
Scale of operation: Natura 2000 sites of Vransko lake, islands of Murter and National park Kornati

Timespan: 18 months (2014/2015)

Keys to success: Partnership of civil and private sector, EU funding, creation of a local multistakeholders platform to promote and implement the concept

For further info:

https://www.argonauta.hr/1499/ozivi_odrzi_otok/



Problems addressed by this example

This project aimed at reinventing the traditional practices that fostered HNVf in the contemporary times. It aimed at tackling the problem of knowledge transfer of traditional practices that stopped due to intensive land abandonment and aging of population.

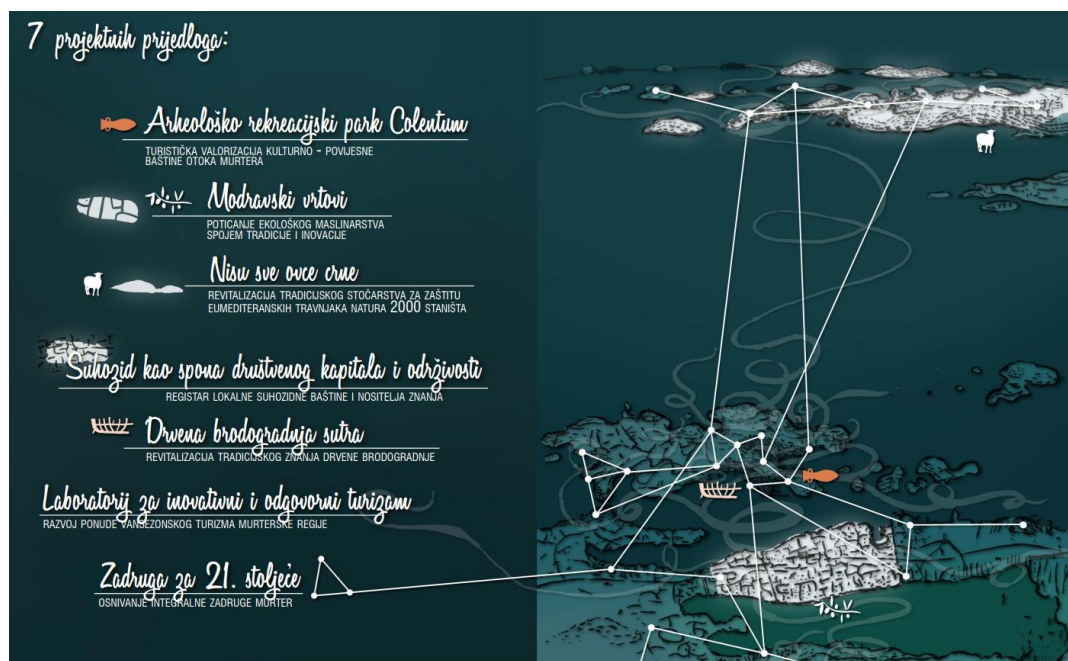
Story in a nutshell

This was a project *“Revival of local traditional practices of sustainable use of resources of the island of Murter and its natural region”* funded through the EU IPA Funds (Supporting CSOs in Development of Partnerships for Sustainable Use of Protected Areas in Croatia, Including Potential NATURA 2000 Sites). One of the outputs was the action plan that documented local resources in terms of natural resources and biodiversity friendly practices and innovations linked to it. Additionally 7 concrete project proposals were developed as a next step in the implementation process:

- 1) Archaeological/recreational park Colentum - tourist valorisation of the cultural and historical heritage of the island of Murter;
- 2) Modrave gardens - Fostering ecological olive growing with a combination of tradition and innovation;
- 3) Not all sheeps are black - The revitalization of traditional cattle breeding for the protection of the eumediterranean lawns;
- 4) Dry stone walls as a the bond of social capital and sustainability - A register of local dry stone walls heritage and knowledge holders;
- 5) Wooden shipbuilding tomorrow- revitalization of traditional knowledge of wooden shipbuilding;
- 6) Laboratory for innovative and sustainable tourism – development of tourist offer outside of the tourist season of the Murter region;
- 7) Cooperative for the 21st century- founding of the integral cooperative Murter.

What does Oživi održi otok achieve for HNV farming?

- 20 success stories
- 2 workshops
- 7 project proposals



Achievements

Revival of local knowledge on nature protection and sustainable use of its resources. Incorporation of nature protection in development of island of Murter through sustainable tourism. Creation of a platform of people from the islands and their Parks for strengthened capacities of stakeholders on the topic ecosystem services; strengthened capacities of stakeholders for development of participative management of Natura 2000 areas; explored practices of participative management policies in protected areas on the model of French eco-museums; revival of local traditional practices of sustainable use of natural resources.

Economics of HNV farming

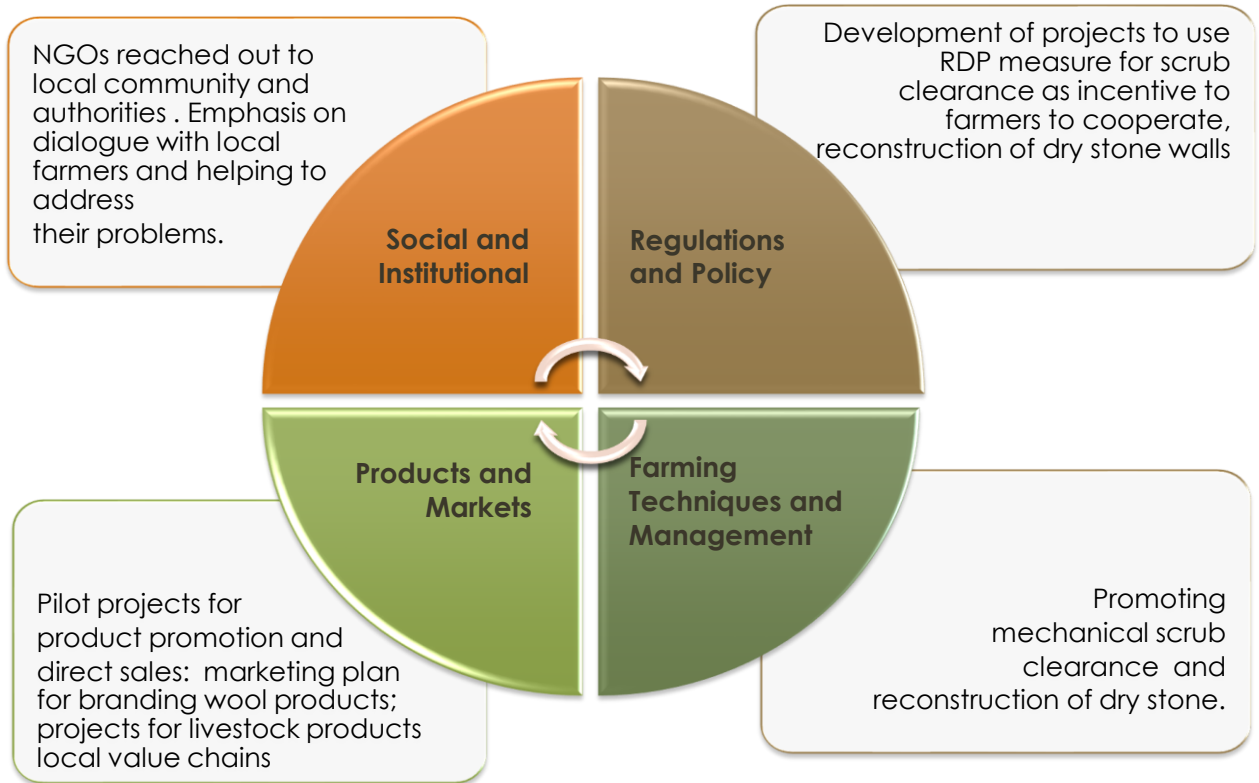
Data is not available on the economic impact of the programme for HNV farms.

Maintaining or improving HNVf values

The programme was not designed to achieve specifically HNV or conservation objectives, but probably had benefits as a result of maintaining extensive grazing systems and reducing scrub encroachment.

Potentially the programme could have been adapted to give it a more explicit HNV focus, for example, with greater involvement of the nature-conservation authorities.

How does "Oživi održi otok" respond to the HNV LINK innovation themes?



Social and institutional

Action plan is the project that is a creation of a collaborative local platform of stakeholder from civil and public sector and the farmers around the idea of developing a plan for sustainable use and revitalization of the Natura 2000 sites

Regulations and Policy

This action plan holds in itself concrete project proposals that aim at using RDP funds for implementing policies designated for HNV and Natura 2000 sites

Farming Techniques and Management

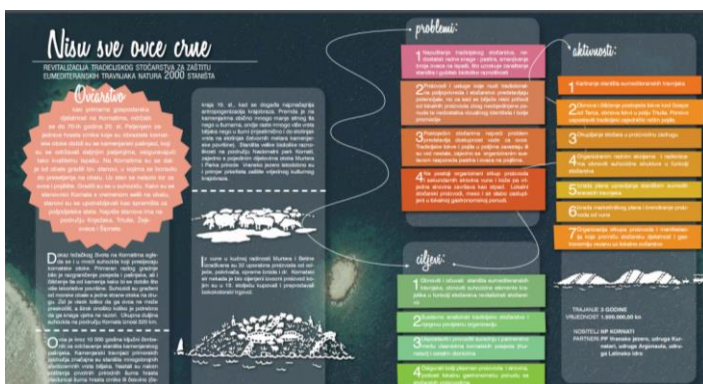
This action plan promotes traditional agricultural techniques of mechanical scrub clearance to prevent wild fires and reconstruction of dry stone walls for preventing erosion and also as a livestock management system

Products and Markets

Drafts and kick starts pilot projects for promotion and direct sales such as "Not all sheep are black" that aims at branding traditional wool products that are treated as waste and not as a resource.

The process that made it happen and critical factors for success

- Multistakeholder partnerships
- EU funding
- Youth enthusiasm
- Transgenerational collaboration



Actors and roles: This project was a result of a partnership collaboration of NGOs Argonauta, 4 Grada Dragodid, Feniks Arbor, Modrave Murter-Betina and public institutions National park Kornati and Nature park Vransko lake: local NGOs and local highly educated youth. Specifically, Murter NGO Argonauta opened lines of communication with public institutions and with the “holders of heritage” using formal and informal acquaintances to foster a long term multistakeholders, multi-islander platform for sustainable development that is still ongoing.

Institutional context that made it possible: The process of acquis harmonization of the Republic of Croatia and access to EU funding for Natura 2000 management plans available to NGO’s and other civil society organisations.

Resources: Funding was available through EU funds, specifically IPA funds

Processes: The project that drafted the action plan lasted for 18 months but the activities related to its implementation kick started in 2015 and are ongoing.

Critical factors for success: Major factor was funding availability of EU funds and financial support that came from the Office for NGOs of the Republic of Croatia. Another factor was enthusiasm of all the people involved that created it using solely their own resources and knowledge.

Limiting factors, actual/potential problems, and how could they be overcome? Project based funding puts constraints on the number of actions that could be done as they are always unexpected opportunities and constraints for the implementation of the vision proposed.

Lessons learnt from this innovation example, and its potential replication

- Transgenerational collaboration
- Multistakeholders partnership
- Territorial approach to sustainable development



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

For HNV preservation of traditional landscapes and revitalization of agricultural practices in a way that it answers to the contemporary needs of the locals (incorporation of nature protection, revitalisation of landscapes and sustainable tourism)

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

It is an innovation that is replicable and that has been in some extent implemented in other areas (such is the Strategic development framework of the National Park of Mljet that functions both as a baseline assessment of the territory and an action plan with a set of project proposals to ensure its implementation)

Could it be rolled out on a bigger territorial scale?

Existing examples that have been mapped were focused on small to medium scales such is the territory of National park, Nature park and plans and projects that were developed as part of a wider international programme such was the COAST project (Conservation and Sustainable Use of Biodiversity in the Dalmatian Coast through Greening Coastal Development – COAST)

What would be needed to do this successfully?

For implementation of HNVf as a concept that will secure livelihood for the local stakeholders it is necessary to secure overheads for organizations that are local key holders of the concept in order to have long term education and collaboration in both implementing and promoting HNVf practices as well as branding its products.

Croatia – innovation example 2)

Multistakeholder organizations LAGs and Slow Food: fostering HNV products and practices

Location: Dalmatian islands

HNV system: mosaic agriculture and extensive grazing, mainly sheep on eumediterranean grassland

Scale of operation: LAG Brač, LAG Škoji, LAG 5

Timespan: From 2012 ongoing

Keys to success: EU funding, multistakeholder platform, continuous communication and collaboration with local stakeholders

For further info:

<https://www.facebook.com/sfpeljesac/>



Problems addressed by this example

Institutional support and promotion of HNVf practices and products.

Story in a nutshell

In the area of Dalmatian islands there are several LEADER organizations and other multistakeholder organizations that indirectly promote HNV friendly practices and its products. They represent partnership of public, private and civil sector established in order to get EU funding for local projects that foster rural development and benefit their agro-eco system. These multistakeholder organizations comprising representatives from public, private and civil sector serve as knowledge brokers and catalysts for the implementation of HNV values in local communities.

Movements such as Slow Food Convivum also contribute to international promotion and branding of such products. *Slow Food Pelješac Convivium* aims to encourage and promote local food production and consumption on principles of being good, clean and fair. Its main activities are encouraging nutrition based and seasonal produce, protection of biodiversity in their focused territory, documenting and reviving local recipes and foods that are endangered or forgotten, bringing the producers and consumers closely together, promoting organic farming that doesn't involve harmful herbicides and pesticides

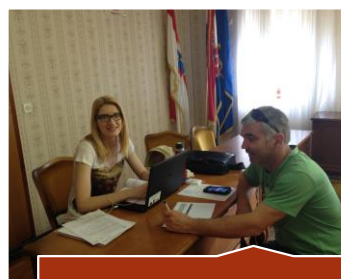
What do multistakeholder organizations as LEADER and Slow Food achieve for HNV farming?



Subsidies for livestock



Education on agrienvironmental measures



Administrative support for RDP subsidies



Branding and promotion of HNV products

Achievements

LEADER organizations play an important role in educating the farmers on available subsidies and helping them receive and administer those subsidies by implementing HNVf friendly projects such as buying livestock, building shelters for livestock, restoring extensive oil grove, restoring one-year crops on mosaic farmland and opening landscapes and planting local medicinal herbs. *Slow Food Pelješac Convivum* has organized several workshops and gatherings with the aim of promoting and educating the local stakeholders on the importance of local cuisine, on what we eat and how its linked to biodiversity.

Economics of HNV farming

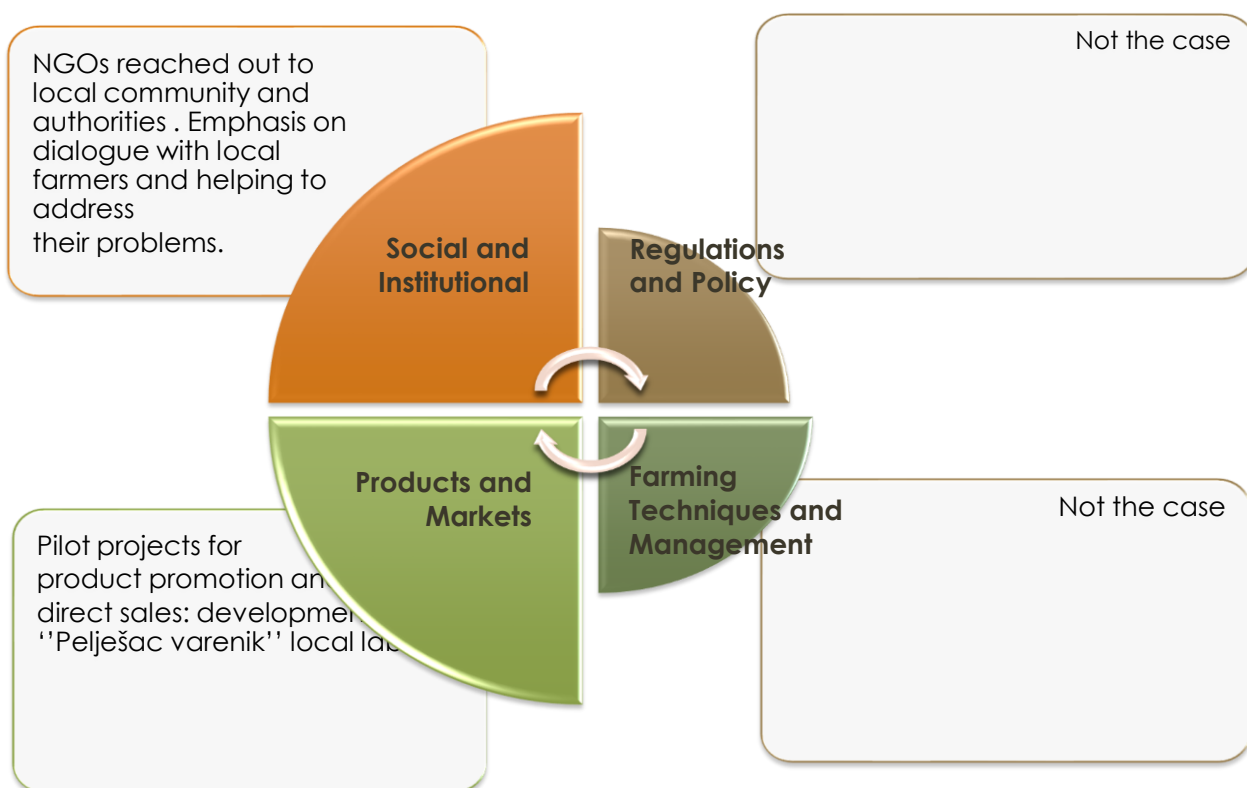
Several workshops and manifestations regarding the promotion of HNVf products and the Slow Food Concept.

Maintaining or improving HNV values through administrative support for 20 HNVf friendly projects.

The organizations and its projects and work programmes were not designed to achieve specifically HNV or conservation objectives, but probably had benefits as a result of maintaining extensive grazing systems and reducing scrub encroachment.

Potentially their work could have been more adapted to give it a more explicit HNV focus, for example, with greater involvement of the nature-conservation authorities.

How do multistakeholder organizations respond to the HNV LINK innovation themes?



Social and institutional

Multistakeholder organizations of different forms represent an important social innovation as they are a first step in creating institutional structures and avoiding a short-term project culture. These social innovations that are part of either international movements or rural development programmes are grounded in the social processes of the community and can best help create social value for that community.

Products and Markets

Multistakeholder organisations, both LEADER organizations work on developing new projects that will brand the territory (such as Active Adriatic South project of LAG 5 that connects local cuisine to cyclo tourism) and the products such is the initiative of the Slow Food Presidium "Pelješki varenik".

The process that made it happen and critical factors for success

- Multistakeholder partnerships
- EU funding
- Youth enthusiasm
- Transgenerational collaboration



Actors and roles: The role of the stakeholders and organizations themselves was defined by their local members from the private, public and the civil sector.

The establishment of the *Slow Food Pelješac* came as part of a LAG 5 project (LAG 5 Green Agenda) where the local stakeholders met and exchanged practices with the civil sector activists from *Slow Food Liburna*.

Institutional context that made it possible: The process of acquis harmonization of the Republic of Croatia and access to EU funding that fostered more field trips, exchange of best practices and networking.

Resources: Funding was available through EU funds.

Processes: The funding came from EU funds and the major factor was the process of harmonization with the EU acquis that put an emphasis on nature protection and bottom-up development.

Critical factors for success: Major factor was funding availability of EU funds and enthusiasm of all the people involved that they will be able to kick-start projects that will truly improve the life of their rural communities and their own businesses.

Limiting factors, actual/potential problems, and how could they be overcome? Project based funding puts constraints on the number of actions that could be done as they are always unexpected opportunities and constraints for the implementation of the vision proposed.

Lessons learnt from this innovation example, and its potential replication

- Territorial approach to local development as a policy framework to promote HNV
- Education and communication as a prerequisite for extensive farming



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

For HNV preservation of traditional landscapes and revitalization of agricultural practices in a way that it answers to the contemporary needs of the locals (incorporation of nature protection, revitalisation of landscapes and sustainable tourism) key is territorial approach to development that foster multistakeholder integrated engagement towards the realization of a unified vision.

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

It is an innovation that is replicable and that has been in some extent implemented in other areas.

Could it be rolled out on a bigger territorial scale?

Existing examples that have been mapped were focused on small to medium scales, in those terms the innovation is replicable on various scales.

What would be needed to do this successfully?

For implementation of HNVf as a concept that will secure livelihood for the local stakeholders it is necessary to secure overheads for organizations that are local key holders of the concept in order to have long term education and collaboration in both implementing and promoting HNVf practices as well as branding its products.

Croatia – innovation example 3)

HNVf as a tourist activity: SMS Vlaho Komparak, SMS Eko Škoji, Olive oil museum

Location: Dalmatian islands

HNV system: mosaic agriculture and extensive grazing, mainly sheep on eumediterranean grassland

Scale of operation: LAG Brač, LAG Škoji, LAG 5

Timespan: From 2012 ongoing

Keys to success: a broad spectar of products, tourism as product placement

For further info:
<https://www.facebook.com/OPG-Komparak-171256756247800/>
<http://www.culinary-croatia.com/culinary-retreats/trpanj-b-b-peljesac.html>
<http://www.muzejuja.com/>



Problems addressed by this example

Branding and promotion of HNVf products. Economic sustainability of HNVf

Story in a nutshell

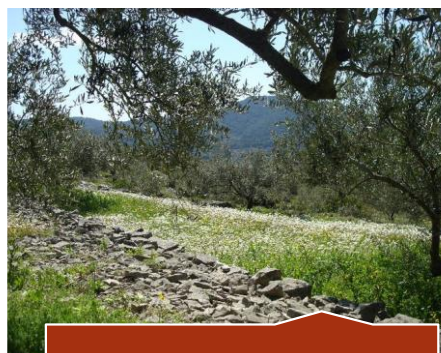
This innovation examples gather different stakeholder that have several things in common: they have all return to the cultivate agricultural lands of their ancestor and revitalize their heritage and their biggest shopper are tourists visiting the area..

- Kruno Cukrov who is the owner of the Olive Oil Museum, decided to renovate the old family mill and turn it in a museum. Museum presents the story of his family, visitors that came can participate in the work on the olive fields, sight see or buy and taste local food.
- Diana Marović, owner of Eko Škoj together with her husband left the capital of Croatia, Zagreb where they both lived and work to open an SMS that is today one of the best rated in the country.
- Vlaho Komparak, a student of Agronomy during his studies decided to come back to the island and translate all the theory in a practice of his own making.

What does HNVf as a tourist activity achieve for HNV farming?



Economic viability



Preservation of biodiversity



Maintenance of traditional agricultural landscapes

Achievements

Linking HNVf to tourism ensures the economic viability of these practices beyond subsidies and ensure its long term endurance. Presenting HNVf as a tourist activity helps increase its popularity and becomes a “in thing” both in tourism and agriculture.

Economics of HNV farming

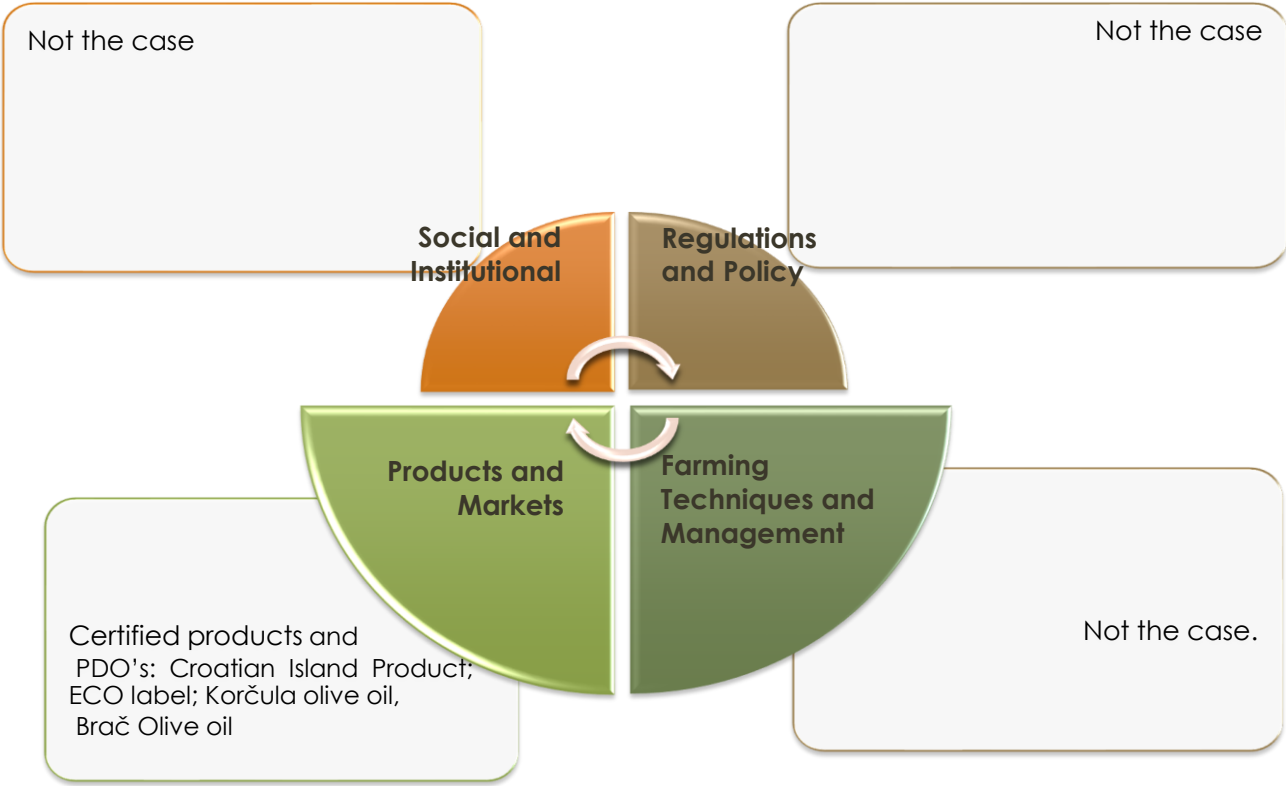
Data is not available on the economic impact of the programme for HNV farms.

Maintaining or improving HNV values

These activities didn't come as an output of pro HNV measures but probably had benefits as a result of maintaining extensive grazing systems and reducing scrub encroachment.

The activities could have been adapted to give it a more explicit HNV focus, for example in terms of branding and HNVf labelling.

How does HNVf as a tourist activity respond to the HNV LINK innovation themes?

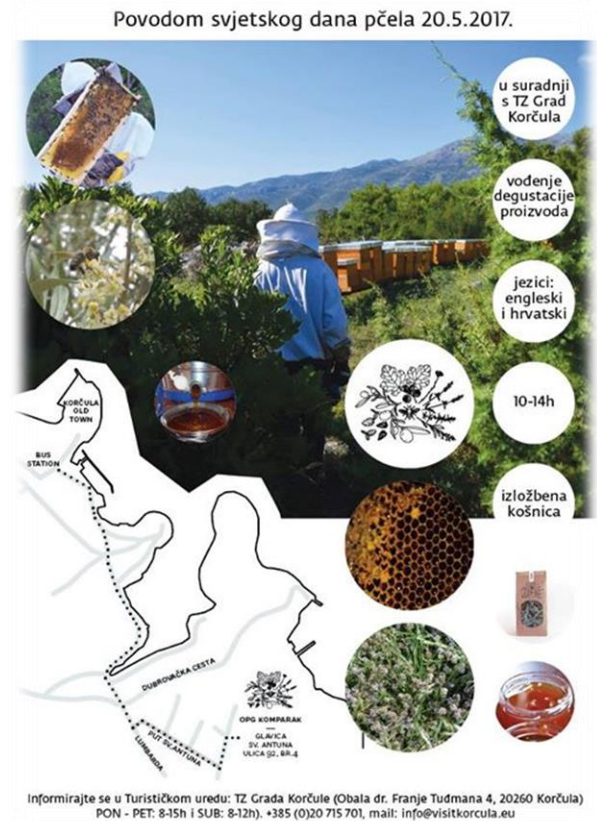


Products and Markets

Tourist demand and the biodiversity on the agricultural holdings helps in the creation of an array of diverse and unique local products that have and added value with the labels such as PDO and ECO label. Additional support is necessary as there is a high unit cost in certification of these products as there are small number of units per product but a great variety of products. The existing administrative and fiscal burden is stopping additional certification that is necessary for creating and added value for these products.

The process that made it happen and critical factors for success

- Inheritance
- Entrepreneurial spirit and creativity
- Demand for authentic tourist experience
- Tourist demand for local products



Actors and roles: Key actors were enthusiasts and entrepreneurs that after a life in the city or schooling in a big city decided to come back to their island and cultivate their agricultural and cultural heritage. Institutional context that made it possible. Opening of Croatia to tourism that is based on local products and local tradition helped create a market niche that would economically valorise the added value of their agricultural products.

Resources: Major resources was their heritage, their own savings or a credit loan and a lot of their own hard work in the field, in the sphere of marketing and promotion and in dealing with bureaucracy.

Processes: These processes were kick-started in different times in the 2000s and are all still ongoing and improving.

Critical factors for success: Their success is a result of years and years of hard work with the sole support of their enthusiasm and their families. Critical factor being enthusiasm and will to persevere are the initial obstacles.

Limiting factors, actual/potential problems, and how could they be overcome? The administrative burden that has no flexibility for micro scale agribusiness in the islands is a major limiting factor. Lack of organised institutional support. National legislation in different sectors block a lot of integrate entrepreneurial ideas that would foster viability and promotion of HNVf (legislation for tourism, business and agriculture differ and there is a need of creating different legal entities). Coordinate action of institutional stakeholders on different levels and sphere of government is necessary in order to produce an administrative ease in doing this type of businesses.

Lessons learnt from this innovation example, and its potential replication

- Tourism as a boost for HNVf products
- HNVf as an unique tourist experience
- Tourism as a marketing tool for HNVf



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

For HNV preservation of traditional landscapes and revitalization of agricultural practices in a way that it answers to the contemporary needs of the locals (incorporation of nature protection, revitalisation of landscapes and sustainable tourism)

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

It is an innovation that is replicable and that has been in some extent implemented in other areas such as it has been presented in this example.

Could it be rolled out on a bigger territorial scale?

Existing examples that have been mapped were focused on small to medium scales such is the scale of an SMS.

What would be needed to do this successfully?

Administrative and fiscal easing of these type of HNVf friendly entrepreneurial activities.

Croatia – innovation example 4)

Drystone walls: keystone for mosaic HNV

Location: Croatian coast and islands

HNV system: mosaic agriculture and extensive grazing, mainly sheep on eumediterranean grassland

Scale of operation: islands, coast, coastal hinterland of Croatia

Timespan: The origins of the initiative go back to 2002 and is ongoing. Dry stone walls as a farming technique in the islands are over 2000 years old

Keys to success: enthusiasm, EU funding, EU recognition (Europa Nostra award)



Problems addressed by this example

Preservation and restoration of HNV habitats and grasslands. Protection from soil erosion and actions to prevent landscape closure. Transgenerational knowledge transfer and promotion of HNV friendly land management practices.

Respecting the knowledge and skill of our ancestor to manage natural resources in this vast and often arid karst area, making the best of it, we aim to promote sustainable ways of managing land and water resources. The aim is to re-establish dry-stone techniques as an efficient, aesthetic, humane and sustainable alternative to concrete in construction of simple buildings and objects in the Mediterranean, especially in areas such as national/natural parks and protected heritage sites. (Bubalo, 2017)

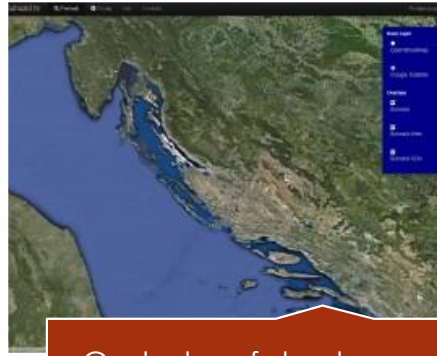
Story in a nutshell

NGO 4 Grada Dragodid is a group of enthusiasts who have established and organization that is promoting and re-actualising the dry stone skill and heritage through workshops, field research and media. They are making links between the bearers of knowledge and the audience: young professionals (agriculture, architecture, construction, tourism, etc.), heritage enthusiasts, tourists.

What do drystone walls and NGO 4 grada Dragodid achieve for HNV farming?



Education on dry stone wall heritage and techniques



Cadaster of dry stone walls of Croatia



Promotion of traditional agricultural landscape

Achievements

Revival of local knowledge on nature protection and sustainable use of its resources. Creation of a platform for reviving local traditional practices of sustainable use of natural resources and land management.

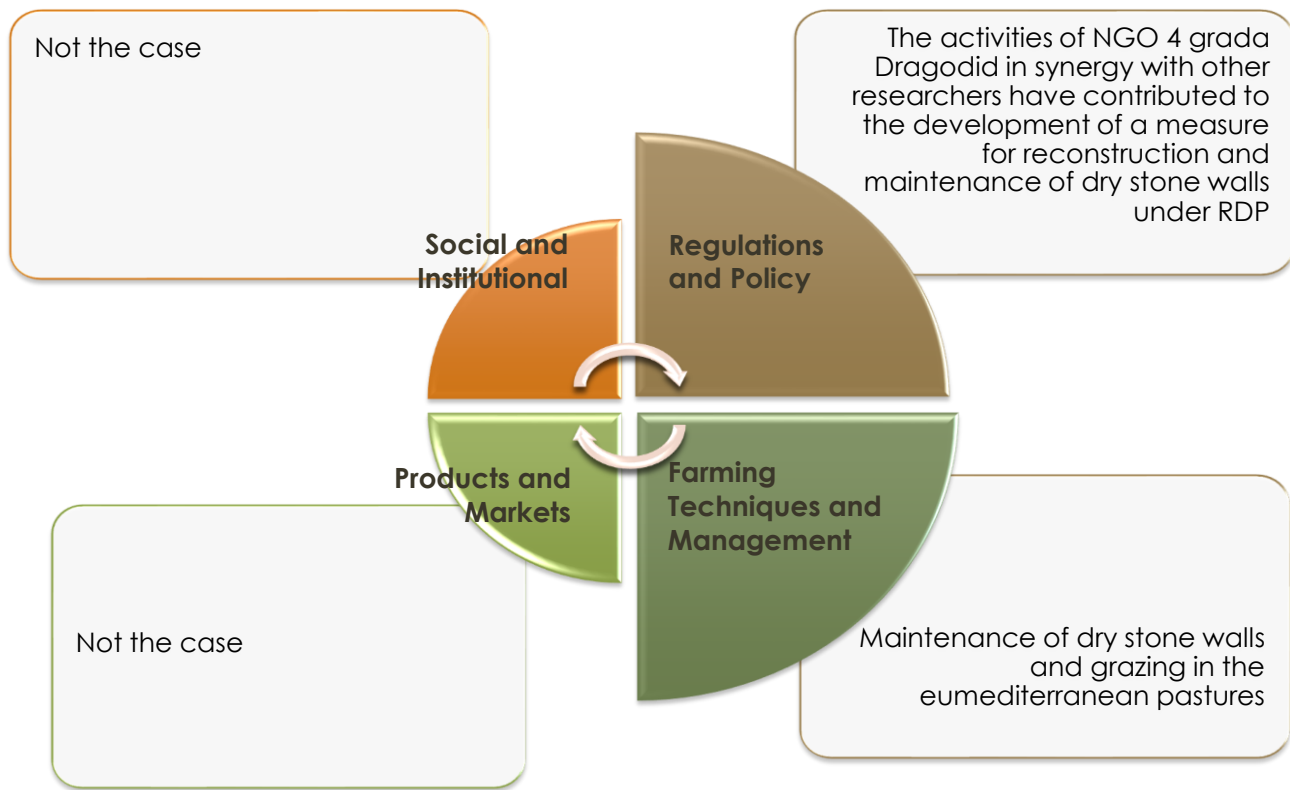
In the communities where the continuity of agricultural production was broken by the abandonment of the agricultural land during the 20th century, there is a noticeable generation gap between the elder, who are, if still alive, mostly retired, and the younger generations of agriculturists, who are revitalizing the agricultural practices in the new circumstances. Recently, this gap has begun to fill in with the activities of various organisations and enthusiasts that organize workshops and issue printed and digital handbooks and newsletters. Often such actions bring the elder masters “from oblivion”, giving them the opportunity to show their skill and share their knowledge. Promoting the valorisation and protection of vernacular heritage as a growth asset in the region lead us to trans-national partnership with similar organizations, and interdisciplinary collaborations (home and abroad) resulted in UNESCO nomination for dry stone walling on representative list of the intangible cultural heritage of humanity. (Bubalo, 2017)

Economics of HNV farming

Data is not available on the economic impact of the programme for HNV farms but the overall mosaic agriculture in the learning area is fenced and managed through the system of several hundreds of kilometres of dry stone walls.

The programme was not designed to achieve specifically HNV or conservation objectives, but probably had benefits as a result of maintaining extensive grazing systems and reducing scrub encroachment. Potentially the programme could have been adapted to give it a more explicit HNV focus, for example, with greater involvement of the nature-conservation authorities.

How do dry stone walls and NGO 4 grada Dragodid respond to the HNV LINK innovation themes?



Regulations and Policy

The activities of this NGO that has been working on the promotion of dry stone walls have resulted in policy recommendations and have translated in concrete measures (4.4.1. and measure 10 of the Croatian RDP)

Farming Techniques and Management

Dry stone walls are one of the oldest and most effective ways of land management in the LA of Dalmatian islands. Promotion of this techniques and its transgenerational skill transfer is a key innovation in maintaining mosaic landscape.

The process that made it happen and critical factors for success

- Enthusiasm
- Volunteer work
- Main practitioners of dry stone walls: shepherds, vine and olive



Actors and roles: The key actors were local NGOs and local highly educated youth that wanted to find a way to connect to their heritage but also to be able to ensure its economical viability in the islander area. Institutional context that made it possible: The process of acquisition harmonization of the Republic of Croatia and access to EU funding.

Resources: Volunteer work and funding available through different EU programmes.

Processes: The initiative started in 2002 and is still ongoing.

Critical factors for success: *The enabling factors were basically set of circumstances : participation in an international workshop on the island of Vis where we introduced to abandon village of Dragodid and the owner Mr. Andrija Suić, who taught traditional skills of dry stone walling. Our commitment for preservation and DIY aesthetics slowly led us to forming national network of partners (heritage professionals, institutions, local NGOs) and local stakeholders. With few national and one international award, it all fell into perfect timing and we were able to create momentum with numerous workshops throughout Croatia and abroad, making this traditional skill very popular on numerous events especially in rural areas. However, there is a need to establish some formal or semi-formal courses in order to make the knowledge and skills available, especially now that new measures for rural development (maintaining dry stone walls) have been approved. (Bubalo, 2017)*

Limiting factors, actual/potential problems, and how could they be overcome? Project based funding puts constraints on the number of actions that could be done as they are always unexpected opportunities and constraints for the implementation of the vision proposed.

Lessons learnt from this innovation example, and its potential replication

The dry stone as intangible cultural heritage of humanity is from the start the result of a dialogue among communities, groups and individuals that see the element as something they have in common and wish to cooperate in order to promote its significance and value, and therefore is applicable to every country included in project. By creating a platform for the future cooperation, except being a centre for distributing traditional knowledge, it would create attention to local, regional and national stakeholders of the importance of dry stone walls both as cultural and natural (biodiversity) heritage, and raising awareness of importance of using sustainable and traditional way of maintaining agricultural landscape.



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

For HNV preservation of traditional landscapes and revitalization of agricultural practices in a way that it answers to the contemporary needs of the locals (incorporation of nature protection, revitalisation of landscapes and sustainable tourism)

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

It is an innovation that is replicable and that has been in some extent implemented in other areas.

Could it be rolled out on a bigger territorial scale?

The innovation itself is already being implemented on different scales.

What would be needed to do this successfully?

Ensuring long term financial support as these activities are time consuming and require a lot of man power both in terms of research, education, mapping and reconstruction itself.

Croatia – innovation example 5)

Nursery of indigenous species “Anemona”

Location: island of Korčula

HNV system: mosaic agriculture and extensive grazing, mainly sheep on eumediterranean grassland

Scale of operation: island of Korčula and the surrounding area

Timespan: Founded in 2010. and is still running

Keys to success: service of knowledge and hard work. Constant listening to customers and local needs



Problems addressed by this example

Traditional practices and agricultural seedling that are indigenous to the area and foster HNV (not invasive).

Story in a nutshell

Anemona is a plant nursery and garden center that is constantly investing time and resources to research and monitor nature of island of Korčula. Lavandula from pupnat, rosemary, olives, tomato from Lumbarda, island cabbage, different products from Myrtus communis, Arbutus unedo, Salvia and a lot of other plants are the stories and products that Anemona holds. They are monitoring ascomycetes, dragonflies, fallow deer, Kočje natural reserve, island of Badija protected habitat, Kamenjak, Donje Blato habitats, protected forest Hober together with other partners and institutions. The gathered data and knowledge is shared with the local community and specially among children through collaboration with schools and the local radio station. One of the educational points is also the garden centre whose aim is to educate and to raise awareness among the islanders on the high nature value of the area.

What does nursery of indigenous species “Anemona” achieve for HNV farming?



Education on indigenous
island species



Nursery of indegenous,
resilient species



Promotion of mosaic
agriculture

Achievements

Revival of local knowledge on nature protection and sustainable use of its resources.

Economics of HNV farming

Data is not available on the economic impact of the programme for HNV farms.

Maintaining or improving HNV values

The plantation house is improving HNV values of the area by producing seedlings for HNVf and raising awareness on the HNV of the area through education and promotion of mosaic agriculture.

The process that made it happen and critical factors for success

- Enthusiasm
- Research on indigenous species and habitats

ISTRAŽIVANJE JELENA LOPATARA NA OTOKU BADIJI*

INVESTIGATION OF FALLOW DEER ON THE BADIJA ISLAND

Milan VOJINOVIĆ i Denis MIOČIĆ**

SAŽETAK: Nešto poslije unošenja jelena lopatara u okolicu Mljetskih jezera (1958. g.), Uprava Brijunskih otoka naselila je dva para te isti divljači i na otok Badiju kraj Korčule.

Otok je površine nešto manje od 100 ha.

Rješenjem Zavoda za zaštitu prirode od 26. 3. 1970., otok Badija upisan je u Registar posebno zaštićenih objekata pod registarskim brojem 283., u kategoriju rezervata prirodnog predjela. Prema Zakonu o zaštiti prirode (N. N. br. 54/1976.) i danas važećem N. N., br. 30/1994., u kategoriju značajni krajolik.

Od naseljavanja lopatara na taj otok, sve do današnjih dana, njime se nije ili gotovo uopće nije gospodarilo. Jelenska divljač bila je prepuštena prirodnom biljnom potencijalu otoka i kamenolomu kojeg je HPT »Korčula« odabrala za denonaciju smeća.



Actors and roles: Project started in 1988 by a teams of researchers Milan Vujinović, ing of forestry and Roman Ozimec, mag. biology with goal to achieve integration of human activity into nature. Since then Anemona has researched, produced and offered plants valuable for local markets and final production.

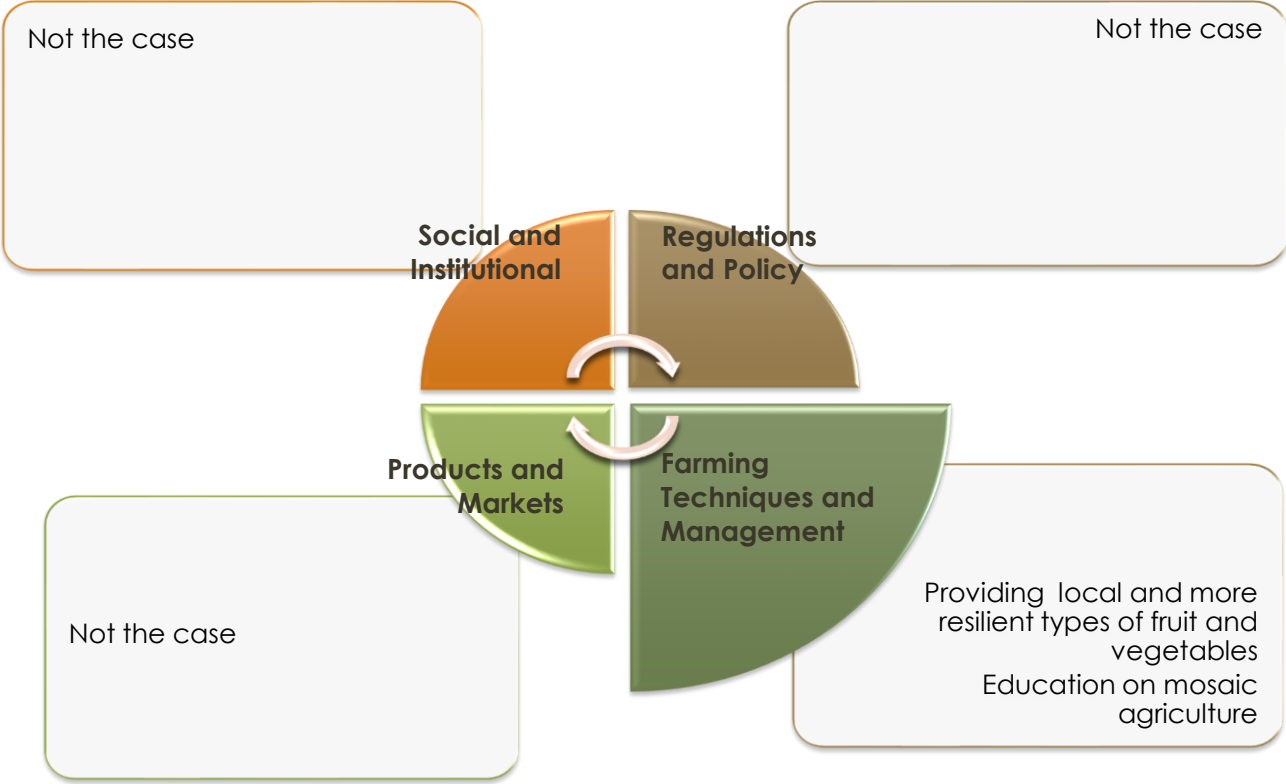
Institutional context that made it possible: There was no institutional support or structured support for the activities of Anemona plantation house although they participated in several EU projects as an example of good practices and held workshops presenting their work.

Resources: Bank loans and own resources.

Processes: Started in 1998 and ongoing.

Limiting factors, actual/potential problems, and how could they be overcome? Problems with waste management and high prices of resources needed for production. A lot of problem have been solved using renewables and recycling.

How do dry stone walls and NGO 4 grada Dragodid respond to the HNV LINK innovation themes?

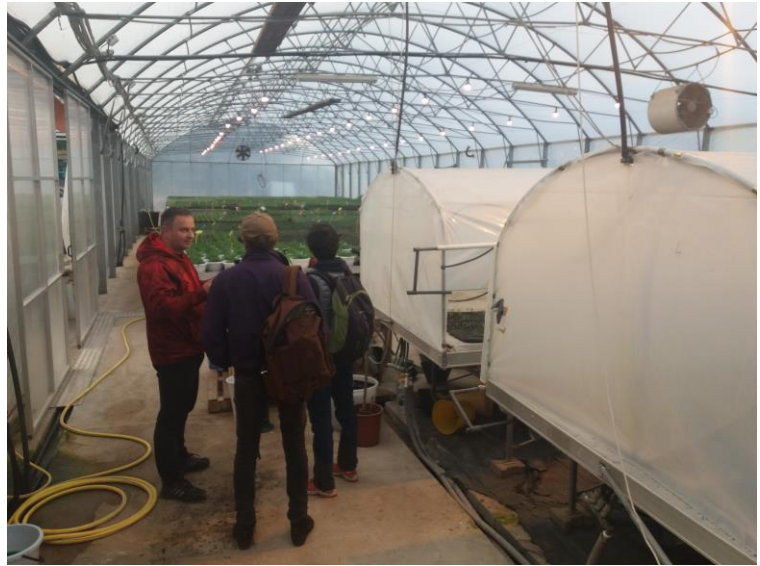


Farming Techniques and Management

Nursery plan “Anemona” provides resilient islander seedlings and education on how to plant them and manage the mosaic landscape of islander agricultural fields.

Lessons learnt from this innovation example, and its potential replication

- Local knowledge and skills to answer to the local problems in HNVf



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

For HNV preservation of traditional landscapes and revitalization of agricultural practices in a way that it answers to the contemporary needs of the locals (incorporation of nature protection, revitalisation of landscapes and sustainable tourism)

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

It is an innovation that is replicable and that has potential for replication into other areas.

Could it be rolled out on a bigger territorial scale?

It is possible to manage such a project on the level of an island or a region, depending on the agro-bioenvironmental characteristics of the area.

What would be needed to do this successfully?

Additional financial support for finalisation of the project called *"Center for agrobiodiversity of the island of Korčula"*

Photo credit

- Pero Poljanić
- SMS Eko Škoj
- SMS Vlaho Komparak
- Olive oil Museum
- NGO Argonauta
- NGO 4 Grada Dragodid
- Filip Bubalo
- LAG Brač
- LAG Škoji
- LAG 5

Bibliography

1. Andlar, G. (2012). *Iznimni kulturni krajobrazi primorske hrvatske*. University of Zagreb.
2. Ateljević, Irena; Raguž, Ana; Fressel, Norma; Ježina, Luka; Bašić, Ana; Skračić, Marina; Bubalo, Filip, Čubrić Šikić, K. (2016). *Akcijski plan održivog korištenja resursa murterske regije murterske regije Vrana - Murter - Kornati*.
3. Bubalo, Filip (2017). *Innovation fiche Dragodid 4 Grada*. 4 Grada Dragodid
4. Chloé Abdessater, Laurianne Bitton-Lebeau, Laetitia Bisiaux, Marie Bourdin, Pauline Briand, Krystel Corsagni, Maxime de Rochegonde, Marc Gomes, Marie Graziella-Cailleau, Zoé Ginter, Robin Le Priol, Johan Litaudon, Elodie Lhuer, Léonard Normand, Iris Parro, M. V. (2017). *Strategic Environmental Management Analysis of HNV in the Dalmatian islands*. Montpellier.
5. Eko Škoj. (n.d.). Retrieved August 7, 2017, from <http://www.ekoskoj.com/hr/>
6. O nama – Udruga Argonauta – Udruga za zaštitu prirode i okoliša te promicanje održivog razvoja. (n.d.). Retrieved August 1, 2017, from <https://www.argonauta.hr/o-nama/>
7. Ozimec, Roman; Karoglan Kontić, Jasminka; Maletić, Edi; Matotan, Zdravko; Strikić, F. (2015). *Tradicijske sorte i pasmine Dalmacije | UNDP u Hrvatskoj*. Program Ujedinjenih naroda za razvoj. Retrieved from http://www.hr.undp.org/content/croatia/hr/home/library/environment_energy/Tradicijske.html
8. OPG Komparak. (n.d.). Retrieved August 7, 2017, from https://web.facebook.com/OPG-Komparak-171256756247800/?_rdc=1&_rdr
9. Ivana Botica, Josip Grgić, Vinko Muštra, Slađana Pavlinović, Blanka Šimundić, 2016. *Assessment of the baseline situation in LA Dalmatian islands*. LAG 5 and University of Split, Faculty of Economics.
10. PELJESAC VARENIK HAS BECOME SLOW FOOD PRESIDIUIM - Essedra. (n.d.). Retrieved February 2, 2017, from <http://www.essedra.com/peljesac-varenik-become-slow-food-presidium/>
11. Slow Food presidium - Pelješac varenik. (n.d.). Retrieved August 7, 2017, from <https://web.facebook.com/peljesacvarenik/>
12. Slow Food Peljesac. (n.d.). Retrieved August 7, 2017, from <https://web.facebook.com/sfpeljesac/>
13. Muzej uja - Museum of olive oil. (n.d.). Retrieved August 7, 2017, from <http://www.muzejuja.com/>



Learning Area “The Burren” (Ireland)

INNOVATION EXPERIENCES AND NEEDS

Contribution to deliverable D2.6.1

Date: October 2017

Authors: James Moran, Brendan Dunford



Introduction and contents

This report looks at innovations that support HNV farming in the Burren, and identifies the types of innovation that are required in order to secure a sustainable future for HNV farming in the region.

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

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

Contents

Slide 2: Introduction and contents

Slide 3: The challenges facing HNV farming in the Burren

Slide 4: Overview of innovations in the Burren

Slide 5: Innovation examples in the Burren: what are their strengths and weaknesses for HNV farming?

Slide 6: Social and Institutional Innovation Needs

Slide 7: Regulatory Framework Innovation Needs

Slide 8: Products and Markets Innovation Needs

Slide 9: Farm Techniques and Management Innovation Needs

Slide 10: Innovations from outside the LA within Ireland

Slide 11: Innovation examples for which the Burren is looking to other Member States

Slide 12: Seven Innovation Examples from Ireland

Slide 13-18: (1) BurrenLIFE: co-creating solutions to HNV farming challenges

Slide 19-24: (2) The Burren Programme: a locally targeted 'Hybrid' Agri-Environmental Scheme (AES)

Slide 25-29: (3) Adopting a farmer-centred approach to AES design and delivery

Slide 30-35: (4) Developing locally tailored livestock feeding and watering systems

Slide 36-40: (5) Burrenbeo Trust: building a conservation 'culture' and community in the HNV Landscape

Slide 41-55: (6) Farming for Conservation Awards: celebrating the HNV farmer

Slide 46-50: (7) Adding value to HNV farming

The challenges facing HNV farming in the Burren

Poor economic
outlook

Poor social
structure

Land
abandonment and
intensification

Lack of integrated
land use strategy

Over-regulation/
Bureaucracy

Apathy



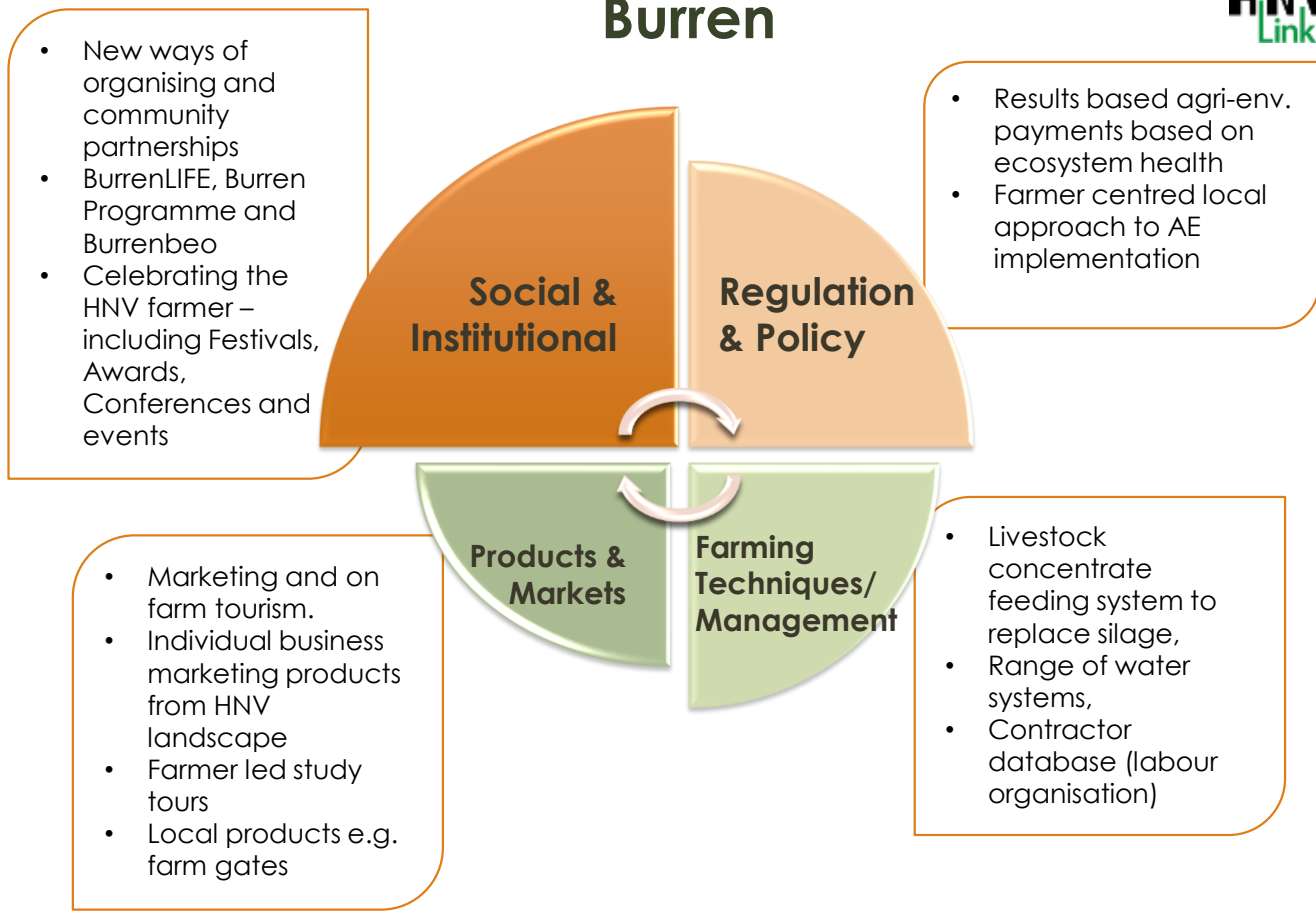
The Burren faces a number of social, economic and environmental challenges.

- Social: an ageing farming population with very few young farmers resulting in a loss of management knowledge and skill and insufficient labour to carry out required HNV conservation actions.
- Economic: Farming remains an unviable occupation for most farmers, even with additional funding provided by the Burren Programme. Farmers currently gain very little from tourism or added value gained from livestock sales.
- Environmental: Notwithstanding the impact of the Burren programme, scrub continues to encroach onto the Burren's grasslands while on lowland areas there is continued, often damaging intensification (reclamation, nutrient input).

The main barriers to realising a sustainable future for HNV areas are identified (through research and HNV LINK Seminar) as:

1. Bureaucracy – too much paperwork, restrictions (eg planning).
2. Access to land – includes inheritance/succession issues but also farmers attachment to land and their reluctance to rent or sell land.
3. An ageing farming population with very few young farmers resulting in a loss of management knowledge and skill.
4. Poor social opportunities especially for young farmers – less people, more machinery, fewer social outlets.
5. Insufficient labour to carry out required conservation actions.
6. Poor infrastructure – broadband, roads, community facilities.
7. Limited skills and confidence among (some farmers) to undertake alternative enterprises.
8. Poor viability of current systems and their limited product range – mainly weanling beef.
9. Lack of a coherent, long term approach to the management of the Burren.
10. Poor overlap between two main industries – farming and tourism.
11. Lack of off-farm employment opportunities close to the farm.
12. Security and short term (5 years or less) nature of public funding.

Overview of Innovations in the Burren



The Burren is recognised as a HNVF change leader and centre of innovation. Much has been achieved in the Burren through the partnership and participatory approach of BurrenLIFE and the follow-on Burren Programme. Organisations such as the Burrenbeo Trust have complemented the Burren programme leading to the creation of a local and institutional environment which inspires creation of innovative solutions.

Many innovations have been piloted in the area, but issues around rural isolation and infrastructure mitigate against a healthy future for the Burren community. Individual businesses/farms have seized the opportunity to create new products and markets but more could be done to build capacity in this area. It appears that answers lie in a lot of small solutions from a range of quarters, if we want farming to be an attractive option for a new generation of Burren farmers.

In particular, it is clear that further work is required in the area of the regulatory framework to enable and support local communities to create local solutions. Social infrastructure and community wellbeing initiatives are required to combat rural isolation and improve attractiveness of farming as a career choice for the next generation. Improved marketing, product development and diversification opportunities are needed to realise a vision of sustainable HNV farming in the Burren.

Innovation examples in the Burren: what are their strengths and weaknesses for HNV farming?



- Partnership approach of BurrenLIFE and the ongoing Burren Programme
- Burren Programme: Hybrid model of Payment for results/payments for ecosystem services
- Burren Programme: Farmer-centred AES design
- Burren Programme: Burren concentrate feed and water systems

- Community Stewardship: Burrenbeo Trust education and communication initiatives
- Celebrating the farmer: Farming for Conservation Awards
- Adding Value: Burren Products, Marketing and on farm tourism (contributing to valorisation of HNV landscape)

burrenbeotrust
connecting people and place

The BurrenLIFE and follow on Burren programme developed and cemented of a positive, respectful working relationship between agricultural and conservation interests which continues today. This partnership can be viewed as the umbrella for the implementation of the range of innovations outlined in this report. The overall strengths and weaknesses for HNV farming of the existing innovations are:

Strengths

- Strong partnership and positive working relationship across a range of key stakeholders
- Support and trust of farming community
- Ongoing public funding for delivery of public goods through payment for results/payments for ecosystem services approach
- Individual businesses availing of opportunities to develop new products (e.g. Burren gates), market food products and create on farm tourist experiences
- Local “one stop shop” advisory services: minimises bureaucracy for farmer while providing guidance and support
- Support of wider community enabled and captured through Burrenbeo Trust initiatives
- Pride of farmers in producing biodiversity and landscape product

Weaknesses

- Short term basis (5 years or less) and ongoing uncertainty of future availability of public funding. Farmers are delivering the biodiversity/HNV products and a market has been created but will this continue.
- Under current regulations and member state implementation rules, many high nature value features are ineligible for farm payments creating a negative perception of value of these areas.
- Despite current initiatives, farming is still a relatively low income occupation - financially non-viable.
- Attractiveness of farming as occupation for next generation.
- Overly dependent on public funds and need to diversify funding sources.
- Limited number of farm business benefiting directly from tourism or selling products directly to consumer.

Burren social and institutional innovation

Social and institutional - innovation needs	Possible approaches
Farmers hosting (guiding, accommodating) study groups, volunteers, students and visitors	Training programme and development of best practice guides and demonstration businesses.
Innovation re inheritance and succession	Investigate approaches to farm partnerships, share farming (possibility to expand to shared land use e.g. farming and tourism?)
Networking between farmers and among farmers, local businesses and other local residents	Farmers network discussion groups for knowledge sharing. Wider network initiated at Burren Winterage School and developed through Burrenbeo.
Community wellbeing initiatives	Work with range of organisations to develop community projects in Burren, building on ChangeX Burren Initiative www.changex.org

Social and Institutional Innovation Needs

To date the Burren has shown capacity for social and institutional innovation which has been the foundation of much of its success in the area of HNV farming. However there is an need for this innovation to tackle wider needs in the areas of attractiveness of the region to young farm families and wider community well being. Initiatives have begun in this area under the ChangeX Burren programme (<https://www.changex.org/blog/3-years-changex-burren-the-power-of-ideas-and-passionate-people-driving-them/>). ChangeX is a platform which aims to enhance community well being through exchange and development of innovations across the world.

There is also a need to improve access to land for the next generation and innovations are needed in the area of inheritance and succession. Much work has been done in this area by the national agriculture advisory and development agency Teagasc but this has mainly focused on intensive farming system. There is a need to adapt existing share farming (<https://www.teagasc.ie/rural-economy/farm-management/collaborative-farming/share-farming/share-farming-a-short-guide>) and partnership approach adapted in the dairy sector to HNV systems. Share farming is where two parties carry on a shared farming business on the same piece of land without forming a partnership/company.

Could the share farming concept be expanded to a shared land use programme? This may be a means of facilitating a tourism operator and a farmer working together to develop their businesses on the same area of land. This could get around issues relate to skills gap and age profile that may be currently acting as barrier to farmers developing alternative enterprises on their land that would complement the HNV farming system.

Burren regulatory framework innovation

Regulatory framework - innovation needs	Possible approaches
Long term future for RBAPS/Hybrid Agri-environment schemes	Future CAP RDP regulations need to have dedicated article for this type of AEM. Needs to facilitate 15 year contracts
More devolved (local-level) decision-making powers to streamline regulations	A new model for government departments and agencies to support local communities; "local area innovation officers" to encourage and support new ideas
A more strategic/integrated approach to the management of the Burren	Government at EU and national level need to work closely together to develop a more integrated approach to land use policy and management

Regulatory Framework Innovation Needs

There is a general feeling in the LA that the innovations that have taken place in the Burren have had to work around the existing regulatory framework rather than being facilitated by it. There is a real need to support and engage with local areas to co-create innovative solutions to emerging challenges. There is need for a more integrated approach to land use as there are currently conflicting messages from a range of policies communicated to communities on the ground.

Burren products and markets innovation

Products and markets - innovation needs	Possible approaches
New product development	New products might include goat meat; hazelnut products; biochar
Direct sales by farmers	Individual farmers market products to tourist on farm walks. May need to revisit a Burren producers group which has been piloted during BurrenLIFE
Other ecosystems services (apart from productive services) marketed as product from land	Create a market akin to the market created by the Burren Programme for biodiversity for other ecosystem services
Farmers need to harness opportunities from tourism and environmental credentials of Burren	Burren as a learning landscape with farmers as the main hosts.

Products and Markets Innovation Needs

Currently the Burren farming has a limited product base due to specialisation of agriculture in suckler beef production with most beef animals sold as weanlings (animals 6-9 months of age) for finishing in other parts of Ireland and Europe. This situation has evolved due to limited availability of pastures suitable for finishing continental breeds which are the predominant breeds in the Burren today. Innovative ideas are particularly needed in the areas of new product and market development.

Burren farm techniques and management innovation

Farm techniques and management - innovation needs	Possible approaches
Techniques to aid control of scrub	Efficient control of regrowth and use of brushings needs to be investigated
New technologies to reduce labour intensive practices	Satellite technology/trackers/drones be used to reduce herding times. Automated timed feeders for concentrate using solar/wind power
Consolidating scattered holdings and enhancing access to holdings	Possible to investigate as part of share farming/partnerships (see social and institutional innovations needs above)

Farm Techniques and Management Innovation Needs

Management techniques needed to maintain the nature conservation value of the Burren are labour intensive and new labour saving technology needs to be investigated.

Innovations from outside the LA within Ireland



EIP Hen Harrier: European Innovation Partnership locally led project for Hen Harrier Special Protection Areas

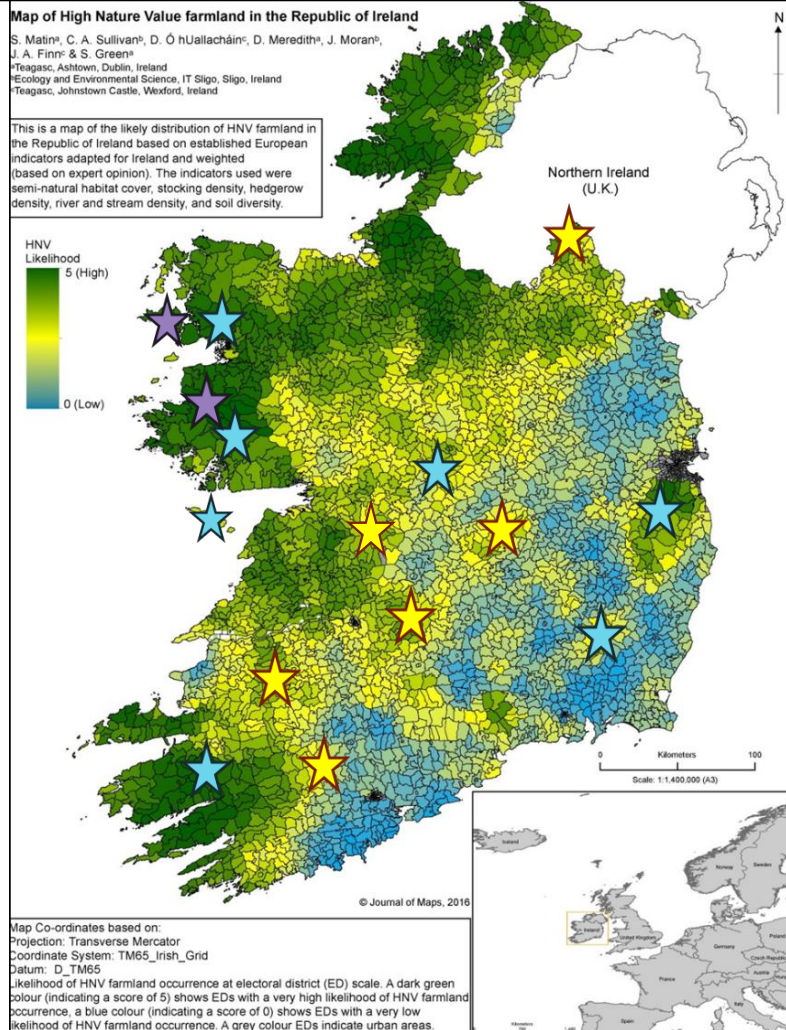


EIP-Open Call: European Innovation partnership operational groups with specific objectives for HNV farmland



HNV Products and Markets: Achill Mountain Lamb and Connemara Mountain Lamb

Irish Natura and Hill Farmers Association (INHFA). New farmer's organisation representing farmers in hill land and designated areas



- EIP Hen Harrier: European Innovation Partnership operational group focused on the development of local agri-environment projects to be based on the Burren model focusing on the Hen Harrier SPAs: 1. Mullaghanish to Musheramore Mountain SPA; 2. Stack's to Mullaghareirk, West Limerick Hill and Mount Eagle SPA; Slievefelim to Sivermines Mountain SPA; Slieve Aughty Mountains SPA; Slieve Bloom Mountains SPA and Slieve Beagh SPA.
- European Innovation Partnership operational group open call: An open call to develop innovative solutions for environmental or climate related issues. Priority themes such as the preservation of landscapes; water quality; climate mitigation/adaption; resource efficiency and biodiversity. Restoration of uplands peats was highlighted as a particular priority. A number of successful phase 1 application have focused on HNV farmland in the open call and the sustainable management of HNV farmland: 1. Irish Breeding Curlew Conservation group; 2. Nephin Beg Uplands Farming Group; 3. Caomhnu Arainn (Managing HNV Farmland Aran Islands); 4. Callows Farming and Wildlife Conservation Partnership; 5. Wicklow uplands Council; 6. Grazing for Ecosystem Services Group; 7. Blackstairs Farming Futures Partnership; 8. MacGillycuddy Reeks Mountain Access Forum.
- HNV Products and Markets: Achill Mountain Lamb and Connemara Mountain Lamb. Lamb marketed on the basis of its High Nature Value origins. Achill Mountain Lamb located on island off west coast with own abattoir, direct and online sales. Connemara Mountain lamb one of only four products with Protected Geographical Indication status in Ireland.
- Irish Natura and Hill Farmers Association (INHFA). A newly formed farmers association focused on HNV farmland issues, membership from across hill and Natura 2000 farmed land in Ireland.

Innovation examples for which the Burren is looking to other Member States

- ▶ Producers groups involved in direct sales and online marketing of products.
- ▶ Marketing and novel products for adding value to meat and other products from relatively remote HNV areas.
- ▶ Innovations linking tourism and HNV farming directly e.g. revenue raised to fund community projects through bed taxes.
- ▶ Labour saving technologies – e.g. for control of invasive species, for herding of livestock.
- ▶ Integrated approaches to land use management.
- ▶ Community well being initiatives.

INNOVATION FICHES FROM IRELAND

- 1) BurrenLIFE: co-creating solutions to HNV farming challenges
- 2) The Burren Programme: a locally targeted 'Hybrid' Agri-Environmental Scheme (AES)
- 3) Adopting a farmer-centred approach to AES design and delivery
- 4) Developing locally tailored livestock feeding and watering systems
- 5) BurrenBeo Trust: building a conservation 'culture' and community in the HNV Landscape
- 6) Farming for Conservation Awards: celebrating the HNV farmer
- 7) Adding value to HNV farming

Ireland – innovation example 1)

BurrenLIFE: co-creating solutions to HNV farming challenges

Location: Burren Region, Ireland

HNV system: Extensive winter-based grazing of rough limestone pastures by suckler cows.

Scale of operation: 20 pilot farms (2,500ha) but with an impact on c.30,000ha of HNV farmland

Timespan: 2004-2010

Keys to success: Improved understanding of the importance of HNV farming and farmers by conservation authorities; better appreciation by farmers of the potential opportunities arising from HNV farming and of their role in positively managing the HNV landscape; adequate funding (€2.3m) and time (5 years) to co-create solutions at farm level to resolve some of the key threats to the HNV landscape; practical solutions with multifaceted (economic, agricultural and environmental) monitoring of impact by a dedicated project team.

For further info: related to implementation of Burren programme: <http://burrenprogramme.com> & For original BurrenLIFE project information see:

http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=2661 and http://files.nesc.ie/nesc_research_series/Research_Series_Paper_9_BDunford_Burren.pdf



Problems addressed by this example

A number of issues relating to agricultural intensification and extensification which were impacting negatively on the environmental health of the Burren needed to be resolved. However the high levels of mistrust and poor working relationship between the key conservation and agricultural interest groups mitigated against any such resolution.

Story in a nutshell

After a period of conflict in the late 1990s – arising from the introduction of the Habitats Directive (SACs) and the introduction of ill-fitting AES (REPS) – relationships between farmers and conservation authorities were at an all-time low. However, following a research project which established the importance of traditional farming practices to the natural heritage of the Burren (Dunford, 2001), there was a growing realisation among the disparate interest groups that they needed each other to achieve their objectives.

Arising from this, the parties came together to make a successful application in 2004 for funding from the EU LIFE Nature fund for €2.23m. The National Parks and Wildlife Service (NPWS), Teagasc (the Irish agricultural advisory body) and the Burren Irish Farmers Association (IFA) participated as co-funders and key stakeholders. The project's objective was to develop a blueprint for the sustainable agricultural management of the Annex I habitats of the Burren.

The project approach was simple; to implement a range of management interventions across a selection of working farms in the Burren and to monitor the agricultural, economic and environmental impact of these interventions. The project worked on 20 pilot farms.

On these farms, key management challenges were identified and potential solutions (mainly proposed by farmers) were implemented, monitored, adapted if necessary, and costed. Key achievements of the project included the development of new cattle feeding systems, livestock watering facilities and scrub removal techniques.

The key output was a blueprint for the sustainable agricultural management of the Burren which included a range of actions, their impact and cost. This provided the basis for the subsequent development of the Burren programme (2010 - present) and for the positive, respectful working relationship between agricultural and conservation interests that continues to exist.

What did working together under BurrenLIFE achieve for HNV farming?

Achievements

- Improved conservation status of 2,500ha of HNV Farmland.
- New technologies for feeding and watering livestock, new scrub removal techniques, resulting in better utilisation of available HNV grasslands.
- Better HNV farming infrastructure on 20 pilot farms – access, water, fencing, feed systems.
- Better understanding of conservation issues by farmers, and farming issues by conservationists.
- A blueprint for sustainable farming in the Burren which is now being applied across the Burren.



Achievements

From 2005-2010 improvements were made on 20 holdings (2,500ha of Annex I habitat) through the development of new feeding systems, improved grazing levels and improved conservation infrastructure (stone fences, water facilities, access paths, gates, feeding equipment etc.). All works were closely monitored in terms of their agricultural, environmental and economic impact and this information was used to generate a series of Best Practice Guides for the sustainable agricultural management of the Burren. The project also allowed farmers, scientists and management authorities to work closely together and the positive working relationships continue today. BurrenLIFE served to engage farmers in environmental issues in a very practical way and created a strong sense of ownership and pride among these farmers. The project also helped to raise public awareness of the importance of HNV farming in the Burren.

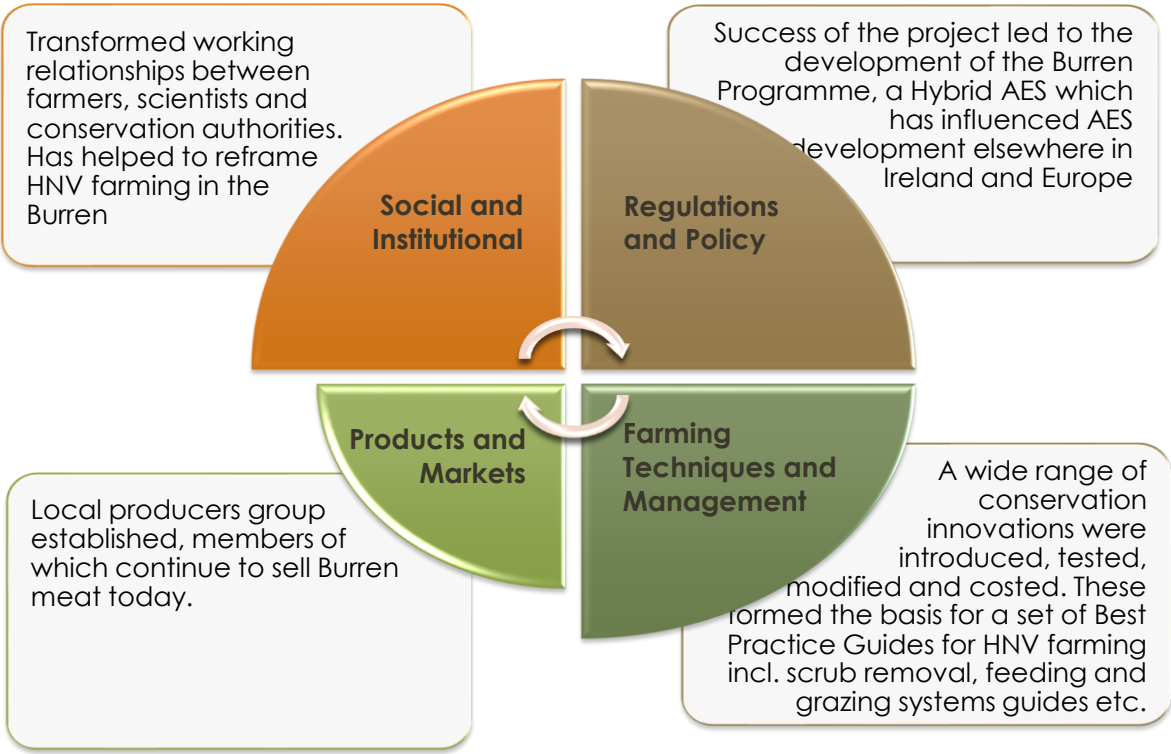
Economics of HNV farming

Data generated during BurrenLIFE confirmed the poor socio-economic outlook for most HNV farmers in the Burren. The project addressed this directly by investing in these farms – paying farmers for carrying out works, including agricultural monitoring - and indirectly by developing a costed blueprint for sustainable farming which led to the Burren programme which now pays these farmers on average €6,600 per annum.

Maintaining or improving HNV values

BurrenLIFE explicitly targeted a number of key nature conservation objectives and was successful in improving the conservation status of the 20 HNVf monitor farms (2,500ha). This has also led to an improved outlook for the Burren HNV landscape (c.30,000ha) – particularly focussing on species rich grasslands and water quality - through the consequent development of the Burren Programme.

How did BurrenLIFE respond to the HNV LINK innovation themes?



BurrenLIFE addressed all innovation themes to some degree – resulting in significant social, institutional and regulatory impacts arising from the successful implementation of new farm management techniques – but diversification of outputs in terms of new products and markets remains relatively unchanged.

The process that made it happen and critical factors for success

- A locally based research project proved the importance of HNV farming: this empowered farmers and convinced management authorities to work with these farmers
- A project was conceived which was farmer-led, very practical but scientifically rigorous
- All partners were kept fully informed and engaged and treated with respect



Actors and roles: An initial research project (1998-2001) by an embedded student researcher highlighted the important role of HNV farming and identified the main threats.

This was published by Teagasc in book form 'Farming and the Burren' (Dunford, 2001) which placed farmers centre stage in the Burren. This led, in 2004, to NPWS sponsoring an application for EU LIFE funding with Teagasc and the Burren Farmers Association (IFA) as partners.

Institutional context that made it possible: LIFE nature funding and closer co-operation among key stakeholders

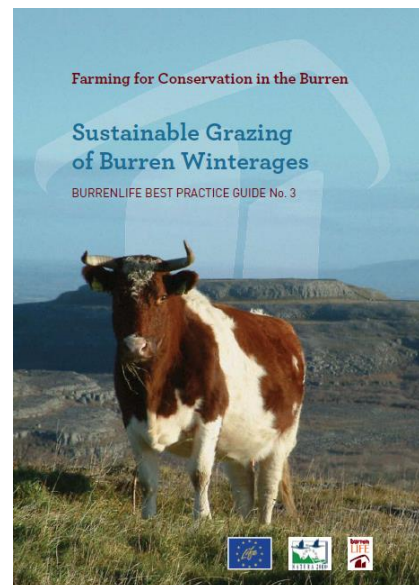
Funding, staff etc. €2.23m and a local team of 4 people for 5 years (2005-2010)

Critical factors for success: Close working partnership by stakeholders, farmer-led approach to problem solving, rigorous monitoring, dedicated project team, good communication,

Limiting factors: High expectations by farmers – managed expectations carefully and emphasised the long term

Lessons learnt from BurrenLIFE and its potential replication

- Understanding the perspective of others, identifying the common ground and the mutual benefits of working together, are all fundamental.
- Involving farmers in the co-creation of solutions to HNV challenges results in much more embedded and effective outcomes.
- Having a practical but robust scientific approach to developing targeted local solutions gives a high level of credibility to these solutions among farmers and management authorities
- This steps involved in this innovation – and the principles that underpin it - are very replicable but require time and resources
- A key first step is to get disparate stakeholders to identify common ground and focus on opportunities as well as challenges



Overall lessons for HNV farming

A well resourced (time, money) applied research project such as BurrenLIFE can form the foundation (partnerships, measures, costs) on which an effective AES for HNV farming can be built.

The engagement of the farming community in all phases of the project – designing, implementing, monitoring and disseminating – is fundamental to the success of the project and to its subsequent implementation.

Replicability of innovation and key requirements to do so

This innovation is not only replicable but is essential for the development of an effective approach to addressing the challenges to HNV farmed landscapes.

The key needs for this to happen are a good working relationship between stakeholders, clear objectives and actions to meet these objectives, as well as resources to carry out actions and monitor and disseminate impact.

Ireland – innovation example 2)

The Burren Programme: a locally targeted 'Hybrid' Agri-Environmental Scheme (AES)

Location: Burren Region, Ireland

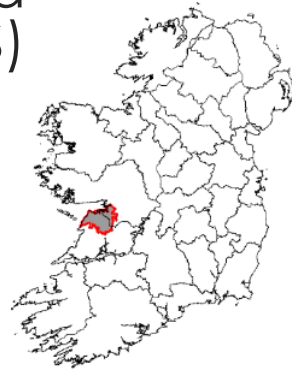
HNV system: Extensive, winter-based grazing of rough limestone pastures by suckler cows.

Scale of operation: Approx. 450 farm families working on c.30,000ha of HNV farmland.

Timespan: 2010 - Present

Keys to success: Creating simple but effective incentives to reward farmers for the delivery of clearly defined environmental outputs; supporting practical farming interventions to improve the management of HNV farmland in the Burren; continually adapting to reflect new information, ideas and objectives; providing clear guidelines and training to farmers and advisors; ensuring respectful working partnerships.

For further info: <http://burrenprogramme.com/>



Problems addressed by this example

National, action-based, Agri environmental schemes were not adequate to deal with the main environmental challenges facing the Burren HNV farmed landscape, particularly undergrazing of key habitats and scrub encroachment. While the BurrenLIFE project was successful in developing a blueprint for sustainable farming in the Burren, HNV farming in the region remained fundamentally unviable for many farmers and so these farmers were reluctant to change their feeding and grazing systems. A new incentive was required to encourage the restoration of grazing and the adoption of environmentally friendly feeding systems, as well as supporting investment in key conservation infrastructure (walls, water, access etc). Thus, a new type of AES was needed for the Burren.

Story in a nutshell

Arising from the success of the BurrenLIFE project (which adopted a mainly action-based AES approach) the Department of Agriculture provided funding to roll out this new 'blueprint' for sustainable farming across 15,000ha of the Burren. The key stakeholders, recognising the fundamental limitations of an action-based approach to AES to the problems facing the Burren, worked instead to develop a locally targeted 'Hybrid' AES whereby farmers are paid for project actions (on a co-funded basis) and also for project impact/results. The resultant 'Burren programme' contains two main measures.

- Firstly, an annual 'works budget' - based on the HNV area of the farm - is allocated to each farmer. Conservation works to improve the farm environment are chosen by the farmer to suit his/her needs. These works are submitted by a trained farm advisor for approval by a local team. Payment (for 25-75% of the cost of the work) is made on completion of work by the farmer.

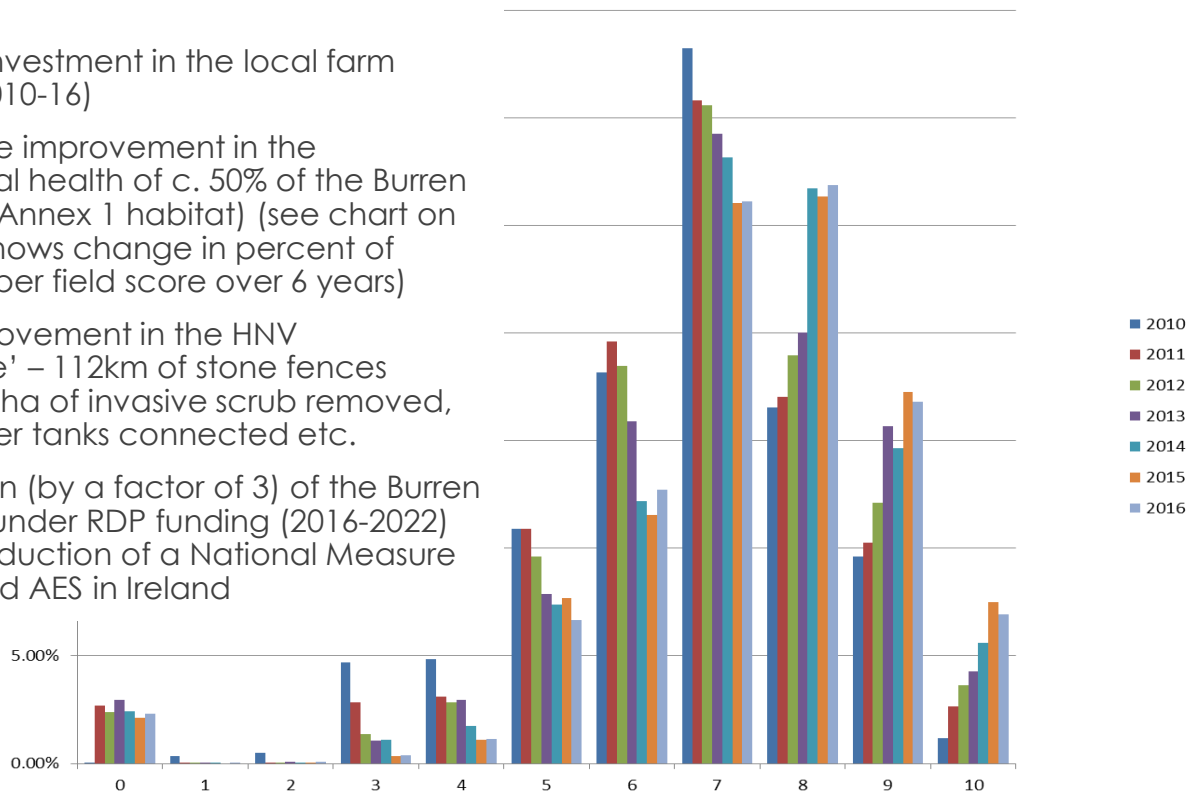
- Secondly, the farm advisor assesses the 'environmental health' of every HNV field within the farm annually. This is captured in a field score (1-10) which is verified by the local team and is then used to calculate an 'environmental performance payment' for the farmer. Bonus payments made for exceptional scores of 9 and 10, no payments are made for scores less than 5.

The two programme measures are closely linked in that, with targeted conservation works and improved management, field scores can be improved and payments increased. Data from 6 years of applying this approach on 15,000ha of land (160 farmers) have proved the positive impact and value for money of this hybrid model and it has now been expanded to the entire Burren (30,000ha) under Ireland's RDP.

What did the development of a locally-targeted 'hybrid' AES achieve for HNV farming?

Achievements

- €6m direct investment in the local farm economy (2010-16)
- A measurable improvement in the environmental health of c. 50% of the Burren (15,000ha of Annex 1 habitat) (see chart on right which shows change in percent of target area per field score over 6 years)
- A major improvement in the HNV 'infrastructure' – 112km of stone fences repaired, 242ha of invasive scrub removed, 440 new water tanks connected etc.
- The expansion (by a factor of 3) of the Burren Programme under RDP funding (2016-2022) and the introduction of a National Measure for Locally Led AES in Ireland



Achievements

Over the period 2010-15, the Burren Farming for Conservation Programme targeted up to 160 HNV farms on c.15,000ha on Annex I habitat. The positive environmental impact of the programme can be demonstrated by an analysis of the annual 'environmental health' scores for over 1,000 fields on the 160 farms: the average score was 6.61 in 2010 and by 2015 this had increased to 7.37. Grazing levels had increased, damaging feeding systems had been replaced, water sources had been protected and new water facilities had been provided, over 130km of pathways had been opened through encroaching scrub thus improving livestock access. The high impact and excellent Value for money of the programme has led to its being expanded to 450-500 farmers in the period 2016-2022 and has contributed to the inclusion of a dedicated €70m measure for locally led AES in Ireland's RDP.

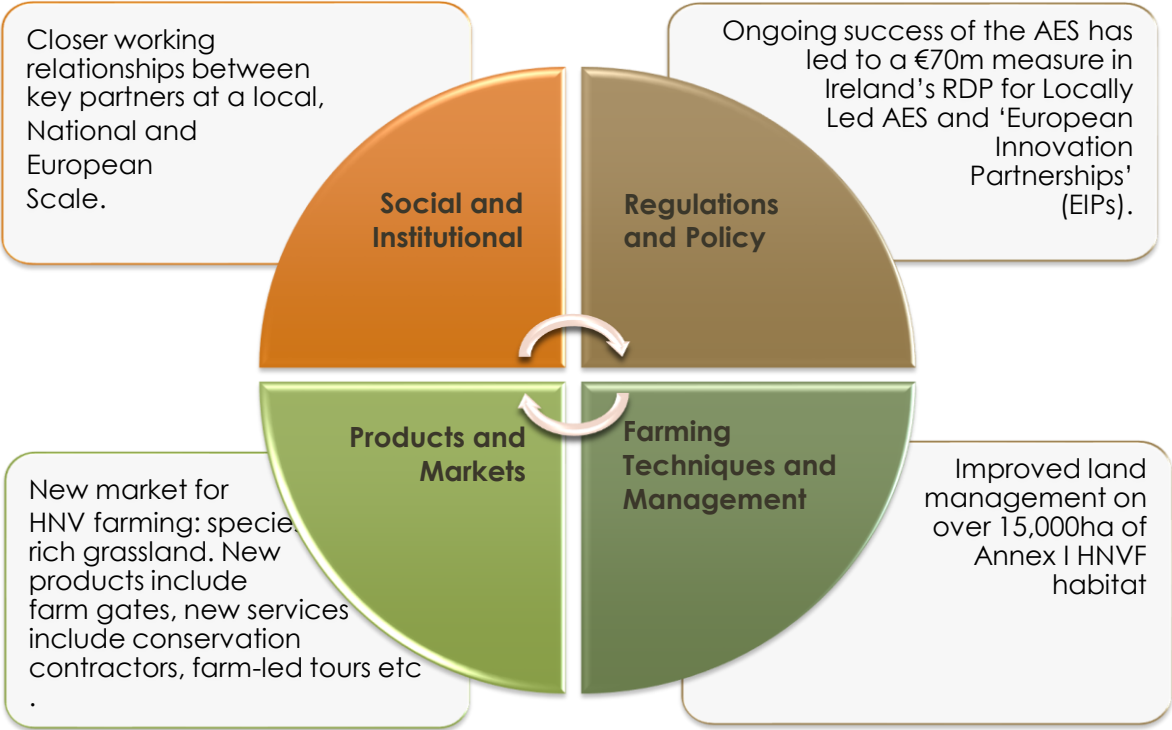
Economics of HNV farming

The programme invested a total of €6m directly in up to 160 farms between 2010-16 equating for example to an average annual payment of €6,600 per annum in 2015. This is in addition to payments made to farmers as part of their participation in the National Agri-environment scheme. Farmers, when surveyed, frequently claim that the programme has also 'improved' the farm. The €1m annual investment into Burren HNV farming has now (2016-2022) increased to €2-3m as the programme continues to expand.

Maintaining or improving HNV values

The programme was designed to maintain and improve the HNV values of the Burren (biodiversity, water quality) and the cultural heritage of the region. It has been demonstrably effective in doing so (see data above).

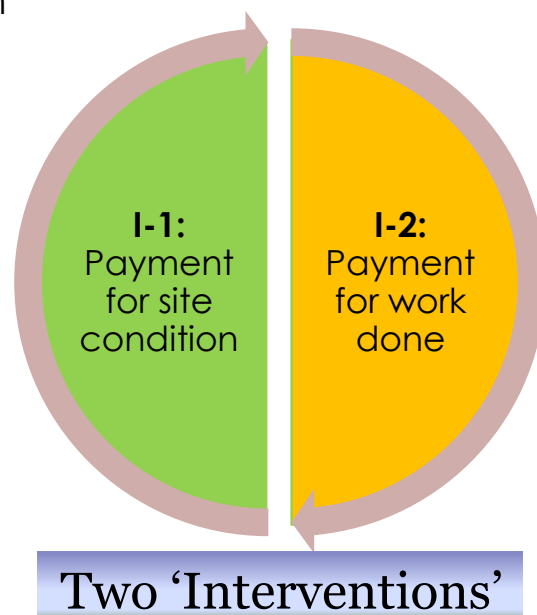
How did the Burren Programme respond to the HNV LINK innovation themes?



This innovation has proven to be very impactful across all innovation themes and has been a game-changer for HNV farming in the Burren.

The process that made it happen and critical factors for success

- A good working relationship between partners and a solid research base
- Trust in an established local team to design a farmer-centred, results based approach that met the HNV need
- The flexibility to adapt and evolve
- High levels of ownership by farmers and other stakeholders



Actors and roles: Building on the success of the BurrenLIFE project, the data generated and the excellent partnerships that existed, The Department of Agriculture and Food and the National Parks and Wildlife Service came together to supply funding and support for an expansion of the project.

Institutional context: €1m annual budget for farmers supplied by DAFM (Article 68 – unspent Single Farm Payment money) and a dedicated local team of 4 people funded by NPWS for 6 years (2010-2015)

Critical factors for success: dedicated local team who were given the freedom and trust to design a programme which met the needs of the Burren and its farmers and to adapt and 'fine tune' (especially the new results based scoring system) this programme over time

Limiting factors: rapid scaling (20 to 160 farmers) – addressed by the phasing in of the programme (119-143-156 farmers in years 1-2-3)

Lessons learnt from the Burren Programme and its potential replication

- Farmers respond well to a results-based payments as this gives them an incentive to improve their environmental output while allowing them the flexibility to adapt the AES to their own farm and to the year to year circumstances of the farm.
- Results-based payments alone may not be enough to address HNV challenges: additional funding for capital works is often also needed.
- A well-designed and costed results-based approach can deliver much better value for money and a measurable impact.
- This approach may be adapted and replicated to address a range of environmental objectives across a range of circumstances but may not suit all situations.



Farm Works (2010-16)	Total
Area of Scrub removed – not incl. paths (ha)	241.99
Scrub pathways (m)	164,047
Area of scrub stump-treated (ha)	181.45
Stone wall repair (m)	111,823
Wire fencing (m)	32,735
Gate installation (no.)	723
Water Troughs (no.)	443
Water storage tanks (no.)	79
Feed Troughs (no.)	180
Feed Bins (no.)	132
New Access Tracks (m)	21,738
Upgrade Access Tracks (m)	34,388
Habitat Restoration Jobs (n)	127

Overall lessons for HNV farming:

The hybrid-AES design exemplified by the Burren Programme can offer the flexibility, focus, incentive and support for HNV farmers to deliver measurable environmental impacts at a very competitive cost. While some environmental challenges may be best met by an action-based approach, others by a results based approach, the Burren Programme suggests that a hybrid approach works best in many situations.

Replicability of innovation and key requirements to do so:

The principles underlying the Burren Programme are very transferrable to other agri-environmental objectives in other regions. These design principles include local targeting, farmer-centred design, high levels of adaptability over time and place, and payments which are at least partly results-based.

Ireland – innovation example 3)

Adopting a farmer-centred approach to AES design and delivery

Location: Burren Region, Ireland

HNV system: Extensive winter-based grazing of rough limestone pastures by suckler cows.

Scale of operation: Approx. 450 farm families working on c.30,000ha of HNV farmland.

Timespan: 2010 - Present

Keys to success: Understanding farmer's issues with traditional AES approaches and addressing these issues; placing the farmer at the centre of AES design and delivery; simplifying complex concepts without diluting their impact.

For further info: <http://burrenprogramme.com/>



Problems addressed by this example

Generally poor farmer engagement with, and understanding of, AES's arising from poor design, communication and training.

Story in a nutshell

When developing the Burren Programme, a farmer-centred approach was adopted to every aspect of the programme design. Payment structures were designed to be very clear and transparent – for example, every payment is linked to a specific action or a specific field (score).

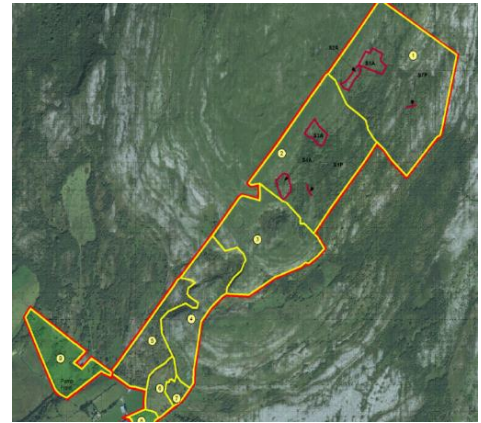
Payments are made on the basis of delivery and impact, and are made of a co-funded basis: farmers have more respect for payments that have to be 'earned' rather than for 'compensation'. Recognising farmers dislike of paperwork, farm plan documents were redesigned to be short, simple, visual and transparent - often less than 2 pages long. Receipts for work done were rarely required - instead unit costs for work are used. Payment claims are simple, just requiring a signature. Permissions to undertake work are handled by a local team using a local authorisation structure whereby the local team can 'sign off' on an agreed list of actions, thus expediting what is often a very tedious process.

Annual training courses - usually based on the farm and with a lot of input from the farmer - are organised and additional technical support (e.g. dealing with monuments, designing grazing and feeding systems etc) are made available locally. All of these measures allow farmers to get on with what they do, and love to do, best: managing their land and livestock.

What did adopting a farmer-centred approach achieve for HNV farming?

Achievements

- High (>90% approval) levels of satisfaction by farmers of programme structure and management
- High levels of interest in participating in programme (consistently oversubscribed)
- Better understanding by farmers of programme as it impacts on them



Achievements

The farmer-centred approach to AES design and delivery contributed to high levels of farmer satisfaction with the AES and its management – reflected in survey data but also in the high levels of oversubscription to the AES.

Levels of paperwork for participating farmers was greatly reduced.

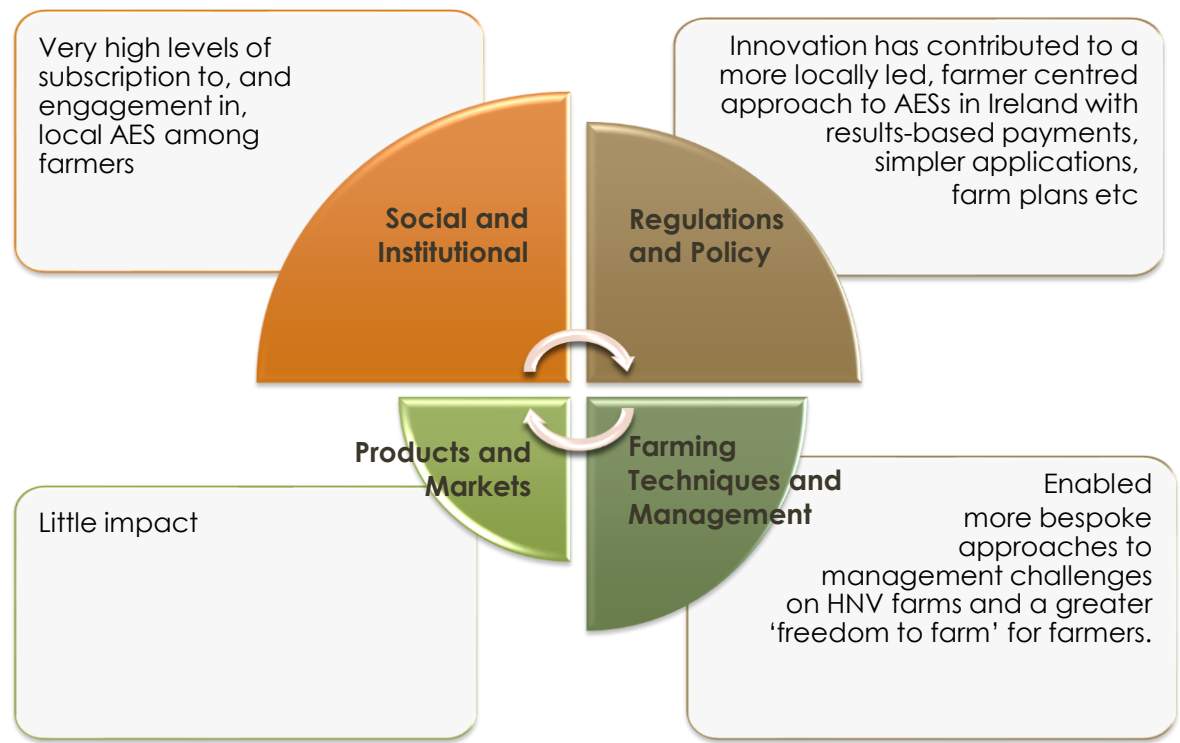
Economics of HNV farming

While there has been no direct impact on HNV farm economics, the farmer-centred principle is central to the Burren Programme which will bring €2-3m per annum to farmers.

Maintaining or improving HNV values

This approach is part of a wider approach to HNV farming which does play a key role in maintaining and improving HNV values.

How did a farmer-centred approach respond to the HNV LINK innovation themes?



This innovation has been important in improving levels of farmer understanding and engagement (clearer farm plans, simpler applications for entry, simpler mechanisms for payment claims), has informed more impactful payment structures (payment for results), and enabled more bespoke farm plans. It has contributed to a rethink of AES's in Ireland. It has not however impacted on products and markets in a significant way.

The process that made it happen and critical factors for success

- A recognition that the farmer is the key actor at the 'coalface' of conservation farming
- Building an understanding of barriers to farmer engagement in AES – bureaucracy, unintelligible plans, impractical actions, lack of freedom and flexibility, penalties not incentives etc
- Integrate solutions to these barriers in the design and delivery of a bespoke AES – the Burren Programme



Actors and roles: A local team, who had worked in the Burren with farmers for almost 10 years, designed an AES which was built around the farmer. Previous research (Dunford 2001) and experience from the Burren LIFE project identified key problems that farmers had with existing AESs and these were addressed in the design of the new AES.

Institutional context: Local team funded by NPWS, AES funded by DAFM.

Processes: Critical factors for success: having the creative freedom, trust (of all stakeholders including farmers) and experience to create a farmer-centred AES.

Limiting factors: difficulty in planning budgets (results-based payments), securing permissions for works, abiding by funding conditions: these were addressed by working closely with all partners and continually monitoring impact to give reassurance. A year to year approach was adopted rather than 5 year contracts.

Lessons learnt from this innovation example, and its potential replication

- AES's should always be designed with the end user – the farmer – at the core
- While programme design may be complex, interface with farmer should be clear and simple
- Freedom to farm is a core value for farmers and should be incorporated in so far as possible into programme design
- Clarity of language, use of visual aids, conciseness of documentation are vital
- Reducing bureaucratic burden allows farmer to focus on his/her strengths: land and livestock management



Overall lessons for HNV farming:

Designing AES's with the farmer in mind will result in more engaged farmers and better environmental impacts.

Payment levels are not the only motivational issue for HNV farmers: fairness and transparency of payments, practical, locally-relevant measures, clarity of objectives and of communications, adequate advice and support and freedom to farm are also very important. These must be borne in mind when designing AES's.

Replicability of innovation and key requirements to do so:

These design principles are easily replicable and should be fundamental to AES design in most if not all situations.

Ireland – innovation example 4)

Developing locally tailored livestock feeding and watering systems

Location: Burren Region, Ireland

HNV system: Extensive winter-based grazing of rough limestone pastures by suckler cows.

Scale of operation: Tested on 20 farms (2,500ha) but adopted by many of the 450 farmers on c.30,000ha of Burren HNV farmland.

Timespan: 2005-2010

Keys to success: Rigorous scientific approach to developing the alternative feeding system; testing of the new system by local farmers on their holdings; monitoring of environmental, financial and agricultural impact; peer-dissemination of new system; support for required infrastructure (feed bins, troughs, water provision facilities).

For further info: <http://burrenprogramme.com/portfolio-items/feeding/>



Problems addressed by this example

The negative impacts of silage feeding systems on Burren HNV grasslands. These impacts include water pollution, poaching of soils, introduction of weed species and visual pollution at feed sites, as well as issues with waste silage plastic and metal feeders. Silage feeding also contributes to the undergrazing of species-rich grasslands and the encroachment of scrub. Animal health issues – including blood scours etc – may also be more prevalent at such feed sites.

Story in a nutshell

The two biggest challenges to the HNV farmland of the Burren are undergrazing, leading to scrub encroachment, and silage feeding, leading to pollution and species loss. These two problems are closely related (more feeding means less grazing and more scrub) and so a solution was identified to help solve both: replacing silage feeding with concentrate feedstuffs which could, in turn, increase forage uptake by livestock.

To achieve this, forage samples were taken from the HNV grasslands of the Burren on a year round basis. These samples were analysed (including mineral content) for their nutritional value, and compared with the nutritional requirements of the main grazers – in-calf suckler cows. A specifically formulated (with high protein and mineral content) cattle feed was then developed to meet the nutritional requirements of the suckler cows who were foraging on these HNV grasslands.

The new feeding system was tested on 20 farms and the resultant agricultural, environmental and economic impact was assessed by the farmers and a local team of scientists.

The research findings demonstrated that feeding the Burren ration increased grazing on rough pastures as the cows could process the rough forage more efficiently with the high-protein ration: increased grazing helped improve biodiversity while reducing pollution levels from silage.

Animal health and performance - for cows and their calves - also improved and the cost of the new system was shown to be lower than the prevailing silage based systems.

Other benefits included easier herding of livestock. As a result of these proven benefits there was, and continues to be, a gradual move to this new feeding system. Feeding of this ration requires a good water supply, a particular challenge in the karst Burren - so a range of solutions have also been implemented to address this. These include rainwater harvesters, solar and wind pumps, pasture pumps, hydram pumps, water storage tanks etc.

What did developing a new supplementary feeding system achieve for HNV farming?

Achievements

- Major reduction (>65%) in the feeding of silage with a consequent increase in grazing levels on undergrazed HNV farmland and reduced levels of water and soil pollution
- Improved animal performance (less illnesses, better calving intervals)
- Improved cost-benefit scenario for Burren farmers (reduced costs and time spent)



Achievements

In the period 2005-2010 there was a reduction by over 65% in the feeding of silage on project farms.

This feeding concentrate feeding system reduced animal health issues and increased animal performance (verified by local vets).

A best practice guidance document was published outlining the details of how best to supplementary feed overwintering livestock.

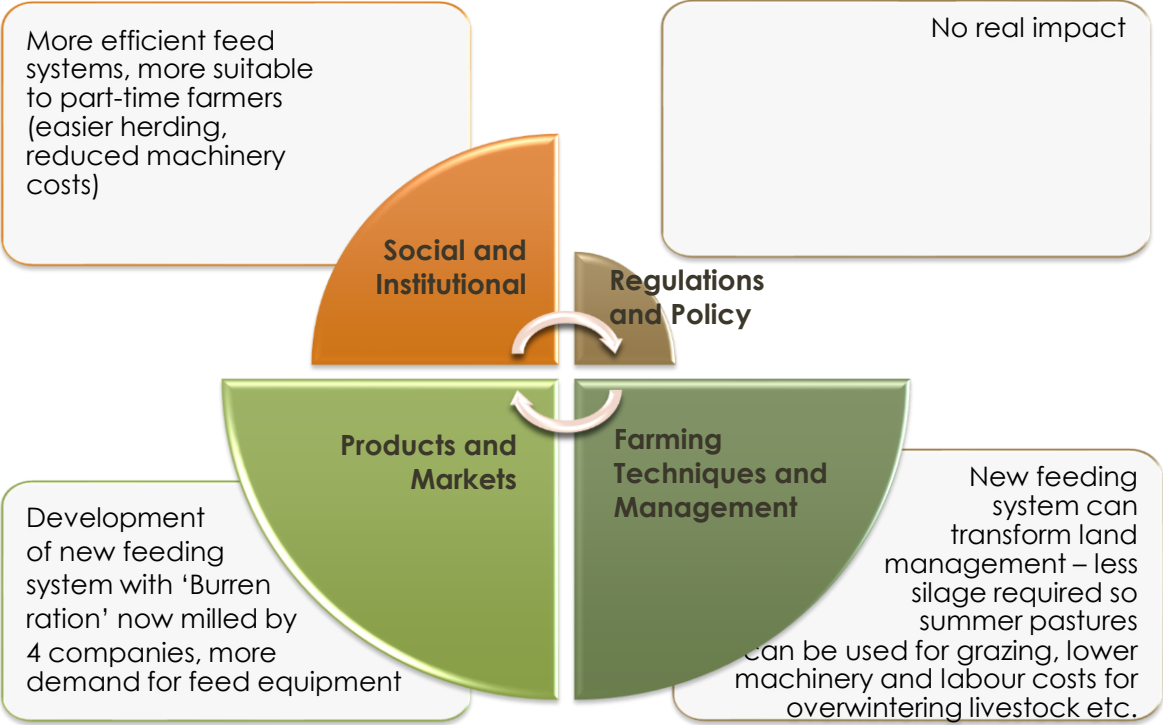
Economics of HNV farming

The new feeding system was demonstrated to be very cost-competitive when compared with the existing silage-based system.

Maintaining or improving HNV values

The new feeding system greatly improves a number of HNV values: reduced water pollution, reduced soil damage, reduced levels of visual pollution and increased forage uptake resulting in improved biodiversity.

How did a new supplementary feeding system respond to the HNV LINK innovation themes?



This practical farming innovation significantly changes farm management systems and enables a more efficient farming system in the Burren. It has resulted in the production of a dedicated 'Burren ration' feed stuff by feed mills. It has not had an impact on policy.

The process that made it happen and critical factors for success

- Listening to farmers regarding possible solutions to the problem of silage feeding
- Co-creation of solution by farmers and scientists; monitoring of environmental and agricultural impact
- Peer recommendation of new feeding system by local farmers to others



Actors and roles: Teagasc (the National farm research and advisory service) through Dr James Moran and with the support of the BurrenLIFE project team developed the new feeding system. The impact was monitored by the team and by the farmers and results shared by the team and farmers through farm demonstration events. A major feed company – Kerry Food – milled the ration and it was initially subsidized for a trial period.

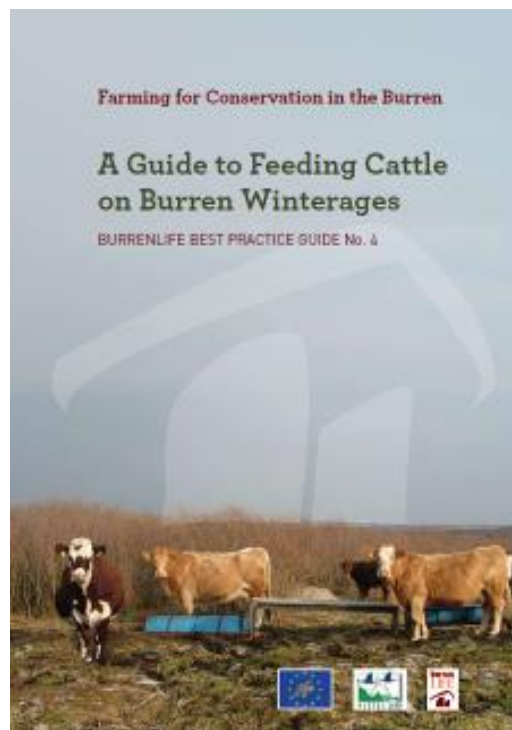
Institutional context that made it possible: LIFE funding (2.23m) was available, a small proportion of which was used to develop the new feeding system. Technical support and credibility of Teagasc was a key factor.

Critical factors for success: rigorous development process, high level of farmer involvement, careful monitoring and dissemination of findings. Practical outcome.

Limiting factors: reluctance among farmers to change from familiar silage-based system: still being overcome, mainly by peer testimonial as to the efficacy of the new system.

Lessons learnt from this innovation example, and its potential replication

- HNV farmers have a lot of good ideas and when involved in the 'co-creation' of solutions they have a far higher sense of ownership
- Targeted use of high protein ration can be very effective of increasing forage uptake on HNV grasslands and can be an important tool to help restore undergrazed grasslands
- The development pathway for this innovation is easily replicable: analysis of forage value of HNV grassland, comparison with nutrient requirement of primary grazers, development of a feedstuff to bridge any gap; test on local farms and monitor impact; share results with farming community on demonstration farms



Overall lessons for HNV farming:

- Practical solutions to key HNV farming challenges do exist and can have a huge impact when implemented well.
- New approaches to animal nutrition can have a major impact on the environmental health of HNV farmland.
- Co-creation of solutions which involve farmers at all levels ensure far better levels of buy-in and roll-out.

Replicability of innovation and key requirements to do so:

This innovation is highly replicable. It requires co-operation between farmers, scientists and feed companies along with modest resources for research and development.

Ireland – innovation example 5)

Burrenbeo Trust: building a conservation 'culture' and community in the HNV Landscape

Location: Burren Region, Ireland

HNV system: Extensive winter-based grazing of rough limestone pastures by suckler cows.

Scale of operation: The Burren (72,000ha) and the c.18,000 people who live there.

Timespan: 2002 – Present.

Keys to success: Communicating the importance of HNV farming in a positive and creative way; investing in community education;; empowering farmers to become the conservation leaders and spokespeople for their place.

For further info: www.Burrenbeo.com



Problems addressed by this example

Low levels of engagement by the local community – farmers and others - in their natural and cultural heritage and their role in its care. Poor understanding of the importance of farming in sustaining the HNV landscape, the challenges faced by these farmers, and the consequent threat to the landscape.

Story in a nutshell

The Burrenbeo Trust is an independent charity dedicated to connecting the people of the Burren with their place, and their role in its care. Burrenbeo - 'the living Burren' - was initially established to highlight the importance of HNV farming in the Burren by affirming that the Burren was a 'living landscape' and not a heritage museum. This was done through a 2002 website www.burrenbeo.com and through articles and images in local and national media. The next focus was offering local schoolchildren - the future farmers - the opportunity to learn more about their heritage and their role in safeguarding it. This was achieved by developing the 10-module 'Eco-Beo' programme in local schools: over 2,000 children have now graduated as 'local experts' in the Burren from this free course, enthusiastically taking ownership of their place and its care. Burrenbeo has also organised a wide range of HNV farming -related learning experiences: these include monthly walks (which have run for over 8 years now) often led by farmers who bring people across their land; 'Tea Talks' where people come together in the local community hall to learn more about their place; the Burren Winterage Festival where the importance of HNV farming is celebrated through open farm events and a community cattle drive across the landscape. Burrenbeo also co-ordinates the Burren Winterage School on sustainable farming which is now a National forum to discuss and develop ideas on how to support HNV farming in Ireland (www.burrenwinterage.com). A group of Conservation Volunteers was also organised whose monthly outings are usually on farmland and include works such as stone fence repair and scrub removal.

What did the establishment of the Burrenbeo Trust achieve for HNV farming?

Achievements

- HNV farming is now as much a part of the Burren 'story' as the flora, archaeology and geology of the landscape.
- Burren HNV farmers now leading monthly walks, organising festivals, churning workshops, hosting study groups, acting as spokespeople for HNV farming
- Over 2,000 young Burren children – mostly from farm families – graduated as 'Burren experts' having completed an intensive 10-module Eco-Beo programme.
- A team of Conservation Volunteers who do monthly work on HNV farmland



Achievements

Since its inception in 2002 (and its re-constitution as a Charitable Trust in 2008) Burrenbeo has:

- Built up a membership of 500 active members, many of whom are HNV farmers
- Organised monthly walks (year round) and talks (winter) for over 8 years: many of the walks are led by farmers.
- Since 2011, organised the annual Burren Winterage Weekend which celebrates the importance of HNV farming
- Since 2002, graduated over 2000 children – mostly from farm families - from the Eco-Beo programme
- Established the Burrenbeo Conservation volunteers who hold monthly conservation outings

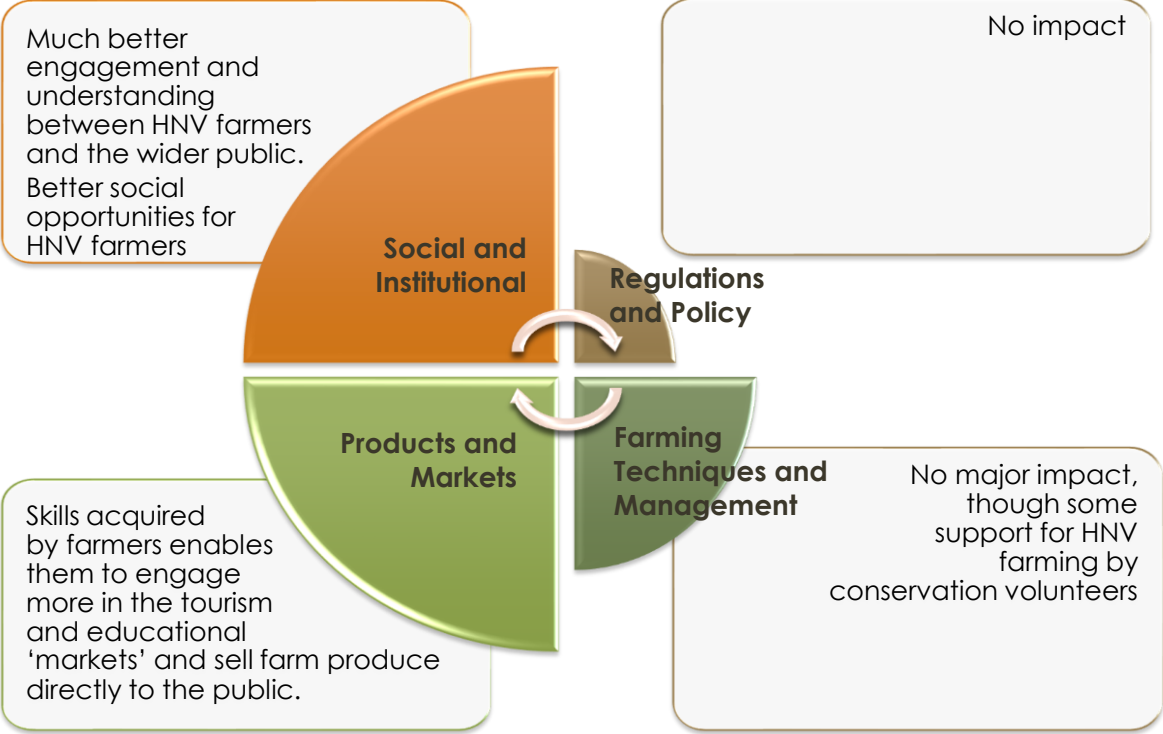
Economics of HNV farming

While Burrenbeo does not contribute economically to HNV farmers, it has given valuable skills to the HNV farming community, some of whom are using these skills (as walk leaders etc) for economic gain. Burrenbeo has made a very significant positive contribution to the social situation of HNV farming through monthly walks and talks, annual conferences and festivals, volunteer outings, study group visits etc.

Maintaining or improving HNV values

Burrenbeo Trust has made an enormous contribution to raising awareness, restoring pride and creating a culture of stewardship within the Burren and beyond. This is the best long term investment in the future of this HNVF landscape and to the efficacy of future conservation efforts.

How did the work of the Burrenbeo Trust respond to the HNV LINK innovation themes?



The work of Burrenbeo has been fundamentally important in improving relationships between, and awareness among, key HNV stakeholders – farmers, rural communities, NGOs, scientists, public authorities and the general public. This has resulted in improved social and economic opportunities for farmers, though has not significantly impacted on policy or on farm management techniques.

The process that made it happen and critical factors for success

- The commitment of key individuals within the community who want to contribute to a brighter future for the Burren
- Focussing on impact: identifying and meeting the key needs on the ground
- A highly professional and inclusive approach while remaining independent



Actors and roles: Burrenbeo was established in 2001 by Ann O'Connor and Brendan Dunford, a locally-based couple with skills in communications and HNV farming respectively. Until 2008 most of Burrenbeo's innovations were developed and delivered directly by Ann and Brendan. In 2008 Burrenbeo was reconstituted as Charitable, Membership Trust and its range of programmes (now over 40) and impact has grown under the guidance of its co-ordinator Brigid Barry.

Institutional context that made it possible: Burrenbeo does not receive any core funding and relies on membership fees, donations and grant-aid and sponsorship for certain programmes and events. It has an average annual turnover of c. €130,000 and has three part-time staff based in Kinvara on the edge of the Burren. Funding has been received from Leader, Local Authorities and others.

Critical factors for success: passion, determination and hard work of staff and volunteers and a positive, inclusive approach to its work.

Limiting factors: low levels and unpredictability of funding. Mistrust of ENGO. Overcome by building the organisations impact, credibility and trustworthiness.

Lessons learnt from the Burrenbeo Trust, and its potential replication

- There is a real need for, and benefit from, raising awareness of the importance of HNV farming within the farming community but also within the broader HNV community and among the wider public, particularly given the increasing need for public funding and support for HNV farming.
- Investing in the education and support of the HNV community is a fundamental long-term investment in the future of the HNV landscape
- A range of low-cost, easily replicable initiatives have been developed in the Burren including HNV festivals, Farmer-led walks and talks, Heritage educational courses, Volunteer groups.



Overall lessons for HNV farming:

The importance of HNV farming needs to be better communicated to the broader public and HNV farmers themselves are the best ones to relate this message.. Simple, low cost initiatives such as farm walks, community festivals are very effective mechanisms for farmers to achieve this. There is also a need for investment in the education and skills of the local 'HNV community' through schools educational projects and skills training.

Replicability of innovation and key requirements to do so:

The range of innovative educational initiatives developed by the Burrenbeo Trust are very replicable individually or collectively. These are low-cost innovations which mainly require a good network of local volunteers and modest resources. The Burrenbeo Trust organises annual 'Learning Landscape Symposium' where many of these innovations can be witnessed first hand.

Ireland – innovation example 6)

Farming for Conservation Awards: celebrating the HNV farmer

Location: Burren Region, Ireland

HNV system: Extensive winter-based grazing of rough limestone pastures by suckler cows.

Scale of operation: Approx. 500 farm families working on c.30,000ha of HNV

Timespan: 2015 – Present.

Keys to success: Identifying a credible, high profile sponsor for the award; organising an awards event which attracts the wider community; having clear criteria through which the awards are made.

For further info:
www.burrenwinterage.com



Problems addressed by this example

Residual suspicion and negativity among the wider farmer community and general public regarding farmer's role in managing the environment. The social and cultural challenges faced by some HNV farmers in 'going against the grain' and embracing farm practices that deliver environmental benefits.

Story in a nutshell

To farm in a way that delivers for the environment can often mean that a farmer needs to 'put his neck on the line'. Having the courage to embrace new ideas such as HNV farming isn't always easy in a 'modern' farming culture, so it was decided to organise an awards ceremony to celebrate and acknowledge the farmers who took this leap of faith and achieved success in doing so.

The annual 'Farmer for Conservation Awards' has five categories: 'Best HNV pasture', 'Best HNV meadow', 'Highest standard of HNV works', 'Farm family of the Year' and 'Farmer of the Year' (the latter based on environmental performance scores, work completed and additional effort). The awards (2000 euros in total) are sponsored by Bord Bia (the Irish Food Board – one of the most trusted organisations in Ireland according to recent research) and are presented in front of the local community during a 'community feast' which is organised as part of the Burren Winterage Weekend.

The awards have been a huge success in terms of affirming the work done by farmers and inspiring others to follow suit. It is intended to expand this into a National Awards Ceremony in the coming years for HNV farming across Ireland.

What did developing a new awards ceremony for farmers achieve for HNV farming?

Achievements

- ▶ Successful annual awards ceremony in 2015 and 2016 with €2k in prize money per annum.
- ▶ Public recognition locally and nationally for farmers who deliver positive HNVF outcomes



Achievements

In 2015 and 2016 Bord Bia sponsored five awards for HNV farmers in the Burren: 'Best HNV pasture', 'Best HNV meadow', 'Highest standard of HNV works', 'Farm family of the Year' and 'Farmer of the Year'. The awards received national recognition – featuring in the main farming publication The Irish Farmer's Journal – and were widely covered in local media also.

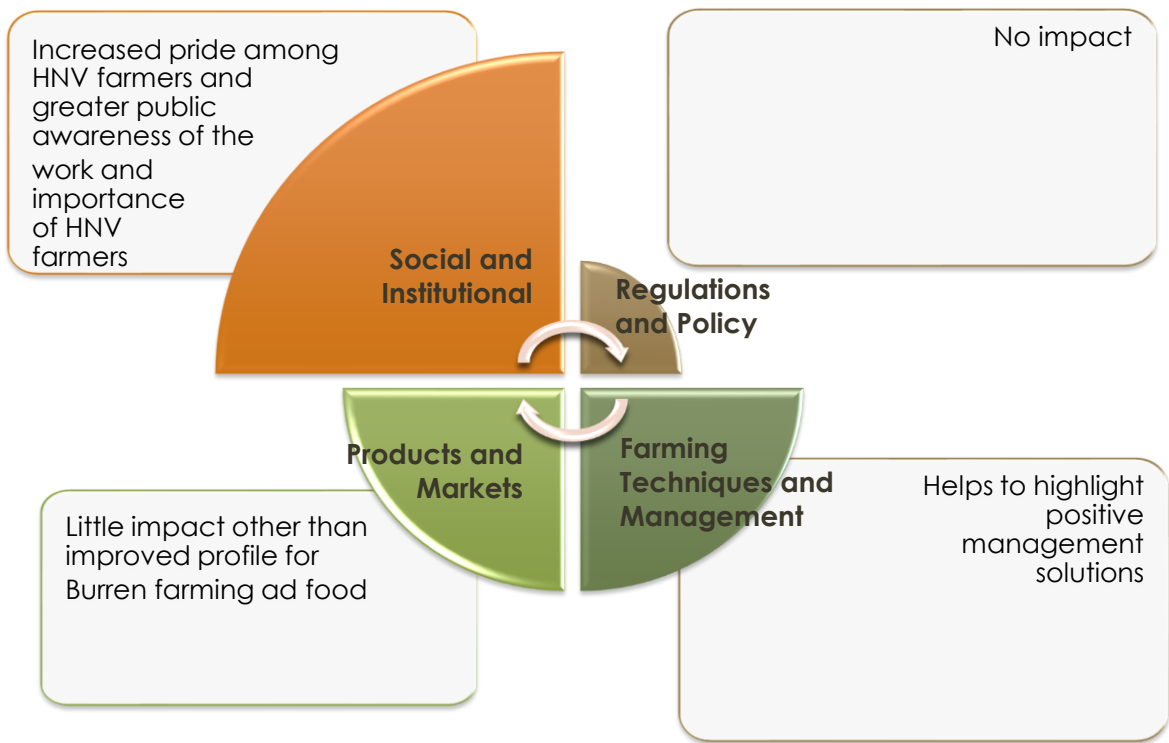
Economics of HNV farming

€2,000 in annual prize money for Burren farmers

Maintaining or improving HNV values

This innovation highlights the importance of HNV farming and celebrates HNV farming champions in front of their own community, empowering these farmers and others.

How did this Farmer Awards innovation respond to the HNV LINK innovation themes?



These awards improve the social standing of HNV farmers and the social opportunities available to these farmers, while raising the profile of HNV farmers and their produce and highlighting exemplary HNVF management systems. Little impact on policy.

The process that made it happen and critical factors for success

- Identifying a funder for the awards, one that had a high level of relevance and credibility
- Deciding on award categories as well as nomination and assessment protocols
- Organising an awards event within the local community but with national coverage



Actors and roles: Burren Programme Manager B Dunford approached Bord Bia to sponsor an awards event and they agreed to do so. Farm advisors and BP Staff nominated farmers (and fields!) for each award category and an assessment process was agreed.

Resources: €2000 in prize money is provided by Bord Bia, for 4x €250 and 2x€500 prizes. The awards are held as part of a night organised by the local community in their hall.

Critical factors for success: Credible sponsor, lucrative prizes, community participation, good media coverage.

Limiting factors: Limited profile: this will be addressed by making this a National Award in future.

Lessons learnt from the 'Farming for Conservation' Awards and their potential replication

- It is really important to recognise and celebrate excellence in the field of HNV farming.
- This counters the impression of HNV farmers as being largely irrelevant, 'poor' farmers depending on hand-outs rather than hard-working, innovative multifunctional farmers valued by society.
- This is a simple and easily replicable innovation: the main requirement is for a credible sponsor.
- Steps are being taken to develop National Awards for Ireland and having a similar European level award would be easily achievable.



Overall lessons for HNV farming:

- Celebrating success helps to embed positive management ideas and creates new farmer advocates for HNV farming.
- Such award ceremonies help counter the prevailing negative opinion of HNV farmers and farming systems.

Replicability of innovation and key requirements to do so:

Highly replicable, simply requires a credible sponsor and an organising committee.

Ireland – innovation example 7)

Adding value to HNV farming

Location: Burren Region, Ireland

HNV system: Extensive winter-based grazing of rough limestone pastures by suckler cows.

Scale of operation: Approx. 500 farm families working on c.30,000ha of HNV

Timespan: 2005 - Present

Keys to success: Ensuring farmers are the first to benefit from the increasing recognition of HNV farming in sustaining the landscape; giving farmers the confidence and support to deliver new products and services.



Problems addressed by this example

The poor socio-economic outlook for Burren HNV farmers and the limited number of mechanisms through which value is added to the important work of these farmers.

Story in a nutshell

A number of mini-innovations have been developed to 'add value' to the HNV landscape, community and economy of the Burren. As part of the BurrenLIFE project, a producers group was established to add value to local beef and lamb: while it no longer exists, its development generated a number of useful lessons and spin-offs, including private direct sales businesses.

A database of local workers (with up to 80 listings, mostly local farmers) was also developed and made available to Burren farmers who are unable to carry out conservation works themselves due to age, infirmity or off farm work for example.

Some of these workers have joined forces to work together on Burren farms. As part of the Burren Programme, a traditional Burren gate was identified as being very fitting for use when upgrading walls and gates under BurrenLIFE - three local businesses now manufacture and install these gates. Arising from the success of the Burren programme, a large number of study groups visit the region: these are increasingly hosted by local farmers who provide lunches and guided tours, affirming the Burren's potential as a 'learning landscape'. Additional initiatives are planned with the expansion of the Burren Programme.

What did 'adding value' achieve for HNV farming?

Achievements

- Establishment of a Beef & Lamb producers group
- Mini-businesses including farmer-led walks, farmhouse catering, production of farm gates
- Establishment of a Database of workers to support farmers in HNV farming



Achievements

Since 2005 a significant investment has been made in the development of AES to support HNV farming in the Burren. During this time a number of smaller innovations have also been instigated and supported to try to add value to HNV farming systems, including:

- A Beef & Lamb Producers Group (2007-2010) which has led to some offshoots in private meat sales
- A Workers Database (80 listings) of available labour to support HNV work in the Burren
- The production of a traditional Burren gate, now made by three local suppliers
- The development of 'learning packages' for study groups which include farmhouse lunches and farmer-led walks across the land.

Economics of HNV farming

The initiatives have contributed to the economy of HNV farmers and to the social opportunities available to these farmers (by interacting with visitors, customers and other farmers).

Maintaining or improving HNV values

The Workers database has helped address key labour shortages in the HNV landscape while training offered to these workers has helped improved outcomes for nature.

Traditional Burren gates have enhanced the visual appeal of the Burren and helped improve stock management and thus natural values.

Farmer's engagement with tourism has encouraged them to engage more fully with conservation farming work.

How did an ‘added value’ approach respond to the HNV LINK innovation themes?



Adding value for HNV farmers – whereby innovations are developed with the intention of benefitting HNV farmers directly – have really helped create a suite of new business and social opportunities for Burren farmers and other local businesses. These innovations have also enabled HNV farmers to work better by having good pool of local skills to draw on. Little impact on policy however.

The process that made it happen and critical factors for success

- Responding to the need – e.g. for farm labour, for better marketing of local food.
- Focussing on the farmer when opportunities do arise – e.g. hosting of study groups from other HNV landscapes.
- Keeping things local – e.g. in terms of local product design and manufacture.



Actors and roles: The Burren Programme Team and Burrenbeo Trust Team have supported many of these value-added initiatives.

Institutional context: Investment in HNV farming (funded by DAFM, NPWS) and the higher profile of HNV farming in the Burren (BurrenLIFE) has created new employment opportunities and new product and service needs.

Critical factors for success: building the skills and confidence of farmers to do new things through skills training (e.g. for scrub removal), piloting ideas (e.g. leading walks) and selling their products (producers group), as well as creating new markets for HNV products and services.

Limiting factors: low confidence levels among farmers and a reluctance to change, limited product range (weanling cattle) and seasonality of tourism.

Lessons learnt from this innovation example, and its potential replication

- Farming alone is not sufficient to address the weak socio-economic outlook for many HNV farmers.
- Seeking to add value through new products and services, collective working processes, developing new markets and funding mechanisms etc will become increasingly important.
- HNV farmers have the capability to create added value but will need ongoing support and encouragement to do so.



Overall lessons for HNV farming:

While HNV farming generates a lot of added value for other industries (e.g. tourism) HNV farmers often do not benefit from this added value. To address the weak socio-economic outlook for HNV farming in many regions, this situation needs to change. While farmers have the ability to generate added value from their work and their place, they need a lot of encouragement and support, ideally at a local level, to do so.

Replicability of innovation and key requirements to do so:

Some of the ideas listed under this innovation are easily replicable: developing workers databases, producer groups, local products, agri-tourism services etc. Local support structures will be needed to ensure these initiatives are not short-lived.



Learning Area “Sítio de Monfurado” (Portugal)

INNOVATION EXPERIENCES AND NEEDS

Contribution to deliverable D2.6.1

Date: October 2017

Authors: Isabel Ferraz de Oliveira



This project has received funding from the European Union Horizon 2020 research and innovations program under Grant Agreement No. 696391

This report represents the views of the authors. The Research Executive Agency is not responsible for any use that may be made of the information it contains

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.

Contents

Slide 2: Introduction and contents

Slide 3: The challenges facing HNV farming in Sítio de Monfurado

Slide 4: Overview of innovation in Sítio de Monfurado

Slide 5: Innovation examples in Sítio de Monfurado

Slide 6: Social and institutional innovation

Slide 7: Regulatory framework innovation

Slide 8: Products and markets innovation

Slide 9: Farm techniques and management innovation

Slide 10: Innovations from outside the LA that could help address LA needs

Slide 11: Innovation examples for which Sítio de Monfurado is looking to other Member States

Slide 11: Three Innovation Fiches from Portugal

Slide 13-17: (1) A healthy soil as the core of the Montado system – Informal group

Slide 18-22: (2) Agri-environmental measure - Zonal Programme of Castro Verde - within the Natura 2000 payments (Zonal supports)

Slide 23-27: (3) Independent projects – The case of Herdade do Freixo do Meio

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
Low investment of farmers in improving management practices	Promote discussion groups and cross visits with inspiring examples (e.g. Tertúlia do Montado)
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

programme (CSAs)

Herdade do Freixo do Meio

Independent projects

– Herdade do Freixo do Meio

Development of a

Territorial Brand –

Aracena y Picos de Aroche - Spain

Agri-environmental

measure - Zonal Programme of Castro Verde



- **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



↓

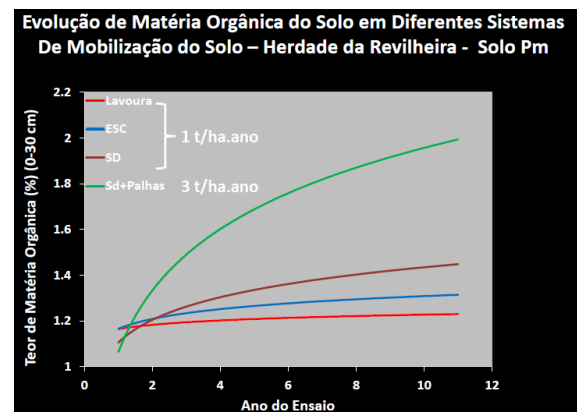
↑ Pasture productivity
↑ Oak tree productivity and thus health
↑ Other cultures productivity

↓

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).



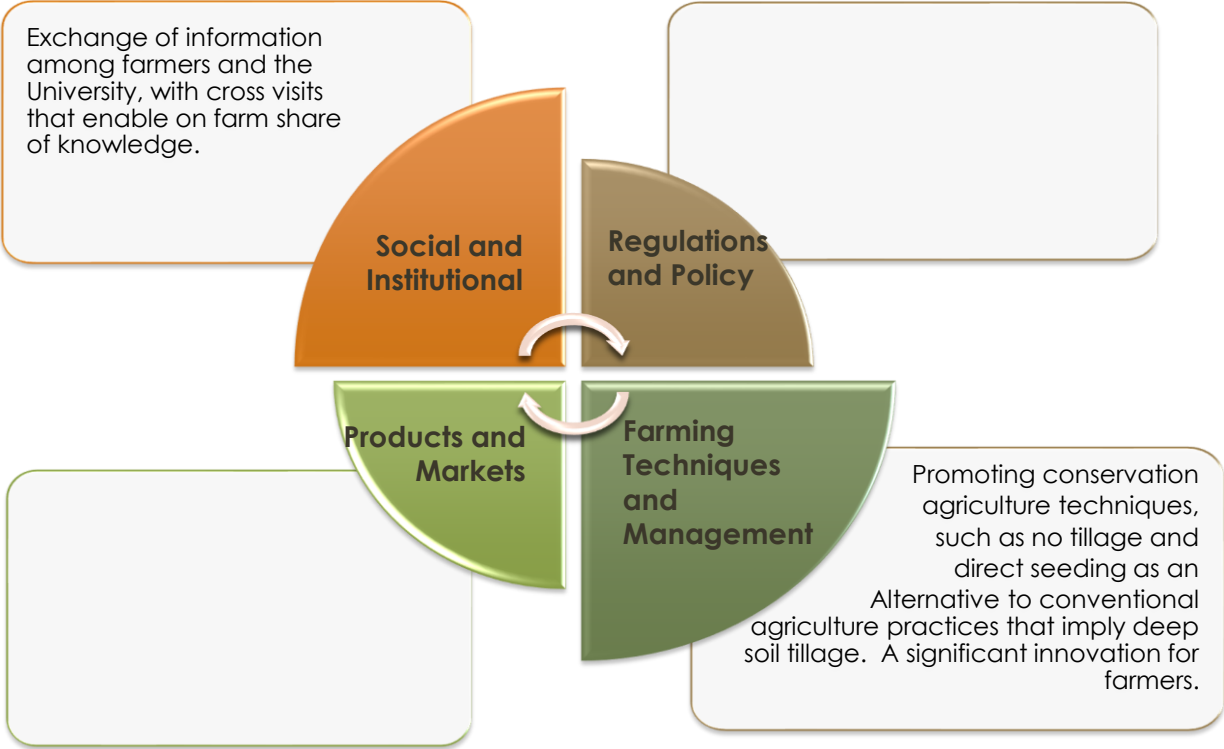
Economics of HNV farming

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

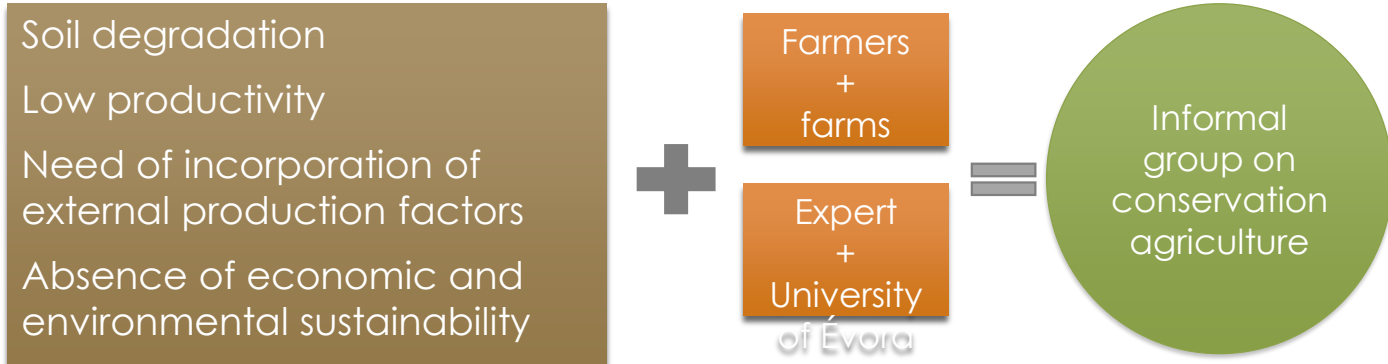
Maintaining or improving HNV values

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 number of farms.

- 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.

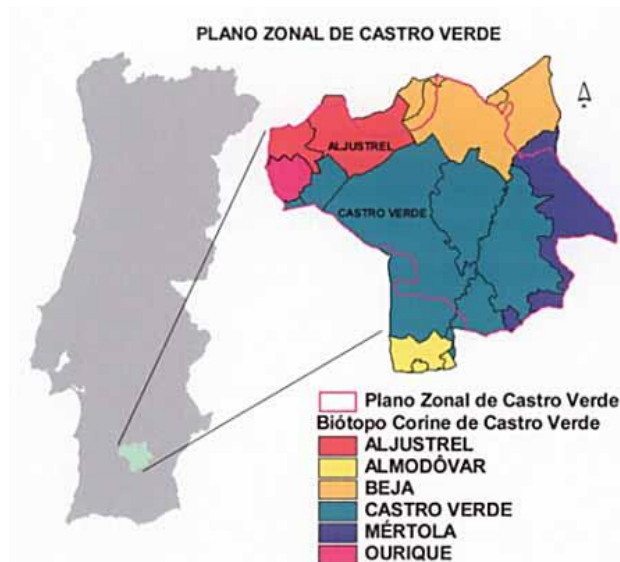
- Could it be rolled out on a bigger territorial scale? What would be needed to do this successfully?

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-Uso-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)

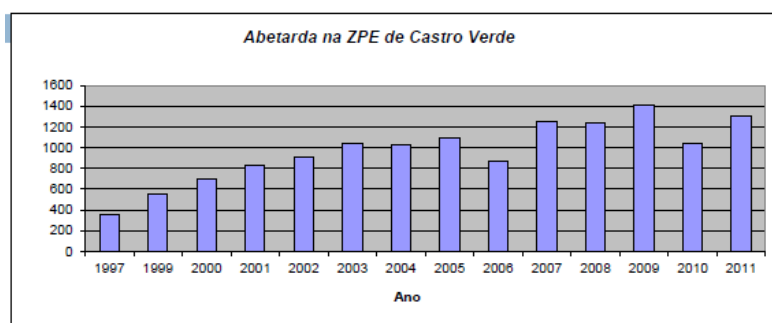
Story in a nutshell

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.

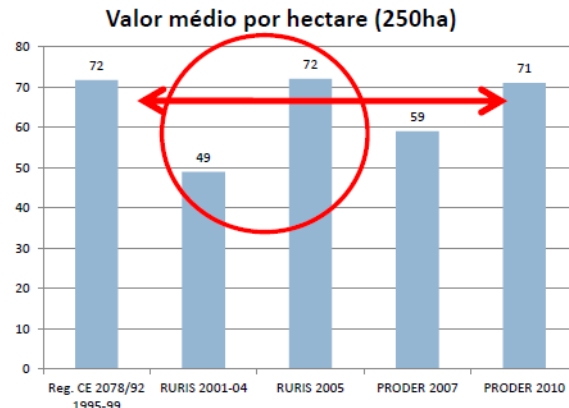
What does the Zonal Programme of Castro Verde achieve for HNV farming?

- 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)

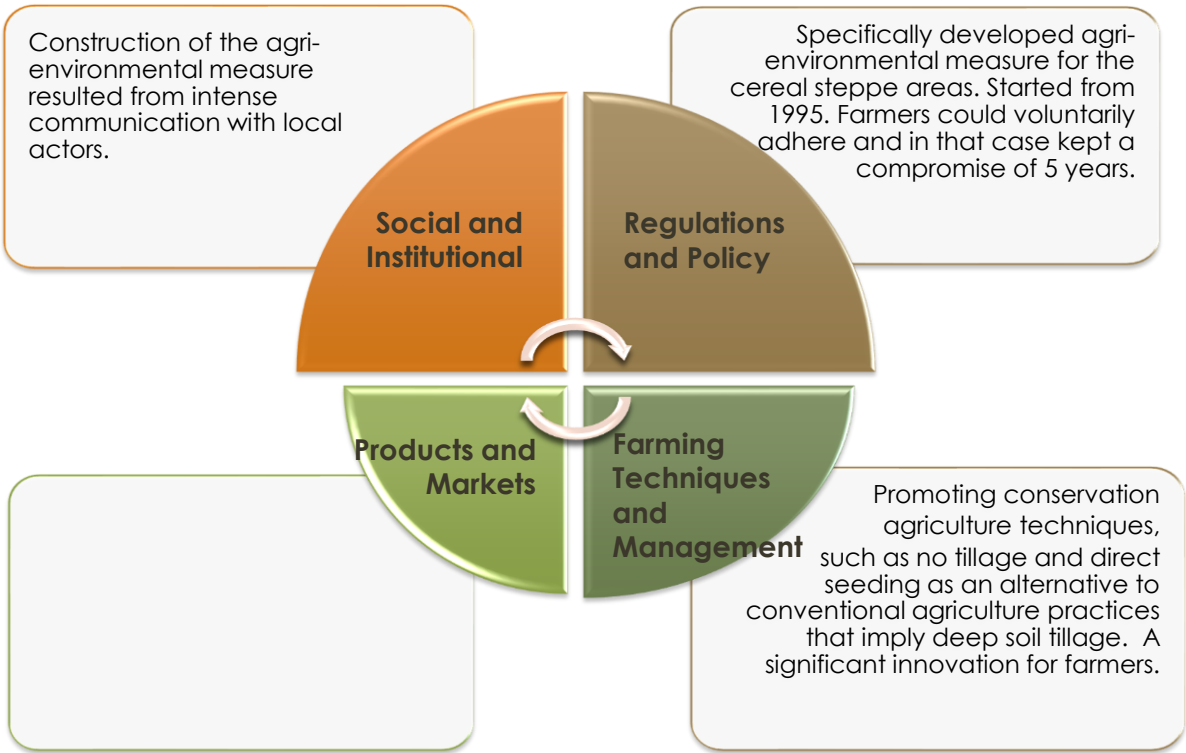
By 2012, the average payment provided by the agri-environmental measures was 71 euros/ha, for an average farm dimension of 250 ha.

Maintaining or improving HNV values

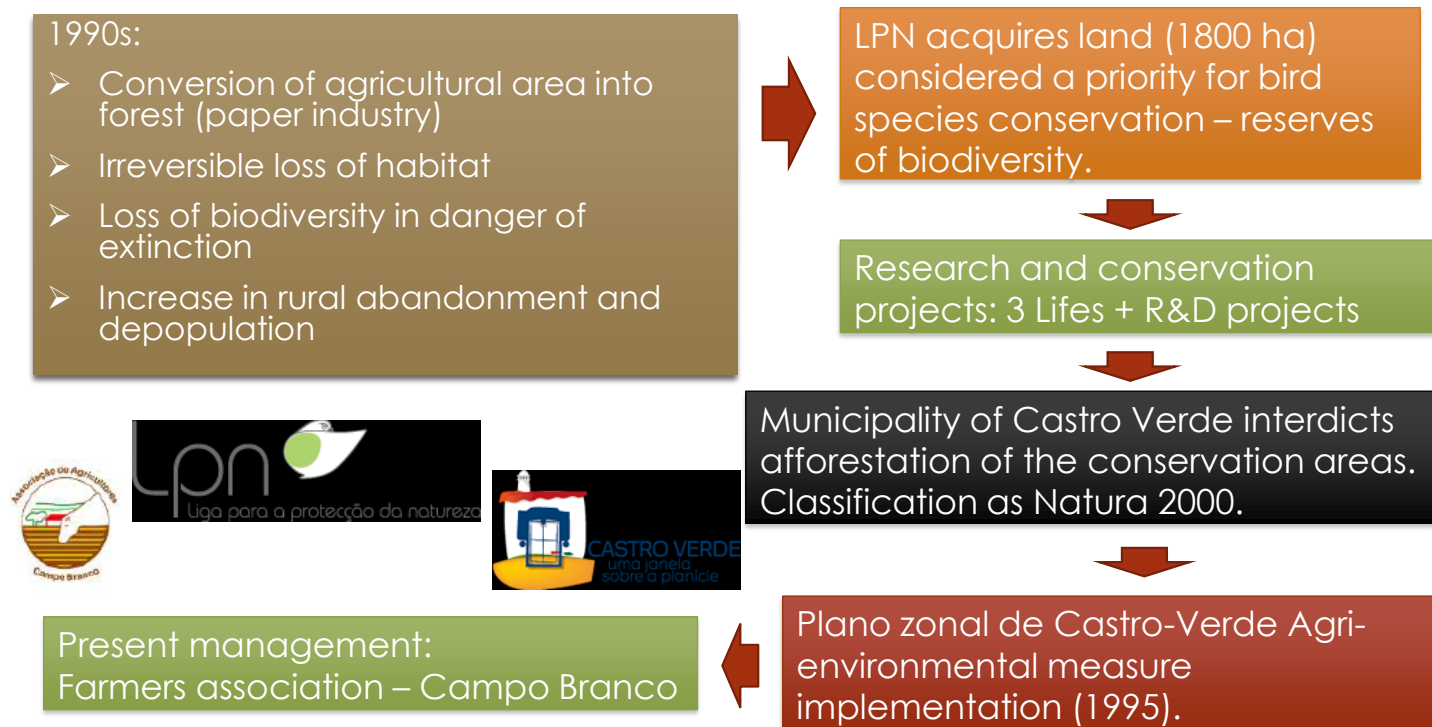
The agri-environmental measure was effective in enabling the recovery of different endangered cereal steppe birds, namely the bustard (*Otis tarda*) and lesser kestrel (*Falco naumanni*). Furthermore the environmental investment have resulted in different actions that greatly contributed to local development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



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 do 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)

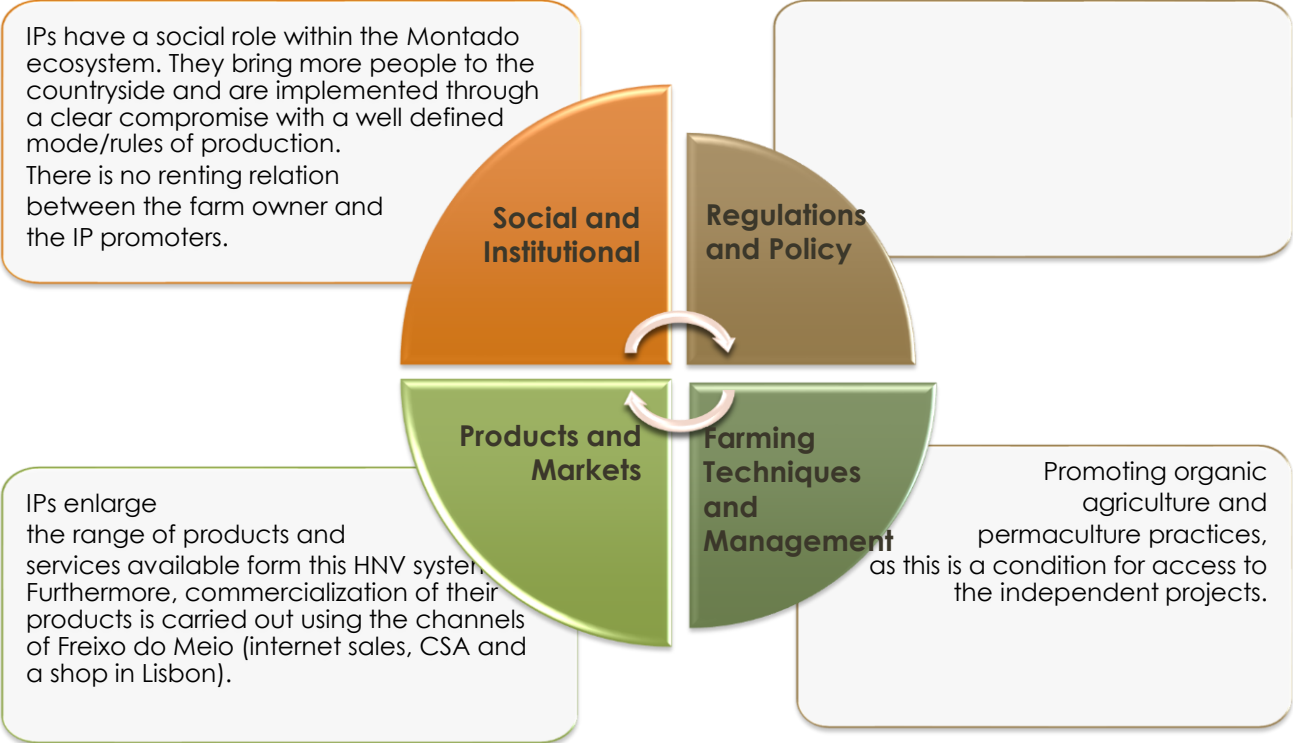


Achievements

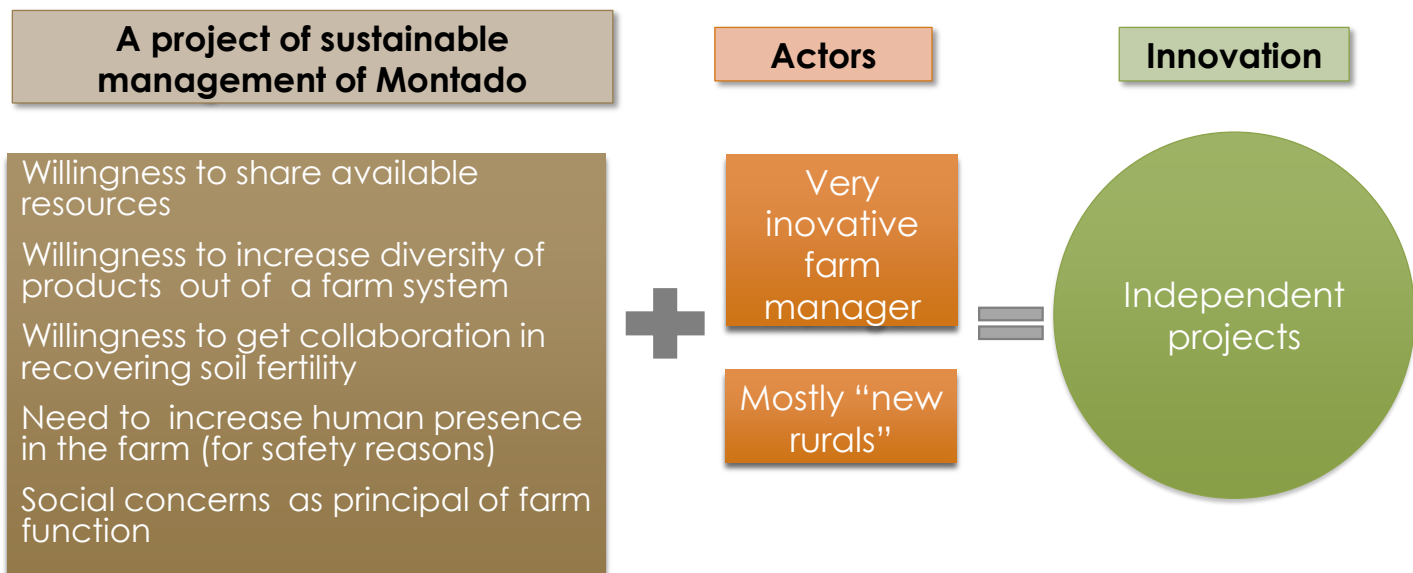
Since 2008, HFM acts as an economic active agent by embracing autonomous but complementary projects that strengthen the system as a whole and increase the amount of products available from the farm.

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 independente projects promoters have used CAP funds for instalation of their independente 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.



Learning Area “Dealurile Clujului Est” (Romania)

INNOVATION EXPERIENCES AND NEEDS

Contribution to deliverable D2.6.1

Date: October 2017

Authors: Diana DUMITRAȘ*, Ionel-Mugurel JITEA,
Valentin MIHAI

University of Agricultural Sciences and Veterinary Medicine Cluj–Napoca; ddumitras@usamvcluj.ro



This project has received funding from the European Union Horizon 2020 research and innovations program under Grant Agreement No. 696391

This report represents the views of the authors. The Research Executive Agency is not responsible for any use that may be made of the information it contains

Introduction and contents

This report looks at innovation that supports HNV farming in **Dealurile Clujului Est**, 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 **Romania** that could usefully be transferred to address challenges in the LA.

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

Contents

Slide 2: Introduction and contents

Slide 3: The challenges facing HNV farming in Dealurile Clujului Est, Romania

Slide 4: Overview of innovation in Dealurile Clujului Est, Romania

Slide 5: Innovation examples in Dealurile Clujului Est, Romania

Slide 6: Social and institutional innovation needs in Dealurile Clujului Est

Slide 7 Regulatory framework innovation needs in Dealurile Clujului Est

Slide 8: Products and markets innovation needs in Dealurile Clujului Est

Slide 9: Farm techniques and management innovation needs in Dealurile Clujului Est

Slide 10: List of innovations from outside LA

Slide 11: List of innovations examples for which Dealurile Clujului Est is looking to other Member States

Slide 12: Innovation fiches from Romania

Slide 13-17: Romania – innovation example 1) Agri-environment measure: “Package 6 Grasslands important for butterflies (*Maculinea* sp.)” in Cluj and Suceava counties

Slide 18-22: Romania – innovation example 2) Integrated management plan for Dealurile Clujului Est (Natura 2000 site)

Slide 23-27: Romania – innovation example 3) Effect of traditional and modern agricultural practices on HNV grasslands

Slide 28-32: Romania – innovation example 4) Practical measures for conservation of HNV grasslands: innovative machinery, conservation action plan, educative materials

Slide 33-37: Romania – innovation example 5) PDO Telemeaua de Ibanesti

The challenges facing HNV farming in LA Dealurile Clujului Est

The **HNV farming** system in the region is based on the traditional family household's low-intensive techniques that used a mosaic of natural pastures for grazing and mowing.

Challenges:

- alteration of the traditional agricultural practices and intensification due to the increase of sheep livestock;
- increasing aging trend especially for the rural communities that have important HNV resources;
- the **value chain** of the HNV products is currently based on low-value-added products;
- poor basic rural infrastructure, especially for the remote HNV areas;

Comparison between mowed and not mowed pastures



Aged farmers applying archaic techniques



Poor rural infrastructure



Challenges facing HNV livestock farming in Dealurile Clujului Est LA

The **HNV farming** system in the region is based on the traditional family household's low-intensive techniques that used a mosaic of natural pastures for grazing and mowing. In recent years the HNV **agro-environment resources** have known suffered a process of degradation caused by the alteration of the traditional agricultural practices and intensification due to the increase of sheep numbers. The traditional farming system based on common grazing and family labour force is threatened and abandoned nowadays due to low income sources and also due to high alternative incomes outside the LA. There is an increasing aging trend especially for the rural communities that have important HNV resources.

Due to inefficiency and high consumption of time, **manual mowing became an exception in the last years**. That caused important degradations for the permanent pastures. In the field of **good governance**, there exist inconsistencies both in the administrative organization (communes belonging to different administrative associative structures with specific objectives and instruments) and also in the implementation of agricultural policies, and in particular for the agri-environment measures (not all communes eligible for such measures although they belong to a Natura 2000 site). The **value chain** of HNV products is currently based on low-value-added products. On-farm processing (cheese/meat) and direct sales cannot develop due to rigid rules and bureaucracy. There is a lack of product differentiation from grazing systems. Basic rural infrastructure is poor, especially in the remote HNV areas.

Overview of innovation in Dealurile Clujului Est, Romania

HNV-LINK is the first comprehensive attempt to evaluate the HNV farming situation in Dealurile Clujului Est, by analysing all four dimensions.

Innovations were found in the areas of: regulations and policy; farming techniques and management; products and markets.

Social and institutional innovations are lacking.

Overall, innovations do exist, however there is lack of innovation at the individual level to help small farmers marketing their HNV products and to comply to eligibility criteria for agro-environment measures

Natural pastures in summer grazing in Dăbâca commune



Hay transportation process



Overview of the innovation situation

HNV-LINK is the first comprehensive attempt to evaluate the HNV farming situation in Dealurile Clujului Est, by analysing the all four dimensions.

Innovations were found in the area of **regulations and policy**, related to the introduction of agri-environment CAP measures based on researches in the field; and to the development of a management plan for the Natura 2000 site Dealurile Clujului Est.

In the area of **farming techniques and management**, innovation was found in the use of light machinery for mowing the HNV grasslands that maintains the biodiversity and their habitats. The Natura 2000 management plan is also relevant to this theme.

The on-line baskets with organic vegetables was found in the area of **products and markets**. The management plan intends to support HNV farming, however there are some inconsistencies with the eligibility criteria of the agri-environment measures.

Social and institutional innovations are most lacking, and it was highly emphasized by farmers (during the project meetings and Innovation seminar, questionnaire) as being helpful to have a small farmer association representative for the region.

Innovation examples in Dealurile Clujului Est, Romania: what are their strengths and weaknesses for HNV farming?

- Regulations and Policy:** Agri-environment measure: "Grasslands important for butterflies (*Maculinea* sp.)" in Cluj and Suceava counties
- Regulations and Policy:** Integrated management plan for the Easter Hills of Cluj (Natura 2000 site)
- Farming Techniques and Management:** Effect of traditional and modern agricultural practices on HNV grasslands
- Products and Markets:** On-line baskets with organic vegetables

Butterfly *Maculinea*



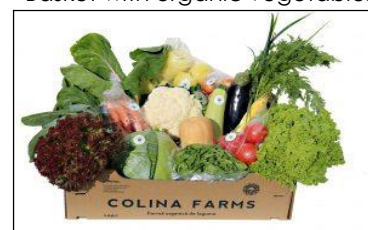
Romanian Lepidopterological Society

Brielmaier mower



Source: Romanian Lepidopterological Society

Basket with organic vegetables



Source: <https://colinafarms.ro/>

Strengths

- Some initiatives to support farmers who use manual/light machinery for mowing HNV grassland;
- Some attempts to improve the marketing of local products (on-line baskets) but at the level of one farm and it is not directly linked to HNV farming (but it is a good example for HNV products as the system works);
- LAGs actively involved;

Weaknesses

- The existing innovations are not in the benefit of all small farmers, as some are struggling to comply with the eligibility criteria for agro-environment measures or/and not interested in HNV farming;
- Acquisition of a light mowing machinery (e.g. Brielmaier) is very expensive for a small farmer;
- On-line baskets for HNV products would be successful only if farmers are cooperating under a farmer association and create a brand representative for LA;
- The examples of innovation do not address the main challenges facing HNV farming: lack of cooperation; lack of processing capacities under a local brand; lack of specific agri-environment support for the communes situated in the Natura 2000 site; lack of consistency among all communes as regards Package 6 (butterfly measure);

What are the main innovation needs in Dealurile Clujului Est, and how could they be addressed?

Social and institutional innovation

Social and institutional - innovation needs	Possible approaches
Farmers' associations	Good practice model for farmer cooperation adapted to small HNV farmers needs
Better information system	Working/extension sessions, SMS system for HNV farms
Young people to start a business in agriculture and/or complementary domains	Information sessions about the CAP non-refundable funds, measures that encourage young people
Investments in rural infrastructure	The Local Action Group and local authorities can access non-refundable funds
Lack of specialised working force	Orientate the local young population to agricultural/rural development studies

Social and Institutional Innovation Needs

Small **farmers associations** would help to become economically efficient by learning to work together in production, processing and marketing (e.g. establish a processing capacity, create a local brand, participate at fairs as a local brand, find better ways to reach customers as belonging to an entity)

The **low level of entrepreneurial skills of small farmers**, as well as their **lack of information** on how to become more economically efficient could be improved by organizing **working and/or extension sessions/meetings with experts** in the field and the local administrative associations, such as the local action groups. The communes from LA belong to different LAGs (6 to LAG Somes-Transilvan, 1 to LAG Leader Cluj, 1 does not appertain to any LAG). This is done at a certain level, however, more efforts of each LAG are needed to organise information sessions to work along with small farmers to look for optimal solutions that could increase their level of living without negative effects on the habitats. An SMS system developed only for farmers acting in HNV areas.

Another innovation needed is to **attract young people from LA** or urban areas to start a **business in agriculture and/or complementary domains**, since elderly people prevail in LA and the migration of young people is increasing. Financing possibilities exist through CAP. Frequent information sessions are needed with examples from previous project/on-going projects already financed through RDP.

The rural infrastructure needs significant improvements. LAGs can play an important role by accessing non-refundable funds, however, the local authorities (e.g. city hall) should also be involved in this process.

Regulatory framework innovation

Regulatory framework - innovation needs	Possible approaches
Adapting the sanitary-veterinary norms to the local needs for processing and direct selling	Lobby for changes in the current regulatory framework
Solve the issues of land ownership (status of unclear property)	Tools used in cadaster
Adapt conditions of agri-environment measures to the reality of small farmers	Revise the eligibility criteria and adapt them to the reality of farmers, based on field research
Use RDP measures to support the areas located in Natura 2000 sites	Adaptation of management plan to the needs/expectations of farmers

Regulatory Framework Innovation Needs

- The most acerbic need is related to the **adaptation of sanitary-veterinary norms to the local production system (HNV system)**, the existing norms impeding the processing and direct selling for small farmers.
- The **status of unclear ownership of land** remains a challenging innovation need. Perhaps tools used in cadastre in other similar situations where the problem was successfully solved could be adapted for this case. Also a system for financing the cadastre costs will help landowners to solve this issue.
- Another priority innovation need is the **adaptation of agri-environment measures conditions** to the reality of small farmers by revising the criteria based on field research and meetings with small farmers to understand their everyday challenges.
- The need for **special RDP measures to support the areas located in LA** (Natura 2000 site) can be solved by adapting the Romanian National Rural Development Programme.

Products and markets innovation

Products and markets - innovation needs	Possible approaches
Small processing capacities under cooperative system	Work in cooperative system of 5-10 farmers, using same specification conditions
Local brand for farmers which practice HNV farming	Create a local brand to differentiate the products on the market
Alternative sources of revenue, such as ecotourism, cyclotourism	The Local Action Group can access funds to create trails, in collaboration with farmers which can offer their products directly to tourists
Alternative distribution channels	Create a on-line platform for selling products from more farmers (associated in an farmer association)

Products and Markets Innovation Needs

The main identified innovation need in this domain is the **development of small processing capacities under a cooperative system** for the local HNV products (meat, milk), this would help small farmers to process their raw products while respecting the sanitary-veterinary norms, leading to production diversification and increased added-value.

Along with this, **development of a brand** would be beneficial for distinguishing the local products from other regions, for their unique features. Both innovations are linked to the creation of small farmers' association (regulatory framework innovation).

Finding alternative sources of revenues such as ecotourism, cyclotourism can offer small farmers also the opportunity to become known outside LA (advertise local HNV products). The trails can be built to reach small farms or small selling points where tourists can taste/buy the HNV local products. LAG plays an important role within the current RDP, as it can access funds for such investments.

Local small farmers struggle with finding **efficient distribution channels**, the access on organized markets being low, the multinational supermarkets dominate. A possible approach developed along with a local small farmer association and a local brand is an on-line platform for selling the products, mainly in the cities located near the area.

Farm techniques and management innovation

Farm techniques and management - innovation needs	Possible approaches
Promoting processing and direct selling to respond to the sanitary-veterinary norms	Training farmers and developing informative materials
Increase the hay production	Use of light machinery that reduces working time
Ways to improve the precarious situation of pastures (large areas with shrubs; low productivity)	Innovative methods to increase green and hay production that maintains the biodiversity
More efficient way of informing farmers how to comply with the criteria for the agri-environment packages	A Guide to good practices for implementing the agri-environment packages

Farm Techniques and Management Innovation Needs

Promoting processing and direct selling to respond to the sanitary-veterinary norms is a need directly linked to the need to adapt the sanitary-veterinary norms to the local production system (HNV system) (regulatory framework need). Farmers can be informed and guided through training courses and informative brochures.

Although several researches were done regarding the effects of using light machinery for mowing such as the Brielmaier mower, there is still a reluctance on using mainly due to the lack of money. The use of light machinery would help increasing the hay production, reducing the working hours spent on manual mowing. Higher payment within Package 6 is also offered for this type of mowing. This mowing technique would also improve the situation of pastures by clearing the shrubs, without negative effects on biodiversity.

Another innovation need is related to manner of helping farmers to comply with the criteria for agri-environment packages. A guide to good practices presenting all required steps would significantly help them.

Innovations from outside the LA that could help address LA needs

5. Online and offline platforms for small producers

2. Improved marketing strategy & tools for farmers to access markets → ②

4. SMS Family Farms of Romania



6. PDO Telemeaua de Ibanesti

7. Modern sheepshelter models and branding kit for mountain products → ⑦

1. Practical measures for conservation of HNV grasslands

3. Marketing initiatives, modern brands and packaging, producer groups, short supply chains and genuine farmers' markets

8. Social enterprise SES Fruleco HNV

9. Facilitating access to farmers markets and milk collection points

10. Community supported agriculture

1. Saxon Villages Area of Southern Transylvania: Practical measures for conservation of HNV grasslands: innovative machinery, conservation action plan, educative materials
2. 6 study areas representative of HNV farmed landscape across Romania (Zarand, Târnava Mare, Târnava Mică, Pogany Havas, Valea Barcăului, Mara-Cosău-Creasta Cocoşului): Improved marketing strategy and tools for farmers to access markets
3. Tarnava Mare: Marketing initiatives, developing modern brands and packaging, producer groups, short supply chains and genuine farmers' markets
4. Entire country: SMS Family Farms of Romania
5. Valea Barcăului, Salaj: Creation of online and offline platforms to promote small producers from HNV areas and to sell their products
6. Valea Gurghiului, Mureş: PDO Telemeaua de Ibanesti
7. Romanian Mountain Areas: Modern sheepshelter models and branding kit for mountain products
8. Sighisoara-Tarnava Mare: Social enterprise SES Fruleco HNV
9. Tarnava Mare: Facilitating access to farmers markets and milk collection points
10. Entire country: Community supported agriculture

Innovation examples for which Dealurile Clujului Est is looking to other Member States

- Flexibility in the application of food hygiene rules to small-scale, on-farm processing units;
- Small processing capacities under a cooperative system;
- Good practice model for farmer cooperation adapted to small HNV farmers needs;
- Innovative methods to increase pastures and meadows production that maintains the biodiversity;

INNOVATION FICHES FROM ROMANIA

- 1) Agri-environment measure: "Package 6 Grasslands important for butterflies (*Maculinea* sp.)" in Cluj and Suceava counties
- 2) Integrated management plan for the Eastern Hills of Cluj (Natura 2000 site)
- 3) Study of effects of traditional and modern agricultural practices on HNV grasslands
- 4) Practical measures for conservation of HNV grasslands: innovative machinery, conservation action plan, educative materials
- 5) PDO Telemeaua de Ibanesti

Romania – innovation example 1)

Agri-environment measure: “Package 6 Grasslands important for butterflies (*Maculinea* sp.)” in Cluj and Suceava counties

Location: Cluj and Suceava counties, Romania

HNV system: Extensive grazing, mosaic farming

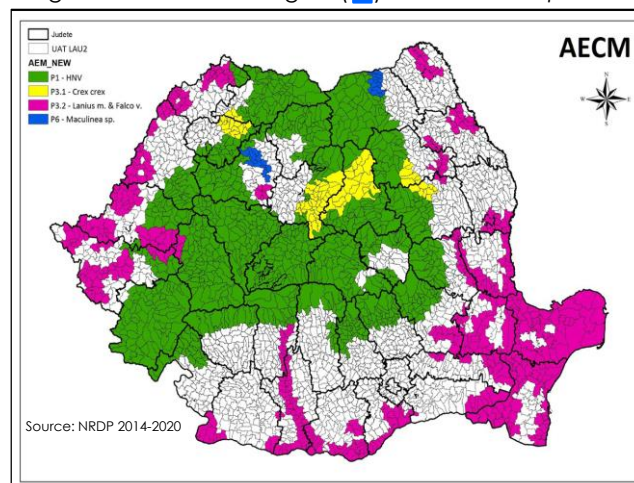
Scale of operation: Eligible areas are 26 ATUs from Cluj and Suceava counties, with a total area of 23000 ha.

Timespan: It started in 2012 and continues through the actual RDP 2014-2020

Keys to success: Initiative of local NGOs (the Romanian Lepidopterological Society; collaboration with ADEPT and WWF); opportunity to ask for extra payment additional to direct payments.

Additional information: <http://www.madr.ro/en/>

Eligible areas for Package 6 (■) – *Maculinea* sp.



Problems addressed by this example

Through this innovation it is intended to protect the grasslands important for butterflies in the two counties. The areas are Natura 2000 sites with high biodiversity. Through this measure farmers commit themselves to respect some conditions such as not using chemical fertilizers or pesticide, the use of organic fertiliser is only up to a certain level, mowing is allowed only manually or by using light machinery and only after August 25th, etc.

Story in a nutshell

The Romanian Lepidopterological Society proposed an agri-environment measure: “Package 6 Grasslands important for butterflies (*Maculinea* sp.)” in Cluj and Suceava counties, in collaboration with ADEPT foundation and WWF as an agri-environment payment. This was based on the work done by the Society to protect the butterflies and their habitats, such as several working meetings, on-field research on butterfly protected species, development of an on-line platform. According to this measure, since 2012 farmers received 240 euro/ha/year if they respected the conditions of the package (National Rural Developed Program 2007-2013). This is additional to Pillar 1 direct payments. According to NRDP 2014-2020, the aid increased to 361 euro/ha/year if land is worked manually or 282 euro/ha/year if land is worked with light equipment. The support is granted following the signature of voluntary commitments for 5 years, after which can be extended on an annual basis until the end of the programme. Additional information: <http://www.madr.ro/en/> (details about Package 6 on page 423-428)

What does Agri-environment measure achieve for HNV farming?

- Important additional support for farmers
- About 3,600 ha/year and 475 beneficiaries/year (NPRD 2014-2020)
- 2012-2016: 400 farmers received about 4.3 millions euro from APIA through Package 6 (SLR Leaflet, 2017)

Butterfly *Maculinea teleius*



@ summer 2017, Păglișa village
Sheep grazing in
Vultureni Commune

Manual mowing



@ summer 2017, Păglișa village

Manual mowing



Source:
<http://ziuadecj.realitatea.net/politica/niculescu-subventiile-pentru-fluturi-si-gaste-cu-gat-rosu-afecteaza-credibilitatea-politicii-agricole-comune--85267.html>



Source: Romanian Lepidopterological Society

Achievements

The payment represents an important support for farmers in the area, as additional payment to the direct CAP payments. The extensive management of the pastures/meadows important for butterflies is ensured by Package 6.

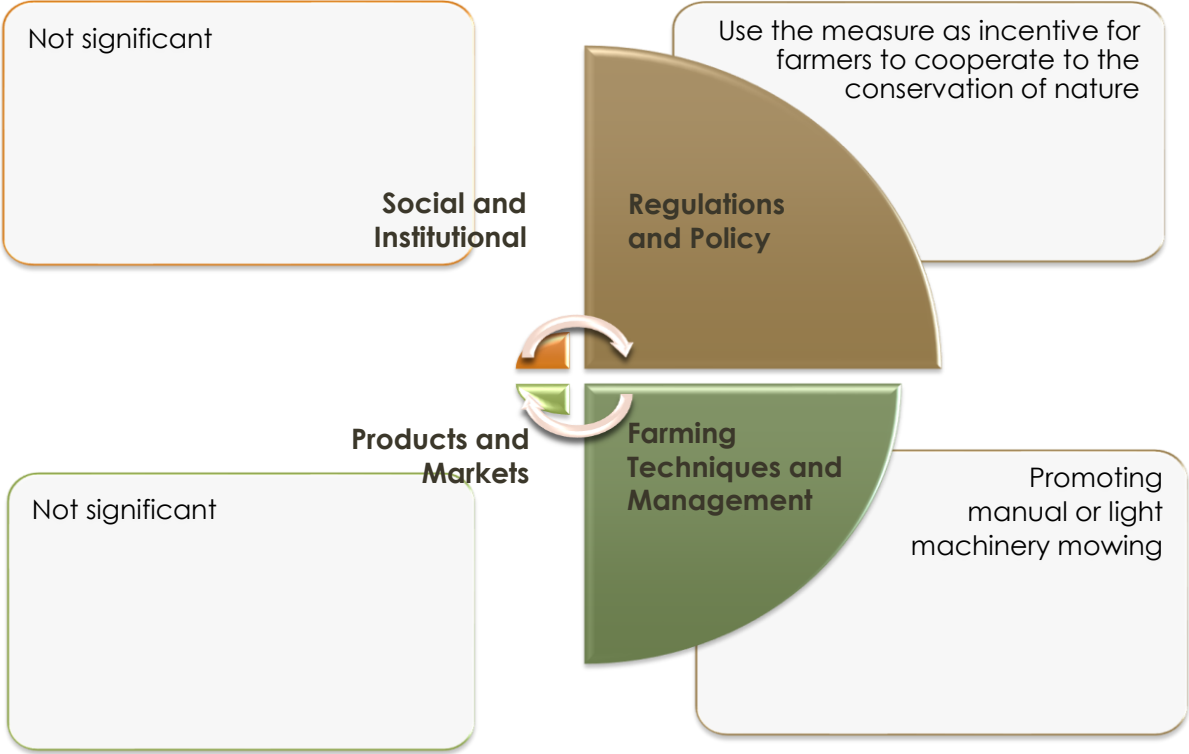
Economics of HNV farming

Package 6 within the NRDP 2007-2013 supported about 3,600 ha/year and about 475 beneficiaries/year (NRDP 2014-2020). During 2012-2016, more than 400 farmers from 11 communes from Cluj county received about 4.3 million euro from APIA (SLR Leaflet, 2017).

Maintaining or improving HNV values

The main objective was to protect the butterfly *Maculinea sp.*, the Eastern Hills of Cluj being the only place where can be found together all the European butterfly species *Maculinea*. These areas host about 3% of the populations at European level and 40% at national level (NRDP 2014-2020). The most representative species are *Maculinea nausithous*, *Maculinea teleius*, *Maculinea alcon* and *Eriogaster catax*.

How does Agri-environment measure respond to the HNV LINK innovation themes?



Regulations and Policy:

Package 6 - Grasslands important for butterflies (*Maculinea sp.*) - was especially built for Cluj and Suceava counties, being a unique measure at European level. It is an additional payment to the direct ones, obtained only by eligible farmers. Eligibility is specified in the National Rural Developed Program and it refers to technological restrictions (use of fertiliser), grazing with maximum 0.7 Livestock Units per hectare, mowing starts after August 25th.

Farming Techniques and Management:

Use of extensive management through manual or light machinery mowing proved to be efficient for pastures/meadows important for butterflies only if it is done after August 25th, after the larvae are leaving the inflorescences.

The process that made it happen and critical factors for success

Information poster from APIA

- Cooperation between actors within Mozaic Project
- Based on research: monitoring butterflies over the years
- Critical factors for success: difficulty to comply package conditions due to old age of most farmers, lack of interest, bureaucracy



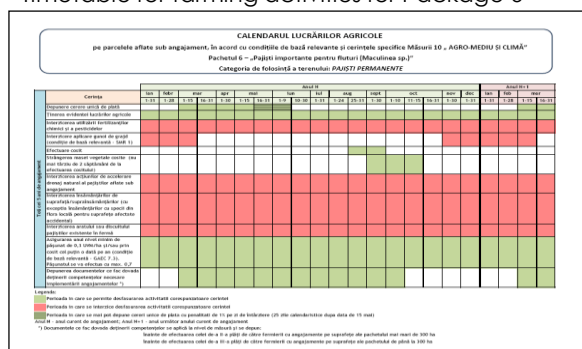
Source: <http://www.apia.org.ro>

Monitoring butterflies in traditional hay meadow – Mozaic Project



Source: <http://www.mozaic-romania.org>; © Inge Paulini

Timetable for farming activities for Package 6



Source: <http://www.apia.org.ro>

Actors and roles: Romanian Lepidopterological Society (SLR) – initiator/catalyst/innovator; ADEPT foundation – partner; WWF (Danube-Carpathian Programme Romania) – partner, Romanian Government – partner (agreed with the proposal to include the new measure in the National Rural Developed Program)

Institutional context that made it possible

It is the result of many years of research projects related to butterflies conducted by SLR. The opportunity offered by CAP for an extra payment in addition to the direct payments.

Resources: researches on butterflies and their habitats were done within the Mozaic Project I (2009-2012)

Processes: The measure has been implemented since 2012 (NRPD 2007-2013) and also supported by the current NRDP (2014-2020)

Critical factors for success: difficulty to comply with the package conditions due to the old age of most farmers, bureaucratic burdens in order to access these payments

Limiting factors, actual/potential problems, and how could they be overcome?

Farmers lack of information and lack of interest. Not all communes are eligible for this payment although they are located within the LA. *The inconsistency for the designation of the package eligible area could be overcome by redesigning the eligible area.*

Lessons learnt from this innovation example, and its potential replication

- Research done by SLR in the area sustained the need of this measure
- Farmers encouraged to use extensive farming methods
- Replicable for HNV areas with species and habitats that need special attention for their preservation

Brielmaier mower



Source: Romanian Lepidopterological Society

Natural pastures general view



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

Researches conducted over years by SLR proved to be an effective foundation to sustain the need of this measure as an optimal solution to conserve natural values and continue farming in the areas. Farmers are encouraged to continue the use of extensive farming methods.

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

The measure can be replicated for other HNV areas where species and habitats need special attention for their preservation

Could it be rolled out on a bigger territorial scale?

Yes, where these species or others are threatened by trends in the type of farming activities used

What would be needed to do this successfully?

Farmers should be better informed about the eligible conditions to access this measure by explaining the benefits of both, nature and farming. A farmer association could be a good solution for small farmers who cannot afford to buy light machinery such as Brielmaier. Including all commune from LA in the eligible area to protect the habitats on a larger scale.

Romania – innovation example 2)

Integrated management plan for Dealurile Clujului Est (Natura 2000 site)

Location: Dealurile Clujului Est

HNV system: Extensive grazing, mosaic farming

Scale of operation: Dealurile Clujului Est Natura 2000 site

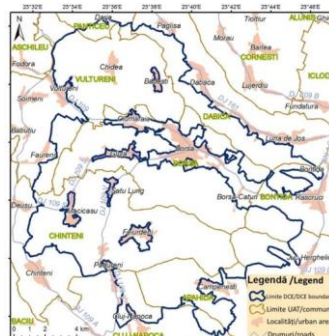
Timespan: 2013-2016; Management plan approved by Order no. 1208/2016

Keys to success: Initiative and experience of the Romanian Lepidopterological Society in research in the area sustained the initiative; opportunity to attract funds

Additional information:

http://www.mmediu.ro/app/webroot/uploads/files/2016-04-11_PM_ROSCI0295.pdf

Limits of Natura 2000 area in Dealurile Clujului Est LA



Source: Management Plan Natura 2000 site Dealurile Clujului Est (map .4.)

Project brochure



Source: Romanian Lepidopterological Society

Problems addressed by this example

The management plan was developed with the aim to conserve the rare fauna and flora, by collaborating with the local communities, especially as regard to the farming activities. For example, mowing only after August 25th, manually or with the use of low capacity machines because this favours the butterflies, the Eastern Hills of Cluj being the only place where can be found all European butterfly species *Maculinea*.

Story in a nutshell

The management plan for the Eastern Hills of Cluj area developed within the project “Development of an integrated management plan for the site of community importance ROSCI0295 – Eastern Hills of Cluj” was initiated by the Romanian Lepidopterological Society (SLR). Eastern Hills of Cluj is a Natura 2000 site (Order MMP 2387/2011) with an area of 18,889.6 ha. The management plan substantially contributes to the conservation of the biodiversity, promotes the natural values, encourages traditional agricultural practices and the sustainable management of hay meadows and pastures, and encourages a sustainable tourism.

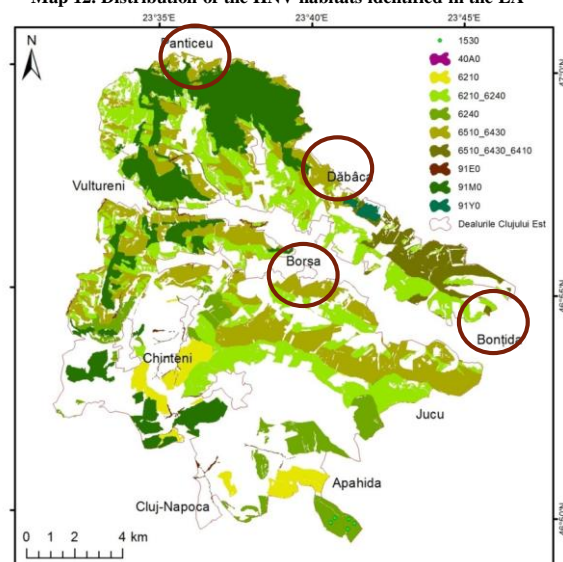
What does Integrated management plan achieve for HNV farming?

- Traditional farming practices are encouraged to continue
- Farmers from 4 communes (Borşa, Bontida, Dăbâca and Panticeu) may be eligible for Package 6 Grasslands important for butterflies (*Maculinea* sp.)
- Favourable conservation conditions for site habitats



Source: Romanian Lepidopterological Society

Map 12. Distribution of the HNV habitats identified in the LA



Source: Management Plan Natura 2000 site Dealurile Clujului Est

Achievements

The management plan was approved by Order of the Romanian Ministry of Environment, Water and Forests no.1208/29.06.2016. This is a good prospect for future if the actions mentioned in the management plan are implemented.

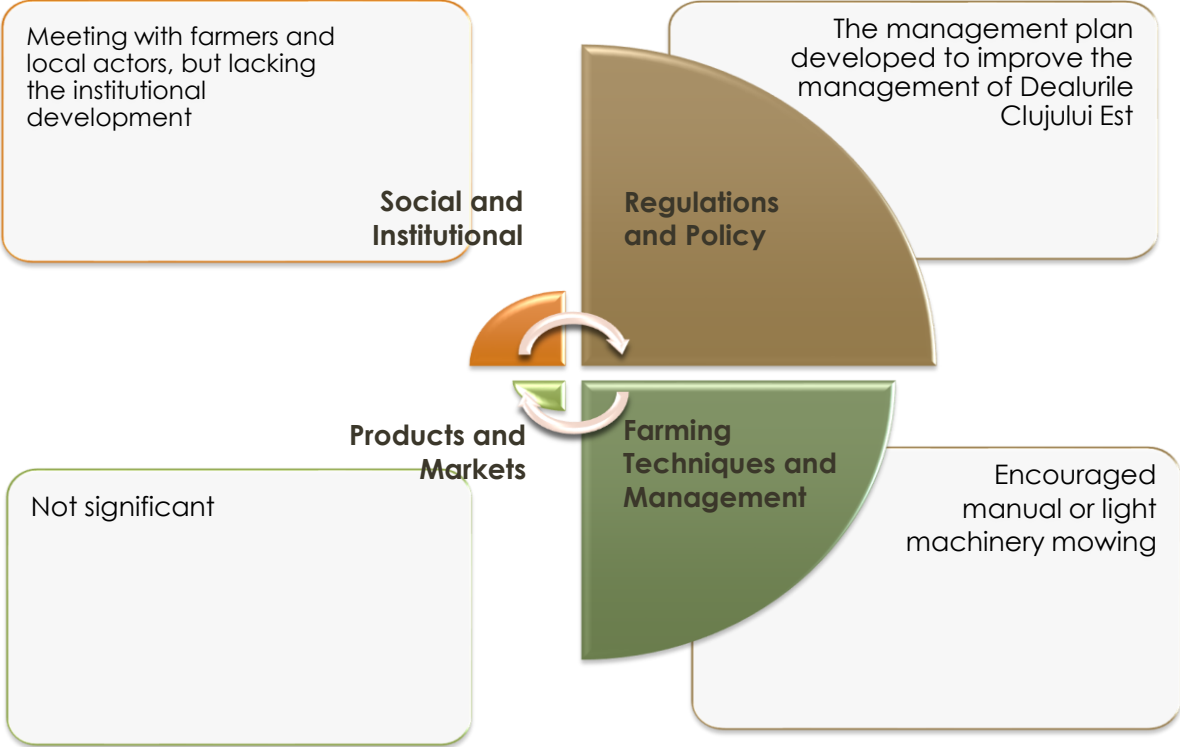
Economics of HNV farming

Farming traditional practices are encouraged to continue. Farmers who respect the management plan comply to the conditions of the agri-environment measure “Package 6 Grasslands important for butterflies (*Maculinea* sp.)”, which is an extra financial aid.

Maintaining or improving HNV values

The management plan clearly indicates how to assure favourable conservation status of each type of grassland habitat in the area by specifying the conditions under which mowing is allowed and naming the authorities in charge for monitoring and control. In the case of damaged areas several measures of ecological reconstruction will be undertaken.

How does Integrated management plan respond to the HNV LINK innovation themes?



Regulations and Policy

The management plan was developed with the aim to improve the management of the site of community importance ROSCI0295 - Dealurile Clujului Est and to increase people’s awareness regarding the biodiversity protection in the site. It was based on detailed assessment of conserved conservation flora and fauna species, natural habitats of conservative interest, assessment of the anthropic impact on protected areas and implicitly on species and habitats, establishment of conservation measures and ways to involve stakeholders and local communities, as well as the environmental assessment procedure according to the legislation.

Farming Techniques and Management:

Mowing is allowed during 25 August – 30 November, the mosaic system being recommended such that each area is mown every 3-4 years. Manual mowing (traditional practices) or with light machinery are encouraged.

Social and Institutional

There were some actions to increase awareness about the management plan: meetings with farmers and local actors, but lacking the institutional development

The process that made it happen and critical factors for success

- Project co-financed by European Regional Development Funds (ERDF)
- Critical factors for success: reluctance of local people to collaborate; migration of young people; low involvement in farming; lack of interest in mowing the land

Signing the contract;
Left Prof. dr. László Rákósy - President SLR ,
Right dr. Codruța Simule - Director OI POS
Mediu Cluj-Napoca



Source: http://www.lepidoptera.ro/pos_galerie_foto.htm

Traditional mowing



Source: http://www.lepidoptera.ro/pos_galerie_foto.htm

Brielmaier mower



Source: Romanian Lepidopterological Society

Researchers in the field



Source: <http://www.lepidoptera.ro/evenimente.htm>

Actors and roles: Romanian Lepidopterological Society (SLR) – initiator/**catalist/innovator**;
Agency for Environmental Protection Cluj – partner; European Regional Development Funds (ERDF) – co-financer; Romanian Government – co-financed from national budget

Institutional context that made it possible

The initiative of SLR, based on many years of research in the field and opportunity to attract non-refundable funds from the European Regional Development Funds and national budget.

Resources: Total budget was 1,349,497 RON (aprox 300,000 EUR), from which non-refundable funds were 1,331,149 RON from the ERDF, and the rest from the national budget.

Processess: The project was prolonged by 9 months, period necessary for the management plan to be approved. Meetings were organised to inform farmers about the management plan.

Critical factors for success: Reluctance of local people to collaborate and the migration of young people from rural to urban areas; risk of low involvement in farming and lack of interest in mowing the land.

Limiting factors, actual/potential problems, and how could they be overcome?

Farmers to be informed about the benefits they can obtain, such as becoming eligible for Package 6 (although only in 4 communes), a higher productivity when using light machinery for mowing.

Lessons learnt from this innovation example, and its potential replication

- Collaboration with stakeholders is mandatory to succeed
- Actions to increase awareness of the benefits of using extensive farming
- Applicable in regions with same grassland habitats or adapted on other types of habitats.

Informing farmers about the management plan



Source: Romanian Lepidopterological Society

Prof. dr. László Rákósy explaining about the Natura 2000 site to children in a school from Bondita



Source: http://www.lepidoptera.ro/pos_galerie_foto.htm

Meetings with local stakeholders, Vultureni City Hall



Source: http://www.lepidoptera.ro/pos_galerie_foto.htm

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

It is important to develop management plans for protected areas with actions that lead in time to a better conservation of the land with the help of local communities (HNV farming).

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

The idea can be applied in other regions with same grassland habitats or adapted on other types of habitats.

Could it be rolled out on a bigger territorial scale?

Yes, in protected areas where HNV farming is still present

What would be needed to do this successfully?

Collaboration with all stakeholders (especially farmers) is critical to understand the reality in the area, the problems they confront on daily basis and find optimal solutions that are in the benefit of both, nature and farmer (to preserve the natural values and help farmers increase their economic productivity)

Romania – innovation example 3)

Study of effects of traditional and modern agricultural practices on HNV grasslands

Map of experimental plots

Location: Dealurile Clujului Est

HNV system: Extensive grazing, mozaic farming

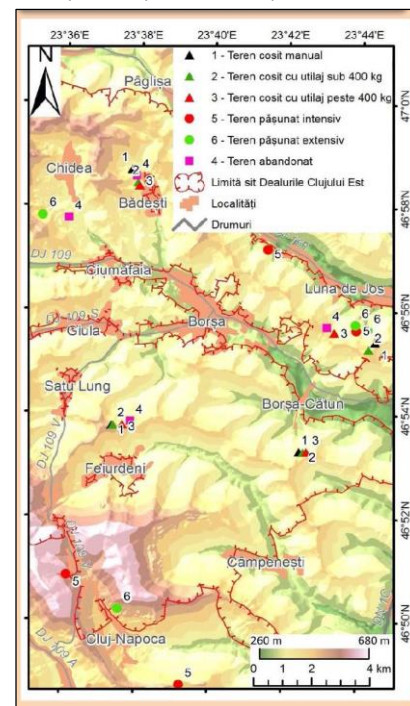
Scale of operation: 24 plots of land from Dealurile Clujului Est

Timespan: 2014-2016

Keys to success: Initiative and experience of the Romanian Lepidopterological Society in research in the area; opportunity to attract funds

Additional information:

https://www.researchgate.net/publication/320165592_Variatii_in_comunitatile_de_fluturi_diurni_din_parcele_gestionate_traditional_sau_modern_din_Situl_Natura_2000_Dealurile_Clujului_Est



Source: Romanian Lepidopterological Society

Problems addressed by this example

There is little information available regarding the correlation between biodiversity and traditional or modern farming practices. SLR has done over the years several researches proving that there is a link between biodiversity and land use (mowing, grazing, abandonment). The project intended to propose practical grassland management measures to be sent to the national and local authorities.

Story in a nutshell

This is a study the effects of traditional and modern agricultural practices on HNV grassland - project “Quantification of the effect of traditional and modern agricultural practices on the biodiversity of HNV grasslands targeting sustainable management”, initiated by Romanian Lepidopterological Society (SLR). It also tested the use of ecological mowers as possible replacement for the traditional hand mowing for biodiversity conservation, thus combining traditional practices with modern technology.

There are 24 plots of land, each with a different management technique and 6 different groups of species, to be compared and to determine an index of biodiversity for each type of use.

6 different techniques were used: intensive grazing, extensive grazing, manual mowing, mowing with mechanical mower of low capacity, mowing with a tractor, abandoned.

Innovation: use of Brielmaier mower does not have a negative impact on biodiversity (to be published)

What does the project “Traditional and modern agricultural practices” achieve for HNV farming?

- About 20,000m² mowed using Brielmaier machines
- Biodiversity is maintained
- Farmers can comply with the conditions of Package 6 - Grasslands important for butterflies (*Maculinea* sp.)
- Reduced working time and increased productivity

Brielmaier mower



Source: Romanian Lepidopterological Society

Butterfly *Maculinea teleius*



Source: Romanian Lepidopterological Society

Achievements

About 20000m² were mown using Brielmaier machines and it was proved that biodiversity is not harmed. Final results of the project are expected to be officially disseminated.

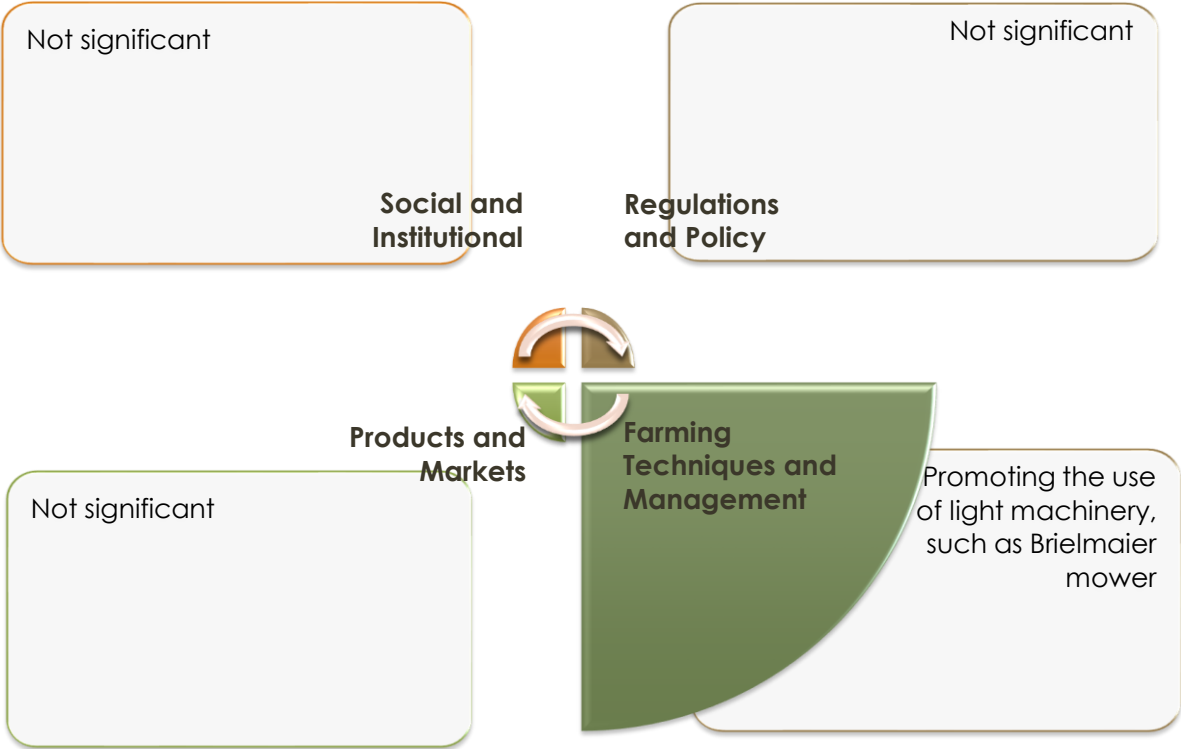
Economics of HNV farming

On the long-term, the socio-economic viability of the farms can be improved if farmers are using proper agricultural techniques that do not harm nature, helping them to reduce working time, to increase productivity and to comply with the conditions of the agri-environment measure (e.g. Package 6)

Maintaining or improving HNV values

The main objective was to conserve nature values and increase awareness of the benefits of using traditional and modern agricultural practices

How does the project “Traditional and modern agricultural practices” respond to the HNV LINK innovation themes?



Farming Techniques and Management:

Use of light machinery mowing. The use of Brielmaier mower does not have a negative impact on biodiversity (to be published). Farmers can reduce the time spent on mowing and increase productivity.

The process that made it happen and critical factors for success

- Opportunity to attract funds to continue research started in 2004
- Critical factors: reluctance of farmers; lack of money to buy the Brielmaier mower
- Increase farmers' awareness of the benefits of using light machinery for mowing

Researchers in the field



Source: <http://www.lepidoptera.ro/evenimente.htm>

Use of Brielmaier mower in Dealurile Clujului Est



Source:
<https://assets.vlinderstichting.nl/docs/2983adae-ff6b-4dc2-813b-bd0dc442b812.pdf>

Actors and roles: Romanian Lepidopterological Society (SLR) – initiator/**catalist/innovator**; Romanian Ministry for Education and Research – funding partner; Brielmaier Motormäher GmbH– partner.

Institutional context that made it possible

It is the result of many years of research projects related to butterflies conducted by SLR. The opportunity offered by CAP for an extra payment in addition to the direct payments.

Resources: Financed by the Romanian Ministry for Education and Research (PN II-PT-PCCA 2013-4-1229, nr. 79/01.07.2014)

Processes: Previous researches on the protection of butterflies and their habitats lead to the research idea of investigating the effects of using the Brielmaier mower.

Critical factors for success: Reluctance of farmers in using the proposed farming techniques. No information found if farmers are using the Brielmaier mower. Continuity depends on the purchasing power of farmers (about 25,000 EURO new mower; 18,000 EURO second hand mower)

Limiting factors, actual/potential problems, and how could they be overcome?

Make farmers aware of the fact that their involvement in protecting natural values will not stop them from practising agriculture.

Lessons learnt from this innovation example, and its potential replication

- Positive effect of using Brielmaier mower demonstrated over years in Dealurile Clujului Est
- Brielmaier mower proved to be efficient in Tarnava Mare as well (STIPA project)
- Applicable in other HNV areas
- Grants and active dissemination are needed to encourage farmers to take up new technology that is quite expensive
- Need to promote HNV farmers' associations for purposes such as sharing machinery

Use of Brielmaier mower in Tarnava Mare



Source: http://www.fundatia-adept.org/?content=lifeplus_whatwedid&news_id=&set_lang=ro

Use of Brielmaier mower in Dealurile Clujului Est



Source: <https://assets.vlinderstichting.nl/docs/2983adae-ff6b-4dc2-813b-bd0dc442b812.pdf>

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

The project was a predictable action of SLR to continue the investigation started in 2004 about the link between biodiversity and land use (mowing, grazing, abandonment). They demonstrated the positive effect of using the Brielmaier mower.

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

Even if it can be considered unique by the fact that it was tested the effect of six different techniques on flora and fauna, the innovation can be replicated in other areas. For instance, the positive effect of the Brielmaier mower was demonstrated previously in another region of Romania, Tarnava Mare within a project conducted by ADEPT foundation (STIPA project).

Could it be rolled out on a bigger territorial scale?

Yes, Brielmaier mower was proved to be efficient in Tarnava Mare as well

What would be needed to do this successfully?

To increase awareness of the positive effects of using it (technical innovation); create farmer association to afford purchasing the mowers, which could be shared by farmers.

Romania – innovation example 4) Practical measures for conservation of HNV grasslands: innovative machinery, conservation action plan, educative materials

Location: Sighișoara-Târnava Mare SCI Natura 2000 site - Saxon Villages Area of Southern Transylvania, Romania

HNV system: Extensive grazing, mosaic farming

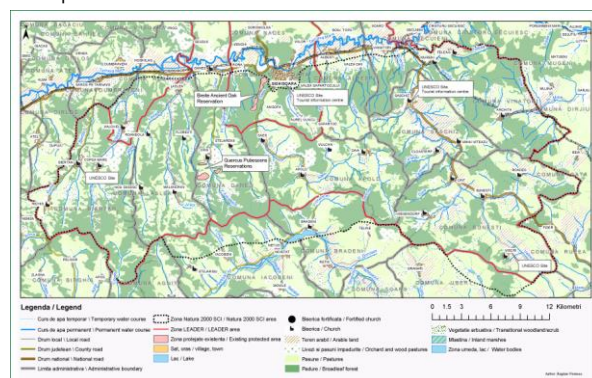
Scale of operation: 5000 families living in 24 small-scale farming communities.

Timespan: 2010-2013

Keys to success: Initiative of ADEPT foundation; EU funds and co-funding from a partner; Direct involvement of the inventor of the mower in training farmers; Participation of a large number of farmers to the farm visits; Regular discussions with stakeholders to validate the Conservation Action Plan

Additional information: http://www.fundatia-adept.org/?content=life_stipa

Map of Târnava Mare



Source: <http://www.fundatia-adept.org/>

Tarnava Mare: 6210* and 6240* managed by farmers



Source: <http://www.fundatia-adept.org/>

Problems addressed by this example

The threats identified at the beginning of this project were the loss of grassland priority habitats 6210* and 6240* - scrub and thorn spread quickly in abandoned grasslands and a thatch of dead grass develops on top of the hay meadows smothering the plants underneath; and the loss of priority habitats through lack of local support for conservation measures; lack of public knowledge about the economic and ecological value of the biodiversity.

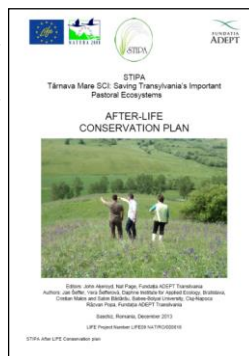
Story in a nutshell

Innovative actions within the project "Saving the Important Pastoral Ecosystems of Transylvania" (STIPA) initiated by the ADEPT Foundation:

- (1) develop conservation action plans for two priority dry grassland habitats: 6210* Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) with important orchid sites, and 6240* Sub-Pannonic steppic grasslands - in cooperation with farmers;
- (2) clear scrub with innovative machinery;
- (3) bring habitat into good conservation status;
- (4) management plan addressed to all stakeholders (farmers, general community, schools, policy-makers)

What does Practical measures for conservation of HNV grasslands achieve for HNV farming?

- Farmers trained on using Brielmaier Conservation Action Plan Document
- 320 ha cleared of scrub by Brielmaier mower, 920 ha returned to Favourable Conservation Status, 3,800 ha under better conservation management;
- Conservation Action Plan agreed by Town halls and farmers;
- Habitat improved after only 3 years;
- Additional 26 communes became eligible for grassland management support payments



Martin Brielmaier (right), a trainer from Germany and two Romanian trainees.



Source: <http://www.fundatia-adept.org/>

Clearing of scrub



Source: <http://www.fundatia-adept.org/>

Achievements

264 farmers participated to demonstrations of innovative equipment for scrub clearance during 43 farm visits and 2 local contractors trained by the inventor for use of the Brielmaier; 320 ha cleared of scrub by Brielmaier mower, 920 ha returned to Favourable Conservation Status, 3,800 ha under better conservation management; Conservation Action Plan agreed by Town halls and farmers; monitoring shows habitat improvements after only 3 years; additional 26 communes became eligible for grassland management support payments

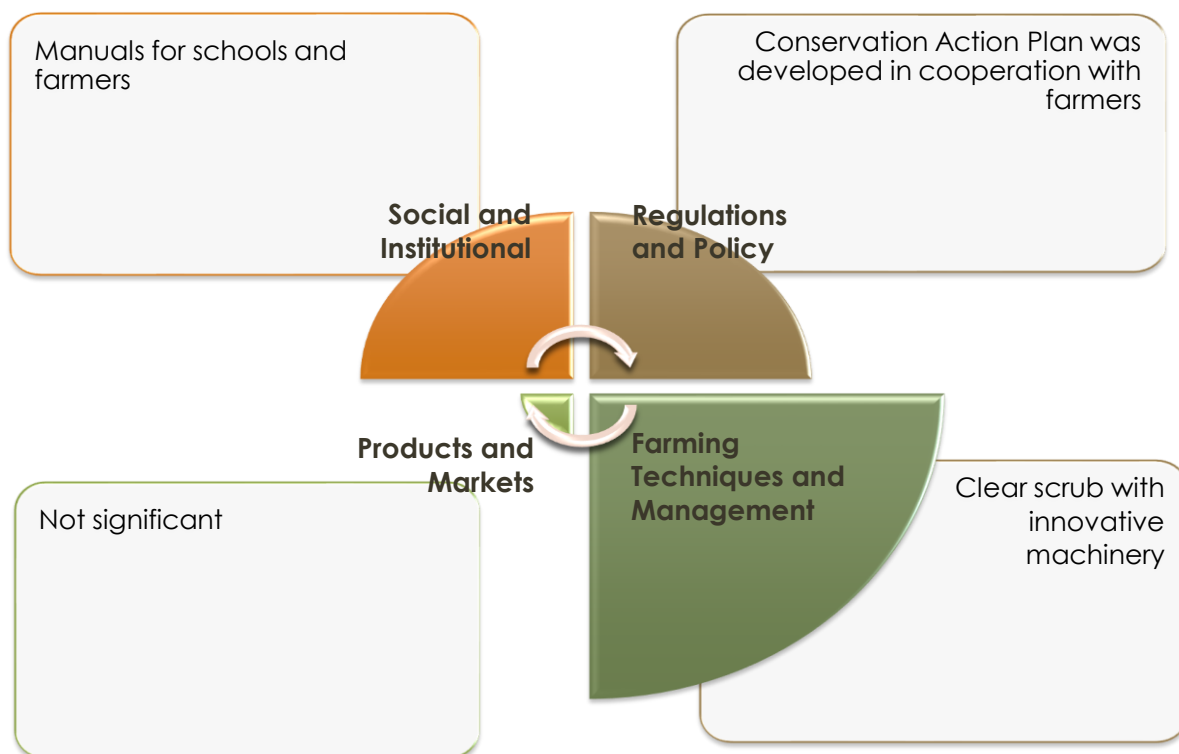
Economics of HNV farming

As a result of the innovative actions taken, 2,097 farmers (69% of eligible farmers, receiving SAPS direct payments) on 35,421 ha (74% of land eligible for direct payments) are receiving a total of €4,959,060 per year (average €2,364 per farmer per year) on 5-year contracts. Farm technology is correlated with the need to improve the conservation status of the dry grassland habitats in the area by using the innovative mowers and applying the Conservation Action Plan.

Maintaining or improving HNV values

The main aim of the project was to improve and secure future conservation status of two priority habitats and of the HNV landscape, in partnership with local people especially farmers. At the end of the project, 920 ha have been returned to Favourable Conservation Status and 3,800 ha are under better conservation management.

How does Practical measures for conservation of HNV grasslands respond to the HNV LINK innovation themes?



Farm Techniques and Management

Clear scrub with innovative machinery (Brielmaier mower; large surface of two habitats cleared and demonstrations of using for farmers). The Brielmaier allows speedy and energy efficient mowing of sloping grasslands.

Regulation and Policy

The Conservation Action Plan was developed in cooperation with farmers was well received by stakeholders

Social and Institutional:

Flora and Lepidoptera Indicator species guides produced, for long-term use in the area and more widely (manuals for schools and farmers); 8 schools were involved (280 children per year in nature classes); Over 1 million TV viewers in Romania have seen film dedicated to the project

The process that made it happen and critical factors for success

- Active involvement of ADEPT Foundation in preserving natural values
- Critical factors: reluctance of farmers; lack of money to buy the Brielmaier mower
- Risk of intensification may appear if farmers are not using the innovative machinery and the Conservation Action Plan is not applied.

ADEPT team



Source: <http://www.fundatia-adept.org/>



Source: <http://www.fundatia-adept.org/>



Source: <http://www.fundatia-adept.org/>

Actors and roles: ADEPT Foundation – initiator/**catalyst/innovator**; Martin Brielmaier - inventor and trainer; Farmers – trainees and for consulting sessions; Local Action Group Dealurile Tarnavelor - for consulting sessions; Town Hall - for consulting sessions

Institutional context that made it possible: The experience of ADEPT in nature conservation contributed to good stakeholders' response. The project was well received by the community and authorities.

Resources: STIPA is a EU-funded Life Natura project (LIFE09/NAT/RO/000618). Total budget was 356330 euro (73% EC Co-funding). It was co-financed by Orange Romania.

Processes: It was a pilot project. Proposed follow-up actions were: to incorporate the Conservation Action Plan into the management plan for the SCI/SPA to be finalised in 2015 (no information found if it was done or not); to cooperate with the Ministry of Agriculture and Rural Development to develop better-targeted agri-environment schemes for dry grasslands; to continue to provide farm advisory services to promote economic viability of the broader landscape of which the target habitats are an integral part.

Critical factors for success: Reluctance of farmers in using the proposed farming techniques. No information found if farmers are using the Brielmaier mower. Continuity depends on the purchasing power of farmers (about 25,000€ new mower; 18,000€ second hand mower)

Limiting factors, actual/potential problems, and how could they be overcome?

The areas need to be cleared of scrub periodically. The risk of intensification may appear if farmers are not using the innovative machinery and the Conservation Action Plan is not applied.

Lessons learnt from this innovation example, and its potential replication

- Brielmaier mower proved to be efficient and supports HNV farming
- Farmers and stakeholders willing to learn about how to protect the grasslands
- Connection among all stakeholders lead to success result, such as the agreement of the Conservation Action Plan.
- Applicable in other HNV areas

Monitoring of the results of habitat restoration



Source: <http://www.fundatia-adept.org/>

Meetings with stakeholders



Source: <http://www.fundatia-adept.org/>

Visit of Former EU Agriculture Commissioner Dacian Ciolos and HRH The Prince of Wales



Source: <http://www.fundatia-adept.org/>

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

- The project was designed to help the continuation or re-establishment of grassland management in the area. The innovative mower can support HNV farming, but it can be a challenge for farmers due to finance reasons. Farmers and other stakeholders were willing to learn about how to protect the grasslands. Connection among all stakeholders lead to success result, such as the agreement of the Conservation Action Plan.

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

- It was unique at the time of project implementation. The use of the innovative mower is replicable in areas with the two types grassland habitats: 6210* and 6240*. The conservation action plan can be adapted to other areas, in LA as well.

Could it be rolled out on a bigger territorial scale?

- Yes, Brielmaier mower was proved to be efficient in Dealurile Clujului Est a well. A Conservation Action Plan should be developed for each habitats and included in the management plans of the areas.

What would be needed to do this successfully?

- To increase awareness of the positive effects of using it (technical innovation); create farmer association to afford purchasing the mowers, which could be shared by farmers. Farmers need to be frequently trained and proved the efficiency of using light machinery.

Romania – innovation example 5)

PDO Telemeaua de Ibanesti cheese

Location: Valea Gurghiului, Mures County

HNV system: Livestock

Scale of operation: Valea Gurghiului (milk collector points in Ibanesti, Hodac, Gurghiu).

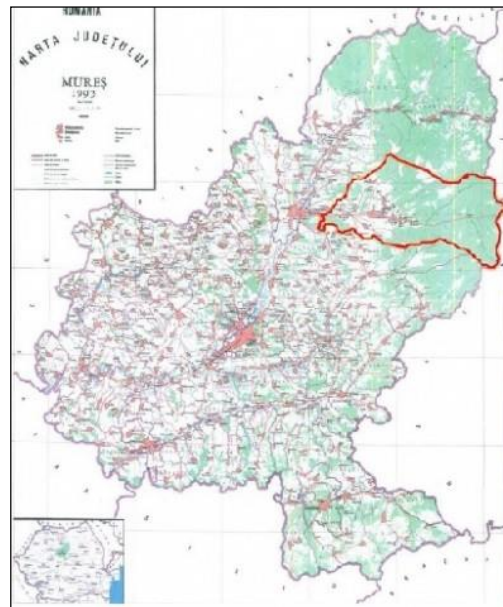
Timespan: PDO certification in 2015

Keys to success: Initiative of the Association of promoting traditional products of Gurghiului Valley ; tradition of producing the cheese; involvement of the Association members

Additional information:

<http://www.madr.ro/industrie-alimentara/sisteme-de-calitate-europene-si-indicatii-geografice/produse-agricole-si-alimentare/caiete-de-sarcini-2013.html>

Valea Gurghiului, Mures County



Source <http://mirdatod.ro/>

Problems addressed by this example

The challenge was to obtain the PDO certification as recognition of a product that has been passed through generations being unique for the provenance of the raw material. Local producers with maximum three cows are helped by collecting the milk – 70% of the milk used comes from the small local producers (not binding in the Products specification)

Story in a nutshell

Telemeaua de Ibanesti is the first cheese with protected denomination of origin (PDO) in Romania. It was certified in 2015. The cheese is produced in Ibanesti, Mures County, through an acid coagulation of milk from cows raised in Gurghiului Valley. Minimum annual grazing period is six months.

The uniqueness of the product comes from the feeding of the animals, but also from the water used for the brine (salt water well in Orsova).

It is produced by the Mirdatod company (Ibanesti) throughout the year. Farmers that provide the raw milk are grouped in cattle breeders associations near the milk collector points from three towns: Ibanesti, Hodac, Gurghiu (Mures County) situated in the Gurghiului Valley. Cows are grazed in summer only in the Gurghiului Valley and in winter with hay harvested from the pastures from the geographic area; milk production is from an extensive system (Products specification). We could say that this cheese is close to an “HNV PDO”.

What does PDO Telemeaua de Ibanesti achieve for HNV farming?

- Local small farmers (max 3 cows) provide 70% of milk
- Region becomes well-known for the unique product
- HNV farming is sustained
- Conservation of nature value is an indirect objective, achieved by encouraging grazing on the local pastures.

Salt in Orsova



Source © Dorina Matis / AGERPRES FLUX

Grazing, Valea Gurghiului



Source <http://mirdatod.ro/>

Achievements

The local product Telemeaua de Ibanesti was recognized at EU level as a PDO. Local small farmers from HNV area sell the raw milk for processing of the PDO product.

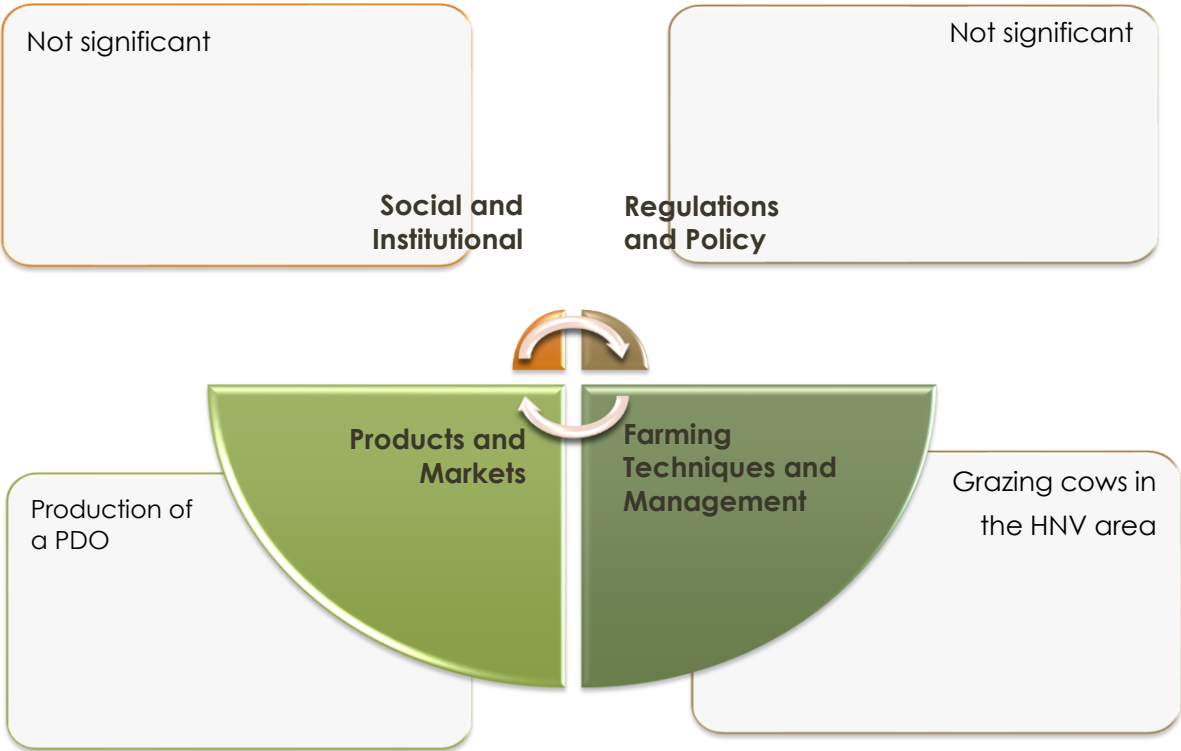
Economics of HNV farming

Local small farmers have the opportunity to sell directly the cow milk for producing the PDO product. HNV farming is sustained. The whole community also benefits because the region becomes well-known for the PDO product and may attract more tourists in future.

Maintaining or improving HNV values

Conservation of nature value is an indirect objective, achieved by encouraging grazing on the local pastures.

How does PDO Telemeaua de Ibanesti respond to the HNV LINK innovation themes?



Products and Markets

Production of a PDO - Telemeanua de Ibanesti

Farm Techniques and Management

Grazing cows in the HNV area in summer only in the Gurghiului Valley

The process that made it happen and critical factors for success

- Initiative of the Association of promoting traditional products of Gurghiului Valley
- Cooperation with local farmers for providing raw milk
- Certification process delayed due to opposition of Greece ("Telemeau" vs. "Telemes")

PDO Telemeaua de Ibanesti



Source <http://mirdatod.ro/>

Achim Irimescu, former Minister of Agriculture, receiving the PDO certificate in Brussel



Source: <https://www.stiriagricole.ro/>

Actors and roles: Association of promoting traditional products of Gurghiului Valley-initiator of certification process; SC Mirdatod Prod SRL (company) **catalyst/innovator**— member of the Association - milk collector and dairy producer; Local small farmers with maximum 3 cows - provide 70% of milk requested for production

Institutional context that made it possible: The initiative of the Association

Resources: Support of Association members for the certification process

Processes: The product will continue to be produced as it is a good asset for the region: farmers are encouraged to graze cows on the Gurghiului Valley.

Critical factors for success: direct involvement of the dairy processor;

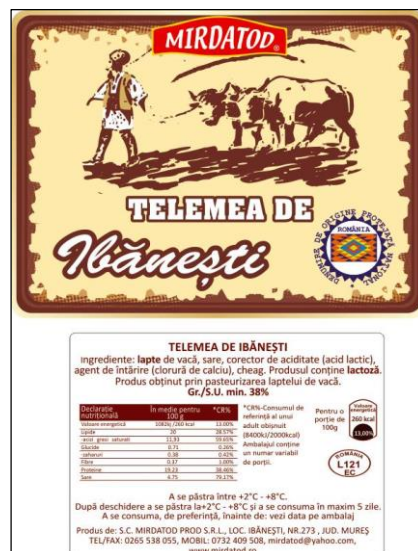
Limiting factors, actual/potential problems, and how could they be overcome?

The certification process was delayed due to the oppositions expressed by Greece: the word "Telemeaua" is almost identical to the word "Telemes" which is produced on large scale in Greece through a similar procedure. Thus, the product was requested to be named "Telemea de Ibanesti" so that the word "telemea" can still be used.

Lessons learnt from this innovation example, and its potential replication

- Local farmers are sustained in their everyday activity
- First cheese product certified as PDO in Romania
- Grazing is sustained
- Applicable in areas with localised products

PDO Telemeaua de Ibanesti



Source <http://mirdatod.ro/>

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

The certification can sustain local farmers in their everyday activity and thus maintain the HNV characteristics of the area (e.g. grazing). The challenge is to create/find associations willing to request for the certification and to assure the production facilities for a constant production.

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

It is the first cheese product certified as PDO in Romania. The process of certification can be applied to any product that corresponds to the certification requirements.

Could it be rolled out on a bigger territorial scale?

Yes, in areas with products that can be proved as being unique by the way of producing and using local raw ingredients

What would be needed to do this successfully?

Initiative of a farmer association; willingness of farmers to cooperate to sustain such a process



Learning Area “Dalsland” (Sweden)

INNOVATION EXPERIENCES AND NEEDS

Contribution to deliverable D2.6.1

Date: October 2017

Author: Lars Johansson, Magnus Ljung, Tove Ortman



This project has received funding from the European Union Horizon 2020 research and innovations program under Grant Agreement No. 696391

This report represents the views of the authors. The Research Executive Agency is not responsible for any use that may be made of the information it contains

Introduction and contents

This report looks at innovation that supports HNV farming in **Dalsland** 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 Sweden that could usefully be transferred to address challenges in the LA.

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

Contents

Slide 2: Introduction and contents

Slide 3: The challenges facing HNV farming in Dalsland

Slide 4: Overview of innovation in Dalsland

Slide 5: Innovation examples in Dalsland: What are their strengths and weaknesses

Slide 6: Social and institutional innovation

Slide 7: Regulatory framework innovation

Slide 8: Products and markets innovation

Slide 9: Farm techniques and management innovation

Slide 10: Innovations from outside the LA that could help address LA needs

Slide 11: Innovation examples for which Dalsland is looking to other Member States

Slide 12: Four Innovation Fiches from Sweden

Slide 13 – 17: (1) **Facilitation of collaborative land use management (FOCLUM)**

Slide 18 – 23: (2) **Facilitation of collaborative land use management; Land use plan (FOCLUM-LUP)**

Slide 24 – 28: (3) **Facilitation of collaborative land use management; Techniques and entrepreneurship for HNV pasture restoration projects (FOCLUM-PRP)**

Slide 29 – 31: (4) **Hälsingestintan - a mobile abattoir**

Photo credits

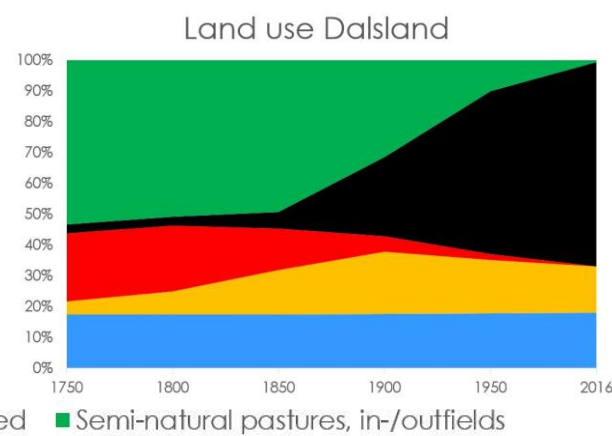
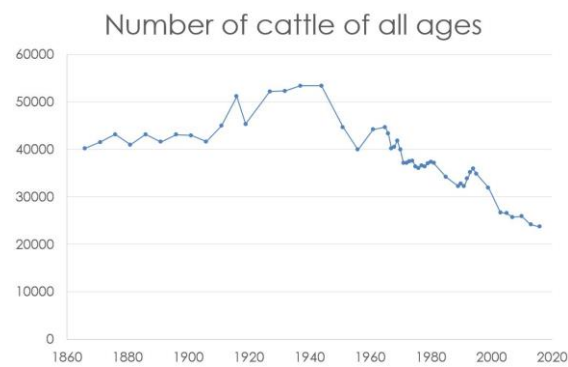
Lars Johansson and Hälsingestintan home page, <https://www.halsingestintan.se>

The challenges facing HNV farming in Dalsland

Much of Dalsland's HNV-qualities have disappeared during the last 150 years. Land consolidation reforms, technological development, political and economic pressure for increased productivity and yields have led to fewer but bigger farms, managed more intensively.

A large share of the meadows and semi-natural grasslands have been transformed into arable fields or productive forests. Therefore, what today is shown in the land use statistics as non-grazed forests are actually overgrown meadows and pastures. It is within the forest areas where the highest HNV-potential exist.

The main challenge in Dalsland is to preserve the HNV-farmlands still existing, but at the same time restore the large areas of overgrown and abandoned HNV-areas before they lose their hidden qualities.



Challenges facing HNV livestock farming in Dalsland

The herds are getting bigger, management more intense, specialised and cost-reducing. On the large dairy farms the ongoing rationalisation has led to that the way animals are kept doesn't create any HNV-qualities anymore. The animals are inside most of the year and during grazing season most animals have only access to grazing on fertilized arable fields close to the farm buildings. An exemption is the young livestock which in some cases are held on semi-natural grasslands.

Farms with sheep, horses or suckler cows often have more focus on HNV farming. But even within these business models there are many factors, especially related to daily management, which make the potential HNV-effects from grazing not realized. One such factor is the widespread use of supplemental feeding of silage on semi-natural grasslands.

Over a long period of time, the trend has been that the number of grazing animals are decreasing in Dalsland. For instance has the amount of cattle decreased with approximately 35% during the last 35 years. At many farms and on many semi-natural grasslands animals are now missing.

The area of meadows and natural pastures are now down on historically, extremely low levels. The erosion of biodiversity in these areas goes quickly. But the awareness that co-ordinated and significant efforts are needed of we are to reverse the trends are growing, both among individual and stakeholder groups on societal level.

Overview of innovation in Dalsland

In the area, some small projects are running aiming to strengthen the HNV-qualities, mainly through advisory services. But there is no multi-stakeholder or co-ordinated effort or strategy on how these actions will enable long-term success.

Nevertheless, there is a common will and also some inspiring examples of innovations on both institutional and regulatory level today. Furthermore, there are some emerging initiatives both in products and markets, as well as new technologies and farm management solutions. Altogether these efforts would have a positive HNV effect, if co-ordinated on landscape level.

With a structured and facilitated development process many of the desirable HNV-qualities would be possible to realise in Dalsland.



Overview of the innovation situation

During the last decade there have been projects running, including social and institutional innovations, but not with enough breadth, sustainability and implemented among core stakeholders. To enable a real breakthrough in sustainable land use, the analysis of challenges and desirable and feasible measures, as well as long-term financial support, have been lacking.

There are separate initiatives which develop new products and markets, testing new technologies and management schemes, and also adaptation of existing regulatory frameworks, but without any co-ordination or common direction. Furthermore, the HNV-focus is sometimes not clear.

There is a LAG-group (Leader) in the Dalsland area, but in there local development strategy there are no obvious HNV ambitions. The County Administration in Västra Götaland and the Region Västra Götaland, runs two advisory service projects, which both have a clear HNV focus, but suffer from their short term project character and with restricted economic resources. Both projects are activity based.

All the above mentioned initiatives will play an important role in the future HNV-work, but this will demand some form of co-ordinated strategy. The public debate and our stakeholder interactions shows that many actors are thinking about the potential for the landscape and society if HNV-issues were to be put to the fore. But there is no neutral and common arena for collaborative learning and action at this point.

The HNV-LINK project is an opportunity for LA Dalsland approach the challenges and existing potentials more holistic and to build a strong foundation for multi-actor stakeholder participation, innovation and real change.

Innovation examples in Dalsland: What are their strengths and weaknesses for HNV farming?

- Sex selection of sperms in dairy production: A way to combine milk production with beef production on HNV-pastures.
- Hälsingestintan: A mobile abattoir
- Community Supported Sheep: New way to market meat from sheep kept on HNV-land
- Kaprifolkött "Honeysuckle- meat": Organic meat, from farms with HNV-land
- Dalspira: Local goat and cow milk dairy
- Facilitation of collaborative land use management (FOCLUM): Development of a HNV-process design
- Facilitation of collaborative land use management, Land use plan (FOCLUM-LUP)
- Facilitation of collaborative land use management, Techniques and entrepreneurship for HNV pasture restoration projects: (FOCLUM-PRP)



Strengths

- Examples exist on how marketing and sale of HNV-based products are possible.
- Examples exist on how slaughter is possible in a more ethical way and without unnecessary stress.
- Examples exist on new methods to restore and restart traditional management on HNV-farmlands.

Weaknesses

- The existing innovations are on an extremely limited scale, compared with the scale of the challenges
- Three of them (FOCLUM, FOCLUM-LUP and FOCLUM-PRP) have, at the time being, very low intensity due to lack of funding.
- There are no co-ordination between different initiatives today and some of them do not add value by connecting to how they might support specific HNV-qualities (for instance some of the local market concepts).

What are the main innovation needs in Dalsland, and how could they be addressed?

Social and institutional innovation

Social and institutional - innovation needs	Possible approaches
1) Initiate a long-term, well anchored, cross-sectorial, and resourceful HNV-program for Dalsland, where practice and research work close together.	HNV can be the foundation and common ground for such an initiative.
2) Implement working methods which all relevant stakeholders agree upon and which build on successful, best practice and available, scientific knowledge.	A start would be to create an arena for collaborative learning on HNV-issues, building on the stakeholders experiences and local knowledge.
3) Establish an institutional function with the aim to secure continuity and quality of the joint work, f.i., administratively and by managing funding issues.	Identifying long-term successful HNV-projects, in combination with innovative ideas on market solutions for HNV-services and products, would be an important starting point financially.

Social and Institutional Innovation Needs

Local actors and other stakeholders are involved in different HNV-projects, but often during shorter periods of time. There are no organised group working with the issues with longer continuity, commitment and on higher landscape level. Even less with a well defined and publically expressed strategy or working approach. Thus, there is a need that engaged stakeholders start working collaboratively with HNV-issues, that they jointly develop and implement efficient and goal-oriented working methods, and that they have pre-conditions for a long-term work.

Regulatory framework innovation

Regulatory framework - innovation needs	Possible approaches
1) A more cooperative and appreciative working approach from authorities towards farmers. A field-level bureaucracy where stakeholders realise their dependency on each other.	Competence development in combination with Agr Env schemes which demand HNV-services and – qualities, and where farmers can make contracts on producing and “selling” these values.
2) Agr Env schemes and project funding which are adapted to HNV-farmland and which support reached HNV-qualities rather than standardised demands on management.	Develop a basis on which HNV-qualities which are relevant to produce, and examples on how these can be realised and how the process should be administrated.
3) Improved coordination between employees on different authorities to enable a more holistic landscape approach and HNV-effect.	Ongoing training and competence development of employees so that they can work more efficiently cross-sectorial. Implement and support new working methods, not least a freedom to experiment.

Regulatory Framework Innovation Needs

If Dalsland’s HNV-vision is to be realised it must be easier, more efficient and motivating for stakeholders and local actors to collaborate – in learning process as well as and concrete actions. One important supporting mechanism lies within the field of policy and regulatory frameworks. We see two main areas for improvements. Both are important and need to be approached simultaneously.

- 1) Changing the pre-conditions.** All stakeholders’ views on how policies and the regulatory frameworks might be improved to achieve the desired HNV-effect need to be taken into account. Social and institutional innovations, for instance by developing collaboration and joint working methods, is part of the process of innovating and improving the regulatory framework. One example would be the national development project aiming to find new models for agri-environmental schemes, models which are oriented towards the outcomes and values created by measures taken by farmers and land owners. But this project are in its beginning and will not be specifically related to meadows and pastures yet.
- 2) Make the best out of existing pre-conditions.** Stakeholders need to be better in understanding the potentials for HNV-farming in existing policies and regulatory framework. This is not least the case for authorities, such as the Swedish Forest Agency, the County Administrations and local municipalities. Different competencies within these authorities must cooperate more closely in order to become more efficient in supporting, catalysing, and coordinate HNV-initiatives. Furthermore, information on the rules and policies which relates to HNV-farming must be better adapted to the target groups (end users), and also coordinated, to really support HNV-initiatives. By these measures HNV-qualities could be supported more efficiently within existing regulatory framework.

Products and markets innovation

Products and markets - innovation needs	Possible approaches
1) A local brand, which clearly states and assure that the meat, milk and cheese that consumers buy comes from animals having a direct and positive effect on HNV-qualities.	Strengthen existing brands by integrating a stronger connection to HNV-effects, f.i., Kaprifolkött, but also analyse the potential for new, local brands with such a profile.
2) A system which makes it possible for consumers to trace from which farm the products originates and which farmlands you support.	Existing technologies and data management need to be integrated. Possible to do within a pilot project.
3) A local brand where a share of the price paid by consumers builds up a fund which financially support restoration activities in the local area.	An investigation must take a closer look at how this can be done administrative and on a free market. Probably possible in a pilot project.
4) Business models enabling commercialisation of the landscape amenities developed through HNV-measures taken in Dalsland.	Following exiting process designs for development of new business models. Possible to do within a pilot project.

Products and Markets Innovation Need

The challenges as well as the potentials regarding innovations in products and markets within Dalsland could be summarised in the following points:

- Making consumers/customers understand, appreciate and to be prepared to pay for the HNV-qualities farming are producing.
- Being able to deliver products which have a clear and assured HNV-effect. This also implies getting rid of products of “free-riding” character (or improve those so that they really deliver what is promised).
- Increase traceability so that consumers/customers can trust that the product they buy really have a positive effect on landscapes, biodiversity and/or environmental health.
- Find new ways to reinvest parts of the price paid for HNV-products/-services by consumers/customers to land managers competent and interested in initiating new HNV-measures, for instance restoration of pastures (creating a system of ongoing, partly market funded HNV-activities).

Altogether this would lead to a more market driven development which is important for long-term success of HNV-oriented land management in Dalsland.

Farm techniques and management innovation

Farm techniques and management - innovation needs	Possible approaches
1) Develop the knowledge base of best practices, that is which measures should be taken on specific places with high HNV-potential.	Within the development of FOCLUM (a process design) a map-based tool called Land Use Plan (LUP) is being improved. Will be ready to use in 2017-2018.
2) Find ways to make the management of grazing animals (logistics) more efficient and by so decrease costs.	Integrate existing practical and theoretical knowledge and present successful models.
3) Private entrepreneurs carry out pasture improvements, in full consultation with graziers, landowners and public authorities.	Social and institutional innovations are needed so that the entrepreneurs get involved in a collaborative process resulting in co-production of HNV-qualities.
4) Find models for increased carbon storage in pastures, while simultaneously achieve HNV-qualities and high animal welfare.	Field experiments and on-farm research where researchers, advisors and farmers study the effect of different grazing strategies.

Farm Techniques and Management Innovation Needs

There is a big need to find more viable strategies for grazing on HNV-farmlands, and to achieve the maximum HNV-effects.

Having said this, and based on experiences from similar projects, we are convinced that cost-reducing technologies and management will emerge if the right pre-conditions regarding the social/institutional setting, the regulatory framework, and the presence of products and markets are in place.

If so, it will be economically interesting for land owners and managers to restore, manage and re-invest in HNV-farmlands. What is not as obvious, and which needs to be supported, is if the innovations give rise to the anticipated HNV-qualities.

But if management of HNV-farmlands was clearly connected to HNV-payments in new agricultural environmental schemes (f.i., “payment for results”, that is, for the values and qualities created rather than for specific landscape objects), we believe that technological and managerial innovations will happen also due to pure economic incentives.

Innovations from outside the LA that could help address LA needs

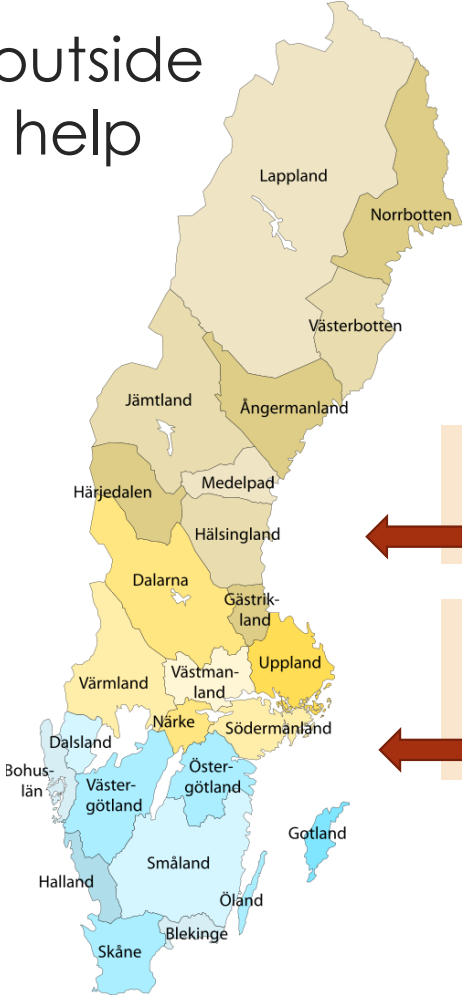
A mobile and digital scale for improved animal health and productivity
National



Hälsingestintan:
A mobile abattoir
National



Economic association
Naturbeteskött
(Natural grazing meat)
National



Innovation examples for which Dalsland is looking to other Member States

- A long-term, cross-sectorial, broadly implemented and resource strong HNV-program, where best practice and science work closely together.
- Use of RDP payment schemes to support HNV grazing systems on a large scale, and apply a payment for results approach to promote these objectives.
- Local brands where a share of the price is re-invested in a fund for restoration of local areas with high HNV-potential.
- Models for increased carbon storage in pastures and other semi-natural grasslands, while simultaneously achieve positive HNV-effects and high animal welfare standards.

The probably biggest challenge is to regain traditional management on former farmlands which still have a high HNV-potential, before these areas are transformed into other land use regime and loses their potential for ever. But to make this happen on a larger scale, and for a longer period of time, it must be viable with HNV-land use management (or as viable as alternative land use options), for instance productive forests.

The innovations we are looking for need to:

- 1) support the costly restorations phase of areas with high HNV-potential, and
- 2) support ongoing management on these areas. Furthermore, the innovations need to give a clear and quite straightforward effect on HNV-qualities and they must be able to work for a longer period of time.

INNOVATION FICHES FROM SWEDEN

- 1) **F**acilitation **o**f **c**ollaborative **l**and **u**se **m**anagement (FOCLUM)
- 2) **L**and **u**se **p**lans (FOCLUM-LUP)
- 3) Techniques and entrepreneurship for HNV **p**asture **r**estoration **p**rojects (FOCLUM-PRP)
- 4) Hälsingestintan - a mobile abattoir

Sweden – innovation example 1)

Facilitation of collaborative land use management (FOCLUM)

Location: Dalsland and Bohuslän, Sweden

HNV system: Livestock, mosaic and multi-functional farming

Scale of operation: FOCLUM used in 13 municipalities, in dialogues with 400 participants, on 4 000 ha.

Timespan: FOCLUM operated for app. 7 years. The practical work has been put on a back burner since 2014 due to lack of funding.

Keys to success: The method facilitate dialogue and collaboration between actors, resulting in shared goals, joint measures and a coordinated approach for a more sustainable land use.

For more information:

<http://www.lansstyrelsen.se/vastragotaland/Sv/om-lansstyrelsen/vart-uppdrag/projekt/projekt-samverkan/Pages/project-diverse-collaboration.aspx>



Problems addressed by this example

Cessation of or discontinuing the traditional use and management of (former) HNV-farmlands

Story in a nutshell

Many land-owners at small farm-holdings are now at a crossroad: Will they turn their grassland and farmland into forest, should they try to lease the land, or even sell it? Land-owners and animal keepers are physically separated in the landscape and it is difficult for them to develop viable collaborations. Furthermore, the HNV farmland in the area consists of smaller, isolated hotspots.

The question is: **What could make farmers cultivate HNV-farmland again? And how could the authorities support another development?**

The key to success is dependent on a shift in perspectives: If the animal keepers searched for larger, connected areas and if organized correctly the smaller patches of farmland could create these areas, but this would only be possible if a constructive dialogue between all involved actors could be initiated and successfully facilitated over a longer period of time.

The innovation in this case is the development of a process design and a facilitated approach which enable learning and joint action based on a constructive dialogue among local actors and other relevant stakeholders, aiming for collaborative land use management.

What does FOCLUM achieve for HNV farming?

- Facilitate the process from first contact to implementation of concrete measures:
 - Identify the land area which is HNV or has a HNV-potential
 - Identify and bring together the actors whom are central to the preservation and restoration of HNV-farmland
 - Facilitate the dialogue and development of a cross-sectorial basis for decision
 - Design and facilitate a collaborative process
 - Present an overview of potential economic support
 - Support when practical measures are taken on HNV-farmlands

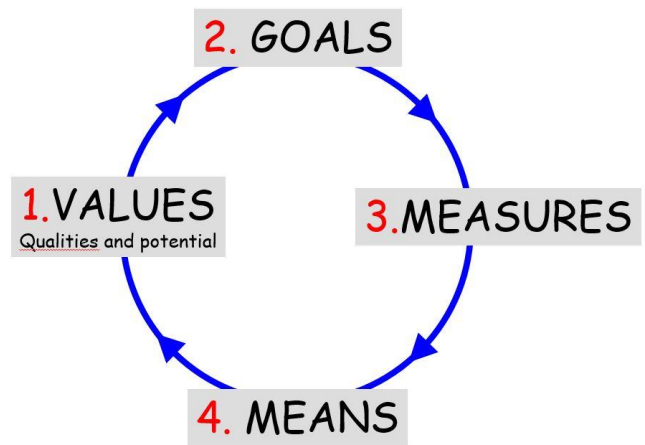


Figure 1. The process design builds on some specific phases and steps, and where additional facilitative tools are implemented or developed if needed.

Achievements

FOCLUM was a response to the need to facilitate network-building, dialogue and to develop joint basis for decisions regarding land use issues, not least in relation to HNV-issues. The approach and process design has, until today, resulted in restoration of app. 500 ha, that land management on many farms have become more oriented towards HNV (a couple of thousands ha), and that many landowners have chosen to put aside parts of their estates in different forms of nature protection (a couple of hundreds ha).

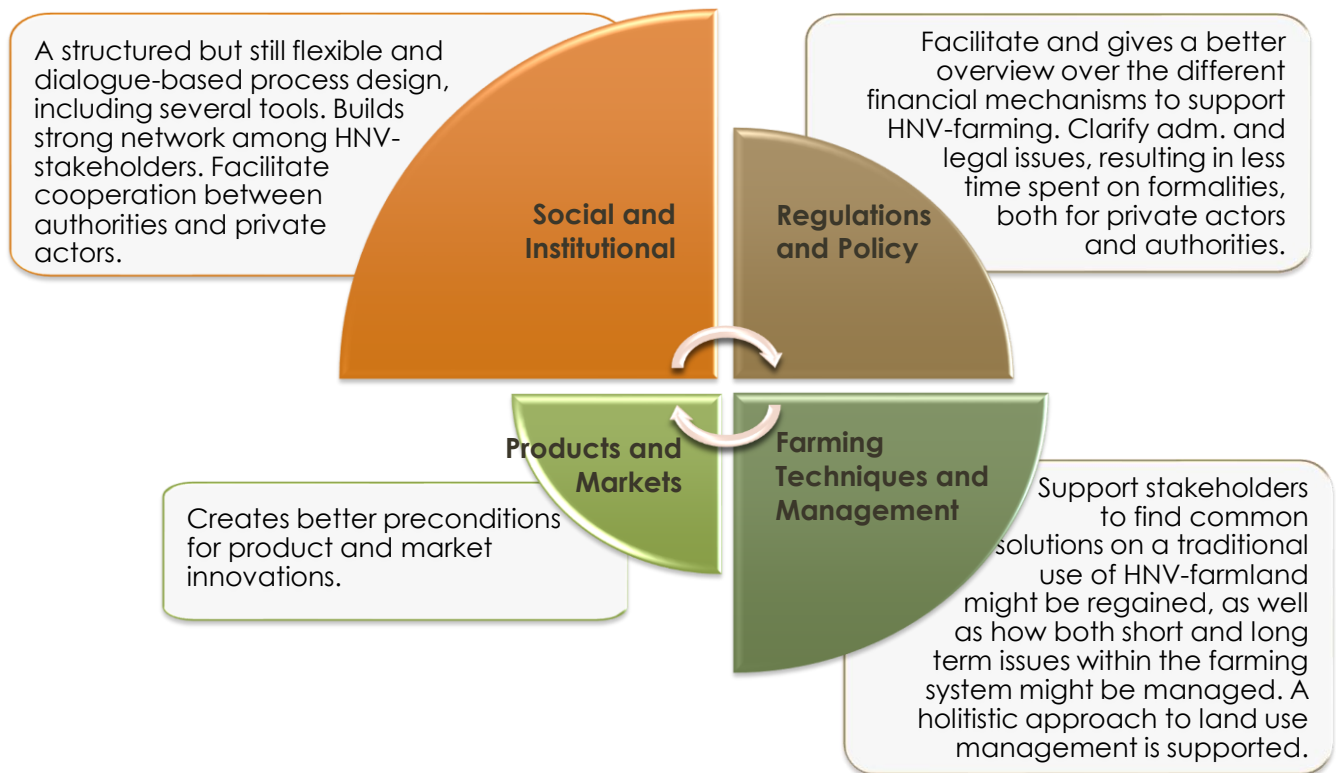
Economics of HNV farming

The applied method has resulted in a number of new or extended animal husbandries and that the turnover of these farms have increased.

Maintaining or improving HNV values

The method has a clearly expressed HNV-focus and evaluations of regained, traditional management has shown clear and positive HNV-effects. The processes the method facilitate is usually long-term. To reach the highest possible HNV-qualities it is necessary that the supporting actors, f.i., public authorities and research institutes, have a long-term commitment. There is also a need to have competent facilitators (with relevant experience) to coordinate and strengthen the work, as well as basic funding to take initiatives and to take care of the outcomes of the process.

How does FOCLUM respond to the HNV LINK innovation themes?



The core of the method (innovation) is mainly social and institutional. Less so an issue of farming techniques and management, and even less related to regulations and policy. There is no strong connection to the development of products and markets *per se*.

We believe this is reasonable and that all four categories does not necessarily need to be treated equally. Rather, our experience is that a strong focus on social and institutional innovations creates the best preconditions for innovations in other areas.

The process that made it happen and critical factors for success

- A will and commitment from land owners, animal keepers and other local actors to support HNV-farming
- A willingness, competence, continuity and sustained effort from core individuals at relevant authorities
- Time (money) to develop the method, to build network and trust, and to create a common ground
- Funding to realise concrete HNV-measures



Some 15 years ago the authorities interacting with land-owners in the area managed their affairs without much contact with each other, although some issues were about managing the same estates or land areas (the County Administration and the Swedish Forest Agency). But there were persons in each organization that experienced that they, in their professional roles, were not able to support land-owners in an efficient way by not communicating with each other, and by not working with a systemic approach. In fact, they struggled with their professional role as well as the ways in which their organizations should work in relation to the farmland managers. Although having a deep understanding and a good ambition, they realized that the way they worked would not be sustainable in the long run.

To overcome the challenges surrounding the HNV-farmlands in the learning area the County Administration in 2007 applied for and also got funding to develop a new working approach to make land-owners and animal keepers collaborate and by such measures help conserving HNV-farmland. The project broadened its scope in 2009, was pre-longed in 2013 and was, as a project, ended in 2014. For each year the collaboration between the authorities was strengthened, but most of all a strong network of farmers in the area had been established and several examples of successful collaboration developed.

Since 2015 this working approach lacks funding. Furthermore, the funding for restoration projects on HNV-farmlands, as in the earlier initiatives, has ceased. In practice this means that new initiatives are not taken, and existing engagement and interest not taken care of. No doubt there is a will to start working with the same or similar approaches again among many local actors. During our workshops in the LA Dalsland in spring and summer of 2017 this was also clearly stated among participating stakeholders.

Lessons learnt from this innovation example, and its potential replication

- The importance of willingness and a commitment to HNV-measures among local actors
- The method works well to strengthen HNV-qualities, but demands training and continuity
- Long-term funding for working time and specific measures is very important
- The method has a big potential for replication
- If the crucial issue of funding is solved, the method will have a big effect on the HNV-qualities in the landscape



Before initiating the first project in 2007 there were some doubts that the local actors, especially land owners and animal keepers, would not be enough interested in HNV-issues. Especially that they would not be committed to do specific measures. These doubts proved to be unfounded. The interest was very big.

Another fear was that it would not be possible to find enough grazing animals for the areas which were identified as desirable and feasible to restore. Also this has shown to be unfounded. When actors collaborate and make a thorough preparatory work, that is tries to find holistic solutions so that the preconditions for animal keeping in an area is as good as possible, there has always been HNV-oriented animal keepers that has come forward and shown an interest and high competence.

In Dalsland and Bohuslän there is a variety of natural environments, from coastal zone to forest areas, and in all these environments the methods have shown to work well. Therefore it should have a potential to be replicated to other countries, regions and natural environments.

Long-term funding of competent individuals is a prerequisite for continuity. Such a continuity among core persons is important to be able to build on already made experiences, existing networks, established trust and social capital. It takes time to build such capital in an organisation, why a strategy must exist on how to secure long term funding, training and commitment among key employees in these organisations. Furthermore, some kind of financial support to farmers who aim to do important HNV-measures are necessary. This are measures which society at large benefit from, why public support is relevant. In the long run, a combination of public support and market solutions are probably the most common solution.

Sweden – innovation example 2)

Facilitation of collaborative land use management; Land use plan (FOCLUM-LUP)

Location: Dalsland and Bohuslän, Sweden

HNV system: Livestock, mosaic and multi-functional farming

Scale of operation: At present the method has been used on app 2.000 ha.

Timespan: FOCLUM-LUP operated for approximately 3 years. The practical work ended 2014 due to lack of funding. Got new funding 2017 to develop the method.

Keys to success: The method conclude and visualise the discussions held between actors, which enable them to reach common ground, set up joint goals, prioritise among measures and coordinate concrete measures to achieve a more sustainable land use.



Problems addressed by this example

The need to structure the dialogues and collaboration between actors working with complex land use issues.

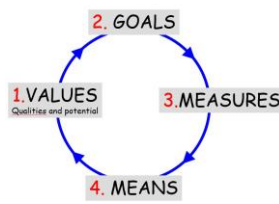
Story in a nutshell

When the work with Facilitation of collaborative land use management (FOCLUM) had been going on for some years the process involved app. 30 different groups and on different places in Dalsland and in the nearby sub-region Bohuslän. To make the work in these different groups more efficient a number of dialogical and learning tools have been developed. Some were necessary to use in all groups/on all locations in processes related to HNV-farmlands. These tools were later on combined in a kind of GIS-based tool-kit which we label Land Use Plan (LUP).

This integrated tool becomes the hub in the FOCLUM-process by helping the participants to realise where they are in the process (as well as what they have done and where they are heading). The tool can visualise all perspectives and qualities which the group needs to agree upon, it can manage both specific objects as well as the landscape level, and it covers the time line from historical land use to today's and future, potential land use. The tool is used to visualise specific goals for different areas of a property, potential measures and economic issues. As such the tool facilitates the shift from the planning phase to the action phase.

What does FOCLUM-LUP achieve for HNV farming?

- Structure, visualise and document the data which the FOCLUM-process generates
- Visualise a BAU-scenario and one or more HNV-scenarios
- Give a basis for decision on how to realise a HNV-scenario and support the implementation



1. VALUES Qualities and potential

Perspective y
→

Perspective x
→

Perspective w
→

Perspective v
→



BAU-
scenario

HNV-
scenario

Maintaining or improving HNV values

FOCLUM-LUP, the land use plan, facilitates dialogue on HNV-issues and has proven to be effective for this purpose. The integrative tool has also supported planning and implementation of concrete HNV-measures.

The LUP is used in all steps of the FOCLUM-process, where there are perspectives and data which would benefit from being better structured, documented, visualised and deliberated. The tool is used in all four steps of the FOCLUM-process: 1. Values, 2. Goals, 3. Measures, and 4. Means.

The example given illustrates how the documentation might look like and the visualisation of step 1, the values inherent in different perspectives.

- First the participants in the group decide which perspectives that should be taken into account. Often this deliberation results in 10 to 15 different qualities regarding the environment, economy and the social situation. The picture shows four out of twelve perspectives which were considered around a lake in Dalsland. The left column shows a potential BAU-scenario.
- When applying this method one estimates how each specific quality, on each part of a specific landscape, will develop during a ten years period, based on how land use and management is developed. Dark colours represent low qualities, the colourful high qualities in the landscape. The right column shows one possible HNV-scenario in ten years time, based on assumptions on how land management is changed and based on specific goals (further discussed under step 2 on Goals).

- The fact that the local actors in the group together deliberate on levels, and potentials, of different qualities and in different parts of the landscape, as well as identifying the trends affecting them today, lay a strong foundation for an increased understanding of the dynamic complexity in their land use and land use decisions. But this is a necessary dimension of the collaborative learning process if it are to result in shared HNV-goals to all involved feel committed.

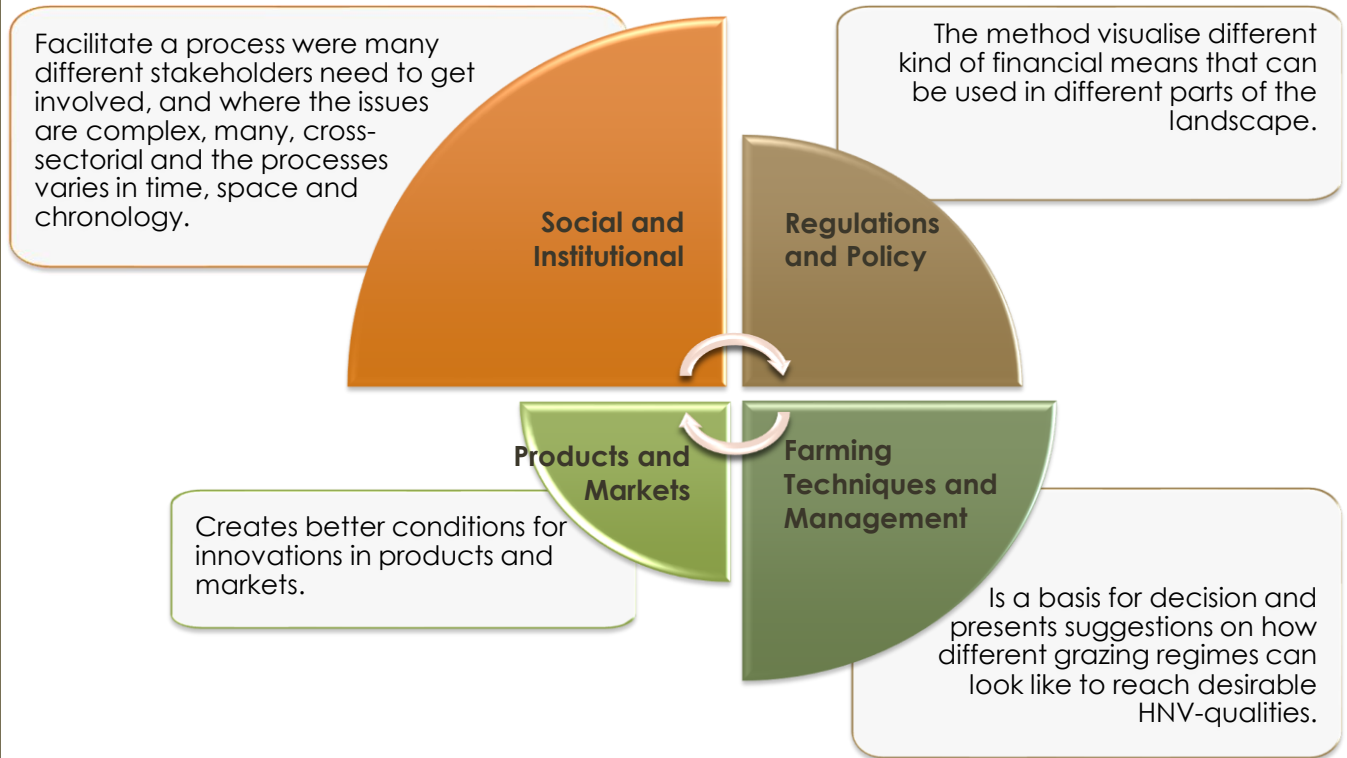
Achievements

In each group where the tool has been used we can see that land management has, by part, shifted to become more HNV-oriented. On most locations the dialogue has led to that land owners and managers agree upon some form of agri-environmental scheme or protection.

Economics of HNV farming

So far no study has been done which study this aspect.

How does FOCLUM-LUP respond to the HNV LINK innovation themes?



The overall aim with LUP (Land use plan) is to create as good preconditions as possible for constructive dialogue in the FOCLUM-process. Focus is on social and institutional innovations. If the conversations are successful other tools or competences could be added to the process, for instance to develop business models for new products and markets.

The process that made it happen and critical factors for success

Funding of the earlier FOCLUM-projects meant:

- ▶ A possibility to establish a network among HNV-actors
- ▶ Identify bottlenecks and possible solutions for HNV-farmlands
- ▶ Develop material to be used to facilitate dialogue and deliberation
- ▶ Test and train
- ▶ Identify areas for improvement
- ▶ New projects on method development



Without earlier FOCLUM-projects between 2007 and 2014 the need for a tool like LUP – the Land Use Plan – would not have been identified. Based on experiences made when participating in and facilitating groups working with HNV-issues we were able to capture ideas on how the dialogues and the collaboration in these groups could be made more interesting, well grounded and efficient.

Over the last two years the further development and implementation of the concept has been on standby due to lack of funding, but recently the Swedish Board of Agriculture has granted funding for us to develop a handbook on methods, to further develop the technical part of the tool and develop examples of Land Use Plans for 1.000 ha.

Lessons learnt from this innovation example, and its potential replication

The tool has proven to be efficient in facilitating dialogue and learning on:

- Qualities; from objects to landscapes.
- Time frames; historical land use, as well as today's and future management
- Different scenarios; BAU and HNV-vision can easily be compared
- Decisions; For instance on future goals of land use, desirable measures and possible financial support.
- Synergies; The dialogues in the process design often leads to that potential goal and value conflicts is managed constructively and joint measures taken.



We believe that the tool has been successful and efficient when structuring and facilitating dialogue between the participants in the multi-stakeholder groups involved. It has given us a common language, facilitating dialogue and learning, and has increased our ability to identify shared goals as well as solutions on complex and multi-faceted challenges.

Our opinion is that the tool ought to be possible to be used also in other countries, environments and for all kind of HNV-issues. A handbook on the methods in English should be written and the persons supposed to be working with the approach and tools trained together with experienced users.

Sweden – innovation example 3)

Facilitation of collaborative land use management; Techniques and entrepreneurship for HNV pasture restoration projects (FOCLUM-PRP)

Location: Dalsland and Bohuslän, Sweden

HNV system: Livestock, mosaic and multi-functional farming

Scale of operation: A couple of hundreds hectare

Timespan: Has operated for app. 7 years

Keys to success: Entrepreneurs with an interest in HNV-farming, and with broad and deep competence as well as an ability to collaborate with both authorities, animal keepers, land owners and other HNV-stakeholders.



Problems addressed by this example

Land owners usually do not have the time nor access to resources, for instance machineries, or experience enough to restore semi-natural grasslands in a way which give us successful results.

Story in a nutshell

An entrepreneur based in the neighboring county to the Learning Area has developed a service package directed toward HNV-pasture restoration projects. The company offers a number of services, and can help a land owner through the process from making the first plans to the first grazing seasons. The services are directed towards restoring former HNV-land that has been deforested, either due to plantation or spontaneous overgrowing, a situation that is the starting point for the most of the HNV restoration projects in the learning area.

In developing the techniques for the restorations, the entrepreneur has invented several machine adaptations, for example a rebuild harrow adapted for assembling branches that are left after felling the trees.

What does FOCLUM-PRP achieve for HNV farming?

- It offers services for restoration of HNV-farmlands, either for specific parts of such projects or as a prime contractor.
- Cost efficient with good impact on HNV-qualities.
- The implementation phase of the FOCLUM-process is facilitated.
- Could be used for HNV-measures also outside of the FOCLUM-process, where the context might be less complex.



Achievements

The entrepreneurial firm participating in most HNV-restoration projects has been working with app. 200 ha semi-natural grasslands. Sometimes the land owner want a prime contractor, sometimes services for specific measures. All different parts needed for a successful restoration is delivered, but based on needs and the level of ambition. The firm can also support with grazing animals during the restoration project and take responsibility for the sometimes quite complex administrative work. Altogether, this firm has worked with app. 30 land-owners during the project period. FOCLUM-PRP has proven to be an efficient tool to implement the goals which the FOCLUM-process and the FOCLUM-LUP-tool has generated.

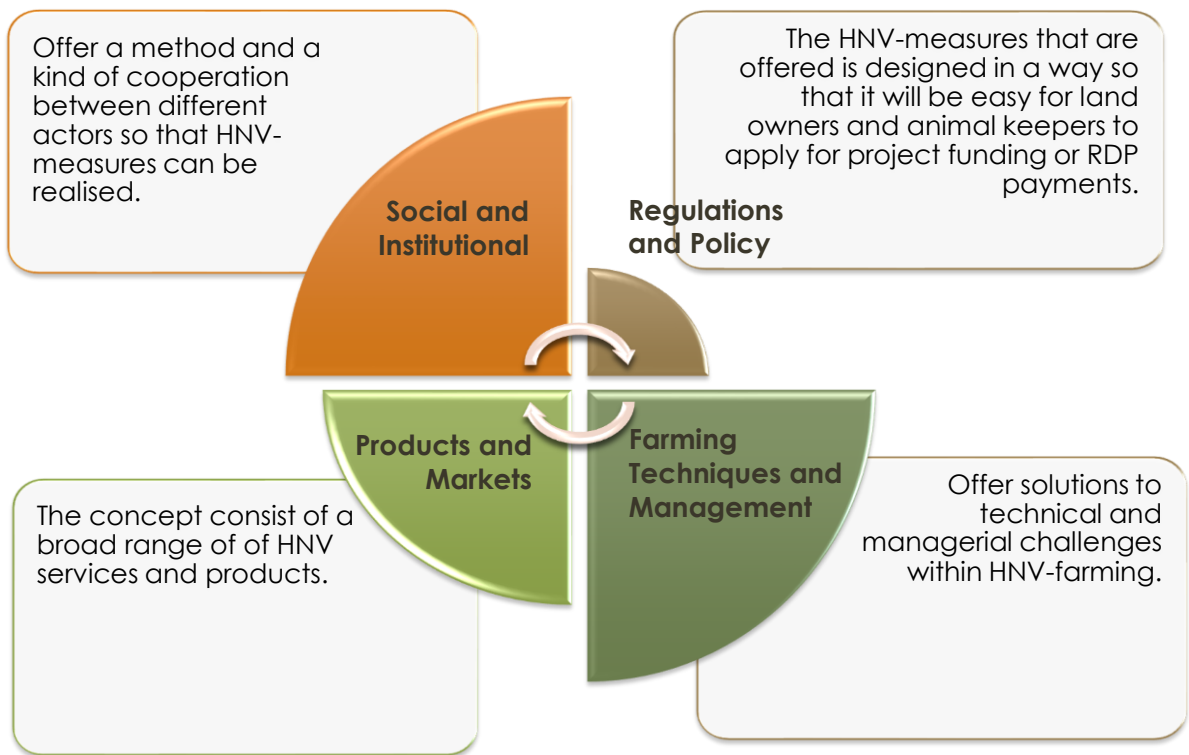
Economics of HNV farming

The restoration projects are less expensive and with a better end-result if the entrepreneur take the whole responsibility for the implementation phase (to be compared with a situation where you work with many different entrepreneurs without any professional coordination). The potential to make restorations in a cost-effective way, and where the animal keepers does not have to spend unnecessary time, has made the preconditions for future restorations more favourable. In some areas and processes this might have been the final factor that made land owner and animal keepers to dare to go for a bigger restoration project.

Maintaining or improving HNV values

All individual operations have been developed so that they generate as high HNV-effect as possible and could both lead to maintenance and improvement of HNV values.

How does FUCUM-PRP respond to the HNV LINK innovation themes?



This innovation helps us manage challenges in all four categories of innovations.

FOCLUM-PRP is used in a phase where land-owners, animal keepers and other HNV-actors move from dialogue and deliberation on specific HNV-goals to the implementation of measures needed to reach the goals. Therefore, it is not strange that the main part of this innovation lies in the field of Farming techniques and management. Making implementation work is nevertheless strongly related to the other innovation areas.

From another perspective one would perhaps argue that FOCLUM-PRP is an innovation in Products and markets because the entrepreneur deliver a mix of services and products which facilitate customers possibility to reach their goals. It is also services which are traded on an open market.

Or, from another angle, the innovation could be seen as a social and institutional innovation because it gives us a working approach so that we can do concrete HNV-measures.

The process that made it happen and critical factors for success

- A common need for cost-effective restorations with the best possible HNV-effect.
- Project funding were available, both to enable time spent on development among advisors and to finance concrete HNV-measures.



Before this concept was established land owners and animal keepers had, with support from the County Administration and the Swedish Forest Agency, made restorations on their own or by hiring specialized entrepreneurs for different measures. All actors felt a need for a more coordinated, cost-effective and HNV-oriented approach.

After having tested the new approach, the County Administration found that the way the entrepreneur organized and did the restoration was much more efficient and with higher quality compared with before. Also for the land owners the process became much smoother. As an individual land owner you does not do many restorations during a life-span, but as an entrepreneur you could develop your skills and the technologies for each project you became involved in. Today the entrepreneur has trained employees and a specialized machinery to fits its purpose.

It has mainly been two factors that has been important for this innovation to exist. One is that there has been financial resources for this kind of restoration projects with enabled employees at the authorities to coordinate activities and to develop the method/process design (FOCLUM). This enabled them also to spend much time interacting with farmers and entrepreneurs. The second factor has been the availability of public project funding (within RDP) for restoration-projects on overgrown semi-natural grasslands. This has been necessary for land owners whom otherwise would have had hard time paying the entrepreneur for their services.

Lessons learnt from this innovation example, and its potential replication

This is an efficient HNV-tool if:

- It is part of an overall HNV-process such as FOCLUM
- A good basis for decisions has been developed for HNV, for instance by FOCLUM-LUP
- All actors have planned and prepared themselves so that they have the economy to pay the entrepreneur during a restoration phase. Consequently, this could mean that possibilities for such project funding must be available under the RDP.



Our experience is that FOCLUM-PRP is a very effective tool to make HNV-restorations of high standard, but also as part of other measures on landscape and object level. In complex projects the implementation must be based on a process which has developed strong drafts for decisions and trust among involved actors (f.i., FOCLUM-LUP). The restoration projects benefitting from FOCLUM-PRP is often part of long-term initiatives which per se create a strong foundation (f.i., through the FOCLUM-process) for actors to finally deliver the desired HNV-qualities.

Where you have capital strong land owners they can start restoration projects without public support. But our experience is that a close dialogue with authorities still is necessary. It has often meant unnecessary work for the entrepreneur if not some procedures are taken into account, as well as some missed opportunities to create high HNV-qualities. When working with this innovation and tool, it is important to keep in mind that the preparatory work, the dialogue and network arrangements, the challenge of future land management, issues related to economy, etc., all are parts of a bigger process, where the chain is not stronger then the weakest link.

Sweden – innovation example 4)

Hälsingestintan - a mobile abattoir

Location: Järvsö, Hälsingland, Sweden

HNV system: Livestock

Scale of operation: National in Sweden

Timespan: Hälsingestintan was founded in 1999 as a reaction to the poor range of meat in Swedish food stores

Keys to success: They have been successful in integrating their overall vision of animal ethics and quality meat, with managing technological and juridical challenges for mobile abattoir, as well as issues related to traceability of products and marketing solutions for customers.

For more information : <https://www.halsingestintan.se/eng/>



Problems addressed by this example

The new focus on "ethical" meat and the unique concept of traceability for consumers down to farm and single animal level offers many opportunities to also include the biodiversity provided by HNV-lands in the concept.

Story in a nutshell

As Europe's first mobile abattoir for fully grown cattle, Hälsingestintan offers an on-farm slaughtering. The process of starting up the initiative was motivated by a wish to provide consumers with "ethical" meat, where the animals have suffered minimal stress during slaughter. The company has a strong focus on meat quality, something that is improved by the low-stress slaughter. This interest in meat quality also means that the company are interested in slaughtering and buying meat from farms with grass fed animals. The company has a few contracted farms in the learning area, and the initiative is helping to strengthen the pasture based cattle production, even though it is not specifically directed towards animals bred on HNV-pastures.

What does Hälsingestintan - a mobile abattoir, achieve for HNV farming?

- This concept was not originally developed to specifically support HNV-farming, the focus was on ethics and quality meat, but it can easily be used and adapted with a stronger HNV-focus.
- Could easily serve as an example of traceability and marketing.



Achievements

The mobile abattoir were presented in 2014 by Hälsingestintan in cooperation with animal scientists and veterinary surgeons, and the business started the following year. The company has grown, and the abattoir is now going on full capacity. Hälsingestintans investment in mobile slaughter of adult cattle is the first in Europe. The design is completely autonomous, with its own electricity, its own water and own heating. The company has a handful contracted farms in the learning area, and the interest seems to continue to rise among farmers and consumers. It has been on the forefront both when it comes to mobile slaughter of adult animals, as well as applying new technologies for increased traceability.

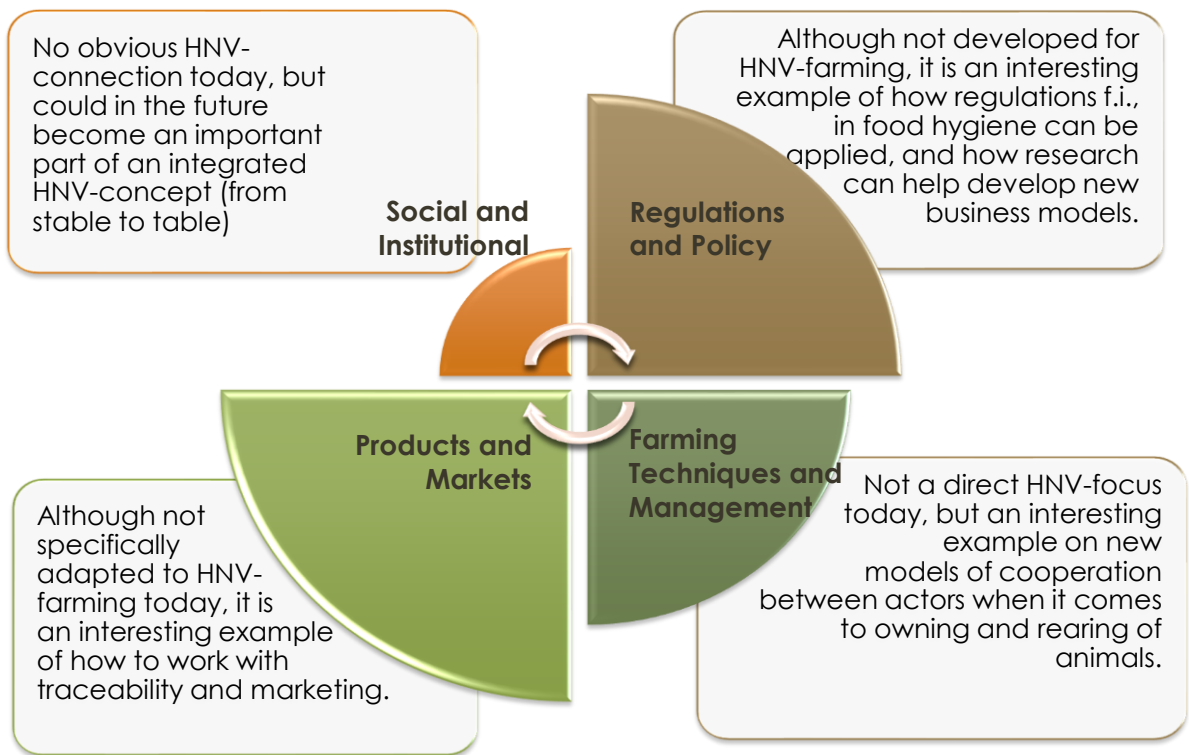
Economics of HNV farming

Data is not available on the economic impact for HNV farms.

Maintaining or improving HNV values

So far the results on HNV-land are uncertain, since the main focus of the innovation is on animal welfare and meat quality. However, the potential to include a HNV perspective is promising.

How does Hälsingestintan - a mobile abattoir, respond to the HNV LINK innovation themes?



One issue that many Swedish producers struggle with is traceability. Consumers might want to be sure that the meat comes from animals that actually has grazed in areas with high HNV-qualities. Hälsingestintan has solved the challenge by using modern technologies enabling the consumers to know the origin, quality, breed, and age of the meat they buy. In short this is how the labelling it works:

1. The animals are equipped with electronic transponders (RFID technology) in the ears when they are born. The tags have a unique ID-code that can be linked to the animal's birthday, breed, farm, etc. via a database. This provides a secured identity as well as a number of logistical benefits during the animal's growth and handling - it is possible to register weight development and possible medical treatments.
2. At the slaughter, each animal ID is reported in the database. The information is then added with slaughter inspection results, such as classification and weight. Whether the animals are labeled electronically or not, they are labeled at the slaughter, when the animal's ID information is transferred to a bar code label that accompanies the hanging ring.
3. When the animal bodies are to be cut, the barcode is read off. When the details are packed for delivery to store, the information accompanies the label that is pasted on the detail in the form of a QR code.
4. On each meat packet, there is direct information about the sex, age, breed, and from which farm it comes. In addition, each tray has its unique QR code that can be read by using a smartphone. When scanning, you get detailed information about the farm and the animal, recipes for cooking and information about Hälsingestintan. This kind of solutions regarding traceability might be interesting to look at for existing and future HNV-products.

The process that made it happen and critical factors for success

- ▶ The company had a vision of being able to deliver “ethically meat” slaughtered in a new way. From that vision emerged the idea of a mobile abattoir.
- ▶ Moving from idea to realisation the company has cooperated closely with researchers in animal welfare, and food hygiene, and been in constant dialogue with relevant authorities.
- ▶ Another important factor has been the big interest in the Swedish society for animal welfare issues.



We have not had the opportunity to investigate in detail the emergence and development process behind this innovation, nor the critical success factors.

Lessons learnt from this innovation example, and its potential replication

- This innovation shows that complex challenges in both technical and legal issues can be managed if relevant stakeholders get involved in a constructive process.
- There are good possibilities for other countries to use similar solutions, and the concept has already been introduced in France.



The company introducing this innovation in the learning area has a strong focus on animal welfare and food quality, and so far the ecological perspective has been secondary. There is however many possibilities in using similar types of solutions, such as the traceability and the mobile abattoir solution in initiatives that are more focused on HNV-conservation and biodiversity.

Adapted towards a focus on the HNV-qualities of farming, this could be an important tool in building awareness about biodiversity and landscape ecology among consumers and distributors.



Learning Area “Dartmoor” (United Kingdom)

INNOVATION EXPERIENCES AND NEEDS

Contribution to deliverable D2.6.1

Date: October 2017

Authors: Gwyn Jones and John Waldon



This project has received funding from the European Union Horizon 2020 research and innovations program under Grant Agreement No. 696391

This report represents the views of the authors. The Research Executive Agency is not responsible for any use that may be made of the information it contains

Introduction and contents

This report looks at innovation that supports HNV farming in **Dartmoor**, 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 United Kingdom that could usefully be transferred to address challenges in the LA.

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

Contents

Slide 2: Introduction and contents
Slide 3: The challenges facing HNV farming on Dartmoor
Slide 4: Innovation overview Dartmoor
Slide 5: selected innovations from Dartmoor
Slide 6: Innovation needs - Social and institutional
Slides 7 & 8: Innovation needs - Regulatory framework
Slide 9: Innovation needs - Products and markets
Slide 10: Innovation needs - Farm techniques and management
Slide 11: Innovation in UK but outside LA
Slide 12: Potential innovations from EU Member States relevant to LA
Slide 13: Five Innovation Fiches from UK (Dartmoor).
Slide 14 – 19: (1) The Dartmoor Vision
Slide 20 – 24: (2) Dartmoor Farming Futures
Slide 25 – 29: (3) Commons Fire Management Plans
Slide 30 – 34: (4) TB Control Plans
Slide 35 – 40: (5) Dartmoor Commoners' Council

Principal abbreviations:

Defra – UK Government's Department of Environment, Food and Rural Affairs.
RPA – Rural Payment Agency (Defra agency).
APHA – Animal & Plant Health Agency (Defra agency) formerly State Veterinary Agency.
BPS – Basic Payment Scheme (pillar 1 support)
AE – agri-environment scheme (pillar 2 support).
ESA – Environmentally Sensitive Area, an agri-environmental scheme.
HLS – High Level Stewardship, an tier with the Environmental stewardship agri-environment scheme.

The challenges facing HNV farming in Dartmoor

- Hill farming is economically marginal, even with agri-environment support.
- To maintain and enhance the priority habitats requires HNV farming, especially extensive grazing, but there is no 'product' where HNV farming has both a competitive advantage and a well-functioning market
- Whilst agri-environment (via commons agreements) provides financial support, many of the prescriptions are not appropriate for common land.
- Regulations relating to animal health (TB) and land management are often impractical for common land.
- The cultural aspects of commons has its own challenges relating to governance.
- Many policy and farming narratives are not favourable to HNV farming
- Additional significant challenges as a result of the UK's decision to leave the EU.



Challenges facing HNV livestock farming on Dartmoor

The Learning Area consists of the 36,000+ ha of registered common land within Dartmoor National Park (DNP) in SW England and the farms which actively use their pasture rights on those commons – currently around 500 farms. These farms are located overwhelmingly within the DNP, but don't include all farms within the DNP, with about 60% of farms activating their common grazing rights. Some hill farms also have their own sole use moorland (new takes). This is also HNV and shares some, but not all, of the issues facing common land within the National Park.

The extensive grazing regimes face many challenges, including; competition from intensive farming systems, whether locally, nationally or internationally; poor financial returns, with little recognition in the market of the high quality product and most other outputs taking the form of public goods for most farms; resultant dependency on support via pillar 1 and 2; inappropriate prescriptions in agri-environment, which is the main instrument which purports to engage with management practices in any detail; impact of TB Regulations (not the disease) in failing to recognise the generally low risk status of the moor and making grazing a greater management and potentially financial risk for farmer; and uncertainty in the future for UK agriculture due to Brexit, both in terms of the likely future trajectory of English (i.e. UK) spending on agriculture and in terms of potential changes in the terms of trade with the EU-27 and the rest of the world.

Overview of innovation on Dartmoor

- Beneficial innovation has been within an overall context of intensifying farming (and associated innovation) away from the moor
- The capacity provided by farmers working together on commons has contributed to a number of innovations.
- Inspirational leaders within the farming community have been essential to the majority of innovations.
- Agri-environment agreements on commons have provided challenges but also the finance to develop ideas into solutions.
- The Dartmoor National Park Authority and others have encouraged entrepreneurship and innovation, by providing facilitation and funds.
- Local innovation has rarely been adopted or properly integrated into/by national policy



Overview of the innovation situation

Relevant innovation at take UK or English level is minimal; most occurs at National Park level. Innovation and investment in research and development and dissemination have all largely focussed on the intensive systems which are themselves increasingly marginalising those Dartmoor systems which use the moor pastures; if anything, there has been a reduction in UK/England-wide structures for the development and dissemination of relevant innovation relevant or supportive of HNV farming . Within that overall context, Dartmoor has been notably innovative. Innovation has often been spawned by a crisis and local bodies, especially the Dartmoor National Park Authority (DNPA), have proactively encouraged innovation in response to such crises. There is also a potential co-funder on Dartmoor not present to the same extent elsewhere, namely the Duchy of Cornwall (the principal land owner).Dartmoor has taken the national lead in providing a long-term vision (25 year) for the moorland and providing evidence of the impressive array of public benefits linked to farming on the moorland. This innovation itself provided the inspiration and basis for a number of other initiatives, for example, a new trial agri-environment scheme that is outcome based.

These initiatives have all sought to support farming as the principal means of managing the diverse and important HNV ecology, especially – blanket bog, wet and dry heath, mires and extensive grass moors all providing the habitat for important species. The other public goods have initiated innovation including re-wetting the mires (for water and carbon benefits), fire control (to protect the ecology and stored carbon in the peat). The dominance of common land has required governance and led to some innovative processes. Further innovation is required – not just in the regulatory and support areas where it has so far been largely focussed, but in other fields; marketing, animal welfare and farming efficiency have all been identified as gaps by farmers. However the uncertainty created by the decision to leave the EU has impacted on the climate of entrepreneurship and innovation, removing potential funding sources and interestingly making at least some farmers think that the route to survival lies in individual technical innovation.

Innovation examples in Dartmoor: what are their strengths and weaknesses for HNV farming?

- **The Dartmoor Vision**, a collaborative process that provides a 25 year vision and resolves conflict between competing land management.
- **Dartmoor Farming Futures**. The design and trial of an outcome based agri-environment scheme.
- **Commons Fire Management Plans**, addressing controlled fires and wild fires
- **TB Control Plans**, a process that enables TB Regulations to become achievable for cattle on common land.
- **Dartmoor Commoners' Council**, governance by farmers enabled by legislation.



Strengths:

- The innovations show that there is a set of local voices and a local ability to develop and implement innovations, at least in certain fields.
- Support and funding from DNPA and major land owner is very important.
- The building of capacity in the case of some groups (e.g. Forest of Dartmoor Trustees) is impressive and builds on long history of cooperative working on commons.
- There can be positive feedbacks where things work well, e.g. Vision leading to Dartmoor Farming Futures and the Dartmoor Hill Farm Project (DHFP a local advisory service)

Weakness:

- Starting point is ever-increasing competition from unfettered intensive farming elsewhere – this puts greater demands on innovations for HNV farming
- Innovation has been mostly in social/institutional/regulatory/support fields, at best addressing the symptoms, not the cause of marginalisation
- Technical innovation is minimal and ad hoc (though a lot of store is put on it)
- Product and market innovation has mostly disappointed farmers so far
- Many social/institutional and almost all regulatory/support innovations are highly dependent on the decisions of English (UK) ministers, which have in general proved to be uninnovative, centralising and unintegrated in terms of policy objectives
- Mainstreaming, nationally or even locally, is poor or non-existent; success of initiatives seems to depend on individual staff members not just in their inception but for roll-over/continuation
- The HNV challenge is not an integrating principle driving innovation (and support for innovation)

Social and institutional innovation

Social and institutional - innovation needs	Possible approaches
Education suitable for hill farmers and potential hill farmers is very limited.	
Research into farming in the uplands is almost non existent	
Strong, broad and relevant advisory, dissemination, guidance function for hill farming systems.	Some farming advice is provided by the Dartmoor Hill Farm Project – need to be less financially vulnerable and able to address more issues.
Stronger local body with the capacity and legitimacy to develop/deliver policy measures?	

Social and Institutional Innovation Needs

In some ways, the social and institutional field is one of the stronger areas in the Learning Area, but innovation in this area is perhaps taken for granted by farmers where it exists (e.g. commons governance) or perhaps not seen as possible where it isn't (e.g. relevant agricultural lifelong learning). It has largely emerged through various times of crisis.

Local tradition of farmers coming together (despite it co-existing with strong individualism) has provided at very least a seedbed in which innovations can grow (importance of farmers' perceptions of their capacity to change/develop things at a particular point in time in the way they respond to possible innovation opportunities comes across clearly – it is something which needs to be nurtured specifically).

There have been quite a few good examples, but they are restricted to certain fields, e.g. commons governance and management (there is a feedback loop – the lack of examples in other areas both explains and results from the lack of an innovation process in those fields).

Policy and regulation frequently fail because they are unsuitable for common land, leading to frustration and disengagement by farmers, but while the gap between government agencies and farmers appears to be widening, the local bodies which either speak for farmers or could potentially deliver solutions have little financial or human capacity at present.

Regulatory framework innovation

Regulatory framework – general innovation needs	Possible approaches
Maximum clarity of vision, integrating objectives on a local scale and with reference to real farms and their social and economic circumstances	
Risk-based regulatory environment, internalising former negative externalities but not imposing pointless burdens	
Less atomised approach to policy needs (e.g. Integrating not just agriculture and environment, but advice, education, research and other activity of the wider state in the locale)	
Encouragement, using a variety of mechanisms for the internalisation of positive externalities, especially where they have a real financial benefit to society and are delivered at a real financial cost to farmers	
Net aim is to ensure farmers are adequately rewarded for the achievement of biodiversity and other 'public good' objectives, so payments 'fill the gap' where and for as long as above steps are inadequate	

Regulatory Framework Innovation Needs - 1

Regulatory and support. Some good examples which illustrate the relative strength and increasing capacity of local partnerships, but ones which also illustrate the weakness of and resistance to innovation on the national scale and the lack of a tradition of locally adapted/developed/led policy.

Whilst the UK Government’s policy is to support hill farming (including on Dartmoor) in practice the payment of pillar 1 and 2 on common land is often severely delayed, complex and vulnerable giving little confidence in the intention to support these farmers.

The relative disadvantage of Dartmoor’s moorland-using systems in part reflects the technical development of intensive systems; many of the negative effects of those systems remain external to the economies of those farms (thanks to policy choices in the field of regulation). There is thus a strong case for arguing that, if one takes the broad view, the greatest need for innovation is in internalising the many costs to society of pursuing ever more intensive farming systems. That means not only the management of permanent grasslands, or of other aspects of cattle and sheep systems, such as the sourcing of feed, but wider questions such as the regulatory framework for pork and chicken production, rules pertaining to imported food etc.

Regulatory framework innovation

Regulatory framework – specific innovation needs	Possible approaches
Provide a long term plan for each common to set out timetable for burning and other major works. Ensure all commons have fire plans and timetable of works	Encourage closer working with Natural England and each common's association.
Ensure pillar 1 funding (BPS) is correctly paid on common land. (short term)	Work with Rural Payment Agency
New TB Regulations, in addition to those addressed by the TB Control plan need to be suitable for common land.	Work with government (Defra and Animal Plant Health Agency).
Officials and agency staff often lack experience and/or understanding of the needs of hill farming.	Use farmers to train officials and agency staff

Regulatory Framework Innovation Needs – 2

Immediate regulatory needs flowing directly from current mainstream or pilot/locally-adapted measures can be seen to relate back to the supposedly-shared Vision. There a need for a long-term agreement on each common on actions and outcomes. All payments need to be adapted to the commons institutional framework, as do regulations. In the case of the latter, the HACCP (Hazard Analysis and Critical Control Points) framework supposed to underlie all EU health policies should be much more apparent in the implementation of TB rules in particular.

Restoring institutional memory is essential – examples where good initiatives and approaches have lost their vigour due to personnel changes have been found in the biodiversity and biosecurity fields, for example, reflecting poorly on the amount of buy-in to those innovations in the organisations concerned as a whole.

Our perspective is that there is much scope for major and positive improvements, not least by rolling out properly the excellent pilots and experimental approaches which have been trialled on Dartmoor. Given that farmers often do not disagree with the objectives of schemes and that agri-environment income is not only important at present, but likely to become even more so in the near future, it seems to us that this has to be one of the major focusses of the project.

Products and markets innovation

Products and markets - innovation needs	Possible approaches
Marketing of beef and sheep meat from moorland that secures premium prices.	
Investigate sheep milk products	
Payments for Ecosystems Services?	
Better/more linking of non-agricultural economy with farming activity?	

Products and Markets Innovation Needs

True innovation, whether in terms of products or markets or marketing techniques, has been limited.

Looking first at conventional agricultural products (e.g. meat, wool, breeding stock), micro-scale innovation has been relatively successful; medium-scale through cooperative groups less so.

Payment for Ecosystem Services (PES) potential is there (water & carbon storage payments, for example), but so far experience has been discouraging. There is a complex issue of how commoners (the farmers) would potentially benefit from payments linked to the soils and water that lie outside their rights on the common – how important is their grazing practice, and particularly how much of that benefit could be delivered through basic regulation?

Dartmoor and its association with the Prince of Wales (Duchy of Cornwall) are potential brands that could provide the added value required by farmers to produce high quality products linked to extensive grazing (organic systems). However efforts to use these brands have not been very successful.

Dartmoor is a huge tourist draw as well as a major brand in the region. Initiatives which truly link this vast amount of diverse economic activity to the economy of HNV farmers are relatively thin on the ground; to the economy of specifically HNV systems and practices, even rarer.

Farm techniques and management innovation

Farm techniques and management - innovation needs	Possible approaches
(Specific things were mentioned, but more than in any other type of innovation, there is no obvious 'list')	

Farm Techniques and Management Innovation Needs

Considered very important by farmers, to some extent this perhaps reflects the ‘we are all different’ narrative, but also the feeling that too much is dependent on the decisions of agencies – a high risk situation for the farmer to find himself in. In addition, the feeling there is a strong feeling (possibly encouraged by the poor experience of efforts to increase prices by niche marketing) that ‘cutting costs’ is essential in the future. Innovations which promote labour efficiency are thus seen to be essential, but innovations which increase technical effectiveness, make better use of the pasture and genetic resource, productivity etc., would also be seen as relevant.

Innovations in this field should be encouraged not discouraged by the ‘schemes and regulations’ and encouraged/supported both directly by the State and through the encouragement of local and/or farmer-organised knowledge transfer bodies and initiatives. The strong impression is that most of the basic innovations of recent decades have been (and still are?) antipathetic to HNV farming, but less systemic ones have potential to improve the effectiveness etc. of HNV systems. There is in fact a need for ‘agro ecological’ type innovation on the more intensive side of the HNV farming systems, as well as innovation on that part of the system which interacts directly with the semi-natural pastures. This means a recognition that the current dependence on commercially-driven research weakens the position of HNV farming, since innovation is also needed in aspects where new products aren’t necessarily a part of the solution.

Another strong impression is that innovations are largely spread informally by self-learning. Education system seems not to have major or positive role. Lifelong learning structures are poorly developed at present. (See social and institutional above)

Innovations from outside the LA that could help address LA needs

- Lessons from knowledge transfer initiatives in the hills
- Lessons from initiatives using 'problem' biomass
- Lessons from collaborative approaches between farmers
- Technological innovations e.g. Fencless fencing

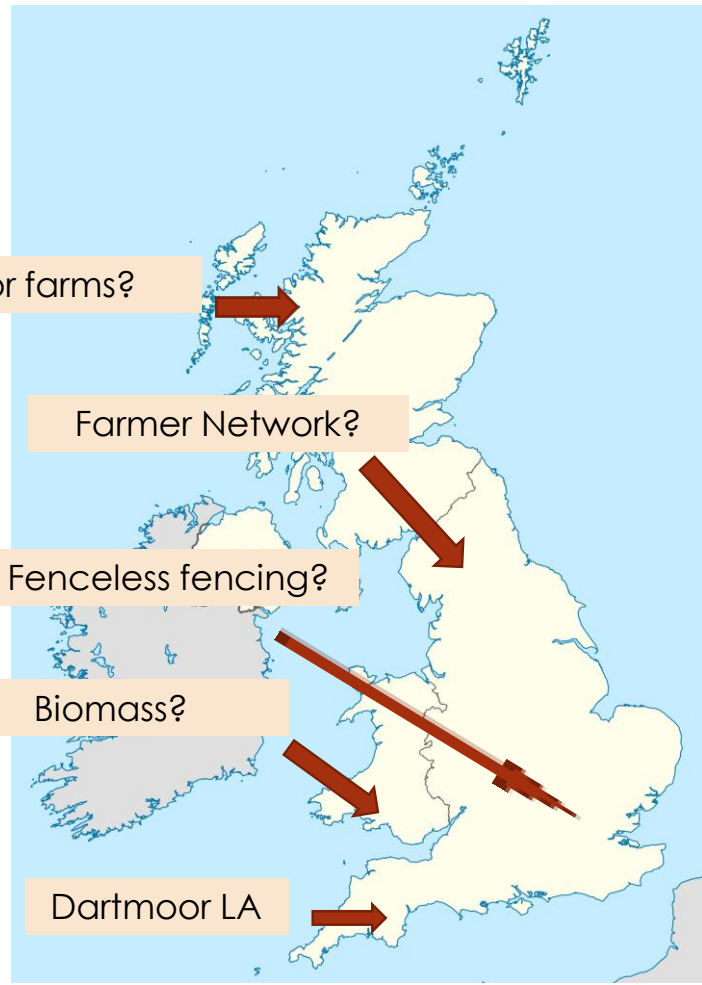
Monitor farms?

Farmer Network?

Fenceless fencing?

Biomass?

Dartmoor LA



Innovation examples for which Dartmoor is looking to other Member States

- Use of RDP payment schemes to support HNV grazing systems on a large scale, especially on common land
- Locally-led projects that set objectives for pastoral land with the users, and apply a « payment for outcomes » approach and/or flexible approach to promote these objectives
- Approaches to dealing with animal health Regulations (TB) in extensive systems on common land.
- Successful means of linking HNV products to markets on a large scale and especially how the obstacles were overcome
- Examples of advisory/training/education provision which is both locally adapted and geared to HNV systems (including the intensive element of those systems) and how they are funded, organised
- Examples of techniques and technologies for HNV grazing livestock systems (including 'agroecological' approaches to inbye land)

Examples from the stakeholder discussion group:

1. Markets

- Wool fest, replicate event in Cockermouth in southern England to attract wool/fleece buyers
- Any other initiatives to add value to wool, e.g. establish local wool washing units?
- How to get successful and stable relationships on the large scale between farmers and local consumers
- How to educate chefs and retailers on use of whole carcass
- Any initiatives which deviate from the standard model of pricing/valuing the product, e.g. sheep meat pricing grid more suitable for hill breeds?

2. Schemes and Regulation

- Anywhere with something like a challenge fund - pot of money to enable innovation
- Anywhere with schemes which are less prescriptive and encourage "real" dialogue
- Anywhere with a workable approach to animal health and biosecurity rules

3. Social & institutional

- Anywhere with successful machinery rings & other cooperative purchasing groups
- How to organise and fund an education/training/advice system which is comprehensive and not focused on one issue. Lessons from Monitor Farms, Making Livestock Profitable etc.
- How to fund and carry out experimentation which is not attractive to commercial companies (i.e. not about drugs, fertilisers, etc.) - need a fund for development of ideas that is not risk averse. How to fund farmers' participation in experimentation

4. Techniques & technology

- Invisible fencing/fenceless fencing need more information
- GPS technology to track extensive grazing animals; ovulation monitoring of cattle etc.
- Management techniques for 'difficult' vegetation - how to cut and remove *Molinia*, turn waste vegetation (rush, reed and grasses) into animal feed, biomass etc. What lessons from existing initiatives

- Consider the integration of woodland into farm business

INNOVATION FICHES FROM UK

- 1) **The Dartmoor Vision** – provides a 25 year vision shared by agencies and farmers.
- 2) **Dartmoor Farming Futures** – an new approach to agri-environment based on outcomes and no prescriptions.
- 3) **Commons' fire management plans** – provide information required to fight fires, new equipment and train farmers to work with professional fire fighters.
- 4) **TB Control plans** – ensuring Regulations are practical on common land.
- 5) **Dartmoor Commoners' Council** – farmer led governance.

UK, Dartmoor – innovation example 1

The Dartmoor Vision

- **Location:** Dartmoor
- **HNV system:** Extensive grazing, sheep & cattle on rough upland pastures
- **Scale of operation:** all the open moorland on Dartmoor – c. 45,000 ha. of which 80%+ is common land.
- **Timespan:** valid to 2030
- **Keys to success:** Endorsed by farmers and all agencies, provides guidance to local AE delivery and resolves disputes over conflicting demands on the same area of land
- **For further info:**
<http://www.dartmoor.gov.uk/lookingafter/laf-landmanagement/laf-moorfutures>



Problems addressed by this example

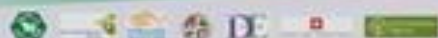
Poor communication between various government agencies and between those agencies and farmers. The Vision was initially an exercise to address what farmers perceived to be different demands from archaeologists and ecologists, often on the same piece of land; farmers were not confident there was a long term view of what was intended to be achieved by agri-environment schemes.

Story in a nutshell

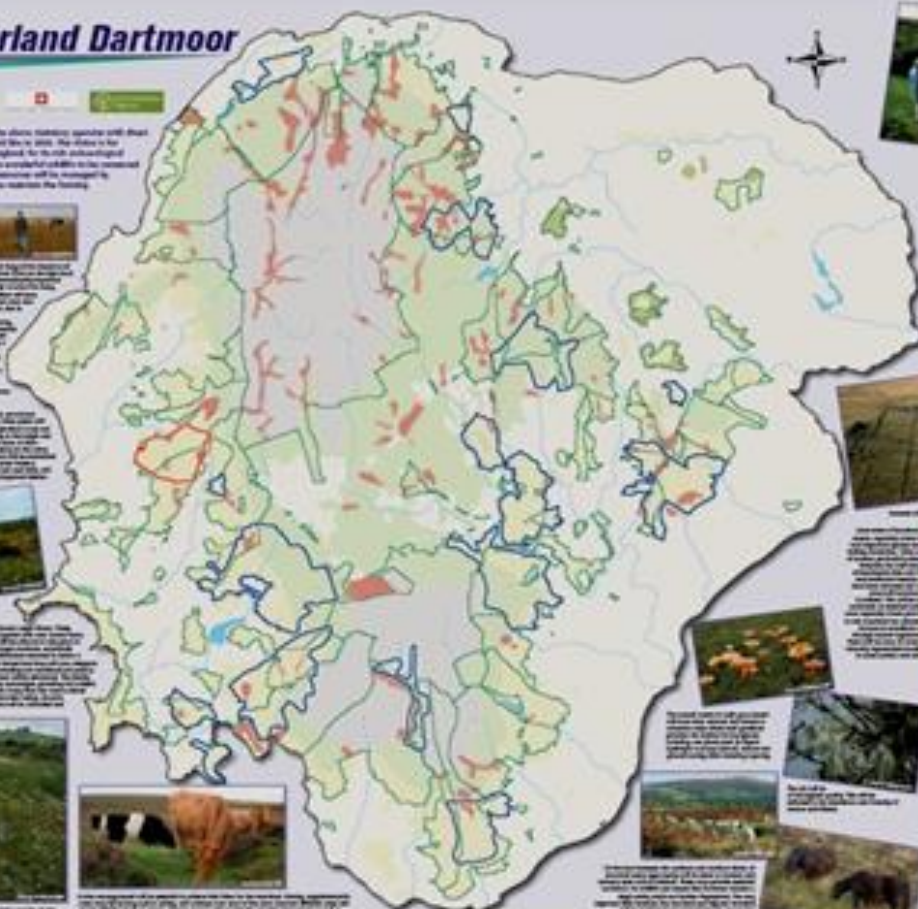
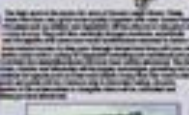
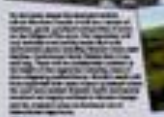
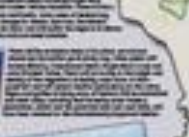
The process of designing and creating a vision for the moorland began in 2003, while the Vision itself was completed and adopted by the statutory agencies and farmers in 2005. A long term (25 year to 2030) vision was produced for Dartmoor's moorland. It encompasses all the open moorland on Dartmoor – c 45,000 ha. of which 80%+ (35,000 ha) is common land and describes what the agencies want the vegetation (HNV) and archaeological landscapes on the moorland to look like in 2030. The Vision is owned and endorsed by the main regulatory agencies and by the farmers. The process used to achieve the Vision was as valuable as the final product (a map) in securing a shared understanding of what each contributor wanted the moorland to look like in 25 years time. All relevant agencies contributed and endorsed so provided confidence to farmers that they all wanted the same thing.

A new process of identifying archaeological landscapes helped farmers and agencies better understand priorities, introducing a new concept, PALs – Premier Archaeological Landscapes. These are mapped areas that contain important (internationally important) archaeology that requires to be set in a suitably managed landscape. Adoption of PALs enabled the ambitions of ecologists and archaeologists to be compared and assessed with the top priority taking precedence. This is very helpful to farmers with responsibility for managing such areas.

A Vision for moorland Dartmoor



Why is an environmental vision for Dartmoor needed? It is when the above statutory agencies with their responsibilities for Dartmoor's environment meet in one forum (and they do in 2005). The vision is for Dartmoor's natural and cultural heritage to be managed in a way that ensures its long-term survival and the benefits it offers to the community. The vision is for Dartmoor's natural and cultural heritage to be managed in a way that ensures its long-term survival and the benefits it offers to the community.



Why is an environmental vision for Dartmoor needed? It is when the above statutory agencies with their responsibilities for Dartmoor's environment meet in one forum (and they do in 2005). The vision is for Dartmoor's natural and cultural heritage to be managed in a way that ensures its long-term survival and the benefits it offers to the community. The vision is for Dartmoor's natural and cultural heritage to be managed in a way that ensures its long-term survival and the benefits it offers to the community.



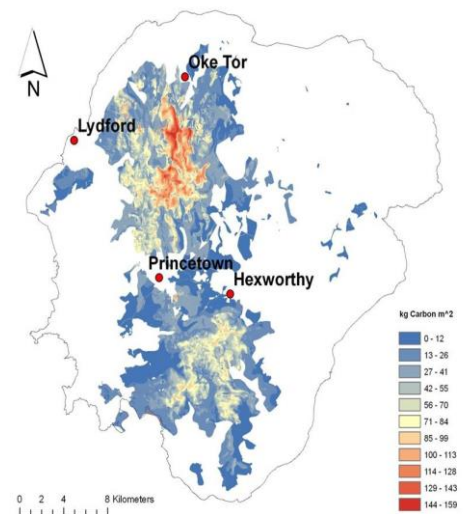
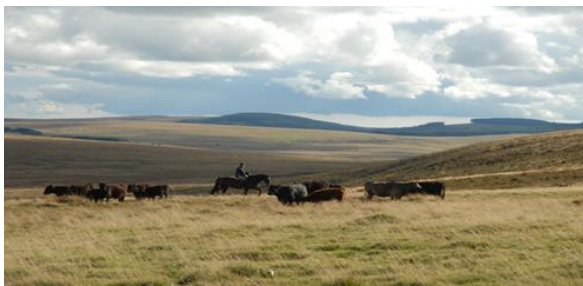
Dartmoor in 2010

A vision of what Dartmoor might be in 2010. The vision is for Dartmoor's natural and cultural heritage to be managed in a way that ensures its long-term survival and the benefits it offers to the community. The vision is for Dartmoor's natural and cultural heritage to be managed in a way that ensures its long-term survival and the benefits it offers to the community.

Why is an environmental vision for Dartmoor needed? It is when the above statutory agencies with their responsibilities for Dartmoor's environment meet in one forum (and they do in 2005). The vision is for Dartmoor's natural and cultural heritage to be managed in a way that ensures its long-term survival and the benefits it offers to the community. The vision is for Dartmoor's natural and cultural heritage to be managed in a way that ensures its long-term survival and the benefits it offers to the community.

What does The Vision achieve for HNV farming?

- Confirms consensus amongst agencies for a farmed landscape – farmers have a future.
- Provides clarification on what vegetation is wanted and where.
- Resolves disputes between the land management required for archaeology and for biodiversity.
- Identifies where priority habitats are and where they are wanted in the future.
- Includes other public benefits: carbon storage (92m tonnes), water, public access.



Distribution of peat soils / carbon



Achievements

- The process resulted in a clear picture of what vegetation was wanted and where, not least for farmers, who now know what they are to achieve. Detailed management is then set out in the agri-environment agreements that are underpinned by the Vision.
- The invention of a process to resolve potential conflicting demands for different land management on the same area of ground.

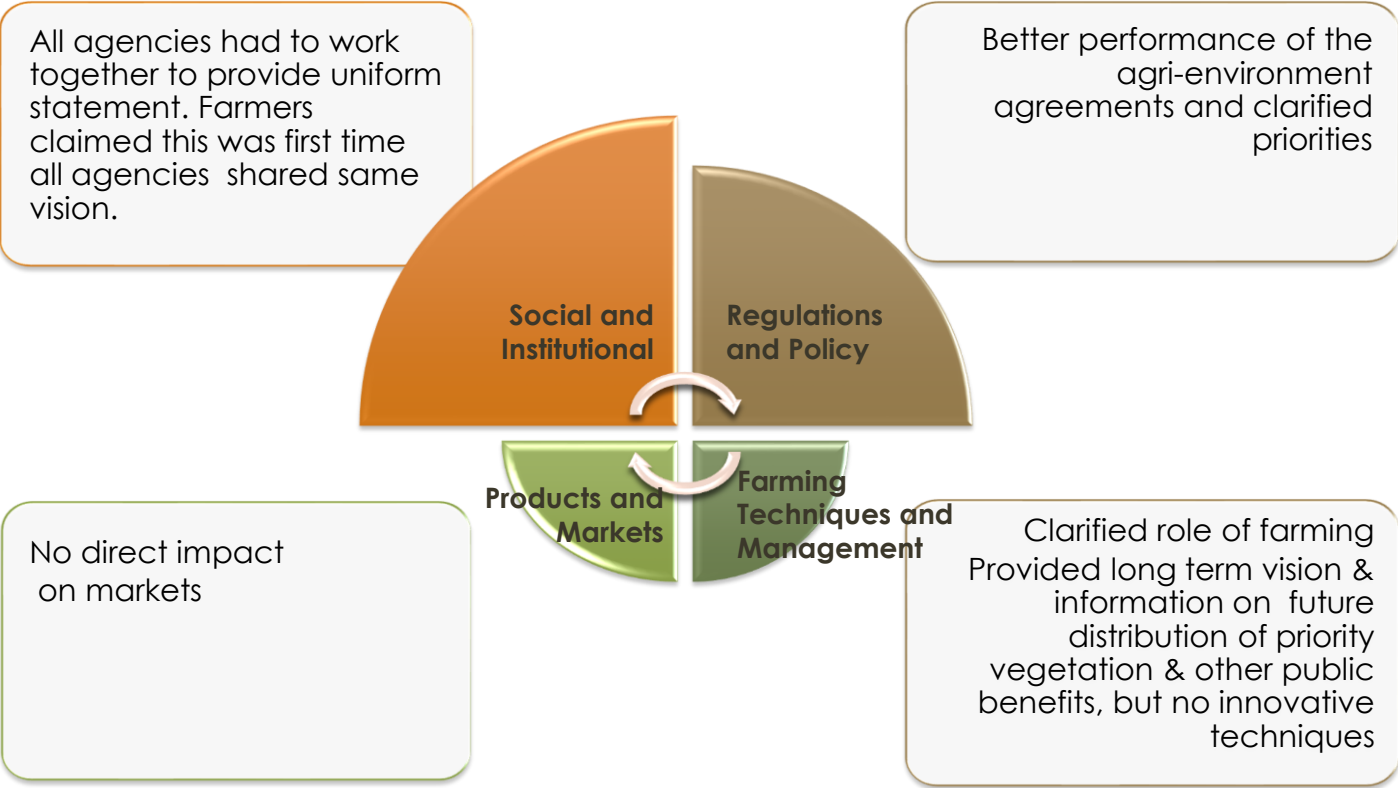
Improved economics of HNV farming

- Better understanding of the intended outcomes for agri-environment agreements resulted in an increased uptake of this important funding resource

Maintaining or improving HNV values

- The full suite of HNV vegetation (Annex 1 and non-Annex; within and outwith designated sites) was addressed through the process and included in the Vision.

How does The Vision respond to the HNV LINK innovation themes?



Ironically for an innovation which is so intimately connected to policy and indirectly therefore to support and innovation, there is a strong case to be made that at present at least the main impact of the vision was social and institutional; regulatory and policy effects are certainly present, but could be much more thoroughgoing and fundamental.

The process that made it happen and critical factors for success

- Action designed to address a specific problem identified by farmers.
- Independent facilitator employed to secure agreement between all agencies.
- Sufficient funding and capacity.
- Funded by all agencies so owned by all.
- Secured agreement on draft vision with professionals before asking farmers to comment and then endorse



The DNPA initiated the proposal following concerns from farmers that they had little faith in the agencies long term view of Dartmoor and conflict between the aspirations of the archaeologists and ecologists. An independent facilitator was employed and the process was to secure agreement between all the ecologists and then the archaeologists and then bring their agreed positions together to see if there was conflict. There was very little overlap of ambitions, both groups' visions could be accommodated to each other.

All the government agencies with responsibility on Dartmoor participated. They eventually signed off the Vision and by doing so clarified their position. Farmers claimed this to be the first time that agencies had clearly stated that they wanted a farmed landscape to continue. The farmers then ground-truthed the draft, i.e., asked themselves whether it could be delivered, and then signed it off.

The process that was developed to deliver the Vision has been used successfully elsewhere. The employment of a facilitator was the only significant cost. Providing sufficient time was very important, enabling full participation by those busy with other work.

Lessons learnt from this innovation example, and its potential replication

- Vision restricted to moorland, fails to provide vision for inbye land.
- NGOs did not participate.
- Process, including use of Premier Archaeological Landscapes (PALs) used to produce vision for Bodmin Moor and moorland units on Exmoor.



The Vision process has been used on Bodmin Moor (a similar discrete upland in south-west England). It is suitable for replicating on other uplands or discrete areas to resolve conflict between different land management for differing outcomes.

The following aspects of the Vision process were found to be valuable:

- Independent facilitation by someone with access to statutory agencies and farmers.
- Sufficient time allocated to secure participation
- Adoption of a term to describe discreet areas of high archaeological value that require a landscape setting – Premier archaeological Landscapes (PALs).
- Timing of meetings tailored to participants (farmers met in the evening at less busy times of the year)
- Ambitions of various disciplines captured on maps that could be shared and amended.
- Process improved communication between agencies as well as between agencies and farmers.
- Designed to compliment and enhance existing delivery mechanisms and not to replace (AE agreements).
- Useful so it is still used and referred to.

The process did not include NGOs; if it were to be repeated, some NGOs would be invited to contribute so they could learn about the ambitions and constraints facing the farmers whilst contributing their information.

UK, Dartmoor – innovation example 2

Dartmoor Farming Futures

- **Location:** Dartmoor – on 2 commons
- **HNV system:** Extensive cattle, sheep and pony grazing
- **Scale of operation:** Trials on 11,724 ha.
- **Timespan:** designed in 2010, trials to 2020
- **Keys to success:** Adaptive management approach to HNV vegetation. Farmers aware of and engaged with indicators of success, and involved in monitoring. Improved farmer engagement includes governance mechanism for approving variations to standard prescriptions.
- **For further info:**
<http://www.dartmoor.gov.uk/lookingafter/laf-landmanagement/dartmoor-farming-futures>



Problem addressed by this innovation

Partly as a result of clarity on objectives from the Dartmoor Vision, farmers expressed concern that their existing agri-environment agreements (with their prescriptive approach to many issues, not least stocking regimes) were unlikely to deliver better environmental benefits. They also noted that they were not clear what the phrases used by agencies ('favourable status', for example) meant in practice.

Story in a nutshell

A group of Dartmoor farmers were invited to design a new approach to agri-environment in 2009. Trials, using the new design, started in 2011 and are continuing and being evaluated on two commons - one of 554ha and the other 11,170 ha. The pilot 'sits on top of' standard agri-environment agreements; the grazier association agrees a set of outcomes and participating graziers do not have to be bound by the standard prescriptions – any variations they propose have to be agreed through a formal mechanism. Some of the outcomes (move towards 'favourable status' of Annex 1 habitats) were subject to a process of clarification and simple exposition on an illustrated A3 field sheet by the relevant agency, itself an innovative development. Some of the participating farmers are now undertaking elements of the monitoring of the agreements. Recent evaluation confirms improved ownership and delivery from those participating in the trials.

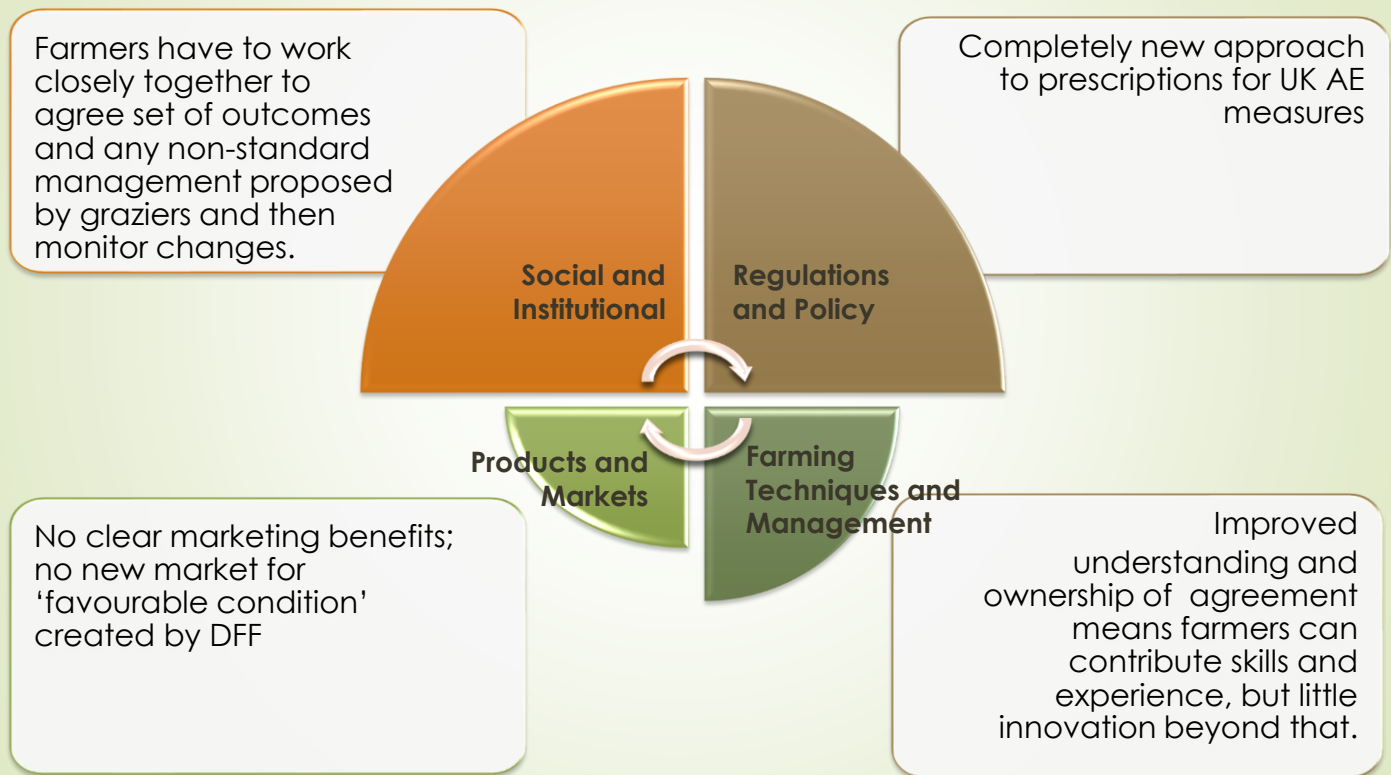
What does Dartmoor Farming Futures achieve for HNV farming?

- An outcome based scheme that encourages farmer participation in identifying the most appropriate land management and monitoring and which has also involved better communication of the agreed objectives by agencies.
- Several evaluation studies confirm improved farmer ownership and delivery of actions.
- Improved land management for HNV outcomes and other public benefits.



- It recognises the value of farmers using their skills and experience to deliver public policy outcomes on HNV farmland. It is a new approach to agri-environment for the UK, focussing first and foremost on outcomes; as a result, it is not prescriptive, allowing farmers to make decisions in a framework of assessment by their own peers.
- It has brought farmers and agencies together (building on the Vision) to better understand and then agree detailed objectives, which has involved the agencies examining how to make legal and ecological concepts meaningful in the field for farmers.
- Farmers monitoring parts of the agreement has secured better engagement and ownership of the trial. Ecological monitoring training was particularly successful and was based on the agency work to turn their objectives into 'plain English'.
- Recent independent evaluation confirms participating farmers have better understanding of HNV farming and what it should achieve.

How does DFF respond to the HNV LINK innovation themes?



Social and institutional - This innovation has significant benefits for farmer participation in a scheme. If the agreement is better understood and is deliverable then it results in less effort to ensure the terms of the agreement are met. This results in lower administration costs and enables professional effort to be targeted on outcomes rather than administration. The State was involved in one significant innovation, which was a new way of setting out and explaining its policy objectives (Favourable Conservation Status for Annex 1 habitats) to farmers. This involved a good deal of work on the part of local staff, but its character is if anything more social and institutional than regulatory, despite being carried out by employees of the State – never before had such a search for common language and practical explanation of policy taken place in this way.

Regulations and policy - While non minimising the innovation of doing anything different within a national agri-environmental scheme in England, the irony is that the impact on regulation and policy is less than might be imagined and while the participating grazings and commoners have a certain freedom from the standard prescription, the innovation has its limits. There is no impact on payment levels, while the standard prescription remains as the default option for graziers even on the participating commons. More disappointingly, there has been no attempt to integrate the lessons of DFF into the national scheme, nor to roll it out even to other Dartmoor commons under AE contract, nor to extend the scope of the innovation on these or other experimental commons. Neither have the farmers' self-monitoring efforts been collated and analysed or somehow incorporated into wider monitoring or evaluation processes.

Farming techniques and management – While the pilots allow a potentially much greater range of management approaches and techniques to be legitimised as appropriate for delivering AE undertakings, there is no reason to think that it has so far spawned approaches or techniques which are in themselves innovative; that possibility remains open however.

Products and markets – The lack of a link between 'quality' (or even hours of work expended) and payment level means that strictly speaking this innovation has not led to a new 'product' nor a new market for the farmers' products. Taking this extra step would be challenging but should at least be considered in depth.

The process that made it happen and critical factors for success

- Two groups of farmers given the opportunity to design a new agri-environment scheme.
- The design and trials are underpinned by existing AE agreements and consents to deviate from agreement prescriptions granted.
- Funding for design and facilitation provided by National Park, Duchy of Cornwall and Natural England. Trials funded by AE agreements.
- Similar design (outcome based) produced by both groups of farmers. Farmers then presented their ideal model and granted consent to trial.
- Process require sufficient time (farmers busy), farmer led agenda and independent facilitator. Need to build trust.
- Trust-building and confidence to vary prescriptions also closely-related to Natural England's explanation of its objectives for Annex 1 habitats



Partly due to the Vision farmers were critical of the current and past agri-environment schemes claiming the schemes failed to reflect local conditions and local farming systems. In response to the criticism a Government Minister suggested that the farmers design a better approach. A group of farmers designed a new scheme based on outcomes for a range of public benefits and later given the opportunity to trial this innovative approach on two commons.

Dartmoor National Park Authority, Natural England and the major land owner (Duchy of Cornwall) provided funding for facilitation to enable farmers to design scheme.

Important that sufficient time allowed for farmers to design. Security for trials provided by underpinning by existing AE agreement with consent to deviate from prescriptions. Annual monitoring programme and sign-off mechanism reduces risk to both parties.

Lessons learnt from this innovation example, and its potential replication

- Need to build trust between farmers and agencies. Provide sufficient time for progress to advance, balance action with engagement, speak to farmers in way they can understand
- An outcome based AE scheme is applicable to all farming systems.
- Ideally suited to common land the approach could be used on farm land.
- Willing farmers (leaders), independent facilitation (who can explain the benefits to all) and sufficient time.



- The list of outcomes to be delivered includes a number of public benefits/ecosystem services in addition to the more usual ecological and historic environment outcomes.
- Capacity provided by common agreement useful but not essential, the approach can be adapted for a farm.
- Farmers participating have more understanding and ownership of agreement. Similar approach under consideration elsewhere (Exmoor).
- Farmers enabled and encouraged to contribute experience, skills and local knowledge.
- Clear outcomes are reported each year. Flexibility enables farming practice to respond to climate and vegetation growth. Reflects local conditions.
- Ownership within farming community is high and it has increased trust between farmers and between farmers and agencies.
- BUT changes within the statutory agencies have created problems, since new staff do not understand the reasons for the trials.
- Greater clarity as to how this pilot is regarded in national policy and how/when its lessons will be rolled out to other areas (even within Dartmoor) would be very beneficial. A clear process of using farmers' monitoring data would also help build positive feedback loops.

UK, Dartmoor – innovation example 3

Fire Management Plans

- **Location:** Dartmoor, UK
- **HNV system:** Moorland with extensive cattle and sheep grazing.
- **Scale of operation:** Currently available on almost all of c.80 common land parcels = 36,000 ha
- **Timespan:** Designed in 2006 for one common; now operational more widely until end of current AE agreements (<2020).
- **Keys to success:** Involving farmers in fighting wildfires, providing training; innovation in equipment; knock-on for farmers' controlled burns



Problem being addressed:

Wild fires were destroying priority habitat (HNV) threatening property and jeopardising agri-environment agreements. Farmers were less confident of carrying out controlled burns and this valuable management tool was being lost.

Story in a nutshell:

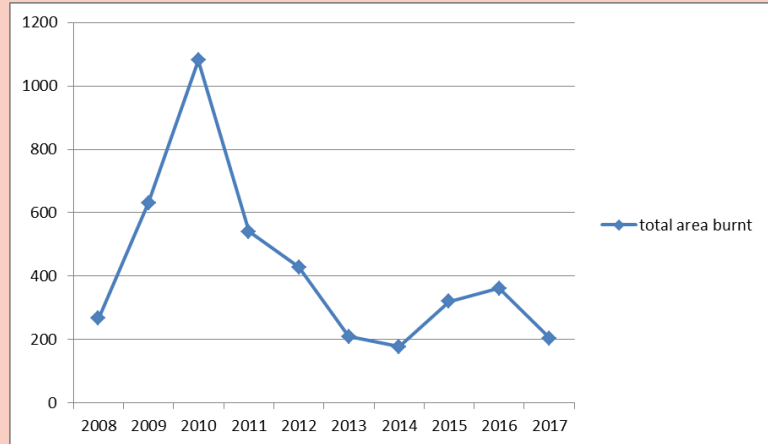
The control of wildfires was a priority for Environmentally Sensitive Area agreements (ESA), as a result of which the Dartmoor Hill Farm Project worked with a group of partners including Ministry of Defence, Natural England, Duchy of Cornwall, Devon and Somerset Fire and Rescue Service (DSFRS) and Dartmoor National Park Authority, to establish a model Management Plan. Prior to the adoption of the fire plan no commoners/farmers were allowed to work alongside the professional fire fighters. The professional fire fighters when they attend a moorland fire have to wear the same uniform and carry the same equipment that they would use when fighting a house fire; this heavy protective clothing reduced the speed they could reach fires away from roads or tracks. The professional fire fighters' only equipment are fire beaters – a pole with a heavy rubber flap, traditionally used to put out grass fires. The commoners could improve the time in reaching a fire by the use of quad bikes, a vehicle that the professional fire fighters are not allowed to use.

The solution was to train some commoners to work alongside the fire fighters. Training, provided by the Fire Service, was arranged and once a commoner had successfully undertaken the training they were allowed to work alongside the professionals at the front line. The training has to be refreshed each year and only those farmers with this up-to-date accreditation can directly fight the fire. There is a debriefing session, identifying issues and solutions, after every fire. The Fire Plan provides the necessary information to help tackle fires (access routes for vehicles, water sources etc.) and training to enable farmers to tackle fires on the common by providing equipment and training. It also resulted in the invention of a new water based fire fighting kit carried on a quad bike - a fogger. This plan has enabled 29 commoners to be trained and equipped to respond quickly in controlling and managing wild fires on the Forest, alongside DSFRS and DNPA rangers.

What do the Fire Management Plans achieve for HNV farming?

- Reduces the extent of wild fires that can damage various HNV habitats.
- Enables better controlled burns that help with management of certain vegetation by reducing evasive gorse.
- Decline in number of fires and areas burnt by wild fires.
- Considered by Natural England to be the main achievement of AE schemes on Dartmoor.

Note: 2 wildfires in 2010 = 475 ha.



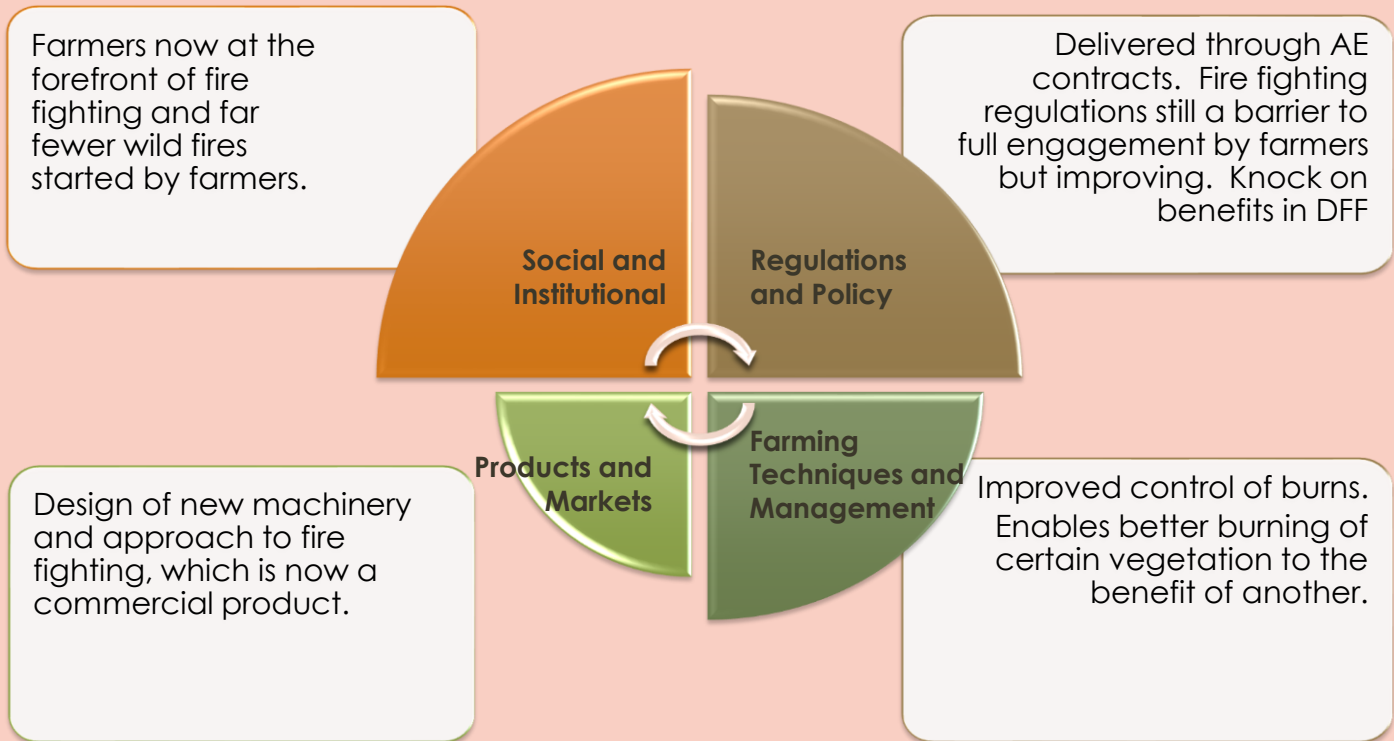
Achievements

The huge reduction in the extent of wildfires is considered to have been achieved largely by the use of trained farmers to tackle wild fires and to be better equipped for controlled burns. The initiative ensured the local farmers had some responsibility and participated in controlling wild fires. Wild fire damage to priority habitats, especially blanket bog much reduced.

The skills and relationships developed has also had an impact on the confidence of farmers in carrying out traditional controlled burns (swaling) to manage vegetation such as gorse (*Ulex*) and *Molinia*, while within the DFF pilot commons, applications to vary the approach to burning laid out in the original AE contracts can be regarded with more confidence and favour.

Not only are the plans seen as the major achievement of AE schemes in general on Dartmoor, but it is the one aspect of AE (apart from the payments) which non-participating commons look on with envy – regret has been expressed that something so useful in its own right is only available if the associated perceived burdens of AE are undertaken.

How do the Fire Management Plans respond to the HNV LINK innovation themes?



The plans have been innovative in all regards:

- New way of working together when previously partners were hampered by health & safety rules etc.. Has led to upskilling of farmers and a high degree of 'ownership' of fire control on their commons.
- Delivered through AE, and one of the most prized innovations within AE by all parties
- While perhaps not per se innovative, the management of both wildfires and controlled burns has improved in quality in a way which is new to the area
- New machinery was developed by the commoners for their own use in collaboration with the fire service, and is now available commercially

The process that made it happen and critical factors for success

- Initiated by the Dartmoor Hill Farm project and key farmers.
- Need for improved fire control identified by one AE agreement.
- Large AE agreement provided not only capacity but funds to produce plan, new equipment and training.
- Package of plan, equipment and training produced for one common then available to all commons in AE.
- Initial resistance from professional fire fighters but overcame by demonstrating benefits (and commoners allowed to do things firefighters are not able to do, so high amount of complementarity in practice)



Initially the fire plans and associated training of farmers to fight fires on the common were part of the agri-environment agreement on the Forest of Dartmoor common. The Dartmoor Environmentally Sensitive Area (ESA) scheme was launched in 1994 and the Forest of Dartmoor association entered into an agreement in 2001. Although a fire management plan was not a prerequisite members of the association and staff from the Dartmoor Hill Farm Project soon realised that uncontrolled fires could put their agreement at risk and they designed a plan and associated training to ensure that fires did not jeopardise their income. The Fire Management Plan was soon recognised by Natural England to be very successful in reducing the impact of wild fires and aiding controlled fires (swaling) and become a requirement within all the other commons' agri-environment agreements on Dartmoor. This reflects well on this aspect of the English project officer-led AE implementation model which in some ways at least permits the putting together of an appropriate package of support. Unfortunately, it is only available within the AE 'package', so that commons associations which would benefit from it, and want it, but are unable or unwilling to enter into an AE contract.

Two individuals were responsible for the concept, the chairman of the common's association and the project officer from the Dartmoor Hill Farm Project. The Fire Management Plan, training the farmers and the purchase of equipment were funded from the ESA agreement. Although initially there was no specific money allocated within the agreement to address fire issues the size of the agreement (almost £1m per year) enabled a discreet "pot" of money to be set aside to develop the fire plans, buy equipment, train farmers and pay farmers to attend fires without having a significant impact on the payments to individual members of the agreement (c280 farmers). The farmers soon recognised that new equipment was needed to fight fires and this led to the invention of foggers, power sprays mounted on quad bikes.

Lessons learnt from this innovation example, and its potential replication

- Funding enabled original ideas to be developed. Strong leadership and a willingness to work with the Fire service to secure better solutions.
- Plans, machinery and training provided to other areas on Dartmoor and further afield (Wales & north of England).
- Ideally suited to common land where capacity of farmers much larger. Requires some financing.



This approach is highly exportable to other sites as long as professional fire fighters willing to adopt. New equipment is cheap compared to fire engines, but expensive for farmers (£1200/2000 euro for a fogger) and training requires funding.

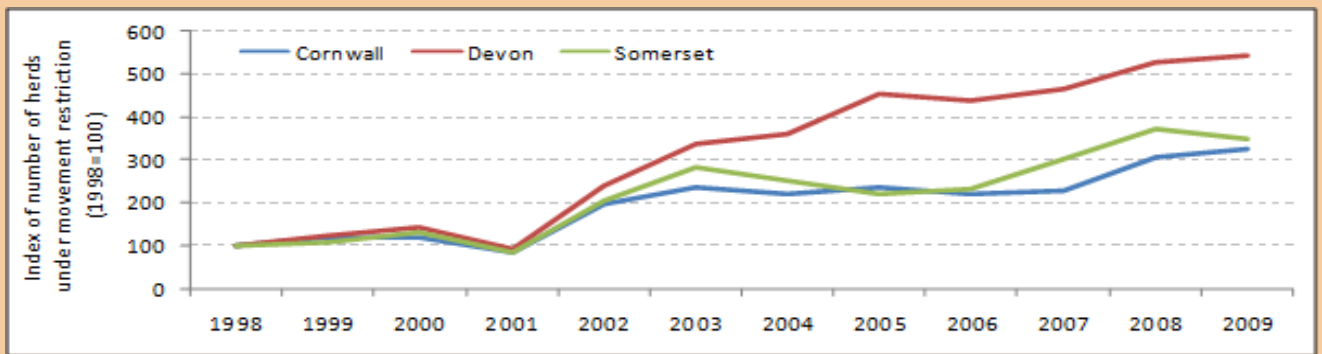
At present it is tied to a wider AE contract; while the ideal might be to tie it firmly to wider land management commitments, it seems that the benefits of the approach are such, even on a standalone basis, that some mechanism for wider roll-out might be desirable. Funding innovation is a real issue; the size of a large agri-environment agreement, enabled small but substantive separate pots of money to be created without a significant impact on individual farmers.

The creation of a separate pot of money for fighting fires was supported by all the agreement members. This pot still exists for funding farmers to fight fires, replace equipment and training. Surplus money at the end of the agreement will be reallocated to all beneficiaries.

UK, Dartmoor – innovation example 4

TB Control Plans

- **Location:** Dartmoor, UK
- **HNV system:** Extensive grazing, beef cattle on rough upland pastures
- **Scale of operation:** plans in place for most commons (30 commons with associations)
- **Timespan:** annual renewal from 2014.
- **Keys to success:** cattle able to graze on commons and fewer movement tests



Problem being addressed

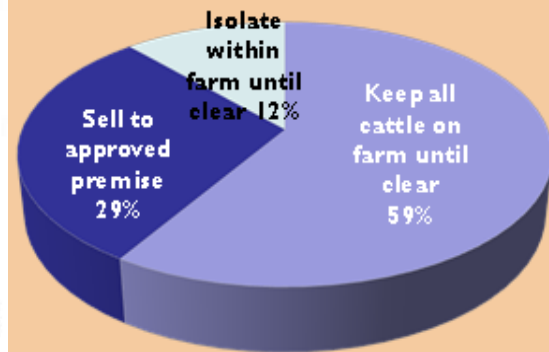
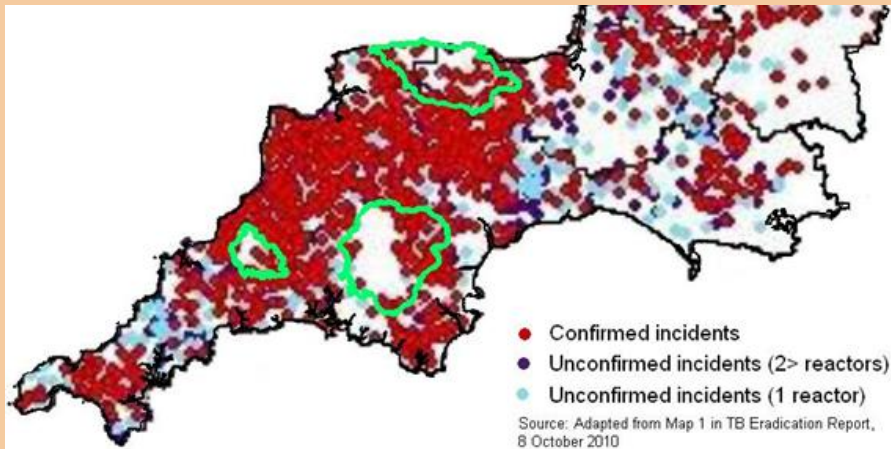
New TB Control regulations introduced in 2014 were impractical for common grazing. The Regulations included post movement testing on leaving the common and introduced multiple tests for animals moving between the farm and common. This made little sense for biosecurity (the commons are often, probably usually, the lowest risk area for TB) and further discouraged the use of the commons for cattle grazing at a time when numbers were already at a low point (probably the lowest ever). If a farmer is under TB restriction and is unable to keep the cattle that tested clear on their land, isolated from other cattle, the main option is to sell the cattle at a special market – the prices at such a market can be very low or in the case of hardy hill cattle non-existent.

Story in a nutshell

A small group of farmers worked with the State Veterinary Service now called Animal and Plant health Agency (APHA) to provide locally appropriate solutions to these problems. A model plan was designed by farmers in close cooperation with APHA to provide the basis for a risk assessment on individual commons, with the aim of reducing the burden from inappropriate regulation whilst retaining the necessary measures to minimise the risk of spreading TB. Holding areas, off the common but treated as being part of the common for this purpose, are identified to reduce the need for multiple movement tests every time cattle leave the common to go to the bull (bulls are not permitted on the common land) or for veterinary purposes. On the basis of such a plan, licences are issued to avoid post-movement testing off the common. Such plans are in place for most of the individual commons on Dartmoor affecting c300 cattle graziers.

What does TB Control Plan achieve for HNV farming?

- Devon is in the High Risk Area for TB in the UK, requiring annual tests.
- TB Regulations including multiple movement tests are proving to be a deterrent to cattle grazing moorland, resulting in undergrazed vegetation vulnerable to wild fire.
- 2 out of every 3 farmers on Dartmoor have been under restriction (TB) within the last 2 years.
- Plans provide State Vets with information to enable a risk assessment following a positive TB test and provide alternative to multiple testing regime that deters farmers from putting cattle on commons, thus allowing a higher level of commons use than otherwise.

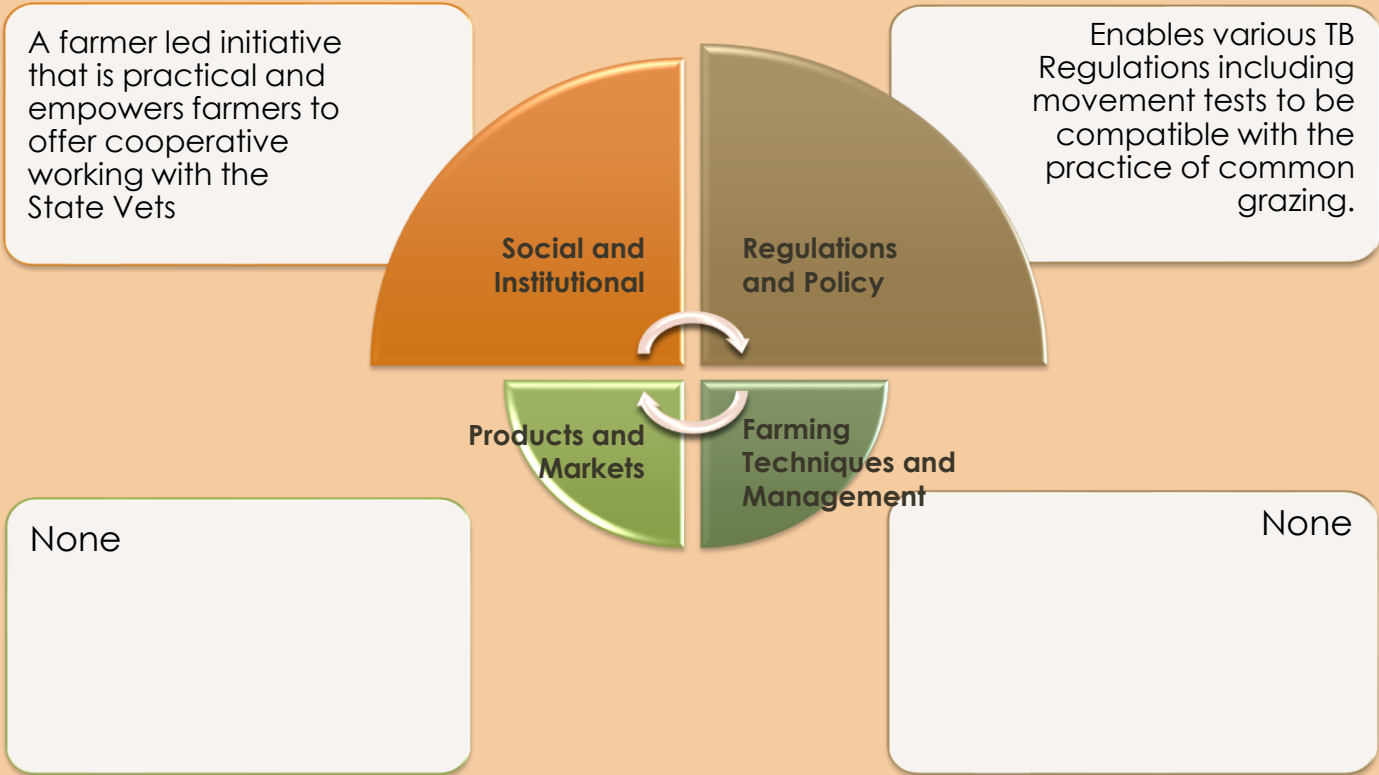


Cattle grazing is an essential ingredient of HNV farming on the commons and loss of cattle grazing was already a significant issue before TB. When South-west England became a high risk TB area, with strict and onerous biosecurity rules in place, cattle farmers faced impractical Regulations. This resulted in some farmers deciding not to put cattle on the commons and many more farmers considering such a move. Two out of every 3 farmers on Dartmoor will have been affected by TB in the last two years. When under restriction options for farmers are few; 29% sell to approved premises (not possible for hardy slow growing cattle breeds) but the rest (71%) have to keep the cattle on the farm until the herd tests clear. This has huge practical implications – no silage, hay making and high costs. Farmers say ‘TB could be the end of grazing cattle on the commons; not the disease, but the rules’. (It has already led to a tendency towards finishing of cattle, rather than the traditional selling of stores and this has implication for breed type).

Achievements

A Common’s TB Control Plan enables the state vets to undertake a risk assessment that may allow cattle to return to the common. The plan also reduces the need for post movement tests on the common (impractical) and introduces the concept of holding areas (to be treated as part of the common) allowing free movement between the holding area and common without incurring need for movement tests. Reducing the burden of impractical regulations allows cattle farmers to continue to graze the moorland. The process encourages better dialogue between state vets (APHA) and farmers.

How does the TB Control Plan respond to the HNV LINK innovation themes?



Social and institutional:

Communal grazing has a unique set of issues that new TB Regulations failed to recognise. Dialogue between state vets and farmers led to collaborative working to secure a solution. Although cattle herds are “hefted” or “leered” to specific parts of the common and rarely mix with other cattle on the same common policy makers assumed otherwise. Demonstrating that farmers could work together and consider the implications of a TB breakdown in a neighbours herd gave the vets confidence in the proposals.

Regulation and Policy:

Regulations and policy are rarely designed for common grazing resulting in impractical and poor practice. Examples include: 1. all cattle movements over 10 miles requiring a movement test. 2. Post movement tests when leaving the common – impractical because the facilities to retain and test on the common do not exist.

The process that made it happen and critical factors for success

- Farmers sought solutions and contacted APHA.
- Certain individuals in Defra/APHA willing to progress practical solutions.
- Investment of agency staff and farmers' time. Production of maps and communication with farmers undertaken by commons' associations.
- Series of 5 meetings with agency staff (4) and farmers (5) produced draft plan for wider consultation.
- Change of APHA staff threatened process as new staff/vets not aware of plans.



Defra proposed new regulations in January 2014. after concerns raised by farmers/commoners Defra officials visited Dartmoor. Critical meeting between three AHVLA (now APHA)vets and six Dartmoor commoners in February proposed idea of plan to provide necessary info for risk assessment and better understanding of how commons/cows operate. Drafts exchanged between APHA and farmers, led to agreed process by mid summer.

Critical to success was certain individuals willing to contribute time and expertise alongside a willingness by APHA staff to find a practical solution.

Recent changes of staff within APHA threatens the process due to a poor understanding of the plans and how they operate. Failure to ensure new staff are made aware of previous agreed procedures and process now of concern. However, the innovations are significant enough that they should be taken on board at a higher level in APHA and rolled out with local adaptation in other high risk TB areas of the UK – failure to do so thus far is extremely disappointing, given the supposed commitment to ensuring that control measures are risk based.

Lessons learnt from this innovation example, and its potential replication

- Collaborative working between farmers (practical) and policy/regulators resulted in better understanding plus a solution.
- The approach of a plan and holding areas are now applied to other commons in south-west England
- There needs to be willingness to participate in discussions and to produce a solution from all parties.



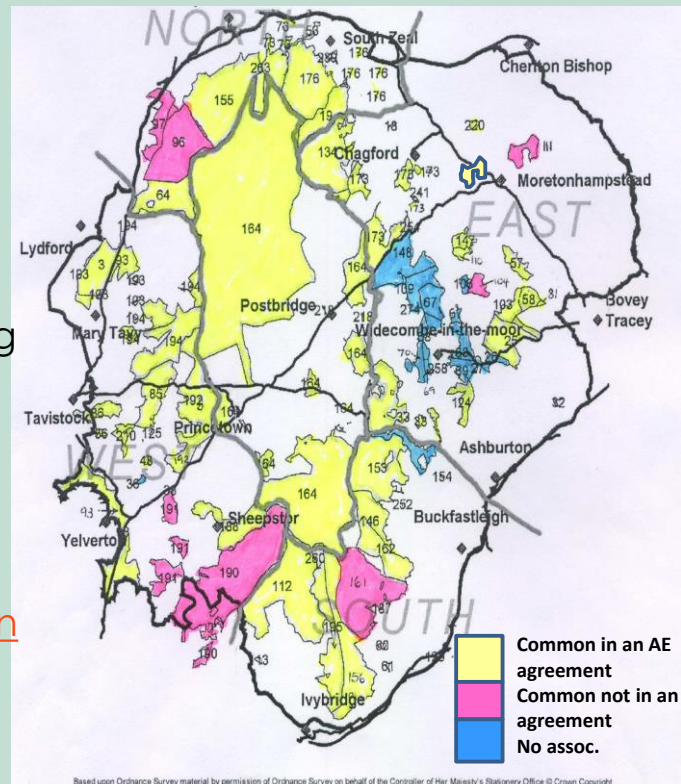
The policy-makers had failed to recognise the significant difference between common grazing and herds kept on one enclosed farm. Farmers prepared to explain the differences can be very successful.

The principle of joint working between practitioners and regulators is easily replicated but requires engagement and element of trust from both sides.

UK, Dartmoor – innovation example 5

Dartmoor Commoners' Council

- **Location:** Dartmoor, UK
- **HNV system:** Extensive grazing, cattle, sheep and ponies on rough upland pastures
- **Scale of operation:** 36,000 ha.
- **Timespan:** Established in 1986, ongoing
- **Keys to success:** Governance with legal powers that is farmer led and elected from the local farming community.
- **For further info:**
<http://www.dartmoorcommonerscouncil.org.uk/>



Problem being addressed:

A Dartmoor Commons Association was formed in 1954, a federation of 32 local common's associations. The Dartmoor Commons Association lacked enforcement powers and remit to ensure the number of grazing animals did not exceed an individual's common rights, correct animal husbandry on the commons and the appropriate management of the common land. Specific issues included damage from winter feeding, erosion and over burning.

Story in a nutshell:

The old Dartmoor Commons Association worked with the DNPA and Devon County Council (who largely funded the work) to secure new legislation - the Dartmoor Commons Act 1985. This legislation enabled the formation in 1986 of the Dartmoor Commoners' Council with enforceable powers (the Regulations) to manage the commons.

The Council is composed of <28 members, 20 of which are elected from the local farming community, 2 from the National Park Authority, one from the Duchy of Cornwall, two co-opted members and a veterinary surgeon. A chairman is elected from the within the Council who is responsible for ensuring the Council's business is undertaken correctly. A member of staff (secretary) is employed to ensure the register of rights is updated and correct together with supporting the commoners with issues relating to their rights.

The Council's Regulations address animal husbandry (health, condition and no bulls or rams), timing of grazing (reduced winter grazing) and the burning of the vegetation.

All farmers wishing to activate his/her rights and graze animals on the common land must pay an annual fee to the Council. The revenue so raised enables the register to be maintained and the functions of Council to be fulfilled.

The number of registered grazing rights on Dartmoor is impressive; totalling some 95,745 livestock units that can be used for sheep, cattle or ponies (most rights state which animal they refer to).

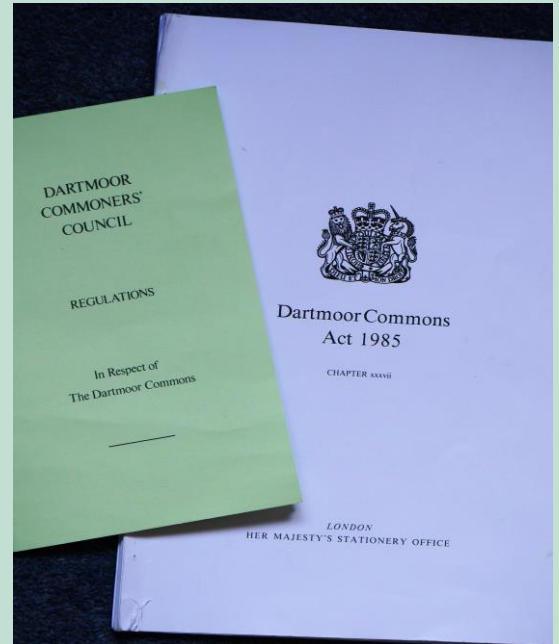
In practice the numbers actually grazed today are much smaller, and although 915 farmers register their rights to graze (78,985) many farmers choose not to activate their grazing.

Council has imposed regulations that require all graziers to remove their stock (except ponies) for “clear days” to ensure all stock are properly marked, in good health and are grazing within their permitted area. Farmers failing to register their rights and found to be grazing stock can be fined as can any grazier who fails to abide by the Council’s Regulations can be taken to court and fined and their animals removed from the common. In practice these powers are rarely used (3x in 30 years) but act as a deterrent for poor behaviour.

For 30 years the Dartmoor Commoners’ Council was unique as a Council in Britain. The 2006 Commons Act enabled other councils to be established. Two other Councils are being established with a third group of commoners considering applying

What does Dartmoor Commoners' Council achieve for HNV farming?

- ▶ Council can regulate stocking rate and timing of stock on the commons
- ▶ Numbers of feral ponies controlled
- ▶ Improved health of grazing animals
- ▶ Negotiated improved TB Regulations and equine movement regulations



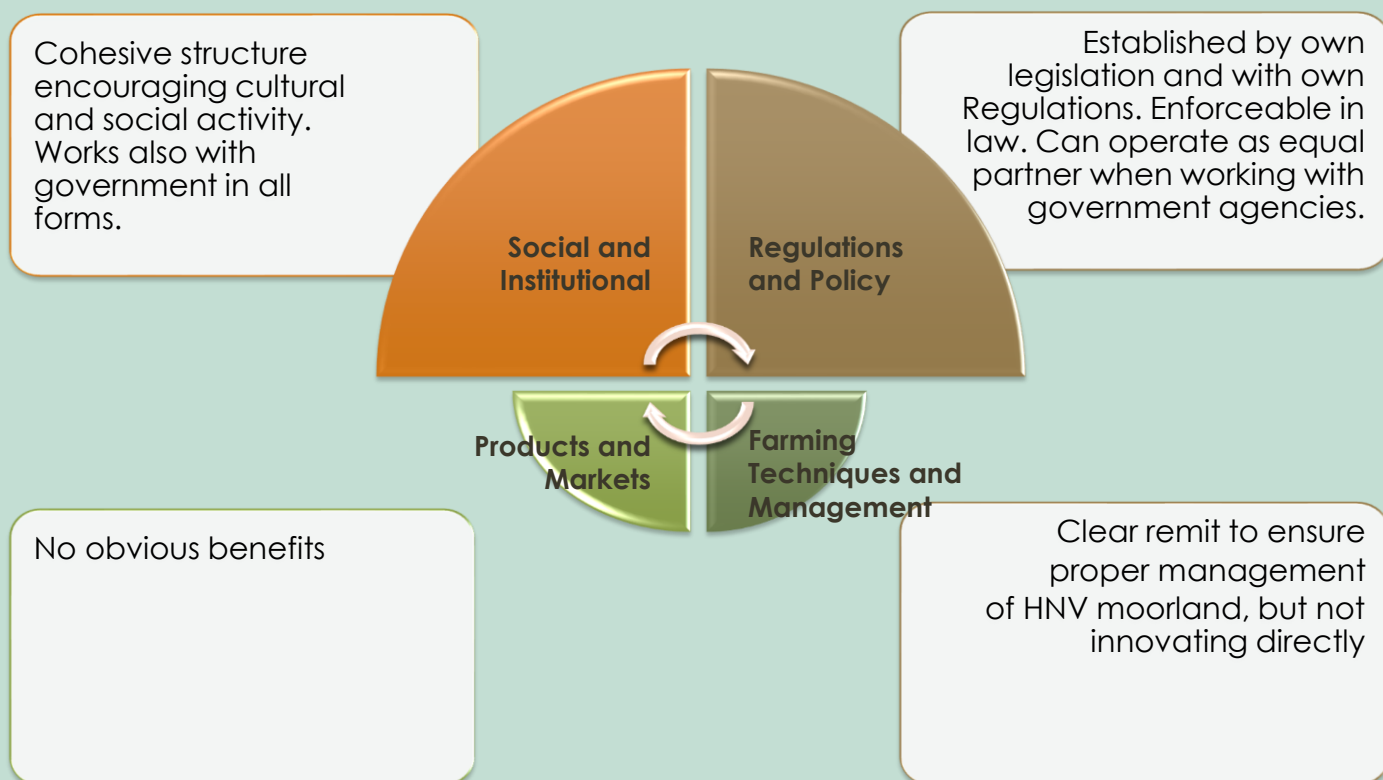
Achievements

An up to date register of rights, ensuring grazing animals do not exceed rights. Prior to the Council become established in 1986 the commons were considered (by many observers including some commoners) to be over stocked resulting in damage to the condition of the HNV vegetation (particularly blanket bog and heaths), the moorland was burnt too frequently and the areas burnt were too large and the livestock were in poor condition. There was also some abuse of grazing rights with farmers grazing more animals than their rights permitted.

Council's Regulation and subsequent enforcement have addressed:

1. Good husbandry of all livestock on commons; grazing animals hefted/leered, animals properly marked, diseased animals removed from the common and restrictions on stallions, bulls and rams.
2. Ensure commons not over stocked; introduction of clear days, counts and checks.
3. The conservation and enhancement of the natural beauty of the commons, HNV farming by controlling burning, prohibiting motor vehicles and stock prohibition periods.

How does Dartmoor Commoners' Council respond to the HNV LINK innovation themes?



Social and institutional:

The Council acts as a voice and sounding board for all issues. Encourages social cohesion and ensures cultural issues are not neglected and recognised as important drivers for wider Dartmoor management including HNV farmland. Ensures commons are better understood.

Regulations and Policy:

Council is established by Act of Parliament and can enforce powers through its own Regulations. Initially this was essential to ensure respect for enforcement, though by now, conformity has become normalised. A statutory function enables dialogue with policy, political and government officials.

Products and Markets:

No direct links.

Farming Techniques and Management:

The Council's Regulations require good land management, good animal husbandry and the continued functioning of the commons; regulating grazing to ensure HNV farmland is maintained and enhanced.

The process that made it happen and critical factors for success

- Influential leaders from within commoning community
- Support from local authority (Devon County Council) providing expertise and funding
- Self funding from levy on rights
- Council comprised of farmers from all parts of Dartmoor, elected by their fellow commoners.
- Addressed issues of concern (damage from winter feeding, over burning, erosion related to horses and over grazing).
- Fortunate in having a series of committed, well-respected chairpersons and excellent administrative staff.

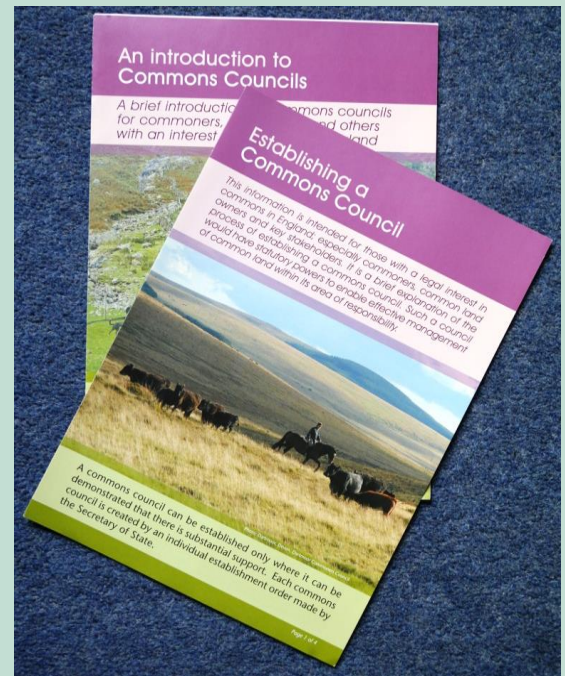


The large number of commoners (850) and the large number of rights of grazing (145,000 for sheep, 33,000 for cattle, 5450 for ponies and 12,330 for non specified animals), even though not all of these are active/used, provide the critical mass necessary – through the payment of grazing fees - to deliver the capacity to provide regulation and enforcement, including an annually-updated register of rights.

The emergence of leaders from within the farming community has been a vital part of the Council's ability to command respect, but the role of it's paid staff and its unpaid chairpersons is also key; failure to find appropriate people would be a severe blow to the Council's work and the unpaid nature of the onerous role of chair makes it a potential Achilles' heel.

Lessons learnt from this innovation example, and its potential replication

- The model of DaCC is successful securing better management and less abuse of grazing rights.
- New legislation in 2006 enable Commons Councils to be created. So far 2 have been established.
- The model is applicable for different scale of common land, on Exmoor for 1 common and on Dartmoor for 32 separate associations.
- Establishment of a Council requires commitment from the commoners, new legislation and funding for legal fees and facilitation. Once established a Council can be self-financing.
- There has to be sufficient income to provide the necessary staff and reward work undertaken on behalf of the Council by its members and officers.



The benefits of a Commons Council: Those common associations considering establishing a commons council have identified a number of potential benefits:

- Regulation in respect of stock numbers and land management.
- A mechanism to overcome disputes and resolve long standing obstacles associated with land management and funding.
- Providing a consistent approach to divisive issues across a number of associations and commons. Such issues include the process of dealing with the number of rights held by individuals on a number of commons, clarifying the role of active and non graziers and reaching agreement with the land owners.
- A means of addressing disease control, bio-security and stock welfare.
- Removing the power of veto through the introduction of majority voting.
- The preparation and maintenance of a record of grazing rights (i.e. a live register).
- Empowering commoners and providing a stronger single voice.

Potential issues: Capacity to fund and steer the establishment process; sufficient members (commoners with an interest) to raise sufficient income; plenty of time to secure agreement and participation, inclusive for all commoners; availability of good support staff etc. and an awareness that funds need to be set aside to pay for them

Replication: The Dartmoor Commoners' Council model was used to inform new legislation, the 2006 Commons Act, that enables the creation of new councils for common land throughout England and Wales. To date only two areas of common have successfully applied for Council status and both still wait for Government approval of their regulations before they can become active. The process has proved expensive (Government has funded some of the process), complex and very slow, the capacity of Defra to respond and support is very poor. A third group of commoners (Cumbria Federation of Commoners) has agreed to apply for Council status but the expense and slow progress is acting as a deterrent.