A thematic network on High Nature Value farming
Learning, Innovation & Knowledge

Learning Area *"Western Stara Planina"* (Bulgaria)

INNOVATION EXPERIENCES AND NEEDS

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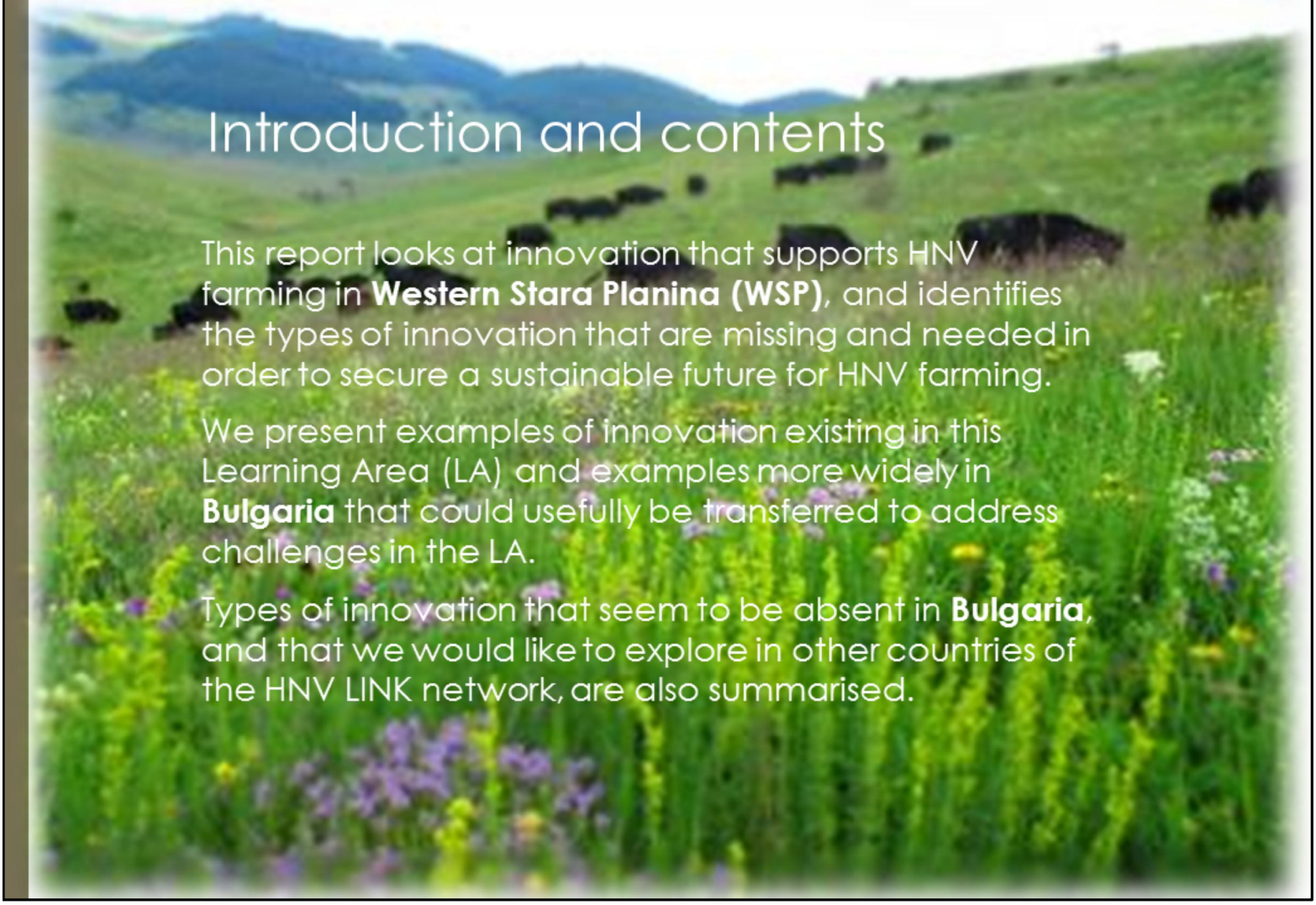

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The challenges facing HNV farming in Western Stara Planina

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.


Juniper and scrub invasion in WSP


Mowing and cutting of scrub and trees is offered as a service in the LA

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.

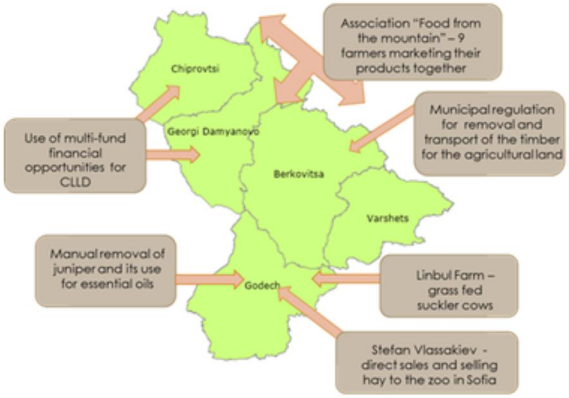
Overview of innovations in WSP

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-Berkovitza 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

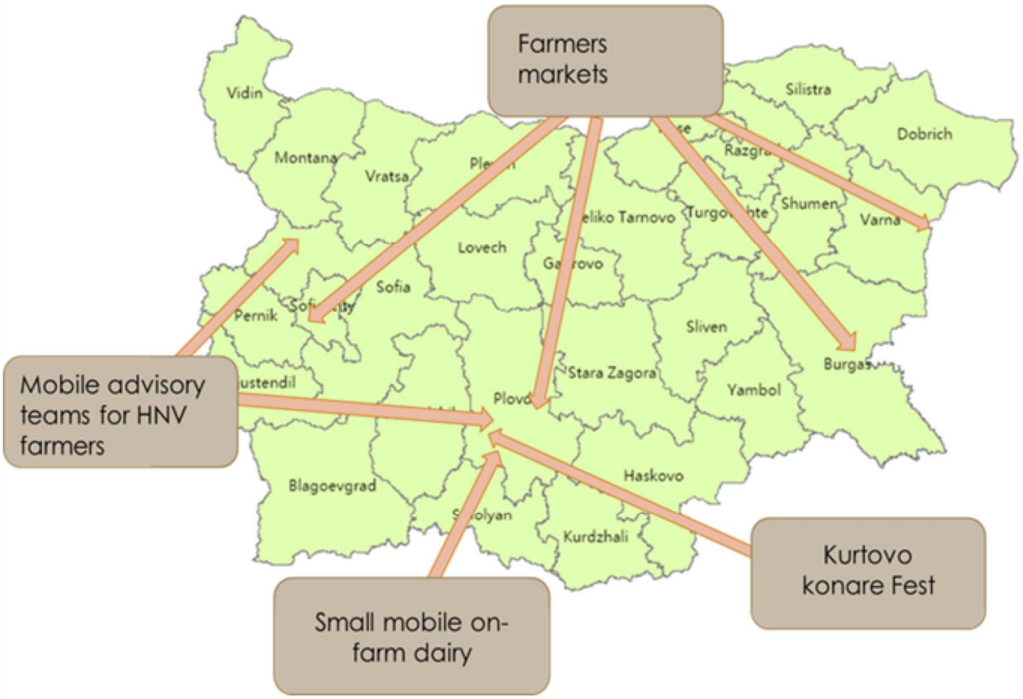
Farm techniques and management - innovation needs	Possible approaches
Improve farm productivity and modernization of the HNV farms	New farming technologies and equipment adapted to Natura 2000 requirements
Prevent/reduce the diseases on grazed animals and extensive crop production	Natural plant and animal 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 framing 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 Rodophi 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

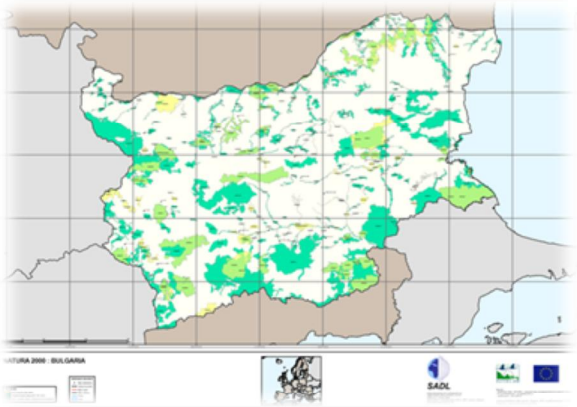
Location: Natura 2000 designated sites in Bulgaria (33% of the national territory)

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:

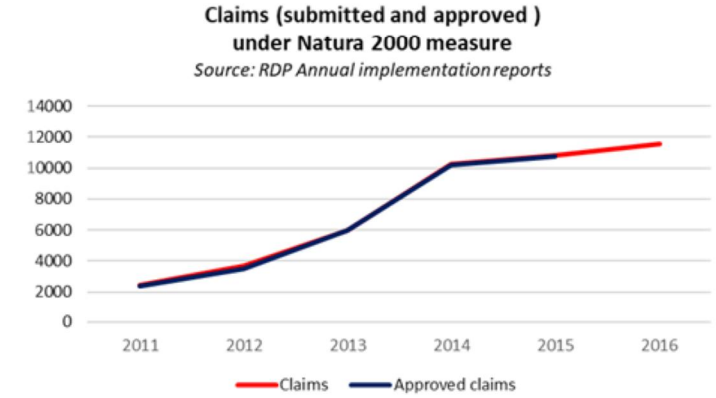
- Ban on the removal of landscape features (hedges, single and group trees);
- Prohibition of mowing before 1 July;
- Prohibition of ploughing and afforesting meadows, pastures and commons and turning them into arable land and/or permanent crops;
- Prohibition on the use of pesticides and mineral fertilisers 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.

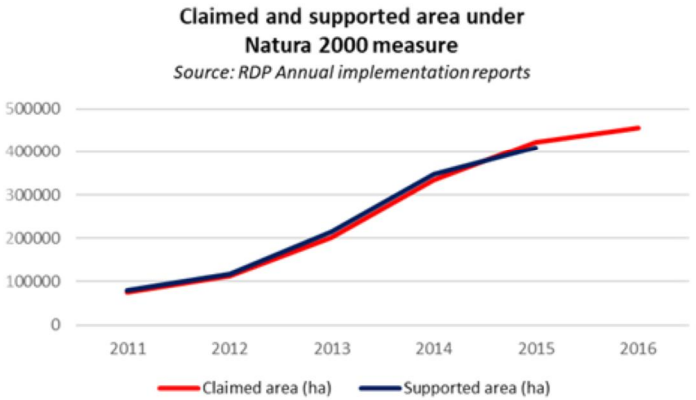
Story in a nutshell

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





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.

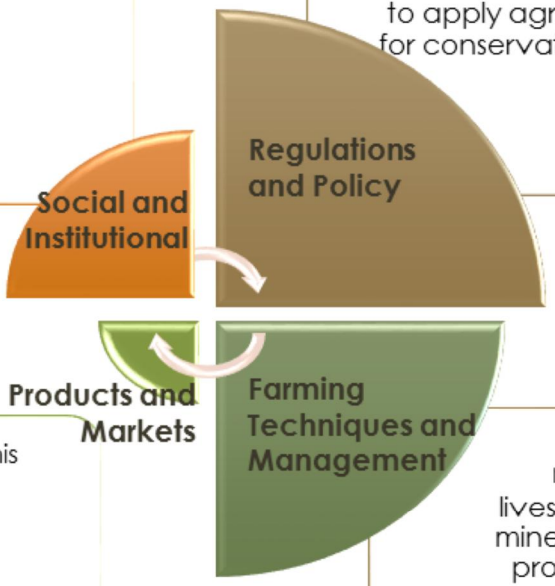
Economics of HNV farming

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?



Farmers as well as Municipal offices of MAF that implement the measure become more and more aware of the location of Natura 2000 areas in their territory

Use of RDP Natura 2000 measure as incentive to farmers to apply agricultural practices for conservation of biodiversity in HNV farmlands

No specific contribution to this theme.

Promoting Later mowing periods, lower livestock density, no use of mineral fertilizers and plant protection materials, slow mowing machines and biodiversity friendly mowing practices

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 steppic grassland, 6250 Pannonic loess steppic grasslands, 62A0 Eastern sub-Mediterranean dry grasslands , 62C0 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.


"Cleaned" Natura 2000 grassland in WSP

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?

Blog and FB page explaining the benefits of the grass-fed livestock breeding. Participation in projects and trainings.
Dialogue with conventional farmers in the region.
Cooperation with livestock breeders associations.

Participates in HNV grasslands Agri-environment measure in 2007-2013 period. Works actively for improvement of the legislation for allocation of municipal grasslands and RDP measures.
Natura 2000 measure

Direct sales to final customers
On-line orders (FB and blog)
Various packages:
- Mini barbeque – 3 kg;
- Tasting package – 5 kg;
- Family package – 10 kg

Cooking recipes
Feedback from the clients .

Only grass-fed livestock breeding.
Maintenance of HNV and Natura 2000 grasslands.
Trials for natural juniper control.
Restores 300 ha HNV municipal grasslands but after 5 years municipal authorities allocate them to another farmers. Rotational grazing and electric fences.

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.

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.

Food from the mountain logo


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.

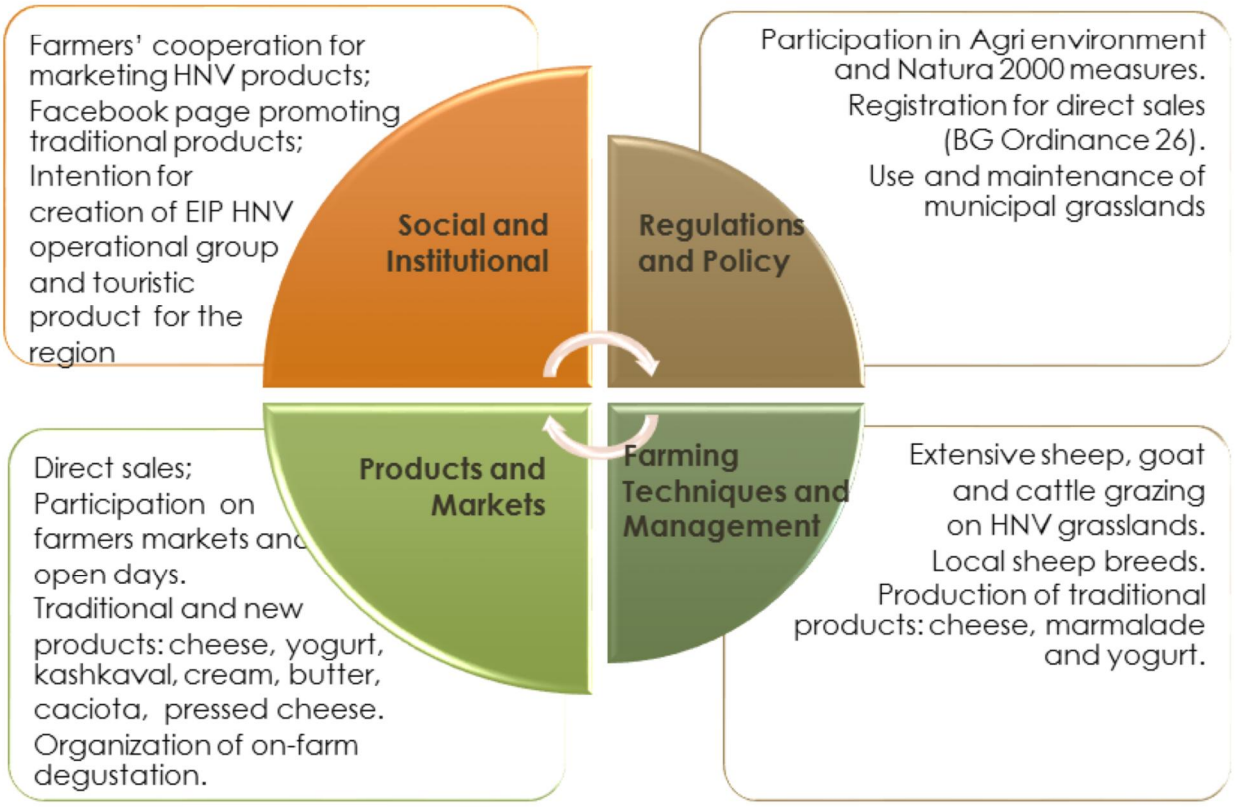
Economics of HNV farming

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 mobile advisory teams became a trusted partner both for farmers and for the regional MAF and PA services.
They organised trainings and exchange of experience on HNV conservation issues.

Development and implementation of pilot agri-environment scheme for conservation of HNV grasslands.
Development and implementation of pilot Natura 2000 scheme
Initiating implementation of Natura 2000 scheme on national level.
Proposals for simplifying the rules and procedures of the national AE measures.

Support for the organization of fests, open days and exhibition at local, regional and national level.
Advices on the direct sales and marketing of HNVF products

Consultation and advice to HNV farmers on:
- HNV farm techniques and technologies;
- Compliance with EU hygiene rules;
- Good agricultural practices

.

The process that made it happen and critical factors for success

- GEF funding for the project so that BSBP 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.


HNV grasslands in Ponor mountain (WSP)

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.

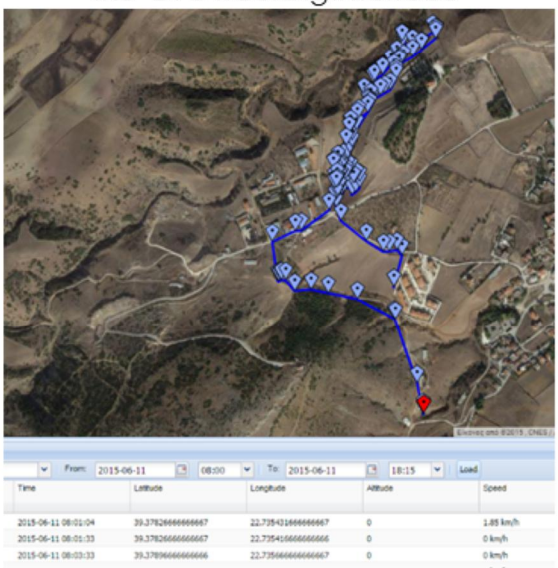
Could it be rolled out on a bigger territorial scale? What would be needed to do this successfully?

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.

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.

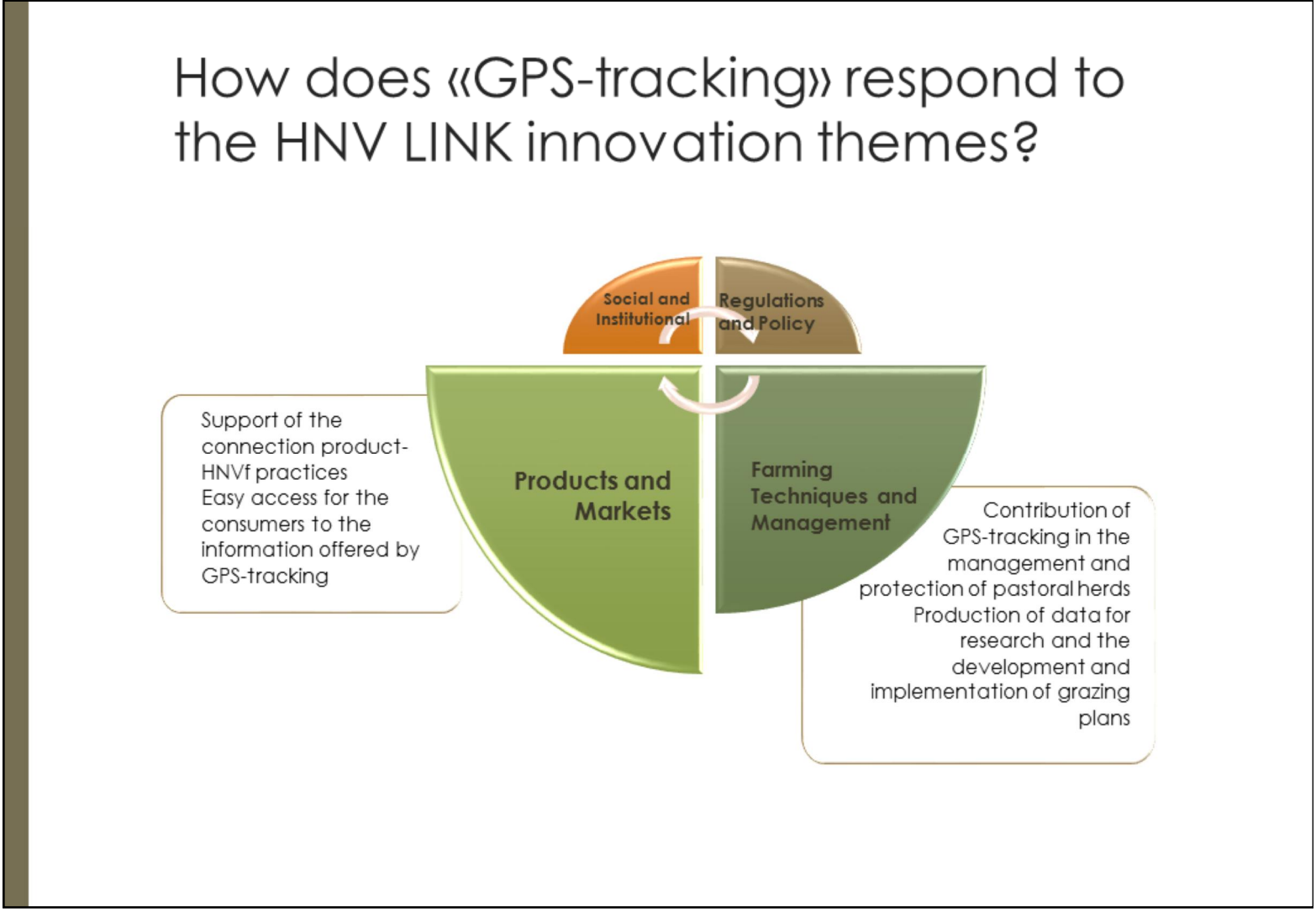
Economics of HNV farming

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.



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)

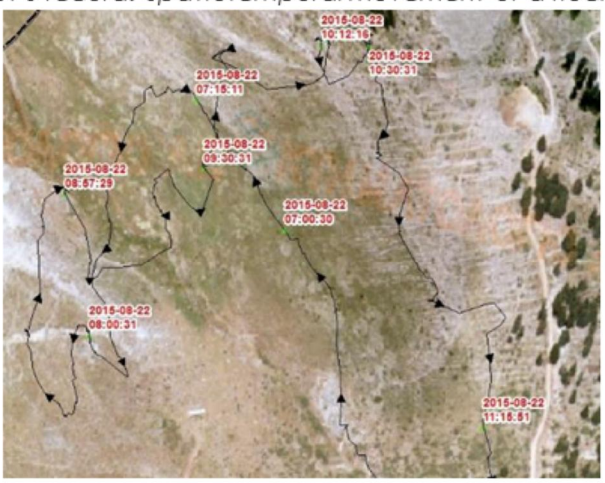
(b) Familiarization of producers with advanced technological tools on diagnosis and space management (using GPS - tablet – smartphones)

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

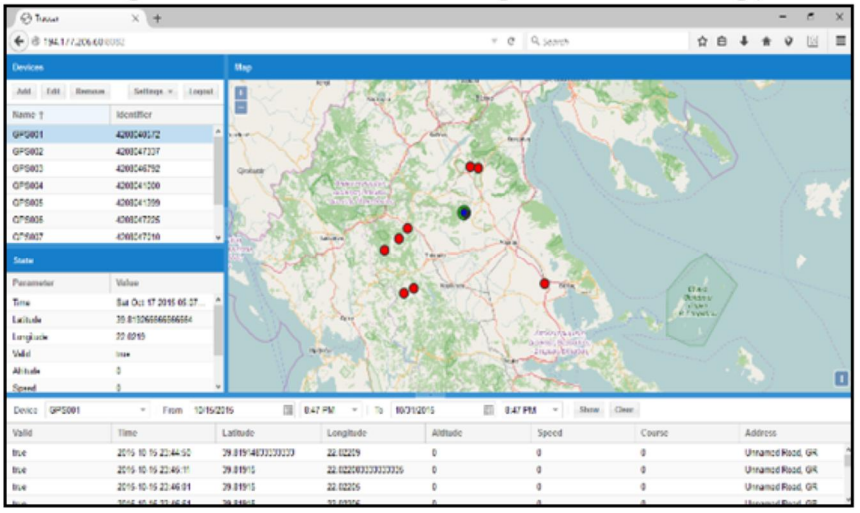
  (b) on the tracking of the herd (use of tablet - smartphone). However, in many cases new farmers are familiarizing quickly with new technologies minimizing thus the learning curve
- Finding the funds for the installation and operation of the system. Fixed costs: buying a server, GPS devices and their 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.