

## ANNEX 1 – DOCUMENTS FOR THE ELABORATION OF THE CASE STUDY MATERIAL TO BE INCLUDED IN THE E-LEARNING COURSE (IO2).

### 1.A - Case-studies by country: Greece

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**Case-Studies on innovative development in Peripheral Rural Areas**  
**Part A – Introduction to PRA –Baseline Assessment**  
*Corresponding to Module 2 – e-learning course*

Title: Introduction to **mount Pindos, Greece**, Peripheral Rural Area



## Introduction to Mount Pindos in Thessalia (Greece)

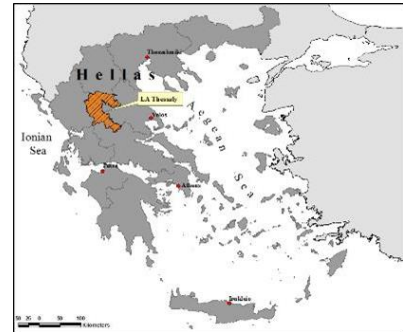
The **mount Pindos** in Region of Thessaly is a mountainous geographical unit of high historical importance in Central Greece. It covers 4200 km<sup>2</sup> with the altitude range of 250-2,400 m above sea level.



Picture 1. Achelous' valley

Mount Pindos is an area of permanent pastures and meadows, natural grasslands dependent on agricultural activity, and cultural heritage elements.

Farming systems are extensive agro-sylvo-pastoralism: extensive sheep and goat farming in coexistence with intensive and irrigated agriculture, natural aromatic and medicinal plants. Diverse practices in the area include shepherding, artisan cheese making, agrotourism activities, cultural activities, small agro-food entrepreneurship. The main land cover is wooded vegetation (shrubs and trees with some grassland and arable plots) and is characterised by small-scale agriculture of crop cultivation and extensive livestock production.



Map1. Location of the mount Pindos study area

Geologically, **Pindos mt** is characterized by two types of rock material (Oligocene marly (limestone) sandstone leans - flysch). From a pedology side of view, acidic soils rich in organic matter (coming from forests) and clay (podzolic soils) dominate the area. [*fertile substance (humus) at a lower rate / Most soils are gravelly or red (terra rosa), rarely deep*].

**Pindos mt** is covered by two slightly different climatic zones: (a) over the Pindos' mt foothills: In a strip about 20 km wide from the foot of the mountain, rainfall is much higher (>800 mm) than the plain. Early autumn rains shorten the drought period. (b) Pindos' mt inland: mountainous Mediterranean climate with a significant drop in the average annual temperatures/ plenty of snowfalls and rainfalls (annual precipitation height over 1,000 mm).

There is a dense network of watercourses, plenty of groundwater resources and many springs. In the westernmost part of the, Pindos mt major rivers like Achelous and Pineios, originate.

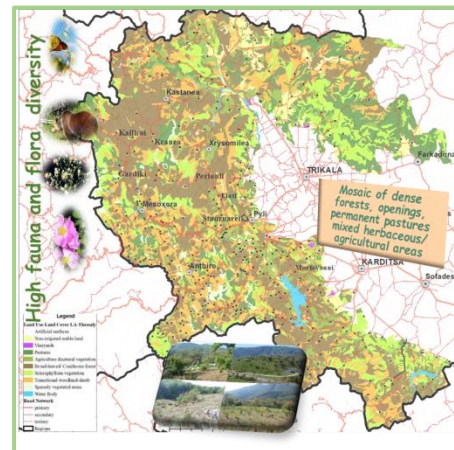
At Pindos mt medium elevations evergreens and broadleaved vegetation i.e. Mediterranean elements, prevail. Then a zone of oaks follows and at higher elevations coniferous trees are dominant, with most characteristic the black pine (*Pinus nigra*). At the same time even higher trees of beech and white pine appear. Between 1,400 m and 2,600 m *Pinus leukodermis* emerges. Land cover at this height becomes sparse. The treeless and steppe-like pastures appear higher in altitudes. As a result of grazing, new plant formations are appearing (fern, kermes oak, phrygana...). There is intense vegetation along the watercourses (plane trees, alder trees). Finally, the limestone soils (Koziakas zone) is the area where kermes oak (*Quercus coccifera*) grows, always accompanied by *Phillyrea media*, and gives a shrub vegetation or a formation of micro-shrubs from non-edible species (*Poterium spinosum*, *Phlomis fruticosa* etc). The study area, lays in parts of five Natura sites, within Greece's biggest National Park, i.e. Tzoumerka National Park, and specifically the sites Aspropotamos (GR 14400010), Kerketio Oros (GR 1440002), Koilada Acheloo kai Ori Valtou (GR 2110006), Limni Tavropou (GR 1410001) and Ori Agrafon (GR 1410002).

Currently, a process of socio-economic recovery is unfolding. Young farmers and new entrants in agriculture are receptive to the many values the society attributes to the High Nature Value character of the area. Many initiatives are underway to strengthen recognition of the multifunctional role of agriculture in the area by consumers and society-at-large.

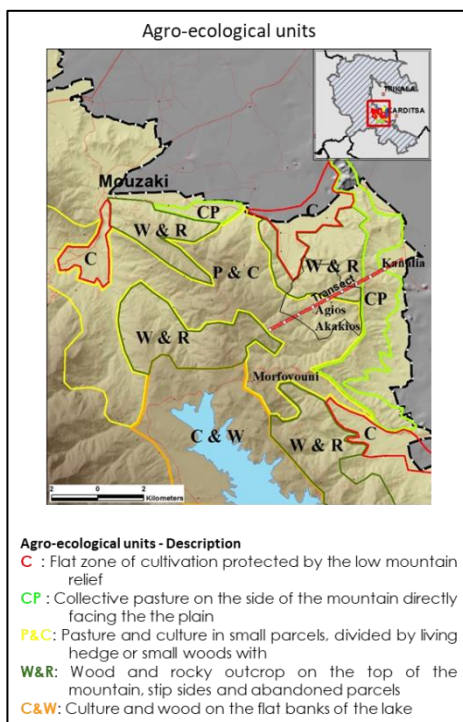
## PRA – Pindos mt FEATURES

### 1) Environmental values

In Greece, the criterion of the existence of a biodiversity friendly farming system in order to characterize an area as HNV area has not been explicitly used, mainly due to the deficient national biodiversity policy prior to the Natura 2000 zones by EU. Hence, these connections remain to be studied and established by identifying the specific agricultural infrastructure elements and/or land use and management practices that enhance the role of agroecosystems as habitats for specific plant and animal species. These landscape features and beneficial practices must be maintained and further developed in order to preserve and strengthen species' population.



For Pindos mt this implies:



a. The pastoral management of sheep and goats' flocks. The movement and the long outdoors permanence of flocks is an enhancing factor for predators and carrion eating animals (eg gyps fulvus).

b. The rich in biodiversity interface points and ecological routes (e.g. ecotones like the intermediate zone between pasture and agricultural land) of the subsystems are abundant common and scattered in large extensions in the area. The mosaic landscape with a mixture of land uses and management practices applied, includes features (e.g. hedgerows, tree fences, terraces, streams, small ponds, trees and bushes, clumps etc.), creating a very valuable biodiversity network.

c. The small size and the disperse individual parcels carries high complexity and an increased length of the transitional areas.

Pindos mt hosts a high faunal diversity, including many Special Bird Protection Areas. The study area is the habitat of an amazing bird fauna since at least 67 bird species have been recorded. Nonetheless, the flora is also quite rich with 850 plant species recorded in the territory. Pindos' mt flora also includes a great variety of medicinal and aromatic herbs,

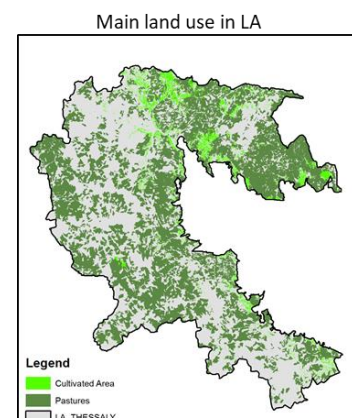
among others.

Flora endemism rate exceeds 35%, and comprises over 650 species and subspecies. Some of which belong to IUCN's Red List Index of Threatened Species.

### (2) Agro-economical values

Pindos' mt agricultural holdings (4.084) remain attached to managing low-intensity High Natural Value farming systems which is positive the biodiversity rich landscapes. However, some holdings in NE of the mountain either use intensive farming practices in the framework of mixed system or by choosing land concertation instead of livestock farming although HNV farm habitats, like semi-natural pastures are still a functional part of holdings.

Pastures are mainly public and communal previously managed as commons. However, the CAP subsidy system made necessary the attribution of entitlements to individuals. Agricultural land is limited to the natural valleys. Extensive and transhumant livestock systems



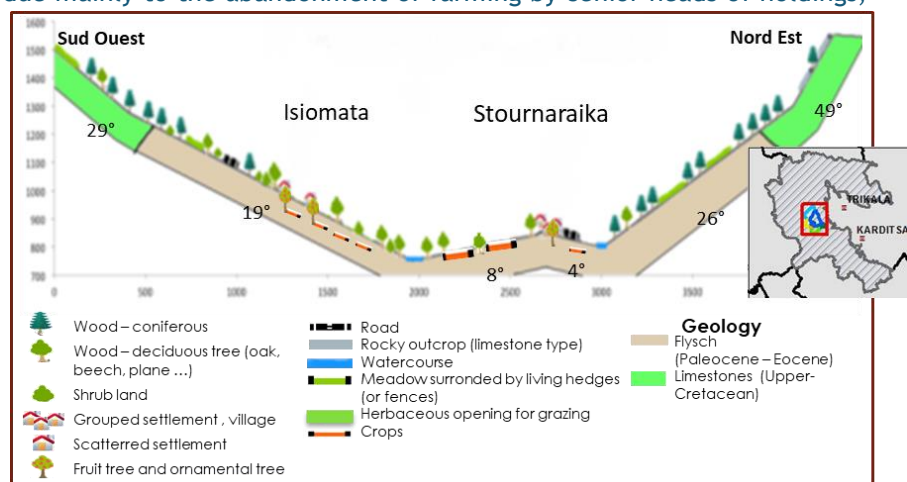
are dominant utilizing local animal breeds and pastures of the area.

Free-range cattle's breeding is oriented towards meat production. Plant production is limited to traditional crops (forage, vineyards, legumes, trees etc.).

The importance mixed holdings in terms of agricultural land and biodiversity management, is not acknowledged. Intense decrease in the number of livestock holdings with permanent installations has been observed mostly in west Pindos mt. Transhumant farmers are covering this gap with their herds (333 holdings) whose average size ( $\approx 324$ ) is approximately double of the resident average (177 animals). Organizing rotational grazing and chaise of pastures followed traditional distribution rules (e.g. dependent on family tradition, size of the herd).

There is currently an abandonment of remote pastures and over-grazing of nearby pastures and parcels, even nearby the settlements, which is included at the livestock holding's grazing system.

The holdings' long decline is due mainly to the abandonment of farming by senior heads of holdings, who entered the profession, between 1960-1970. However, this long trend conceals internal structural changes caused by the creation of new holdings. Besides, on last years, there has been a shift towards sheep breeding, cattle and mixed holdings and partially towards new dynamic cultivations by the new entrants, while the number of arable holdings continues to decline.

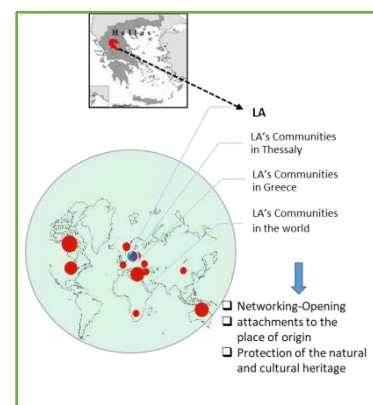


There is an increase of intensive production model, adopted by the national agrifood policy complex since the late 1950s, and the fact that this model was applicable only to the lowland areas, limited the CAP's role to a mere economic relief of mountainous Pindos' mt Farmlands.

### (3) Socio-economical values

Demographically, the area is characterised by a persistently decreasing population (33.028 inhabitants in 2011)

**Population-:** the area has an aging population distributed in 297 villages (4,084 farmers of which 800 > 65 years old). During the summer, the population is multiplied, due to the transhumant activity and the return of a significant number of non-permanent residents originating from the area (Diaspora<sup>1</sup>). West Pindos mt is more sparsely populated and thus with less permanent activity (it is dominated by transhumant farmers). Basic services are provided in towns located at the Pindos' mt limits and the cities of Karditsa and Trikala (80.000 and 60.000 inhabitants respectively). Its' road network addresses the needs of livestock breeding, tourism and diaspora's returning to their homeland but the relationship time-distance/services still remains problematic.



<sup>1</sup>Diaspora referring to 3 levels: international, national, regional

Economy is based on pastoral farming, small-scale agriculture and agri-tourism. The primary sector is estimated to account for approximately 60% of the total active population. Agricultural production is oriented to self-consumption, milk is processed at cheese dairies of entrepreneurs from the Pindos located to the plain. Local products' (e.g. flour, aromatic plants, desserts, trout, honey, etc) and services (restaurants, accommodation and alternative forms of tourism) are offered to diaspora and tourists.

#### 4) Institutional values

Spatial and Development planning plays an important role in the area. The latest administrative reform (2010) consolidated the Pindos' mt settlements in 7 extended municipalities where livestock farmers are less willing to participate in cooperatives while individual farmers establish informal professional relations with cheese makers. At the same time, thanks to the diaspora new cultural associations and novel co-operation initiatives appear, which are perceived as indications of a social capital formation process.

Actors: Permanent, settled and transhumant producers and “providers” of touristic services. Diaspora's associations active in the protection of natural and cultural heritage and the diaspora members individually as land and house owners. Local public administration and the municipalities increasingly become actively involved in natural resources management.

The existence of two (2) development agencies (LAGs) in the Area is key for the implementation of European rural and regional development projects and policies.

Timeline: The changes observed in the case study area at the intermediate intervals, as they are illustrated below, have been provoked by transformations, either political and/or socio-economic, at the European and national levels, and created today's profile.

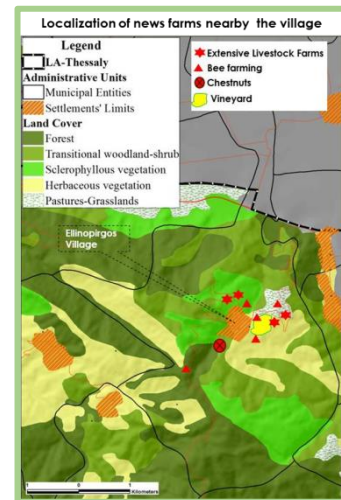


The key issues faced by the area are sustainable pasture management, managing high fire risk, and lack of extension services and advices especially for the livestock sector. There is a clear need for innovative practices as well as tools for improving the viability of extensive farming systems and to promote synergies between extensive systems and in efficient use of local natural resources. The area has seen several important innovations in increasing added value from the resources through a participatory guarantee system to producers, integration of stakeholders, marketing and territorial development.

## PRA Pindos mt - Weaknesses and Challenges

### A. Weaknesses

- Scarce support of specialized groups (technicians, facilitators, researchers).
- Cooperative organisations are minimal while clusters are lacking, hence the absence of a local support and governance mechanism.
- Lack of strong professionalism and multi-stakeholder approach, within the farmers and the local actors.
- Tools and mechanisms that could showcase the quality attributes of local products and services are absent. The latter could exploit local traditional knowledge, facilitate its transfer, in managing farming systems and biodiversity preservation.
- Lack of management planning, at the level of holdings but also at communal level, and the insufficient institutional framework, intensifies existing problems within Pindos mt farming system.



Therefore, the main weakness in the study area, lays in the lack of planning, not only in the farming production system, but also in other sectoral initiatives/action or even spatial and land management. This means that any attempt to adopt participatory coherent approaches towards agroecology, require effort and time in order to reach maturity.

### B. Challenges

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

Pindos mt has a great tradition in pastoral-permanent and transhumant- livestock as well as in small HNV agricultural holding (mixed farming). Despite the rural exodus and the decrease in the number of holdings, the farming potential is still remarkable. Within this framework the prospects to support HNVf are connected to:

- the apparent reinforcement of the trends to adopt such systems due to the crisis, through the presence and establishment of new farmers from the communities of the diaspora,
- communities' capacity due to the positive role of diaspora and its participation in the development of agritourist activities,
- the turn of consumers towards quality and identity products.

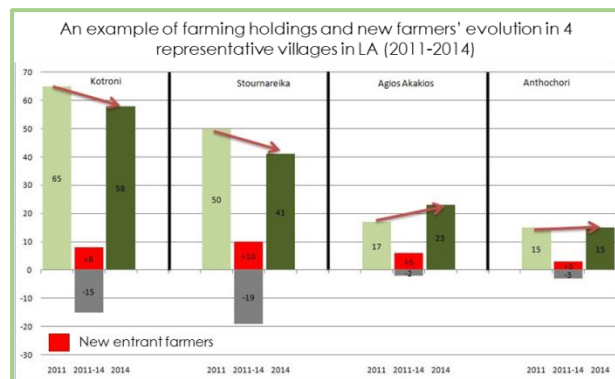
Therefore, the main challenge is to acquire the capacity, through new governance form, to design and implement a balanced recovery as a multifunctional area with HNV attributes. New opportunities arise with a concurrence of trends i.e. the will of some people to establish there permanently, the return of new farmers and entrepreneurs, the increasing interest of consumers', especially among the diaspora; and finally new policy measures. 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 level of the farm, community but also the wider Pindos mt area) combined with the promotion of their products in the markets.

## PRA Pindos mt- Opportunities and Strengths

### A. Opportunities

The continuing economic crisis appeared as an opportunity for the Pindos mt as it was associated first with the changes at the external environment (increased unemployment in the cities, but also a shift towards external markets where demand for local products is more intense) which directly affected the holding (excessive increase of influx and taxation, lack of liquidity etc.). This situation leads firstly to the countryside's emergence as an alternative employment area for unemployed urban dwellers originating from the countryside (especially Pindos mt)

and secondly to the mobilization of two important institutions: family and Diaspora. Pindos mt attracts for the first time after the exodus of its population (mid-20th century) an important part of its human and social potential in productive actions that take place within its borders.



It is clear now that the more marginalized part of the country has suffered less consequence from the economic crisis, compared to more developed areas. What also moderates the impact of crisis is the funding from the CAP and also an inexplicable shift of Greek consumers towards Greek products. The problem of the higher price of local products seems to be mitigated because the consumers are apparently adopting the view "less quantity and better quality". Finally, this effort to focus on local products is searching, with relevant success, for an alternative in foreign markets. Consequently, one

should focus on direct and indirect positive consequences of the crisis which are to name a few, mobilization for partnerships, structural changes in the institutional framework for flexible cooperation forms etc.

As far as the Diaspora is concerned it is certain that its role in the mountainous and island areas is traditionally strong, therefore is regarded a critical success factor for any proposal for the development of Pindos mt.

### B. Strengths

- The area contributes to the preservation and enhancement of the biodiversity and the sustainable development of the area.
- There is a long tradition of extensive pastoral farming, with high quality products that although it has been difficult to introduce to consumers, the market now is willing to look for. However, consumers are now aware for the products' qualitative attributes and their linkage with the area
- Existence of innovations (although still sporadic) within the area. Orientated towards environment and tradition and sustainable development. Existence of potential for developing new ones
- New entrants in the production chain (new farmers, new entrepreneurs, etc.) and diaspora are more willing to act either as consumers and as actors of an effort for Pindos mt development. This is also illustrated, by some new networks and collective efforts that have appeared in the area aiming at a holistic strategic development plan (i.e. PINDOS Network of the 5 local authorities).



- Existing institutional actors (LAG's, Local Authority, Nat,ParkManag. Authority etc), due to their participatory nature, can act as facilitators & coordinators in an integrated development attempt.

## PRA Pindos mt- Current and Future challenges

### Business as Usual

The business as usual scenario takes into account two main trends identified in the Pindos mt:

- ❖ the evolution in the number of holdings observed, as a combined result of cessation of agricultural activity, potential succession and installations of new farmers. In 2030, about 45% of heads of farm will have stepped down, being over 75 years old. This evolution is determined by the (low) renewal rate through succession (rather small, if we consider that the age of today's several leaders is >70 years old) and new installations.
- ❖ Continuation of pastures and crop land reconquest at least for in the most accessible villages. With varying grades of farming intensity from the most intensive use on the land around the settlements to land abandonment in the most distant ones. Without the introduction and implementation of land use management plans, especially when the installation of new farmers is concerned, there is a risk that the identified trend of forest expansion to pastures, decline of endemic plants and parallel loss of cultivated land and pastures through abandonment, could continue.

The resilience of these systems highly depends on the existence and effectiveness of policy measures focused on the support on HNVf systems. Without such measures the evolution in the Pindos mt will be determined by reinforced current trends: pastoral herds' spread without plan, with a parallel reduction of their number, especially of the small ones and enlargement of the herd size for the remaining ones.

### **HNV vision: *The sustainable reconquest of the region: building on participatory governance to better manage and promote the HNVf heritage***

The vision reflects the need to incorporate the HNV dimension into the evolving process of Pindos' mt re-conquest within the wider context. A dynamic conjuncture framed, on one hand, by the need to integrate environmental protection and quality of life as objectives in the development process, a demand that is gradually consolidated among consumers and, on the other hand, enforced by the socio-economic conditions created by the enduring crisis. This objective is achievable due to the fact that during the last decades, the reclaiming process, shifted from the approach of strict conservation and exclusion ("land spare") to another approach, supported by the communities of diaspora, where natural and cultural heritage management and its speciality production (eg. cheese-making) are integrated in a project that instead of excluding tourism, involves it as an essential part of the vision. The installation of a new farmers' body opens a new chapter for the productive exploitation of the significant local resources: high environmental value, a rich pastoral tradition and holdings that belong to the HNVf1 and HNVf2 category. In such a process, pastures' and their rich biodiversity and landscapes constitute the main assets.

A plan for the construction of a vision for the area is based on the utilization of the multi-partner scheme of the Pindos' mt social, economic and political actors and institutions (HNVf producers, diaspora, consumers etc.) from the public, private and social sector. Incorporating those partners in a horizontal governance scheme, promotes their coordination, by assimilating different ways of participation at the various policies (RDP, LEADER etc.) which are an important tool for promoting Pindos' mt sustainable reconquest. Such a governance scheme can better deal with issues such as native relations, the rising representation of the regional authorities, the combination of informal and formal institutional relations as well as knowledge.

In this cooperation and coordination context, planning an integrated intervention is required to effectively manage the pressures and impacts on Pindos' mt landscapes and biodiversity as well as the prevention of intensification and/or abandonment of farming. The proposed governance scheme and management plan, are called to highlight the way in which it is possible to overcome public

intervention deficiencies e.g. policy failures. But also to support the multifunctional role of Pindos' mtHNVf systems at the scale of every community landscape.

Link to further information and sources:

<http://hvnlink.eu/download/GreeceBaselineAssessment.pdf>

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Case-Studies on innovative development in Peripheral Rural Areas  
Part B - BUILDING A COMMON VISION FOR THE PERIPHERAL RURAL AREAS:  
THE PARTICIPATORY PROCESS AND THE IDENTIFICATION OF SOLUTIONS AND  
INNOVATIONS FOR THE SUSTAINABLE DEVELOPMENT OF THE PRA  
*Corresponding to Module 3 – e-learning course*

Title: Building a common vision for **mount Pindos**, Peripheral Rural Area **Greece**



### Mapping the Participatory Process of Pindos mtThessalia Greece

The University of Thessaly's Laboratory of Rural Space studies pastoral livestock farming as the traditional main livelihood in the Pindos Mountains. The Laboratory continuously work on the area, mobilizing actors and drafting strategies for ensuring the its preservation. For achieving these purposes, the university engages a collaborative work based on a participatory process which s is based on the long-term relationships and trust of the University team members and its collaborators with a diverse group of external stakeholders, directly involved in field and contribute in gathering information, sharing knowledge, mobilising in-field work, ensuring to achieve project

Under HNV-Link project (2016-2019), efforts have focused on 1) mapping farming systems (researchers of AgroParisTech supervised by the University of Thessaly) and identifying the HNV qualities in a large area of the central Pindos mtand, 2) creating an HNV Vision for the Pindos mt. As part of the HNV Vision process, the team used participatory processes such as consultation with stakeholders to gather data for a baseline assessment and to develop a business as usual scenario, on one hand, and the Vision for the area, on the other.

#### Key actors involved:

Using the proposed framework, the University of Thessaly's Laboratory of Rural Space elaborated the following classification of actors, identifying their roles and skills

Pinods mt integration in a management plan for the relationship between the HNVf system and farmland is an innovative endeavor that will allow their active participation in the adjustment of the rural policies and the elaboration of suitable support plans on HNV holdings and rural development.

	Internal	External
Private	<ul style="list-style-type: none"> <li>- Farmers/Producers [<i>Knowledgeable of inherited collective management systems of territory</i>]</li> <li>- New entrants in agriculture: [<i>Innovative (preservation of HNVf systems contributes to productivity, increase of the products' value, recognition of their holding's multifunctionality and their quality of life)</i>]</li> <li>- Local entrepreneurs</li> <li>- New comers (not in agriculture) [<i>Innovative (development of activities that support the territory's multifunctionality)</i>]</li> <li>- Young people [<i>Specific issues, access to land, resources etc.</i>]</li> </ul>	<ul style="list-style-type: none"> <li>- Absentee land owners</li> <li>- Investors in large farming, energy, recreation projects</li> </ul>
Collective	<ul style="list-style-type: none"> <li>- Diaspora's communities/cultural associations [<i>not only because they care about their home village but also because they have vested interests (management of the HNV farmland concerns community's future and the protection of their own interests (fire prevention, settlement management, quality of life in the village etc.).</i>]</li> <li>- Municipal authorities Mayors of PINDOS Network [<i>preservation of HNVf systems responds to the management and utilisation of its natural resources and territorial cohesion</i>]</li> <li>- Territorial cluster "Terra Thessalia" [<i>support of the promotion of specific livestock products</i>]</li> </ul>	<ul style="list-style-type: none"> <li>- Universities /Research institutions <ul style="list-style-type: none"> <li>o Laboratory of Rural Space, University of Thessaly,</li> <li>o Agricultural University of Athens</li> <li>o Panteio University</li> </ul> <p>[<i>transfer of innovation and knowledge on management issues on of the relationship between the agricultural system and the HNV agricultural surface</i>]</p> </li> <li>- Regional authorities <ul style="list-style-type: none"> <li>o Agricultural authorities</li> <li>o Rural Development authorities</li> <li>o Management authority of the regional Community Support framework</li> <li>o Forestry authorities</li> <li>o Environmental authorities</li> </ul> <p>[<i>management of natural resources</i>]</p> </li> <li>- Local Development agencies (Local Action Groups of Karditsa and Trikala) [<i>operational planning and utilization of European programmes for the development of the territory's multifunctionality and the support of local governance</i>]</li> <li>- Management authority of National Park of Tzoumerka [<i>protected area management body protect the vulnerable habitats</i>]</li> <li>- Environmental NGOs (GreenArc, CEE of Mouzaki) [<i>education and awareness of the producer on the one hand and of the consumer on the other hand on the role of the HNVf and their association with the promotion of local specific resources</i>]</li> </ul>

## Implementation and Assessment of the participatory process

The consultations with multiple stakeholder groups facilitated identification of the innovation gaps which must be addressed for LA Thessaly to realise the agreed HNV vision for the area. Following these consultations and in collaboration with the Agricultural University of Athens, the team developed a series of trainings for producers in the following sectors: sheep and goat farming, beekeeping, aromatic plants and legumes.

Additionally, and in cooperation with the PINDOS Network (a Local Government Network), the team aims to create a Coordination and Support Centre of the HNV Systems. In this context, the team is working with PINDOS Network members for: (a) the conception, configuration and planning of this Centre and (b) the activation of RDP funding for the region. Four farmer leaders were selected to implement, in a demonstrative pilot form, innovations (technological, organizational) in the context of publicizing those innovations and enhancing the innovation “Participatory Guarantee System” with HNV farming character.

□ *participatory methods for the diagnosis*



□ *mobilisation of a large number of researchers for the diagnosis*  
 Agricultural University of Athens, Panteion University, Agro Paris Tech, University of Clermont- Auvergne, University of Thessaly

and *local actors for the construction of VISION*  
 Local Authorities, Local Development Agencies, Environmental Associations Environmental Centre of Education, National Park of Tzoumerka, Breeders and producers, Cheese makers, Beekeepers

Finally, the Greek HNV-Link team held meetings with producers for the aim of increasing understanding on the potential benefits of organization and to encourage the creation of a farmers' network for HNV farming

### List of participatory events in LA Thessaly, Greece

Activity	Number of participants	Date
Meeting with proposed PINDOS Network	22	February 2017
Meeting with local actors and producers	60	March 2017
Mapping the LA's farming systems with stakeholders	20	March – August 2017
Interviews with key stakeholders	15	March – June 2017
Innovation seminar	38	July 2017
Meeting with PINDOS Network	10	November 2017- April 2018
Producers training	6	February – June 2018
Bilateral meetings with producer-leaders on the innovations	10	January 2018- ongoing

## Creating the Pindos mt vision for the territory

### vision

- *sustainable reconquest of the region: building our horizontal governance to better manage and promote the HNVf heritage*

### Overall Objectives

- In order to achieve it, the aim is to promote in the society of consumers, producers and public actors the multifunctional role of the LA's HNVf systems (through interventions in the hole range of the local value chains) in order to increase the value of the LA's products and services

Presentation of the main conclusions from the participatory process and the common vision for the Territory

### Taking knowledge on the strengths

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, Agrafa 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.

#### ❖ 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

### Taking knowledge on the vulnerability factors and challenges

#### Identification of the innovation needs, and on the vulnerability factors of Pindos mtThessalia Greece

##### A. Need for a 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 Pindos mt 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 Pindos mt 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

**B. Regulatory Framework Innovation Needs:**

Regulatory framework - innovation needs	Possible approaches
Recognition of the Pindos mt 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 Pindos mt	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

Pindos mt recognition as HNV area will contribute to sustainable development and the increase of the value of products and services. 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.

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.

**C. Products and Markets Innovation Needs**

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 Pindos mt	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 Pindos mt 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 Pindos mt 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.)

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-advertising 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

#### D. Farm techniques and management innovation Needs

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 Pindos mt 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

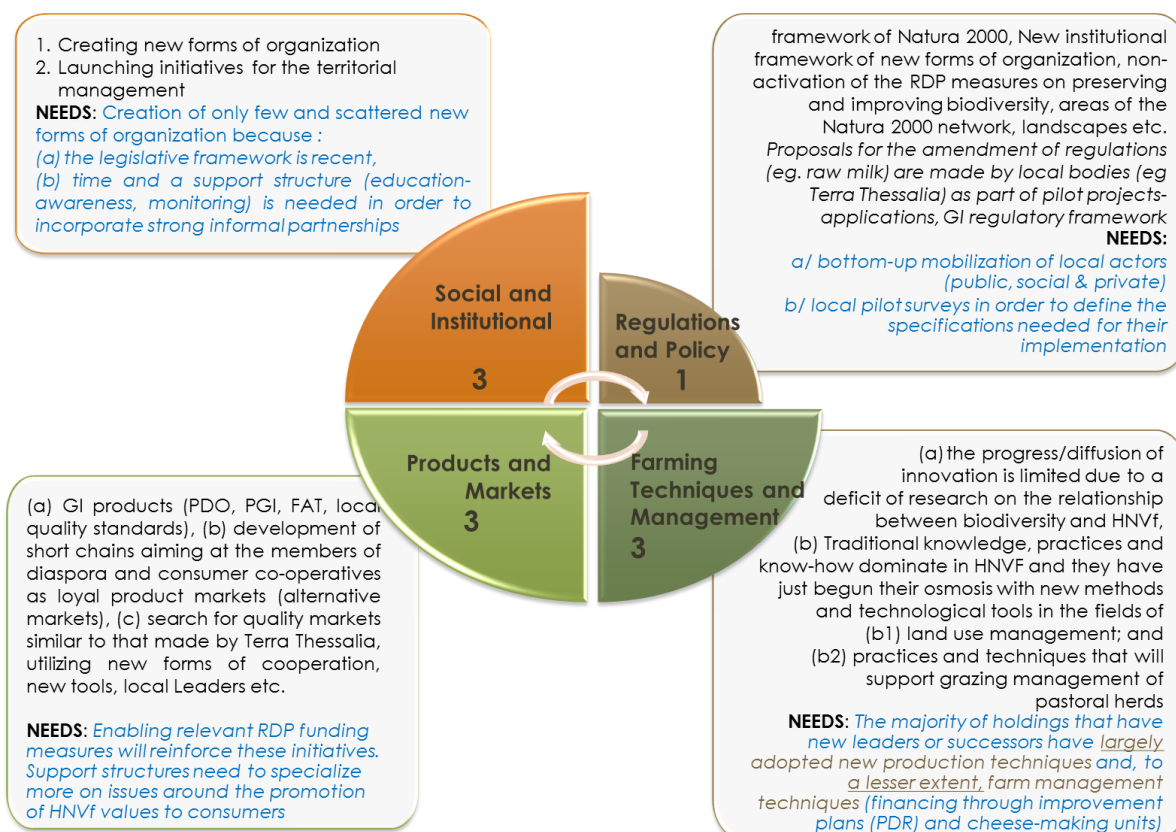
Both the advisory system and research, during the last decades were oriented towards the support of the intensive agricultural model. Nowadays it is necessary that they turn more intensively and coordinated towards HNVF, focusing on the internal organization and operation of farm units and their relationship 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



### What is need to be done

The proposed innovations and what is needed to be done in order for these to be adopted, follows on the figure below



Their contribution is important because based on this knowledge

- we can help build the HNVf Support Co-ordination Center
- we will use the existing guarantee system and expand it with criteria and procedures that concern the integration of biodiversity in the effective use of techniques and practices in the pastoral farming system
- producers will be able to a/ solve problems of monitoring their free range herds and b/ guarantee the quality of their products to consumers

the various actors can participate, on better terms, in the decision-making process regarding the management of the space as well as the implementation of development actions

The priority in the Innovation categories is:

- 1st priority is the category "Social and Institutional",
- 2nd priority is the category "Product and Market",
- 3rd priority is the category "Farming Techniques and Management" and
- 4th is the category "Regulations and Policy".

Priority was given in order to resolve innovation deficits. It is estimated that these will be achieved through the actions-priorities mentioned below

highest priority: Social and Institutional , (importance's order : 1, 3, 4, 2)	
specific innovation gaps	top priorities for the next phase
❖ Lack of experience in the operation of multi-holding cooperation and coordination forms (governance) that integrate HNVf	Utilization of LA's multi-holding & 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) in the scale of the community and the Municipality	Local assembly of producers, entrepreneurs, the Diaspora (internal), 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

The short term through the implementation of this Action Plan does not allow the objectives set to be attained. However, the actions that were developed the previous year contributed to the acceptance of two basic needs:

- the creation of a network of new farmers who have recently settled in agriculture, aiming at informing them and promoting their activities
- focused and coordinated action by the local actors in support of extensive farming and the promotion of its products.

All stakeholders believe that time is required for the cooperation conditions to mature and to build trust between both the members of the team and the different teams

Sources:

- HNV Link (2018) Report from the Innovation Seminar  
[http://www.hnmlink.eu/download/GR\\_NationalLanguageReport\\_innovationseminar\\_Thessalia.docx.pdf](http://www.hnmlink.eu/download/GR_NationalLanguageReport_innovationseminar_Thessalia.docx.pdf)
- HNV Link (2018). Participatory approach report in Mount Pindos  
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<http://www.hnmlink.eu/download/GR-THESSALYINNOVATIONREPORT.pdf>
- HNV Link (2018). Action Plan for the multi-actor participatory approach in Mount Pindos  
[http://www.hnmlink.eu/download/P10-GR-THESSALYACTIONPLAN\\_final.pdf](http://www.hnmlink.eu/download/P10-GR-THESSALYACTIONPLAN_final.pdf)

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## TERRA THESSALIA: A TERRITORIAL CLUSTER OF VALORISATION OF HNV

### 1 / PRA and innovation identification

**1.1 - Peripheral Rural Area name:** mountain Pindos at Thessaly, Greece

**1.2 - Innovation short name:** Territorial cluster-Terra Thessalia

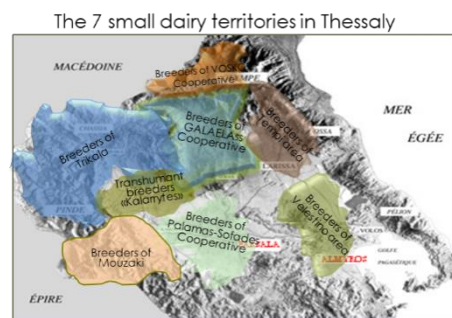
**1.3 - Agricultural system to which the innovation relates (may be more than 1):** HNV system: Shepherd sheep and goat farming system. Potentially all HNV farming systems

#### 1.4 - The story in a nutshell:

Creation and adaptation of a territorial dairy cluster integrating, 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.

**Scale of operation:** 7 small dairy territories, (appr) 500 pastoral farms, 7 family artisanal dairies, supporting agencies (LAGs, Cooperative Banks, Chambers, Research Laboratories).

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



### 2 / What specific challenges does the innovation address?

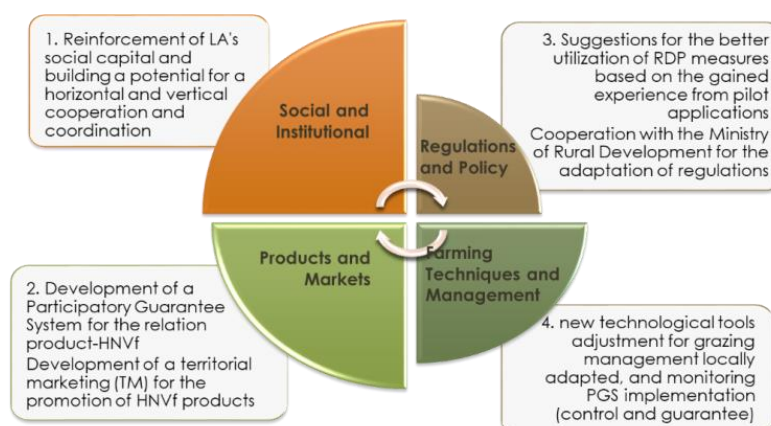
Existing asymmetrical power relations in the governance of the value chain of PDO cheeses -and in particular of the popular Feta cheese being in a growing demand- in favor of large industrial dairies and distribution networks (oligopolistic market structures).

Through active involvement, in an innovative organizational structure, small producers of the PRA guarantee and highlight in the growing market the qualitative attributes of their products (milk, cheese). On the same time, they preserve their traditional practice, respecting the HNVf specificities delivering products with respect to the consumers' expectations.

### 3/ Description of the innovation

#### 3.1 - Where does this innovation fit in the four innovation themes identified?

The adopted innovation has proven to be very impactful across all four innovation themes:



### 3.2 - Which theme(s) is most relevant:

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

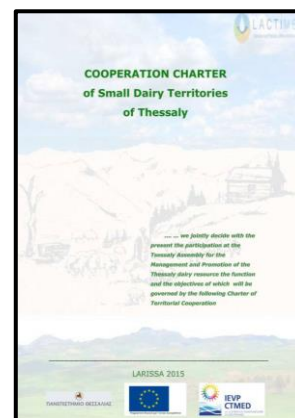
## 4 / What are the overall achievements of the innovation?

### 4.1 What was the process that made it happen?

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. 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.

### 4.2 What were the enabling and success factors?

The initiative was favored by the institutional framework of local authorities' 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 entities 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 inter-territory. Terra Thessalia is a non-profit legal entity and organizes the various support services (technical and advisory) throughout the Value Chain. 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.



### 4.3 Is it improving socio-economic viability of HNV farms and communities while maintaining HNV characteristics? How?

From the adopted innovation, organizational and technical, the viability of HNV farms is being preserved, answering in the same time to the market needs, through services of Terra Thessalia offered to the holdings. The improvement of pastures and the configuration of a balanced and adjusted ration led to the reduction of the production cost, while 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. 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. 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.)

#### **4.4 Does it include conservation of nature values as an explicit objective, or is this effect incidental? How?**

By fostering the innovation in the PRA, HNV farmers were able to maintain their traditional and ecological enhanced practices (ie. local breeds, pasture), and with the implementation of the TPGS, these practices are guaranteed to the consumers. 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 increase of economic benefits has 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).

#### **4.5 On what scale is the innovation successful (individual farm holding, whole community...), and potentially successful?**

500 holdings and 7 artisanal dairies 100.000 sheep and goats (pilot application in 60 herds- 13.000 animals) participate in the TPG system. Further expansion is dependant from the existence of traditional and ecological appropriate practices, rather than the number of participating farmers, mainly due to the participatory nature of the proposed innovation.

### **5 / Why the innovation worked and why did not? Which was the process, the enabling factors, and the limiting factors, for preventing full realisation of the innovation's potential?**

The value 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, among producers. The most 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 whereas the small dairy producers maintain their traditional, artisanal techniques, answering to a continuous growing market for high quality products.

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

- The mismatch between timetables for the implementation of support and funding policies.
- Restrictions due to the economic recession, 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 of PRA.

## 6 / What lessons can we draw from this experience?

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 that produce them
- \* 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)
- \* strengthen cooperation with the regional and central services for an effective combination of motives (utilization of RDP funding tools, lower taxation etc.) and regulatory frameworks (consulting services, training, financial motives, support of the market etc)
- \* restore the territorial anchorage of collective knowledge and practices.

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, with respect to their territory's individual characteristics.

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## PARTICIPATORY GUARANTEE SYSTEM (PGS)

### 1 / PRA and innovation identification

**1.1 - Peripheral Rural Area name:** mountain Pindos at Thessaly, Greece

**1.2 - Innovation short name:** PARTICIPATORY GUARANTEE SYSTEM (PGS)

**1.3 - Agricultural system to which the innovation relates (may be more than 1):**

Shepherd sheep and goat farming milk system, potentially all HNV farming systems

**1.4 - The 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 innovative technological tools whose data are displayed in a database and the Terra Thessalia site that is accessible to consumers.

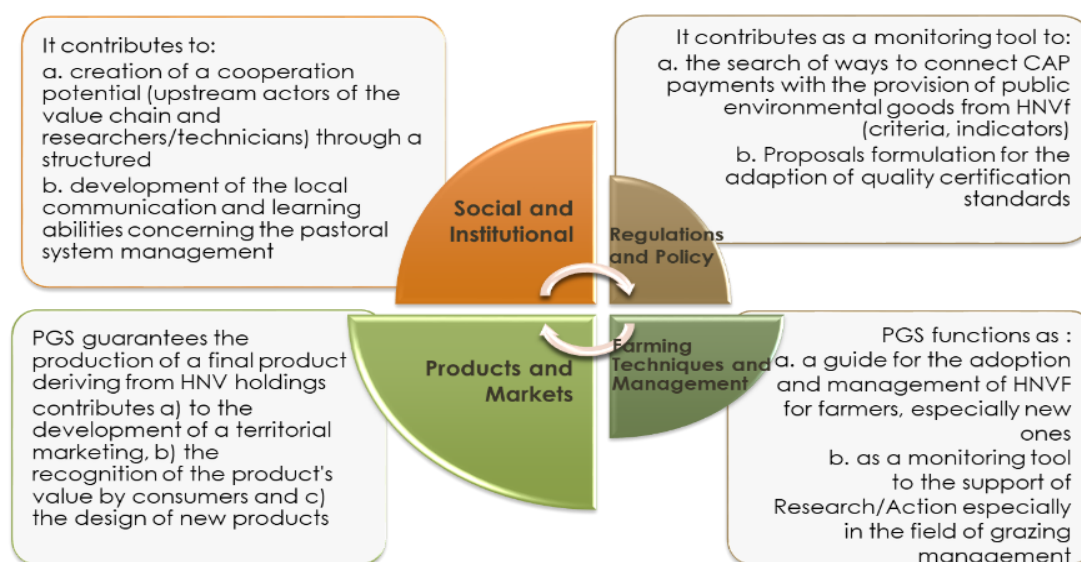
### 2 / What specific challenges does the innovation address?

- *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.*

### 3/ Description of the innovation

**3.1 - Where does this innovation fit in the four innovation themes identified?**

This innovation has proven to be very impactful across all innovation themes:



### 3.2 - Which theme(s) is most relevant:

In the thematic “Products and markets” PGS contributes to the promotion of HNV territorial resources and products, based on innovative 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).

## 4 / What are the overall achievements of the innovation?

### 4.1 What was the process that made it happen?

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 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 exchange meetings, training cycles.

### 4.2 What were the enabling and success factors?

*The process that made it happen and critical factors for success*

- *Existence of local animator: Project and technical support team*
- *Identification of elements directly linked to the relationship of the final product and HNVF and which can be guaranteed by the PGS*
- *Organization of training, consultation for the producers by utilizing new technological tools*
- *Implementation of PGS through a monitoring form for the control, guarantee and supply of the territorial marketing*
- *The institutional entity of Terra Thessalia and the institutional recognition status of the operation of some research laboratories as certification centers*

### 4.3 Is it improving socio-economic viability of HNV farms and communities while maintaining HNV characteristics? How?

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 self-governed 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, with respect to their local knowledge and traditional practises.

### 4.4 Does it include conservation of nature values as an explicit objective, or is this effect incidental? How?

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 favour of the bodies that are involved in preserving the HNV character of those production systems.

#### **4.5 On what scale is the innovation successful (individual farm holding, whole community...), and potentially successful?**

PGS can be applied in the scale of the holding, the team of a cheese-maker's holdings, the community and the PRA as it presupposes the engagement of local producers in the criteria that are jointly set.

### **5 / Why the innovation worked and why did not? Which was the process, the enabling factors, and the limiting factors, for preventing full realisation of the innovation's potential?**

The intensification of competition (expansion of the dairy companies and intensification of livestock holdings), the economic recession, the failure to organize the feta cheese 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 recession, 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 HNVF 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.

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

### **6 / What lessons can we draw from this experience?**

By adopting and integrate innovative 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, b) farmers' active participation in control and guarantee systems of their holdings' HNV characteristics, c) 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 competitiveness based on product discretion, is more effective than certification systems by third parties.

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, 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.

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**Case-Studies on innovative development in Peripheral Rural Areas**  
**Part D–INNOVATION TRANSFER AND BROKERAGE**  
*Corresponding to Module 5 – e-learning course*

Title: innovation transfer and brokerage  
**mount Pindos, Peripheral Rural Area Greece**



## 1- Engaging Actions for a sustainable development of the PRA: Making choices

### The participatory process for making choices

Under the framework of HNV-Link, the University of Thessaly's Laboratory of Rural Space organised in 2018 an Innovation Seminar with key local stakeholders of the Pindos mt in order to move forward on the sustainable development of the area. The main purpose of the Innovation Seminar in Pindos mt Thessalia entitled "Integrated interventions and actions for the management, promotion and exploitation of Pindos and Chasia as High Nature Value areas" was:

- a) the adoption of a common vision in order to support the HNV farming systems of the area
- b) the analysis of the barriers and opportunities so that the local bodies can promote their common vision by searching for the most effective cooperation and coordination forms
- c) the search of innovative actions able to support the HNV character of the farming systems and also promote their products

The steps that have to be followed, the tools that will be chosen as well as the innovations that can be adopted for this purpose were discussed. It was decided, in the first place, the exploitation of the initiative, suggested by the Municipalities within the area, to establish a network represented by the body PINDOS Network for the creation of **anew form of governance** with main purpose the support of the Pindos mt HNVF. In order to strengthen this decision an initiative committee was created that will network the farmers that are newcomers and heads of HNV holdings. At the same time the research laboratories of three universities and two local development agencies committed to immediately proceed to the creation of a **Coordination and Support Center** for the attempt. These two new institutions would participate to the governance structure of the HNV Pindos mt. Participants also agreed to further exploit and expand the innovative initiative of the territorial cooperation (i.e. Terra Thessalia)

- a. a collaboration and cooperation form and
- b. a guarantee and promotion procedure with the use of innovative tools of the multifunctional role and the HNV character of the Pindos mt's farming systems.

Therefore, a **Support Coordination Center** was proposed to be established at a local level for to coordinating local actors, either experts from private sector, government representatives, and collective groups, in order to implement focused actions in the PRA.

Firstly, the proposed scheme, will

- Multi-scientific study and evaluation of farms and HNV - businesses operating in the area (per community), with the contribution of national and foreign universities and laboratories
- Detection and emergence of terroir for further development
- Exploitation of abandoned farms.

The proposed Center would have three action goals:

- Pasture Lands Management Plans
- Training on HNV practices and techniques
- Promotion of PRA's local products in the market (PGS and common label of PRA introduction)
- Coordination of combined monetary supports through national and European funds.

At the same time, the University of Thessaly's Laboratory of Rural Space organised a series of meetings with producers from the area for informing on opportunities and disseminate innovations, as the following:

- the possibilities and opportunities of setting up a producers' network
  - The aim is to inform, monitor and support existing (producers' groups, cooperatives, etc.) or new forms of cooperation among farmers focusing on HNV holding
- the possibilities of utilizing-using 3D and virtual reality tools as well as GPS
  - for the support of local actors' active participation in planning and documenting their choices and decisions and their contribution in the preparation of specifications for the organization and operation of every holding within the limits of the village and the agro-ecological unity in which it belongs
- the possibilities to develop a mixed innovative initiative (social-institutional, regulatory, technical and product-market)through the adaptation of the Territorial Participatory Guarantee System

with a double aim: a) internally to control the implementation of the obligations that every holding has and b) externally to inform the consumers on the sustainable links between the HNV systems and the production area of local products.

#### **The innovation transfer process: engaging stakeholders through a participatory process.**

The University of Thessaly's Laboratory of Rural Space organised a **working meeting with farmers from LA Thessaly**. The main objectives of the meeting were: (a) to present to the producers the innovations suggested by the partners of the project, (b) the organization of expeditions, for those who are interested, in the areas of other partners in order to study the respective innovations that have been developed(cross-visits). After a discussion the cases of the French and Swedish innovations were chosen as interesting, without at the same time excluding the other areas that have also showcased equally interesting innovations such as the management of grazing lands, the organization of producers in various levels (production, processing) etc.

#### **Stakeholders involved in the innovation transfer process were the following:**

- ✓ the Mayors of PINDOS Network
- ✓ National Park of Tzoumerka
- ✓ Development Agencies of Karditsa and Trikala,
- ✓ Environmental bodies (GreenArc, CEE of Mouzaki),
- ✓ Public Services (Department of Rural Economy and Veterinary -DAOK Karditsas and Forestry Office of Trikala),
- ✓ Thessaly Agrotourism Association,
- ✓ Territorial cluster TERRA THESSALIA
- ✓ Livestock breeders and farmers from the area of Mouzaki and Pyli,
- ✓ Laboratory of Rural Space, University of Thessaly

## **2- Cross-visit an effective knowledge transfer action-**

*Peer learning exchanges between PRA-Pindos mt and other PRA was implemented through Cross-Visits. These cross-visits/operational study tours involved key actor groups. They discussed the innovations in their real agro-ecological and socio economic context, to better understand the possibilities of transfer. Theyare organizedaccordingacommonmethodology.*

## A. Cross-visit to Sweden

A small team of two - a researcher from the University of Thessaly, key in forwarding innovation in the Learning Area, and a goat breeder from Thessaly, who has an extensive livestock farm with vital activities in a HNV area - visited Dalmland, Sweden. They met agricultural advisors and environmental and GIS specialists from the County Administrative Board and visited several farms. The choice of a cross-visit destination was primarily because of the innovative mapping tools for participatory processes that have been developed and implemented by the Swedish team. A similar approach, but with other unique methods, has been applied in the learning area Thessaly. The exchange of learning on the approaches was highly valuable for both sides.

The livestock farmer who took part had a chance to discuss with his Swedish counterparts problems and new trends on management and operational issues of the holdings. The innovative mobile slaughterhouse in Sweden was especially interesting, and the Greek team intends to investigate the legislative framework back home for use of this for free range herds. The Greek expedition gained knowledge on many other new techniques and approaches for improving the performance and profitability of extensive livestock holdings in HNV areas.



From the visit in the HNV livestock holdings the Greek expedition expects:

- To adopt new techniques and technologies that will improve the performance of extensive live stock holdings in HNV areas.
- The adoption of agritourism activities, from new livestock farmers, in HNV holdings in order to increase their income.

**Conclusions:** As a general conclusion it should be noted that the Greek expedition got a lot of experiences from the four-day visit. They consider that the main initial objectives have been largely achieved.

- Keep in touch with the Swedish team that works with common areas of interest. Especially concerning issues of participatory procedures.
- Exploration of the possibilities to develop a mobile slaughterhouse for free range herds. Investigation of the legislative framework.
- Presentation of the Swedish subsidy model on extensive HNV holdings for grazing HNV pastures. Pressure to set up an equivalent support mechanism of the Greek extensive holdings in HNV areas.
- Presentation at the farmers' network within the Pindos mt of the activities run by the model farm and especially those concerning agritourism.



Bellow, the elements that are considered important and will contribute, to a certain extent, to the challenges that the HNV farms in Greece have to face, are highlighted.

- A discussion and the possibility to implement the FOLCUM system in LA Thessaly. Investigation forthe development of respective environmental, economic and social indicators adjusted to the Greek conditions. Creation of an equivalent digital database for the registration of information.

- Exploring the extent into which the combination of the FOLCUM innovation & 3D mapping will broaden the prospects and the values of local society, producer groups, institutions etc.

## B. Cross-visit to France

A team of 3 visited Causses and Cévennes to learn about the innovative schemes for pastoralism adopted in protected areas of Causses and Cévennes and, especially, about the Intercommunal Pastoral Pact and the actions taken for biodiversity conservation and pastoralism. The Greek team also met with the Spanish team, who were also visiting. Visits included to an abattoir cooperatively run by farmers, National Park visits for learning about the farming systems and hearing from local farmers involved in the Intercommunal Pastoral Pact, and visiting 2 local farms. The visitors also heard about the Agrilocal innovation for local foods. Visitors were particularly enthusiastic about the two farm visits, where they were able to engage about farming and pastoral issues with the farmer, as well as issues of direct sales, hygiene and production standards, agri-tourism and on-farm cheese production.



Cross-visits contributed to (a) learn about new innovative actions that can be easily transferred, (b) realize the need to mobilize and organize so that producers themselves can claim the recognition of their activity.

**Expectations:** The Greek team expects to witness the mechanics of the innovative approaches adopted in the French learning area, to learn from breeders and transfer knowledge and good practices of agro-tourism approaches in local farms.



Regarding the latter, since the farmer of the Greek delegation is regarded as a dynamic and innovative, will have the opportunity to transfer knowledge of agro-tourism farms, as it will be witnessed in the French learning area the management of pastor lands and of course the way that local products can gain the most of the value. Therefore, the Greek team expects to gain knowledge and transfer it



to the Pindos mt concerning:

- a) Pastor land management and the mechanics of the decision making process
- b) Activities of farmers to enhance their product value and generally enhance their income

**Conclusions:** The cross- visit is regarded successful, as the Greek delegation had the opportunity to witness the good practices done in the French learning area. The initial questions set by the HNV Link team and the delegation members were answered and, additionally, new ideas were given.

Of importance is the mechanics of setting the intercommunal pastoral pact, among its many stakeholders and the way pastor land management is adopted in Causses and Cevennes. Especially since this is done in a national park area, like the Greek learning area. The practices of the French Park's management authority are also worth commenting and worth adopting, after further communication between the two parties. It was also, beneficiary for the Greek breeder to witness practices, not necessarily in the everyday process of work, but as ideas for in farm cheese production and making a farm open for tourists and the public.

### C. Host cross-visit

Bulgarian partners (STEP) involved in the HNV-Link project came to visit the Ouest Thessaly (Pindos mt) territory between June, 13rd and 15th of 2018. We have organized visits and discussion with different actors as Municipality, representative of Rural Development Ministry (discuss about CAP and its implementation), farmers participated to pilot actions (improvement of pastures, seminars etc), Environmental Center, etc.

The main expectations of the participants were:

- To meet with Greek livestock farmers from HNV region and learn about their managing practices;
- To understand more about the GPS tracking and territorial cluster;
- To see the practices and innovations related to the development of HNV farming and development of rural areas;
- To see new technologies and how the HNVF livestock farmers are meeting EU hygiene requirements;
  - To see how direct sales are working for HNV farmers.



#### Lessons learnt and possible replications in Western Stara Planina (Boulgaria)

All participants in the cross-visit appreciated very much the practical value of the visits and the possibility to meet Greek farmers with similar activities.

The majority of the participants (63%) think that the most interesting and useful visit for them was the calves fattening farm. They were very impressed by the hygiene of the farm. The young farmer shared his knowledge and experience with enthusiasm and answered to all the questions regarding the food and the nutrition of the calves. One of the interesting things in the farm is also the optimization and the combination of livestock breeding and plant growing.



A very interesting approach/innovation that was discussed between the BG participants is the way the diaspora is used for marketing and adding values to the products from the region. Since Western Stara Planina area is also suffering from migration and depopulation of the area it was discussed that the approach of creating a certifying a local brand from the region could be interesting for the WSP diaspora in the big cities in Bulgaria.

The participants think that the HNV innovation that can be replicated in Bulgaria is the GPS tracking and monitoring system for sheep and goats. However, some of the farmers expressed concerns that if everyone can see where the flock are grazing - this may increase the thefts of the animals.

The cooperation between farmers, processors, municipality and other relevant stakeholders and the local community in Terra Thessalia Cluster is also a very important HNVF innovation example. However, a lot of efforts are needed to achieve this and our experience shows that without a long-term project this cannot happen on the territory of WSP.

### 3- Drafting an Action Plan for the PRA Regional Seminars on innovation transfer

The target of the meeting was: Configuration and operational planning of a framework in order to support new producers.

**Concept note:**

- Increasing evidence of young people who have got involved in agriculture and the difficulties they are facing due to the lack of a support system throughout their establishment in the sector.
- The existence of local actors and their ability to act as a mediator in a coherent, integrated approach of HNVf for the sustainable development of the PRA
- The wide range of innovative support tools-mainly the organizational ones.

The following questions are raised for consultation:

- What will be the operational implementation of the desire that PINDOS network has expressed to support its young citizens in order to make an attempt locally at the primary sector capitalizing on innovative tools (technological and mainly organizational)?
- What different kinds of cooperation can be developed and what are the financial instruments that are possible to utilize?



The discussion was organised around three basic axes: (a) the organisation and operation of the extensive farming Coordination Support Centre and the search of funding for its operation, (b) the experiences acquired from the cross visits and (c) the utilization of partnerships through the HNV-Link network for the promotion and resolution of issues that extensive farming in Pindos faces nowadays.

The facilitator (Laboratory of Rural Space) made a short presentation to the attendants focusing on:

- a) the vision that has been shaped for the area: the sustainable reconquest of the region: building our horizontal governance to better manage and promote the HNVf heritage.
- b) the priorities for its implementation: building a multi-partnership form of governance and organizing the new farmers and their collaboration with the small already organized entrepreneurs of agrotourism
- c) the actions that have been up to now implemented by the research team (organisation of events in local and regional level) to diffuse, inform, raise awareness among the farmers, public bodies, development agencies etc. on issues concerning the technical, technological and organisational innovations that have been developed within the HNV network. Those are:
  - ✓ Innovations developed by the research team in Thessaly, in HNV areas
  - ✓ Innovations developed by partners of the HNV-Link network

contributing meaningfully to the support of extensive farming, the extensive production systems generally and the promotion of their quality products more specifically. The participants were informed through a presentation about the innovations of the HNV-LINK network applied in the other PRAs and can be easily replicated in Pindos. Special emphasis was given in innovations that offer solutions to everyday problems and are linked to space management and the increase of the added value of their products in the market.

Afterwards there was a presentation of the importance of the Coordination Support Centre for the extensive production systems, the way that it can function as well as its main action. Within the context of the support provided to the Centre, the Laboratory of Rural Space contributed -with the help of the local authorities- to the organisation of seminars, under the



auspices of the Agricultural University of Athens on: livestock breeding, aromatic plants and beekeeping. The main purpose of the seminars was for the trainees to acquire skills on technical and organisational issues.

#### Conclusions and next steps:

The participants in the regional meeting agreed on the following actions for reaching the HNV vision for the region:

- Develop a long-term project and look for funding for strengthening the cooperation between the different stakeholders: local community, farmers, municipalities, local authorities, etc., for supporting the development of extensive farming in Pindos
- Continue with organization of targeted and thematic workshops with farmers' participation, in order to (a) to develop and establish a producers' network and (b) looking for financial tools (all stakeholders) that will contribute 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;
- Exploite all the existing networks (the research networks of the Laboratory of Rural Areas, University of Thessaly, the network of Development Agency of Karditsa and Trikala, the network of the Tzoumerka Park National Parks as well as the networks and collaborations of the local authorities) in order to:
  - raise public awareness and changing the current perception for the HNV farmers and their activity and live
  - organise exchanges of experience between producers on issues of spatial management and diversification of their activity (linking with other sectors: processing, agro-tourism, education).

## 4- Conclusions from the Innovation process

The knowledge gained from the implementation of the project is multiple and involves various levels. Initially, the methodological approach of making diagnosis on the intervention area and its production systems is considered very innovative. The methodology steps that were applied to understand the current situation and the dynamics of the Pindos mt- Thessaly proved very useful for the scientific team and the local actors who will be invited to implement them in local scale and other areas. The way that those innovations were approached and their distinction in four groups offered the acquisition of knowledge and deepening. The collected innovations proved to be very rich in experiences. The way they were presented proved to be educational and helped disseminate them. The discussions between the actors contributed to highlighting the problems and led to the identification of solutions. The process of discussing and consulting among the different groups is by itself an innovation reinforcing the consensus and the possibility of finding solutions for common problems.

The cross visits helped the members of the delegations to acquire knowledge and experience, during the exchanges, about the management of HNV holdings and also see innovative actions being implemented. The replication of those actions requires some adjustments at local level. We estimate that the exchanges during the project contributed to create the mood for further cooperation among the partners in the future.

Through the diagnosis and the implementation of the project it became once again clear that in Greece, in an intervention area, there are various bodies that act and function without sufficiently cooperating with each other to bring positive results for the area. Finally, the creation of international networks for the exchange of experiences contributes to the adoption of knowledge and the implementation of actions that have been tested and help the sustainability and the function of extensive holdings.

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