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*European Forum  
on Nature Conservation  
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# **High Nature Value farmlands: Recognising the importance of South East European landscapes**

## **CASE STUDY REPORT Sibiu (Romania)**



WWF-DCP/EFNCP, 2008

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Recognising the importance of South East European landscapes**

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This report is produced as part of collaboration between the European Forum on Nature Conservation and Pastoralism (EFNCP) and WWF Danube-Carpathian Programme (WWF-DCP). Both organisations recognise the importance of certain farming systems for nature conservation. Between 2006 and 2008 a project was executed aiming at finding out at a local scale where agriculture overlaps with areas of High Nature Value in order to understand better the relation between both. The project consisted of six local workshops, three each in Bulgaria (Strandzha, Rusenski Lom and Western Stara Planina) and Romania (Sibiu, Mehedin i and Gala i), and a reporting seminar in Brussels. After concentrating on the ecological aspects, the workshops analysed the socio-economical needs of local farmers and identified where policy can be improved. In this way the project linked the developing concept of High Nature Value farming to the reality of farming and considered the practicalities of implementing the EU commitments on identifying and supporting HNV farming in different local situations. All findings were reported to relevant bodies from local to European level.

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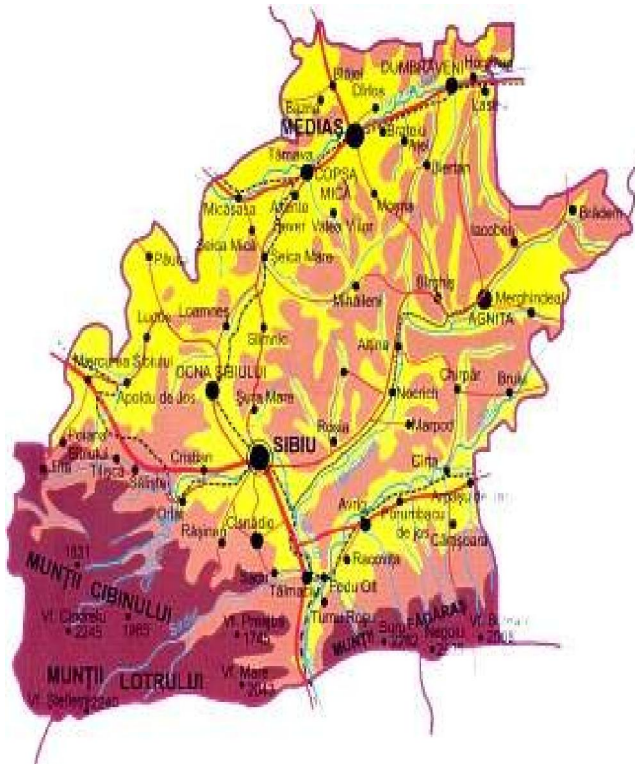
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## I. INTRODUCTION

Sibiu County is situated in central Romania on a territory of 5,432 km<sup>2</sup> and a population of 421,724 inhabitants. The county (NUTS III level) has 2 municipalities, 9 towns and 53 communes. The capital Sibiu has a population of 170,038 inhabitants.

Sibiu Country is covered by plateaus and hills (50%), lowlands (20%), and mountains (30%) with altitudes going up to 2535 m. The mountain area is entirely designated as LFA (less favourable area).



Map 1: Map of Sibiu County

The Carpathian Mountains are covering the southern part of the county represented by F g ra Mountains with heights over 2500 m. Overall they represent approximately 30% of the county's surface. The Transylvanian Plateau is situated to the North of the city of Sibiu.

The Olt River which crosses the mountains to the South of Romania forms one of the most accessible links between Transylvania and Wallachia.

Sibiu's climate is temperate-continental with average temperatures of 8 to 9° C. The multi-annual average of rainfall is 662 l/mp, and there are about 120 days of hard frost annually.

## II. NATURE VALUES

Sibiu County (Sibiu in short) is partly covered by forests and most of its landscapes consist of open, semi-natural habitats (predominantly grassland). Additionally, the area supports a remarkable species richness including many endemic species and medicinal plants:

- Juniper (*Juniperus communis*) scrub on land too rocky for cultivation but often lightly grazed - two butterfly species on the European Red List
- Minimum 11 hay meadow plant associations
- Minimum 270 vascular plant species
- 12 plant species on Romania's Red List
- 73 plant species found in the area are potential butterfly host plants
- At least 58 day flying butterfly species
- Diversity of other invertebrates (beetles, grasshoppers, ants etc) high

The county hosts a rich flora, of over 5500 plant species, or about 67% of Romania's total. Over 40 species from the region are endemic for the Carpathians: *Achillea schurii*, *Aquilegia transsilvanica*, *Cerastium transsilvanicum*, *Erzsinum transsilvanicum*, but there are also



endangered plant species for Romania: *Plantago maxima*, *Polygala sibirica*, *Angelica palustris*, *Calla palustris*.



*Achillea schurii*



*Calla palustris*



*Polygala sibirica*

The region also provides refuge for megafauna species both predators and herbivores that have become extinct in many other parts of Europe, such as the brown bear (*Ursus arctos*), the wolf (*Canis lupus*), the lynx (*Lynx lynx*), the wild cat (*Felis silvestris*), the chamois, etc. Sibiu is offering habitat to more than half of the country's mammals and to 54% of the bird species: 168 identified birds, at least 5 of great scientific value: the Asian and ice alcedo and other rare species.



Carpathian stag



Chamois

Sibiu has 15 protected areas, nature monuments, and natural reserves of great scientific and tourism value: the Lake without Bottom from Ocna Sibiului, the Limestone deposits from Cisnadioara and Turnu Rosu, the Steppe Reservation from Sarba Valley and Balea Lake and the Natural Reservation Iezerule Cindrelului.

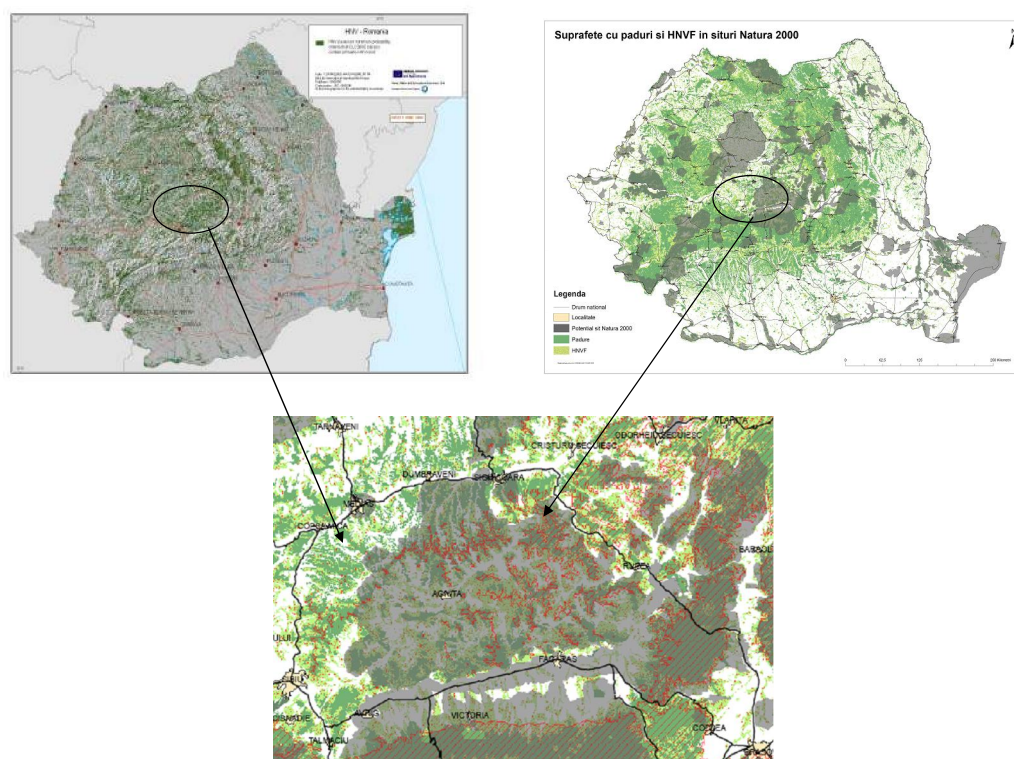
There are 5 SPA sites and 9 SCI sites under the Natura 2000 designation process. The good conservation status of most of the sites is ensured by the continuation of traditional farming which can also be seen from the map of Natura 2000 sites and HNV farmlands in Romania (map 2).

Table 1: SPA and SCI sites in Sibiu County

SPA sites in Sibiu	SCI sites proposed for designation in Sibiu
Nr. Site Name	Nr. Site Name
1 Avrig - Scorei - F g ra	1 Frumoasa
2 Frumoasa	2 Insulele stepice de lâng Slimnic
3 Piemontul F g ra	3 Mlaca T tarilor
4 Podisul Hârtibaciului	4 Movilele de la P ucea

5 Sighi oara - Târnava Mare	5 Mun ii F g ra 6 Oltul Mijlociu - Cibin – Hârtibaciu 7 P durezza de stejar pufos de la Peti 8 P durile de Stejar Pufos de pe Târnava Mare 9 Sighi oara - Târnava Mare
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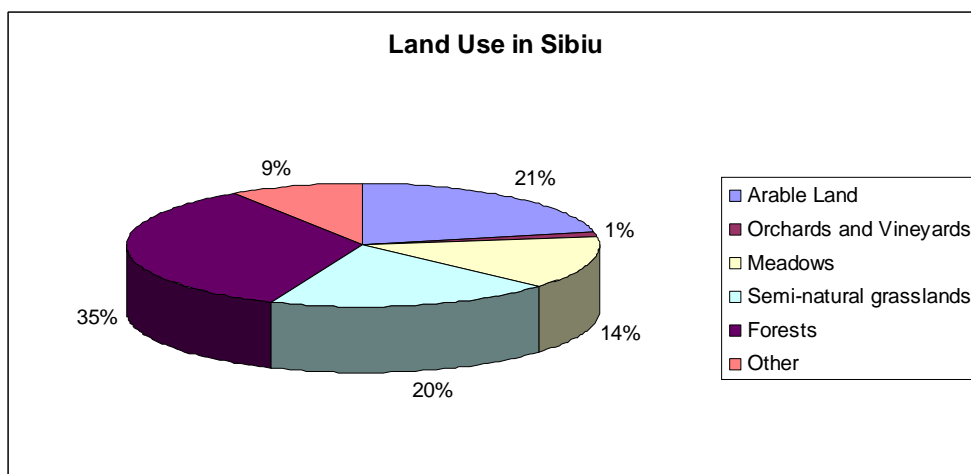
The land covers comprising the map of High nature value farmlands in Romania are fruit trees and berry plantations (corine class 2.2.2), pastures (2.3.1), agro-forestry areas (2.4.4), natural grasslands (3.2.1) and transitional woodland shrub (3.2.4).



Map 2: Overlay of Nature 2000 sites and HNV farmland areas in Sibiu County

### III. LAND USE AND FARMING IN SIBIU

The main land use in Sibiu County is agriculture, representing 56% of total county surface, followed by forests (35%). However, arable land represents only 38% of total agricultural land, while meadows and pastures cover approximately 60% of agriculture land or 34% of the total county territory.



There is a clear distinction of land property regime in Sibiu: the majority (96%) of agriculture land belongs to private owners, compared with 3.5% in the public sector. This is one of the premises of a long history of traditional farming practices. However, in 2003, approximately 8% (23 394 ha) of the private agricultural land remained unfarmed due to the financial problems faced mainly by small farmers and in consequence of difficult climate conditions. Overall state managed vineyards and orchards disappear for the benefit of increased arable lands and grasslands.

Table 2: Land Use and Land Ownership in Sibiu

No.	Land use	Total (ha)	of which	
			PRIVATE	PUBLIC
1	Vineyard	2,759	2,456	303
2	Orchards	5,285	4,074	1,211
3	Grasslands	182,325	175,987	6,338
	- Semi-natural pastures	106,925	102,085	4,840
	- Semi-natural meadows	75,400	73,902	1,498
4	Arable land	116,268	113,364	2,904
	Total Agriculture land	306,637	295,881	10,756
5	Forest land	186,800	112,800	74,000
	TOTAL County area	543,248	-	-

### Farming in Sibiu

Currently, the small traditional farms are producing 98, 9% of crop production, 99, 6% of the livestock production and only 20% of the services. According to Sibiu Agricultural Directorate, there are 16 575 households dealing with farming.



Compared with other counties in Romania, Sibiu livestock production occupies the 4<sup>th</sup> place (1,8% of the country total production), the 5<sup>th</sup> place for crop production (1,6% of Romania's total production) and last place for services. Sibiu County possesses 4,7% of the total sheep livestock of the country, occupying the 4<sup>th</sup> place for the wool production, the 6<sup>th</sup> place for sheep and goat milk production.

The crop production in Sibiu is dominated by cereals and fodder crops, followed by potatoes and vegetables, although in the last decade there is a significant decrease in the total production volumes (except vegetables). Meanwhile, the fruits and grapes are increasing their production volumes by approximately 70% (see attachment 1). This is an interesting trend, unfortunately, we do not have sufficient information to interpret it properly: is it due to change in technology or a shift in production patterns?

In the livestock sector meat and milk production are more or less constant over the last decade. This is a direct prove of the long-standing tradition of livestock farming in the region which we will discuss further in the next sections.

The only significant increase (4 times more) is in the production of honey in the county.

Table 3: Livestock production in Sibiu

<i>Product</i>	<i>units</i>	<i>1996</i>		<i>2006</i>	
		<i>Total</i>	<i>in private sector</i>	<i>Total</i>	<i>in private sector</i>
Meat	Tonnes/1000	38625	38376	36399	36352
Milk	L/1000	1027,3	883,9	1068	758
Wool	Tonnes	826,6	750,1	846	845
Eggs	/1000	90,8	79,4	125,9	125,9
Honey	Tones	177,6	175	745	745

Source: Direc ia pentru Agricultur i Dezvoltare Rural Sibiu

#### IV. HIGH NATURE VALUE FARMLANDS IN SIBIU

Semi-natural vegetation accounts for 60% of all farmed land and most of this is managed extremely extensively. Arable land is found in very small parcels except in the lowlands of the county, while orchards, common throughout the lower areas of the country all have a permanent pasture ground layer. The use of sprays is unusual in permanent crops. The majority of the farmed land area is likely to fall into Type 1 HNV, while the mosaic farmlands around the villages would fall into Type 2.

The farming systems which maintain the high nature value at a landscape scale, some of which may be carried out by the same individuals, are broadly:

- small-scale working of village plots and orchard management
- grazing management with local or daily movements (pendulation)
- grazing management with seasonal or more long-distance movements (transhumance).

##### Characteristics of HNV farming in Sibiu

- **Small-scale:** most households (gospodariile) have only 2-4 cows, some have less than 10 sheep, and 2-10 hectares of hay meadow
- **Semi-subsistent:** majority of the produce is consumed within the households
- **‘Part-time’:** one or both parents in households have employment. The grandparents may do the majority of the work. Three or four generations may live in one household.
- **Highly efficient:** high input of labour and low or zero input of inorganic fertilisers and energy (wood used for fuel). Majority of winter fodder (hay, beet, turnips) produced by the households.

- **Products:** predominantly dairy – cheese and milk. Calves are slaughtered for home consumption. Lamb eaten at Easter and pastram in autumn. Wool is still valued in the villages and used to make clothing and rugs.
- **Pendulation:** annual forage deficit necessitates movement of livestock to pastures in summer months where shepherds herd livestock communally and produce brânză, caș, urd and sometimes telemea by hand in stânele (sheepfolds)

In fact Sibiu is the county with the longest history of transhumance in Romania. The ownership structure of this hilly and mountain area developed a specific farming system predominantly based on methods as mixed sheep and cattle grazing and mowing, and mobile pastoralism on long or short distances. The political changes in late 19<sup>th</sup> century forced the shepherds to restrain long-distance movements within the boundaries of the Carpathians. This led to early deforestation of the region and the creation of mountain grasslands with their own biodiversity value.



Villages like Jina and Poiana Sibiului, where the main occupation is breeding sheep, have been in existence since at least 1537 and have a rich history and culture

### The transhumance tradition in Romanian Carpathians<sup>1</sup>

During transhumance, sheep are herded 2-300 km from summer pastures near the mountain villages in the transhumant centres of southern Transylvania (Sibiu, Braşov and Covasna) to lowland winter pastures in the South of the Southern Carpathians and Moldavia and also sometimes to winter pastures in Northern Transylvania.

The flocks usually consist of animals belonging to several owners. Professional shepherds are employed to take care of the animals. The flocks vary in size, generally ranging from 500 to 1500 sheep. Several shepherds, donkeys that carry their personal items, and livestock guarding dogs accompany every transhumant flock. The flocks leave the mountains in early October and take around two months to complete the journey to the winter grazing, which

<sup>1</sup> This section builds on the following papers:

- Ø Sally Huband and Annette Mertens "Securing pastoral livelihoods in Romania"
- Ø Sally Huband and David McCracken "Rural Policies in Europe: Delivering more for Pastoralism?"
- Ø Sally Huband "The Role of Romanian Pastoralists in Conserving Agricultural Biodiversity"



they have arranged to rent in advance. There are no set transhumant trails and so the shepherds have to find free grazing during the journey where they can. This often leads to conflicts with settled farmers and forestry managers.



In the most common form of mobile sheep grazing in Sibiu, known as pendulation, the movements are short distance (usually up to 20 km) as they are restricted to the limits of the community owned lands. In the spring, householders graze the animals on their own hay meadows because during this time grazing on the village's communal pastures is forbidden. Meanwhile, the local administration or 'town halls' organises an auction, at which people can bid to rent the communal pastures for the grazing

season (May 1<sup>st</sup> to September 30<sup>th</sup>). At the beginning of the grazing season all the sheep of the village (often including sheep belonging to shepherds) are collected together and are taken to the summer pastures by the shepherds hired by the camp organizer. During the summer, while the animals are away on the communal pastures, the sheep owners produce hay on their private meadows. In autumn, at the end of the grazing season, the livestock are brought back from the communal pastures to the villages. At this point, each owner takes their sheep home to graze the aftermath of their own hay meadows, or they are taken to autumn pastures on stubble fields outside of the community's boundaries.

### **Products of the HNV farming systems**

The main product of sheep based pastoralism is cheese, which is made at the mountain camps during the summer months. Some of the cheese produced is allocated to the owners of the sheep and the shepherds keep the rest as a form of payment. Both parties keep what they need for their own consumption and then sell the excess to other villagers or at the local markets though some animal owners do sell their cheese at city markets. This type of sheep production is, therefore, largely semi-subsistent.

The production of wool is no longer economically viable due to the emergence of foreign imports.

The production of meat is secondary to the production of cheese; however there are some sheep raisers who raise the animals strictly for this purpose. The main domestic market for meat is at Easter and otherwise it is exported mainly to Israel, Turkey, Greece and other European Countries.



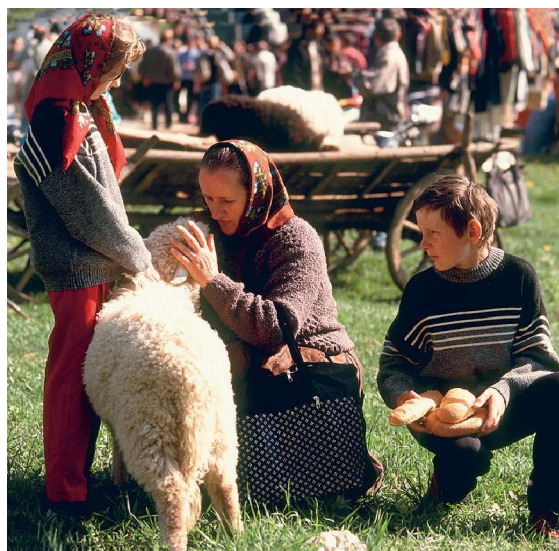
Table 4: Livestock production calendar in the Sibiu County

<b>November – April:</b>	From first snowfall until snowmelt livestock are barn kept. Calving and lambing in March. Ca production begins in the households.  Organisation of the rental of summer pastures in March. Livestock owners 'sign-up' their animals to a pasture.
<b>May:</b>	Cows graze their owner's hay meadows. Sheep leave in communal herds to graze in lowlands Hay meadows are fertilised with dung (this also happens in the autumn)
<b>June 1<sup>st</sup>:</b>	Households take their cattle to the summer pastures and sheep herded up to summer pastures. Cheese etc production begins in the stânele (sheepfolds)
<b>July:</b>	Lower meadows begin to be cut, can be earlier. Higher meadows begin to be cut in late July and in August. Mid-summer milk measurements are made in the sheepfolds determining how much cheese each gospodar (householder) receives
<b>August:</b>	Hay making continues
<b>September:</b>	Otav (second more nutritious hay cut) mowing begins Shepherds are bringing the flocks back to the villages where they can still graze on the pastures around the villages
<b>October:</b>	Cows return to the village and graze hay meadows until the snow comes. The majority of the sheep are taken to the lowlands where they graze arable stubbles until the snow comes.
<b>November:</b>	Pastram (pastrami) made in the gospod rii as well as ca

## V. POLICY ISSUES

Sibiu is well known for its big communities of shepherds who, in time have developed a long history of pastoral livelihood and created and maintained large areas of high nature value. Handed over from generations to generations, this type of farming has developed in time a sustainable livelihood based on shepherding traditions and a balanced relationship of traditional farming with the nature. Furthermore, in the last 20 years, the cheese produced in Sibiu has gained an excellent reputation the markets of big cities like Bucharest.

The importance of this type of livestock production based on semi-subsistence farms and sheepfolds for delivering many benefits to society seems not to be recognised or valued by policy makers, who are not considering semi-subsistence as a priority at national level.



The news in early 2007 that sales of sheep cheese are banned on a longer distance than 30 km or that shepherds are forbidden to take their flocks over private properties without the written permission of the owners have created lots of confusion among small farmers.

The shepherds in Sibiu were the first ones reacting and protesting very soundly to the so-called “harmonisation” of hygiene standards. The new hygiene requirements will be the main issue that the farmers of the Sibiu HNV systems will have to deal with in the coming years. The needs for investments for basic equipment will become a main concern. Many farmers are already considering giving up shepherding overall. In the conditions of continued restrictions imposed by the (mostly wrongly interpreted) implementation of EU or national legislation (hygiene standards, processing the milk over the sheepfolds, lack of markets for local and traditional products) it might lead to a reduction of the livestock in the field. As is the case in many other areas in Europe this will lead to a direct decline of the HNV areas both for the detriment of farming livelihoods and biodiversity.

The HNV farming systems are also becoming less socially acceptable. The job of a shepherd is very arduous and working conditions can be very poor. It is becoming difficult for the organisers of the sheepfolds to find skilled shepherds, choosing to work in countries like Italy and France. Shepherds are the linchpin of this livestock production system, without them, it will not function.

However, another important aspect concerning the transhumance is the lack of legal framework regulating and legalizing it. Without a legal basis transhumant shepherds will always be on the threshold of illegality. There is urgent need for an adequate legal and policy framework that supports extensive pastoralism, and that transparently regulates in detail the practice of pendulation and transhumance. The development of a legal and policy strategy based on this framework would provide decision making bodies with an effective basis on which to secure the livelihoods of pastoralists and the benefits that they deliver to Romanian society.

In January 2007 (when the Sibiu workshop was held in Bucharest) the following specific policy issues were identified:

- 1) The direct ‘translation’ of the EU hygiene regulation is not considering the realities for the Romanian dairy sector and farming traditions.
- 2) There was no distinctive HNMF measure within agri-environment programme. Furthermore, the ‘broad and shallow’ grassland scheme in the agri-environment measure was only planning to cover 10% of the semi-natural grasslands.
- 3) Rural development measures are not designed in a coherent manner (offering financial support for grasslands without supporting the market of products deriving from managing the grasslands – e.g adaptation to the hygiene standards).
- 4) The concepts of agri-environment and HNMF were not understood and promoted among responsible institutions. This resulted in a serious capacity gap of responsible institutions to face the implementation process.
- 5) Clear lack of communication between institutions involved in research, education, policy makers and farmers representatives.

- 6) Low level of coordination and involvement in the process of programming of different types of stakeholders: local authorities, NGOs, advisory agencies etc.
- 7) Poor adaptation of the technical language for the farmers understanding.
- 8) The land ownership titles still missing (lack of cadastral situation/landownership survey) creating difficulties in terms of absorption of funds (as it is requested as justifying document).
- 9) The up-take potential will depend on the level of organization of the advisory system, eligibility requirements for farmers, etc.

## **VI. POLICY RECOMMENDATIONS**

Some concrete proposals came up in terms of promotion of agri-environment measures at national level and how each of the institutions (including NGOs) can contribute for a better information to the farmers, but also for a better and sustainable absorption of the funds. In this respect, the following proposals were formulated:

- Ø Derogation of legislation regarding the regulation of hygiene standards for small producers. It was clear that none of the other measures will have any results if farmers are not allowed to sell their production on the market.
- Ø Developing a distinct measure for HNV grasslands to ensure their conservation.
- Ø Improving the structure of working groups on rural development measures with various stakeholders involved at local level in order to represent as appropriate as possible the interest of small farmers.
- Ø Correlating the agri-environment measures with the measures from axis 1, axis 3 and 4.

More specific proposals were developed for the promotion of the rural development measures and improving the understanding of the hygiene regulations:

- Ø A caravan running through the country organized in partnership with ministry offices in the field, NGOs, local farmers associations, advisory agency, etc.
- Ø Publish brochures containing the main information on agri-environment measures produced in a simple and coherent language.

### **Policy successes**

In the months following the workshop two main successes were achieved:

1. A derogation of hygiene legislation for small producers. This was certainly a relief for small scale farmers in the country.  
A brochure explaining the detailed requirements for all farmers was developed in partnership between the Romanian National Veterinary Service, WWF DCP Romania and Adept Foundation.
2. A distinctive measure designed for HNV grasslands within AE programme. The measure comprises 3 packages each targeted at specific farming system.



## Attachment 1

### AGRICULTURE AND FOREST STATISTICS FROM SIBIU

Table A1: Crop production (tones)

	1995		2002		2005		2006		
	Total	Private sector	Total	Private sector	Total	Private sector	Total	Private sector	2006/1995
Grains	185239	151021	167190	165677	159136	158110	143306	143129	-41933
Industrial plants	33372	30402	4539	3818	5993	5978	7448	7448	-25924
Potatoes	79722	75265	96679	96403	90796	90722	68240	68232	-11482
Vegetables	36682	34117	43555	43497	47207	47185	4037	40307	+3625
Fodder	331518	253944	313679	306366	281528	278581	300252	299353	-31266
Vineyards	3663	2515	5982	5592	7053	6926	5179	5179	+1516
Fruits	13207	4871	28082	26031	31923	29799	19668	19619	+6461

Table 2: Livestock production

		1995		2002		2005		difference		2006	
	units	Total	Private sector	Total	Private sector	Total	Private sector	2005/1995	2005/2002	Total	Private sector
Meat	tonnes/1000	38625	38376	38470	38411	29462	29325	-9163	-9008	36399	36352
Milk	L/1000	1027,3	883,9	975,6	952,6	1058,1	1048,2	30,8	82,5	1068	758
Wool	tonnes	826,6	750,1	699,5	696,5	741,5	739,7	-85,1	42	846	845
Eggs	/1000	90,8	79,4	112,6	112,6	109,6	109,6	18,8	-3	125,9	125,9
Honey	tonnes	177,6	175	291,4	290,6	385,1	383,5	207,5	93,7	745	745

Sursa: Direcția pentru Agricultură și Dezvoltare Rurală Sibiu

Table 3: Forests

	units	2005	2006
Total forest area	'000 ha	186,8	186,8
Private sector	'000 ha	111,0	112,8
Type of forests and surfaces	'000 ha	184,4	184,3
Coniferous	'000 ha	68,4	68,4
Deciduous	'000 ha	116,0	115,9
Forested area	ha	426	493
Wood volume for economic use	'000 m <sup>3</sup>	346,7	401,6
Coniferous	'000 m <sup>3</sup>	136,9	165,0
Beech	'000 m <sup>3</sup>	84,5	95,7
Oak	'000 m <sup>3</sup>	45,4	45,8
Various hardwood species	'000 m <sup>3</sup>	72,0	83,5
Various softwood species	'000 m <sup>3</sup>	7,9	11,6

Sursa: Caiet Statistic 2003

EFNCP is a Europe-wide network which raises awareness of the importance of low-intensity farming for nature conservation and aims to improve the way public policies respond to the needs of these farming systems.

**European Forum on Nature  
Conservation and Pastoralism**

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WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature

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