



# MOUNTAIN DEVELOPMENT BASED ON CULTURAL AND ENVIRONMENTAL ASSETS

European case studies and proposals to guide  
Carpathian and Balkan projects



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*Euromontana SARD-M report  
on positive externalities 2008-2009*

15 April 2009

**Euromontana** is the European multisectoral association for co-operation and development of mountain territories. It embraces regional and national mountain organizations throughout greater Europe, including regional development agencies, local authorities, agriculture organizations, environmental agencies, forestry organizations and research institutes.

**Euromontana's mission is to promote living mountains, integrated and sustainable development and quality of life in mountain areas.**

In order to achieve this, Euromontana facilitates the exchange of information and experience among these areas by organizing seminars and major conferences, by conducting and collaborating in studies, by developing, managing and participating in European projects and by working with the European institutions on mountain issues.

## **SARD-M**

About 270 million mountain people lack food security, of whom 135 million are chronically hungry. While the vast majority of mountain people are rural, agriculture alone cannot ensure their livelihoods. Mountains constitute a wealth of strategic resources: fresh water for half of humanity and the biodiversity that will help feed the world. Mountain populations may also benefit from new economic opportunities, once empowered and involved in the decision process.

As the United Nations lead agency on both sustainable agriculture and rural development and mountain issues, FAO, with support from the Swiss government, prepared a four-year multi-donor project on SARD in mountain regions (SARD-M). The SARD-M project aims to facilitate the formulation, implementation and evaluation of sustainable agriculture and rural development policies. The project also favours the development and implementation of institutions and legislations inspired by SARD principles and adapted to mountain specificities.

The SARD-M Project aims to facilitate the design, implementation and evaluation of new policies for sustainable agriculture and rural development in mountain regions, taking into consideration the essential linkages between mountain and lowland populations.

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## 1. ACKNOWLEDGEMENTS

Many people contributed information and advice about the case study areas, and they are mentioned at the end of the relevant sections. I would like to thank them again here for correcting mistakes and assisting our interpretation. I would also like to thank Alexia Rouby who co-authored the Cevennes case study. Gérard Viatte and Jean Gault provided encouragement and advice throughout the report planning and preparation, and I am very grateful to them.

The Carpathians and Balkans chapter is largely inspired from the work conducted by UNEP Vienna and by Balkan foundation for sustainable development (BFSD) for South-East Europe (Balkans), whom I thank for their inputs.

**The comments, conclusions, information and any remaining errors contained here are of course the author's responsibility.**

## 2. INTRODUCTION

Many mountain areas experience severe social and economic problems yet they are renowned for their environment, culture, and quality products. A previous paper published by Euromontana and FAO SARD-M <sup>1</sup> explored this paradox (Robinson 2007) and made a number of recommendations for ways in which assets like this could be made to play a stronger role in mountain development, particularly by improving income and reducing poverty. Broadly, the issue is about increasing the extent to which the non-market goods and services (often known as positive economic externalities) can generate social and economic benefit in mountain areas.

There are two key strands: ensuring the providers of externalities are paid for the service they provide (even when market mechanisms do not function), and incorporating the value of the externalities in the price of goods and services that can be sold in the market. Farmers should be paid for the value of the biodiversity they sustain through traditional hay-making, for instance. Local cheeses should be marketed as high value products because of their environmental and cultural associations. Both activities are described in economic terms as valorising or remunerating positive externalities. There is an important distinction though between specific payments to land managers for maintaining the environment (payments for environmental services – PES) and the more general case (remuneration of positive externalities – RPE). **The broader term also includes the income received from the added value of a product's cultural and environmental character.**

In order to achieve these apparently straightforward results a range of actions is necessary, including measures such as assisting groups of farmers to work together, modifying how government agencies collaborate, creating new payment systems for land or water management, and encouraging local communities to take initiatives on tourism or food production. The main recommendations from the earlier paper are described below and form the structure for the case studies that follow.

This paper has been written in order to assist the development of mountain regions in the Carpathian and Balkan regions. It examines the principles behind remuneration of positive externalities by looking at experience in four European areas. It then briefly reviews the situation in the Carpathian and Balkan mountains. Finally, it proposes some objectives and mechanisms that could be used for new pilot projects in these regions and suggests a sequence of events for doing so. The examples provided by the pilot projects should contribute to the elaboration of new market and policy approaches for effective development in mountain areas, which would both benefit mountain communities and respond to societal demands.

Desk-based case studies such as the ones in this report depend on the availability of previous research and analysis, so this report is based on information from National Parks and UNESCO Biosphere Reserves, where such work has been common. The successful experiences in governance and valorisation of positive externalities can equally as well be applied elsewhere, though. **The report concludes by recommending how new pilot projects could be set up but does not intend to suggest that they should be restricted to national parks and biosphere reserves.**

**Table 1- Recommendations for creating local benefit from positive externalities in mountain regions (after Robinson (2007))** ex-

Recommendation	Explanation
<p>Policies dealing with externalities should include a poverty reduction objective. They should address equity in the distribution of benefits from positive externalities and from valorisation and payments for services.</p>	<p>Even when valorisation is successful the benefits may be captured by people who are already powerful and wealthy. A successful programme will ensure that everyone benefits, everyone participates, and no-one is excluded.</p>
<p>Undertake preliminary assessment of the existing policies and their ultimate effectiveness; Relevant laws should be enacted, and existing strategies, policies or laws reviewed.</p>	<p>Remuneration of positive externalities (RPE) is a new issue, which is generally under-addressed by laws and regulations; in most Balkan and Carpathian regions the transition period from the communist system is still incomplete.</p>
<p>Find out about beneficiaries</p>	<p>Certain people benefit from positive externalities, such as tourists who enjoy biodiversity. Assumptions are often made about this. In fact, for a successful valorisation programme, good evidence is needed about what they value and how much they value it.</p>
<p>Find out about providers</p>	<p>Providers are people whose activities create externalities, such as farmers who cut hay and thus encourage wild flowers. It is not always clear who the providers are, and how much each of them provides. Payments should be linked to the services provided: which farmers, which rural communities, and how much for each, for example?</p>
<p>Develop payments for services and valorisation through markets, and ensure there is synergy between them</p>	<p>Payments to farmers or rural communities for environmental services and creation of high value markets for cheese can be linked, for example. Together they have more potential to generate social and economic benefits.</p>
<p>Assess the effectiveness of transaction costs and their contribution to sustainable development</p>	<p>Administering schemes and supporting products can be costly. At the same time administration may include training and advice. So the costs and benefits of administration must be looked at carefully.</p>



Recommendation	Explanation
<p>Ensure wide participation, especially of the private sector and community groups, and increase their capacity to play their part</p>	<p>Traditional approaches focus on one group, such as farmers. But one group cannot do everything. For example the wider community and businesses should also be involved in tourism.</p>
<p>Increased efforts should be made to raise awareness of the general public and policy makers about the value and needs of mountain areas.</p>	<p>Many national and international policies neglect mountains. Many people are unaware of how they benefit from mountain areas. It will be easier to create good mountain programmes and to market products if understanding is more widespread.</p>
<p>Use cross-sectoral programmes</p>	<p>For example, from the consumers perspective, biodiversity, recreation, tourism and land management are closely tied together. So successful development programmes operate in a co-ordinated way across a number of fields.</p>
<p>Look at the whole development and policy system</p>	<p>Mountain communities and economies are small and have strong internal links, so successful initiatives make use of this. Narrowly-based initiatives have much more limited impact.</p>
<p>The structure of the institutions, their capacity to achieve mountain externality policy objectives, and their commitment to work together to do so, should be reviewed and changed as necessary.</p>	<p>Government institutions do not tend to work well with one another, yet cross-sectoral working is essential in this field.</p> <p>Product development may be constrained by policies and laws, which may need to be adjusted to suit <b>mountain areas' needs</b></p>
<p>Monitor, evaluate and adapt. Communicate findings.</p>	<p>Every place is different and there is no simple recipe for successful mountain development. Research and monitoring will improve results and persuade stakeholders of the benefits.</p>

## 2.1 Some terms

### 2.1.1 Biosphere Reserve

A number of the case studies feature Biosphere Reserves (BRs). They were chosen because they are based on sustainable development of natural resources, they have been in existence for some time, and information about them is extensive. UNESCO describes them as follows (UNESCO 2009):

*Biosphere reserves are sites recognized under UNESCO's Man and the Biosphere Programme, which innovate and demonstrate approaches to **conservation and sustainable development**. They are of course under national sovereign jurisdiction, yet share their experience and ideas nationally, regionally and internationally within the World Network of Biosphere Reserves. There are 531 sites worldwide in 105 countries.*

### 2.1.2 Payments for environmental services - PES

One of the key features of all the case studies presented here is payments to farmers and other land managers for environmental management. FAO (2008) describes PES in agriculture as follows:

*Agricultural ecosystems sustain life. They supply food and drinking water, maintain a library of genetic resources, preserve and regenerate soils, recycle nutrients... The provision of these services depends critically on the management decisions taken by farmers, fishermen and forest managers.*

*Payments for Environmental Services (PES) are one type of economic incentive for those that manage ecosystems to improve the flow of environmental services that they provide. Generally these incentives are provided by all those who benefit from environmental services, which includes local, regional and global beneficiaries. PES is an environmental policy tool that is becoming increasingly important in developing and developed countries.*

This report also refers to other positive externalities, such as maintenance of built and cultural heritage. The term PES does not normally cover this range even though a service is being provided to society.

## 2.2 Glossary

BR – Biosphere Reserve

CAP – the EU Common Agricultural Policy

CEEC – Central and East European Countries

EU – European Union

FTE (jobs) – Full time equivalent

LEADER – An EU bottom-up rural development programme funded by the CAP

LFA – EU Less Favoured Areas (under RDR)

LIFE – An EU environmental fund

LSU – Livestock Unit

NGO – Non-Governmental Organisation

PDO – Protected Designation of Origin (of a product)

PES – Payments for environmental services

PGI - Protected Geographical Indication (of a product)

RDR – EU Rural Development Regulation 1698/2005 (European Commission 2005)

RPE – Remuneration of positive externalities

### 3. THE RHÖN BIOSPHERE RESERVE



#### 3. 1 Summary

The Rhön Biosphere Reserve was created to revitalise a neglected area of Germany after the fall of communism. The landscape consists of moderate hills and plateaux, with high open pastures separated by walls and hedges and kept free of trees by grazing. Agriculture creates the open landscape enjoyed by residents and tourists for recreation; it is also the basis of local quality food products; the hardy Rhön sheep flock has been expanded to ensure agricultural management continues. The area contains parts of several administrative units and the Biosphere Reserve provides an important way of creating local identity and co-ordination. A range of local food products and brands has been created by local actors, facilitated by the Biosphere Reserve units.

#### 3. 2 Introduction

In the 1980s the centre of the Rhön region was no-man's land. On one side lay communities and an economy that looked east, to the German Democratic Republic and the Eastern Bloc. On the other side people looked to the German Federal Republic, Western Europe, and beyond. Once the Iron Curtain opened, how were things to change? In the newly unified Germany, the Rhön includes parts of three regional administrations (Länder), so a lack of focus and identity could have held progress back for decades. Instead it was decided to galvanise activity by creating a new UNESCO Biosphere Reserve, based on sustainable development of the region's natural and cultural assets. Nearly 20 years later this is recognised as a great success, and UNESCO itself celebrates the Rhön as one of the best exponents of the Biosphere Reserve concept in the world. This case study outlines the main factors that have led to such an outcome.

#### 3. 3 A picture of the region

(Knickel 2001; Fremuth 2004; Iron Curtain Consortium 2004; German MAB National Committee 2005; Pokorny 2006b; Pokorny 2008)

The Rhön region is in the centre of Germany, 150km east of Frankfurt. Settlements are mainly small villages and towns, in the Länder (federal states) of Bayern, Thüringen, and Hessen. The Biosphere Reserve covers 1850 km<sup>2</sup> and was designated in 1991. It has a population of about 136,000, at a density of 80 people/km<sup>2</sup>.

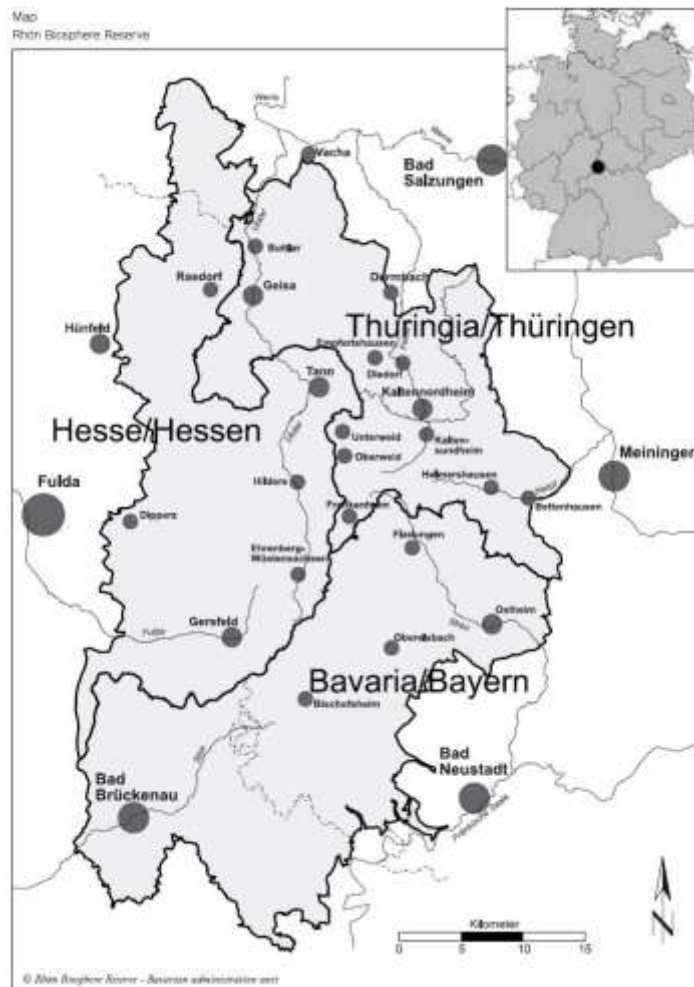
The landscape consists of low mountains up to 950m altitude, composed of volcanic basalt rocks with some limestone.



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The hills are now mainly covered in grassland though beech (*Fagus sylvatica*) forest is left from medieval times and has been producing timber ever since. It still covers 41% of the area. There are also some bogs and mires. The grassland areas are maintained by grazing but the hilltop pastures are very exposed to wind. However hedges have developed at field boundaries and they, together with small woodlands, provide shelter. They are now an important part of the Rhön “cultural landscape” with its high structural richness and aesthetic value.

**Figure 1 - The Rhön Biosphere Reserve lo-**



When the Biosphere Reserve was set up the area had already entered the classic pattern of rural decline. Shops such as butchers and bakers were closing in the villages and people were getting more and more of their shopping from larger settlements and towns. There was very limited marketing of local produce either within the area or further afield.

Agriculture too was in decline in the 1980s, with more than 4% of farms being abandoned each year, though 50% of the land area is still farmed, with twice as much pasture as arable. A significantly higher proportion of young people left the region than was normal in the rest of Germany, and this continues to be the case. Farming included a strong tradition of keeping a local, hardy, breed of sheep (“Rhön sheep”) suited to the harsh open pastures. By the late 1980s only a few remained in the West German part, though more survived in the Thuringen part of East Germany. Once the border was opened animals could be exchanged and the flock expanded, helping to keep the pastures free of woodland regeneration. Nearer to settlements, apple production has long been important, together with plums and pears. A range of local varieties existed though many were disappearing as standard non-local products became more easily available. Other land-based activities include dairy farming, which became an important local brand, and management of the beech woodlands. The important economic activities also include tourism, with around one million visitors and 5 million overnight stays per year, and employment outside the region, which sometimes requires long distance commuting.

### 3. 4 What are the non-market assets and services?

The theme the region has adopted is *Land der offenen Fernen* – Land of distant horizons – and this encapsulates the values that make the region and its products attractive. The expression combines the environmental and cultural resources, and highlights how they are interdependent because of agricultural traditions. Breaking it down into individual parts, the main components are as follows:

Biodiversity (Popp 1998; Fremuth 2004; Pokorny 2006b; Raggamby and Lange 2007)

- Species, including black grouse (*Tetrao tetrix*), black storks (*Ciconia nigra*), corncrake (*Crex crex*), beaver (*Castor fiber*), wildcat (*Felis silvestris*), trout (*Salmo trutta*),
- Habitats such as species-rich dry grassland on limestone, alder (*Alnus glutinosa*) floodplain woodland, *Nardus* grassland, lime-maple (*Tilia-Acer*) woodland, beech (*Fagus sylvestris*) forest, and bogs and mires

Other ecosystem services (Raggamby and Lange 2007)

- Renewable energy (wind-power and wood biomass)
- Genetic resources including medicinal plants and traditional crop and livestock varieties
- Ground water as a source of drinking water for adjacent regions

Recreation (Knickel 2001; Iron Curtain Consortium 2004)

- Walking, cycling, skiing (cross country and downhill), fishing, gliding, paragliding
- Enjoyment of the landscape
- Health-spa towns

Culture (Knickel 2001)

- Regional food products, increasingly from organic production
- Traditional buildings
- Artisan crafts such as woodworking and baking
- Cultural landscape of hill-top pasture with hedges

### 3. 5 Who is involved in providing or benefiting from positive externalities, and how?

Here, we use two terms that describe people who create positive externalities (**providers**), and people who use them (**beneficiaries**).

#### △ Farmers

Agriculture is the key feature of the Rhön landscape, so farmers are the main **providers** in the area. In particular they maintain the open pastures by grazing them with sheep and cattle and using them for hay-making. They also look after the hedges, and the presence of traditional farms contributes to the cultural landscape and communities. Farmers have an important role to play in maintaining water quality, by avoiding enrichment with nutrients from fertiliser and animal waste, and they provide habitats for endangered wildlife that has disappeared in more intensive agricultural areas elsewhere. Finally, they are the guardians of genetic diversity in agricultural products including sheep, cattle, apples, and other fruit.

### △ Foresters

Woodlands are another important element in the landscape and foresters determine which species of tree regenerate after cutting, how old trees grow, how the forests look in the wider landscape, and how people can access them for recreation. Woodlands also provide an important habitat for wildlife. The production of fire wood as a traditional local source of energy has been gaining importance, and as this is a renewable energy source foresters are delivering an ecosystem service. In all of these respects foresters are **providers**.

### △ Traditional crafts

Woodworkers, bakers, butchers, and other traditional craftspeople are engaged in making goods that sell in the market. But at the same time they contribute more intangible values to the community and landscape, and this is benefits both tourists and residents. They have the skills and knowledge to process and use traditional local resources through traditional crafts (as opposed to industrial processing). By training young people on the job they promote these skills and pass them on to the next generation. To that extent craftspeople are also **providers**.

### △ Tourists



The Rhön has a long history of tourism, particularly for health spas and more recently for countryside recreation. Raggamby and Lange (2007) cite a survey showing that 81% of Rhön tourists thought that nature (hiking and cycling) was important for their holiday. 68% said that the land and people were important, and 85% said general recreation. This indicates that tourists (and the tourist business sector) are important **beneficiaries**.

### △ Local residents

An opinion poll of about 800 residents of the Rhön area was done in 2002 (German MAB National Committee 2005). **When asked what the word “Rhön” made them think of, 99% listed a beautiful landscape. 80% or more of them thought of** quiet and security, intact unharmed nature, high quality regional food, and the Rhön Biosphere Reserve itself. Asked to rank how important the Biosphere Reserve was to them on a scale of 1 to 10, the average score was 7. This provides strong evidence that local people are important **beneficiaries** too. At the same time, people involved in agriculture consistently scored these values lower in the survey. This highlights the different roles of **providers** and **beneficiaries**.

## 3. 6 Making a living

How the positive externalities of the Rhön are **valorised** to create economic opportunities (Knickel and Renting 2000; Knickel 2001; Pokorny 2008).

### △ Sheep



Reintroduction of the traditional Rhön sheep breed is one of the great success stories. In the 1980s they were a threatened breed, with only 100 animals registered.

In 2005, following a breeding programme and marketing development, there were over 3000. Prices have doubled over the same period despite the increase in supply, and Rhön lamb sells for twice the price of imported lamb. The reasons for this lie in the qualities consumers associate with the meat: slow growth giving better taste, traditional farms, high environmental values, and the attractive landscape and culture. Farmers, meat processors, restaurateurs, and butchers are the most obvious people to obtain income as a result.



### △ Milk

Rhöngold milk is an organic product processed and marketed by the Rhöngold dairy, which was established in 1994 and immediately became a major industry, one of the four largest organic dairies in Germany. Milk producers received 10-30% higher prices than for the conventional product, purchased input costs were about 35% less, labour costs were about 10% higher, and yields per cow were 5-20% lower. Overall, net farm revenues were about 15% higher. So Rhöngold milk producers obtained more income, as did businesses involved in the processing and distribution chain. **70-75 jobs were created at the dairy, and 13m€ of investment in buildings created additional short term effects.** The environmental and cultural qualities associated with Rhön lamb also drove the marketing of Rhöngold milk, with the added benefit of the globally recognised organic label. Unfortunately the Rhön Gold enterprise has since gone out of business because of strong competition on the national organic milk market. The milk from organic

dairy farms in the Rhön is now being processed in a nearby region.

### △ Environmental land management payments

Under the Rural Development Regulation (RDR) of the EU Common Agricultural Policy (European Commission 2005) farmers can receive payments for managing land to achieve environmental and nature conservation orientated objectives. In the Rhön these payments are available for land grazed by sheep or cattle, or for meadows which are used for hay making, so farmers receive a direct income from the state. The payments are related to biodiversity and landscape objectives, with detailed management prescriptions for different types of area and habitat, and payments in the range **150-200€/ha/year** (2000 prices). Farmers converting to organic production have also been able to get transitional payments of about **250€/ha for a limited period.**

Farmers also receive Less Favoured Area payments under the EU RDR. Although these are intended to provide general support to agriculture in hill and mountain areas, they contribute to environmental goals in areas such as the Rhön where land abandonment is likely and would lead to loss of environmental quality.

The Biosphere Reserve itself does not make any additional payments for environmental management. Although it has been considered, sufficient funding has not been available. The RDR payments available vary depending on which Bundesländer is involved.

### △ Food

Added value agricultural products (from organic and conventional production) of Rhön lamb, milk, beef, apples and other crops are offered to residents and tourists through local shops, restaurants, and by export to wider markets. Butchers, bakers, and other retail outlets, together with restaurants and hotels, and associated distribution networks, all obtain additional income and profit. The Rhön regional label was created to promote these regional products and services. It is provided to businesses that wish to become biosphere reserve business partners by complying with a set of process quality criteria.

### △ Tourism accommodation



Tourism spend in the region in 2000 was estimated to be over **325m€**, and one third of this was attributed to tourists visiting because of the area's environment and culture. The full range of local tourism businesses receives this income, as well as public services such as transport. Farmers play a direct role in tourism, with about 70% having some kind of complementary activity such as food processing (42%), accommodation/activities (21%), or direct sales (34%).

### △ Other Rhön products

Apples, outdoor-reared beef, brown trout (*Salmo trutta*), honey, goat products, beer and wood products are all produced in the region and marketed as special local products. A range of producers, processors, and retailers receive direct income as a result. For example, the Rhön organic fruit organisation has 2000 members, including producers, processors and retailers, with apple juice and a beer/juice mixture as the main products. The price for apples from traditional orchards is now four times as great as in 1990.

### △ Overall economic performance

55% of businesses surveyed in 2006 (Pokorny and Natterman 2008) reported some increase in profitability as a result of the Rhön sustainable economic strategy. This was most obvious in agriculture and forestry, followed by crafts and food-processing, and least obvious in gastronomy and farm shops. Expectations of future turnover were also positive, despite the adverse economic outlook at the national level. In the first 6 years of the project one catering supply group increased its turnover of regional products from 20% to 50%, and the share of regional goods sold in tourism increased from 4% to 10%, generating an additional 2.3m€ (1998 prices).

## 3. 7 The people who made it happen (German MAB National Committee 2005; Pokorny 2006a; Pokorny 2008)

The Rhön Biosphere Reserve has been successful because it has managed to combine both top-down and bottom-up approaches. The following examples illustrate how complex the process has been and what a wide range of people have been involved:

- Public sector
  - \* 3 Federal (Bundesländer) administrations
  - \* 5 District Councils
  - \* Biosphere Reserve units in each of the three Bundesländer
  - \* 75 Municipalities
- NGO<sup>1</sup> and private sector including
  - \* various nature conservation associations in the three parts of the Rhön
  - \* ARGE (Rhön co-operation group at the district level)
  - \* 2000 organic fruit producers
  - \* **Gastronomic association ("From the Rhön – for the Rhön" and "Charming Rhön")**
  - \* EU LEADER local action groups
  - \* The Tegut Foundation (local supermarket chain)
  - \* BIONADE company (local organic soft drink brewery, promoting organic agriculture in Rhön), other beer brewers, mineral water companies



- \* Slow Food (German branch of the international food quality NGO)
- \* Agricultural associations
- \* Rhöner Durchblick association (for women seeking self employment opportunities and training in rural areas)
- \* Rhöner Holzveredler (processing of local timber)
- \* Agrokraft (enterprise to promote bio energy production)
- \* Friedrich-Wilhelm-Raiffeisen eG (cooperative for promoting solar power)
- \* local tourism associations (at the municipality or district level)
- \* Rhön biosphere reserve associations (NGOs) in each Bundesländer

### 3. 8 What help did they need?

The three Biosphere Reserve units have played a critical role by motivating and bringing partners together, moderating and mediating to resolve differences, co-ordinating projects and identifying priorities, and helping to raise funds (Pokorny 2008).

Financial support from EU Structural Funds and CAP (including LEADER), and the EU LIFE Programme has been an important incentive. State funding as well as district and municipal funding and private sponsoring is being used as sources for projects. Biosphere reserves are run by the Bundesländer (federal states), so only selected projects are funded from national level. The biosphere units are financed by state funds only.

### 3. 9 Is it “joined up” (cross-sectoral)?

The Rhön is an excellent example of the advantages of taking a cross-sectoral approach. Farming, retail, tourism and environmental management are linked together in many different ways. Above all the Rhön lamb and Rhön apple labels, as well as the overall Rhön regional label, bring together goods sold in the marketplace and environmental or cultural qualities that are often overlooked.

Knickel and Renting (2000) highlight the importance of synergy between fields of activity and actors in rural development, and they argue that in the Rhön this occurs because of the food branding, the popularity of new food lines, and because of the links between tourism development and the enhanced image of the area. A similar positive link exists between organic food production and biodiversity in the Rhön.

### 3. 10 How it is organised

Tri-lateral agreements between the Länder provide the basis for co-operation and strategic planning of the Rhön region. This top-down process, facilitated by the Biosphere Reserve units, is now evolving into a more bottom-up arrangement through the ARGE co-operation group which is organised by the 5 districts.

This has undoubtedly led to the development of greater capacity in the NGO and private sectors. Their ability to organise themselves and interact in a regional network is shown by the wide range of production, processing and marketing projects. The Rhön biosphere reserve has had an important catalyst function.

However the 2006 survey (Pokorny and Natterman 2008) showed that small business people did not strongly associate Biosphere Reserve status with economic benefits. Instead, the various institutions that work together through the Rhön **Biosphere Reserve are individually credited in people’s minds with the successes that are achieved. This is not to say that the Rhön BR management is unimportant. Its role as a catalyst and animator is widely recognised within local institutions, but it is not very visible to the general public.**

Because the Rhön BR includes parts of three Bundesländer, which make independent decisions, the administration differs (Pokorny, pers. comm.). In Thüringen the BR administration unit is attached to the Bundesländer government, whereas the Bayern unit is at the regional government level, and the Hessen unit is at district council level. There is no overall Biosphere Reserve management, and when the 3 units need to co-operate they do so by consensus. For example the creation of the Rhön brand was done by consensus on a trilateral basis. Some other joint projects have not been possible on a

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trilateral basis because of lack of agreement between the different Biosphere Units. If consensus is not possible then the parts of the BR may pursue work independently. The units hold joint monthly meetings to ensure good communication, and meetings of the Bundesländer ministries, the regions, and the advisory committee take place every 6 months.

There is a small trilateral Biosphere Reserve budget to fund joint publications, research and projects. Individual units are funded by their respective Bundesländer Ministries of Environment. They are not directly linked to the Ministries of Agriculture though they have links with them.

The EU LEADER programme has played an important role in all three parts, though again there are differences in the way this has happened. In Hessen the director of the BR unit was also director of the LEADER+ local action group, whereas in Bayern and Thüringen there was a less direct link with LEADER. Other approaches to public participation have also been used, depending on informal person to person contacts and pre-existing local associations such as those for tourism and education (Raggamby and Lange 2007).

The Rhön regional label took some time to develop because of the trilateral administration of the BR and because of concerns that it might have impacts on other regional labels in the three Bundesländer. It is now under the control of the 5 District Councils. Certification and monitoring visits to participating businesses are made by a group of representatives from the local Biosphere Unit, the Chamber of Commerce, and a specialist for the sector involved (restaurant, farm, etc.). This process has been administered through a standard association structure and is now moving to a limited company. In response to requests from the restaurant sector a multi-level label (using a star system) has been adopted so that higher standards can also be included.

### **3. 11 Do the public and private sectors work together?**

Yes. The Biosphere Reserve has always aimed to facilitate rather than to take charge. The interdependence between the public sector role on issues such as protected labelling and funding for environmental management and NGO/private sector roles in production and marketing is widely recognised by stakeholders in the Rhön region. An analysis of the level of trust between stakeholders, and between them and the public institutions, suggest it is generally good or very good (Raggamby and Lange 2007).

### **3. 12 Possibilities for the future**

**More regional products such as poultry, ewe's milk, vegetables and spices, and non food products such as renewable energy sources could be developed.** The markets for Rhön products within the region could be expanded, particularly at the many health spas. Direct marketing of products to consumers outside the region, both in adjacent areas and for more long distance tourists, could be expanded (German MAB National Committee 2005).

### **3. 13 Poverty, and how the benefits are distributed**

(Knickel 2001) states that the Rhön was long thought of as a poor part of Germany, but that the recent success of the Rhön Biosphere Reserve has induced a process that is changing this in two ways: at the local identity level and at the business level.

Economically speaking the region is still a relatively poor area compared with other booming areas in Germany. However **the Rhön's positive reputation nationwide as an innovative rural region is increasing, and this creates positive feedback to the region and its people.** With the establishment of regional marketing initiatives and their growing success, local people have gained greater local identity and have developed a sense of pride in their region (in contrast to the past).

Apart from some larger enterprises that are national players, most of the initiatives are small and only locally important so they act only at a micro-economic level. So no effect can yet be seen in official statistical figures at the district level, though results from a micro-survey show that there are positive effects. Even in economically difficult phases of rising unemployment many biosphere reserve business partners have done well economically and could maintain or even increase their staff numbers. Between 1991 and 2006 194 permanent jobs were created, a 36% increase for the area. From 1999 to 2006 unemployment in the Rhön fell by 9.2% whilst in Germany as a whole it rose by 2.4% (Pokorny and Natter-

### **3. 14 Will it last, and is the system costly to administer?**

It is difficult to gauge the total costs of projects involved in the Rhön Biosphere Reserve as the funding sources are varied and a large number of initiatives have been undertaken. The costs of administration are only a small part of the overall cost, as the Biosphere Reserve staff mainly provide ideas and organisational support.

Marketing successes indicate that demand for Rhön labelled products is strong, and it seems unlikely that the current trend for high quality food and tourism experiences will be reversed. So the market based elements seem secure. Environmental policies and trends also suggest that EU support for the provision of environmental services such as biodiversity and landscape will continue. Overall the Rhön initiative looks strong and sustainable.

### **3. 15 Conclusions and questions**

- The Rhön initiative was inspired by the economic and social shock arising from the reunification of Germany
- Although the area is not dramatically mountainous, the cold climate and poor communications are typical of mountain areas
- The Rhön is relatively close to wealthy markets in the rest of Germany and elsewhere in Western Europe
- Market pressures threaten the viability of local branding initiatives and may overwhelm even well established brands such as Rhöngold milk
- The Rhön BR has been operating for 18 years. It would not have been so successful without a long term commitment by government and without continuity in the governance structures.
- Institutional co-ordination between Bundesländer has been essential because the Rhön BR crosses administrative boundaries. A strong BR identity, at least within the institutions, has assisted this process.
- The BR identity is less strongly recognised by the general public, who are more aware of specific projects such as recreation provision or branding. This does not seem to cause problems.
- The Rhön BR is widely recognised for the way it has successfully combined top-down (institutional) and bottom-up (participation) approaches. Together they seem to have been much more successful than either would have been alone.
- Bottom-up initiatives may be more difficult to monitor and evaluate because of the diversity of funding sources, programmes and projects. This may make it difficult to get an overall picture of impacts and outcomes.
- Positive economic impacts may be evident at farm level as a result of projects such as the Rhön BR but may not be seen in regional economic data (Ploeg 2000)
- Clusters of synergetic activities (particularly nature conservation, farm tourism, quality production and direct marketing) are likely to be particularly important (Knickel and Renting 2000). The clustering can happen at farm level, and also between different sectors at local level. The positive effects increase with time.

#### **3. 15. 1 Acknowledgement**

We are very grateful to Doris Pokorny of the Rhön Biosphere Reserve, Bavarian Administration Unit, for her help and advice on this case study.

## 4. ENTLEBUCH BIOSPHERE RESERVE



### 4. 1 Summary

Worries about declining agriculture and population, low income levels, and the possibility of restrictions on land use led local communities in Entlebuch (Switzerland) to seek positive development opportunities based on traditional culture and environment. With assistance from government agencies they concluded that establishing a Biosphere Reserve would allow them to take advantage of their assets and market them more effectively. Between 2001 and 2008 this approach led to the establishment of a comprehensive model for co-operation between local communities and government bodies. As a result, product and producer brands were established and marketed, tourism development expanded rapidly, and contracts for land management have been established with farmers.

### 4. 2 Introduction

In 1987 a referendum at Federal level led to a new Swiss law protecting moorland landscapes of national significance from radical change, although at first it was unclear which land would be affected. In 1996 the people of Entlebuch realised that 26% of their locality would be covered by the law and they became concerned about the economic and social impacts (Hambrey, Evans et al. 2008). Lying in the heart of Switzerland, the area had a historical reputation as the poor-house of the country. The inhabitants realised that protecting the moorland landscape should not mean abandoning it, and that new initiatives could both protect it and regenerate their communities.

A short period of planning followed, leading to the idea of establishing a UNESCO Biosphere Reserve that would stimulate sustainable economic development, based around the mountains, moors and forests. These ideas were put to the local communities in 2000, and approved by 94% of those voting. UNESCO awarded the area Biosphere Reserve (BR) status the following year, and work began to establish a range of projects on land management and branding (UNESCO Biosphere Entlebuch 2007).

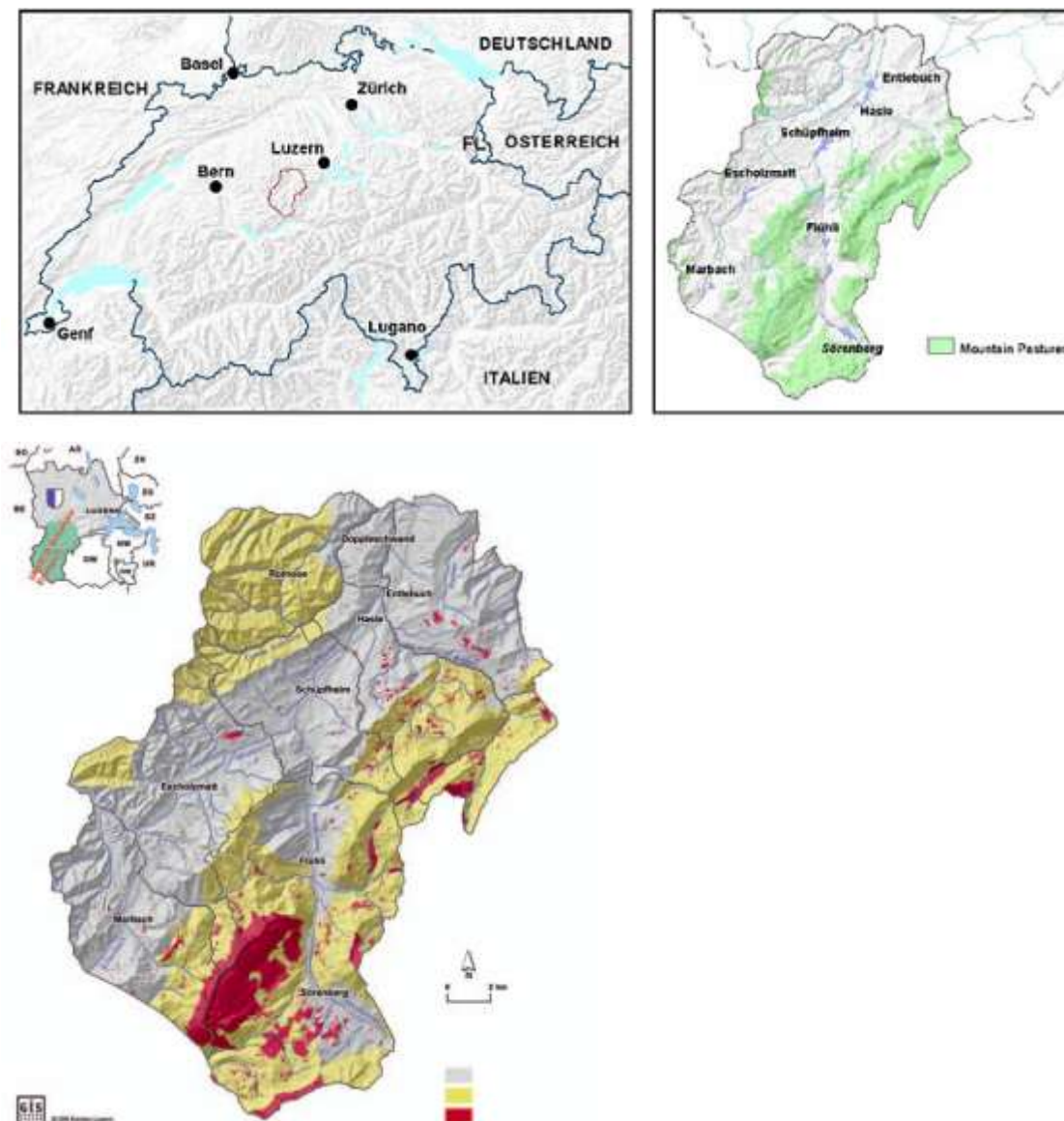


### 4. 3 A picture of the region

(Wyman von Dach 2001; Regional Management 2002; Hambrey, Evans et al. 2008; UNESCO 2008b)

Entlebuch BR lies in the Canton of Luzern, in the northern foothills of the Alps, ranges between 600 and 2,350m in altitude, and covers 40,000ha. About 17,000 people live in the reserve, in 8 communes. In 2000 39% of employment was in the primary sector, far more than in the Canton (10%) or the country as a whole (6%). 30% of the land area was agricultural, with 1100 farms, 74% of which provided full-time employment although farm numbers were declining with 15% of the farms having been lost in the previous 10 years. This has left roughly 900 farms in 2008. Farms were very small in size, had high levels of debt, and farmers tended to be older. Young people were not becoming farmers, but other local training and employment opportunities were not attractive either so they were leaving the area to live in towns. Similar problems existed with forests, which are divided into small privately owned plots that make commercial management difficult, even though 42% of the land is wooded. Tourism was already part of the economy though only 37% of employment was in the service sector (compared with 62% in the Canton and 66% in the Switzerland).

**Figure 2 - Entlebuch Biosphere Reserve location**





## 4. 4 What are the non-market assets and services?

### △ Biodiversity and landscape



The Swiss law that protects moorland areas was created to ensure biodiversity and landscape value continued to be provided, as in the last 100 years 90% of Swiss moorland has disappeared. The high proportion of the BR's land that is covered by the law (26%) shows the value of Entlebuch's moorland. Traditional management of Alpine meadows and forests also provides similar values at lower altitude. Dramatic examples of the biodiversity of the area include Capercaillie (*Tetrao urogallus*), Eagle owl (*Bubo bubo*), and Lynx (*Lynx lynx*), as well as many Moorland plants restricted to the Entlebuch such as *Erica tetralix* (heather) and *Juncus stygius* (rush).

### △ Culture



Traditional land-based communities based on small scale farming and forestry are typical of the area, as the employment figures show, and they represent a strong Swiss cultural tradition. Apart from many farming related traditions, such as the celebration of the cattle returning from the alps, the 19 Jodel (singing) Clubs that persist in the 8 villages reflect these exceptional characteristics. However the communities were in decline and their continuation is threatened as young people seek other employment and move away. The inaccessible forests of the area are the last place in Switzerland where traditional charcoal burning is done, and this is an important cultural link with the past.

### △ Recreation



Some market based recreation opportunities already existed, including downhill skiing. In addition non-market recreational activities include walking, climbing and cycling. More passive non-market recreation in the form of enjoyment of the landscape and villages also exists through general tourism. 450 000 tourist-nights were spent in the area in the year 2000, 250 000 of which were in privately owned holiday homes.

## 4. 5 Who is involved, and how?

Here, we use two terms that describe people who create positive externalities (**providers**), and people who use them (**beneficiaries**).

Basic biodiversity and landscape value is **provided** by land managers – farmers and foresters. Traditional management of cattle sheep and goats, and the associated grassland management by mowing, maintains alpine pastures and upland moorland. Similarly, land owners engaged in forestry manage small areas of woodland using traditional approaches. These two groups are also at the core of the cultural values embodied in the local communities, so farmers and foresters are the main providers of positive externalities at Entlebuch.

**Beneficiaries** can be divided into three groups.

- First, those who live in Entlebuch, who benefit from the cultural and environmental quality of their home area.
- Second, the wider population of Switzerland. They voted for the moorland conservation law, which indicates the importance they attach to it, whether or not they visit Entlebuch. In addition Swiss people can visit, as day trippers or longer stay tourists, and when they do so they directly enjoy the benefits of the area.
- The third group is tourists from outside Switzerland, who also benefit directly from their visit.

## 4. 6 Making a living

Payments for environmental services are made to farmers from two sources. The Swiss national government makes payments for basic agricultural operations such as control of fertiliser applications, maintaining crops cover over-winter, and animal welfare. These practices are all normal in Swiss farming, and payments are made per hectare or per animal. The Canton (federal level) makes additional per hectare payments to farmers for more specific management for biodiversity, such as meadows, and fens. Payments are greatest for species-rich grass and moorland, and larger payments are made **at higher altitude. On average payments are around 1300€/ha/y.**

At present Swiss farmers do not receive support to maintain farming in mountain areas in the way that Less Favoured Area payments are made in the EU. The national system of support will soon change to one that is more clearly related to achieving environmental outputs, rather than one that supports normal farming practice.

Forestry payments are made for forests with special functions (eg. protection from avalanches, habitat for special species such as Capercaillie). Public funding has also been used to create and mark trails for walking and cycling in the BR.

Much of the emphasis of the BR has been on developing the market-based side of the environmental and cultural economy, particularly through two branding schemes. The first covers products themselves, using the brand name “Echt Entlebuch” (genuine Entlebuch). The general requirements are listed in Box 1, and products using the brand include cheese, meat, herbs, bread, conserved fruit and vegetables, and many other types of processed food. From 2001 to 2005 the number of producers using the brand increased from 5 to 38. It now stands at 50, with 200 different products.

### Box 1 - Echt (“genuine”) Entlebuch certification

- △ The raw materials have to be from the area, as much as 90% depending on the product. In the sectors wood, milk, meat, as much as 100%.
- △ 75% of added value should be created within the Biosphere Reserve
- △ The enterprise has to be located within the area
- △ The agricultural products have to be organic or ecological
- △ There should be accountability and transparency with regard to the origin of the raw materials
- △ The production cycles have to be closed in order to avoid contamination
- △ The origin of raw materials must be documented; no genetically manipulated products are allowed.
- △ Legal rules must be implemented and external assessment has to be accepted
- △ The producers and partners have to follow the capacity building program and cooperate within the network of “Echt Entlebuch”

A special certification scheme has also been created for tourism businesses, as described in Box 2. Entlebuch BR was created in 2001, and between 2002 and 2005 tourist visits rose from 25,000 to 105,000, with meals provided and overnight stays all increasing approximately 3-fold. The branding and marketing has put particular emphasis on gastro-tourism – providing high quality cuisine and food products for visitors.

## Box 2 - Certification of Entlebuch tourism enterprises for the Echt Entlebuch label

The criteria are connected both to the products and to the service offered to guests.

Criteria concerning the *products* include the following:

- For products available from the area, 75% must be certified or from organic production, such as meat products (pork, beef, horse, sheep), milk products (milk, cream, fresh cheese, cheese), eggs, fruits, soft drinks, fruit juice, alcoholic drinks, sweets, cakes, wine.
- On the menu card the origin and producer must be declared and the meals must contain seasonal food.
- 50% of the products used in the restaurant must originate from Biosphere Reserves, including foreign sites

Criteria concerning the *services*:

- Typical local meals must be offered daily
- Staff must be able to tell guests about the Biosphere Reserve
- The promotion material must be available and well presented
- Relevant information must be included on the menu cards and placed in the hotel rooms

There is a small annual charge (€70-200) for inclusion in the scheme, which varies with the income of the business.

After (Hambrey, Evans et al. 2008)

At the moment Echt Entlebuch is mainly a local brand known to local people and tourists. It is not widely known beyond the city of Luzern, and future work will focus on gaining greater recognition for it throughout the country.

## 4.7 The people that made it happen

One of the 8 communes within Entlebuch was particularly affected by the moorland protection legislation, with more than 60% of its land covered. The Treasurer of that Commune was a key figure in looking for solutions to the development problem. From that beginning a wider range of participants were drawn into the discussions, and more than 150 local people actively participated in workshop discussions, decision making meetings, and pilot projects.

Local, regional, and national government bodies joined the process as it developed, and their contribution was obviously essential to achieving Biosphere Reserve status at the UNESCO level. Nevertheless, it seems that the place where the idea germinated was in the Entlebuch Communes themselves.

One particularly important early event was a presentation that the Entlebuch stakeholders made in Luzern, promoting the idea of a Biosphere Reserve to a wider audience. To do so, the local stakeholders had to work closely together to create an exhibition and this helped to draw together the relatively isolated communes within the Entlebuch area.

## 4. 8 What help did they need?

The Regional Planning Association, the precursor to the current Biosphere Management unit, was formed to provide support to the grassroots process. Central players and visionaries from the different villages formulated ideas and proposals and stayed in touch with the local people to get their feedback. A diverse range of people from tourism, regional planning, and elected representatives took part, though less farmers were involved. In general the key people were known by everyone and were widely trusted.

Initial funding from a charitable foundation (Stiftung Landschaft Schweiz) and from a regional planning (Canton) scheme were also necessary.

## 4. 9 Is it “joined up” (cross-sectoral)?

The strong tourism orientation of development at Entlebuch means that almost inevitably the approach is joined up and cross-sectoral. Tourists required a range of services, some market and some non-market, and the tourism package will not be a success unless all the elements are present. For example, tourists seek high quality wildlife and landscape experiences, and farmers and foresters help to manage the land appropriately. To take advantage of this, tourists must be able to get to the right places, so transport, footpaths, and cycle routes are needed. The BR management unit ensures the facilities and support services are provided, and particularly that public transport is improved and used more frequently by locals and tourists. Finally, tourists require good food and shelter, so restaurants and accommodation providers are involved. In turn, they depend on local farm products to create the typical quality menu.

The governance arrangements at Entlebuch and the strong community support for the initiative mean that the normal barriers between rural sectors have been broken down. The project is truly cross-sectoral.

## 4. 10 How it is organised

Entlebuch BR is unusual in having adopted a bottom-up participative approach from the beginning. Over time this has evolved into a “co-operation model” that links together grassroots involvement at community level with regional, national and international agencies. By doing so the BR can call on local expertise and knowledge as well as scientific and other technical assistance, and exchanges of knowledge can take place at all levels. The current governance arrangements are shown below in Figure 3.

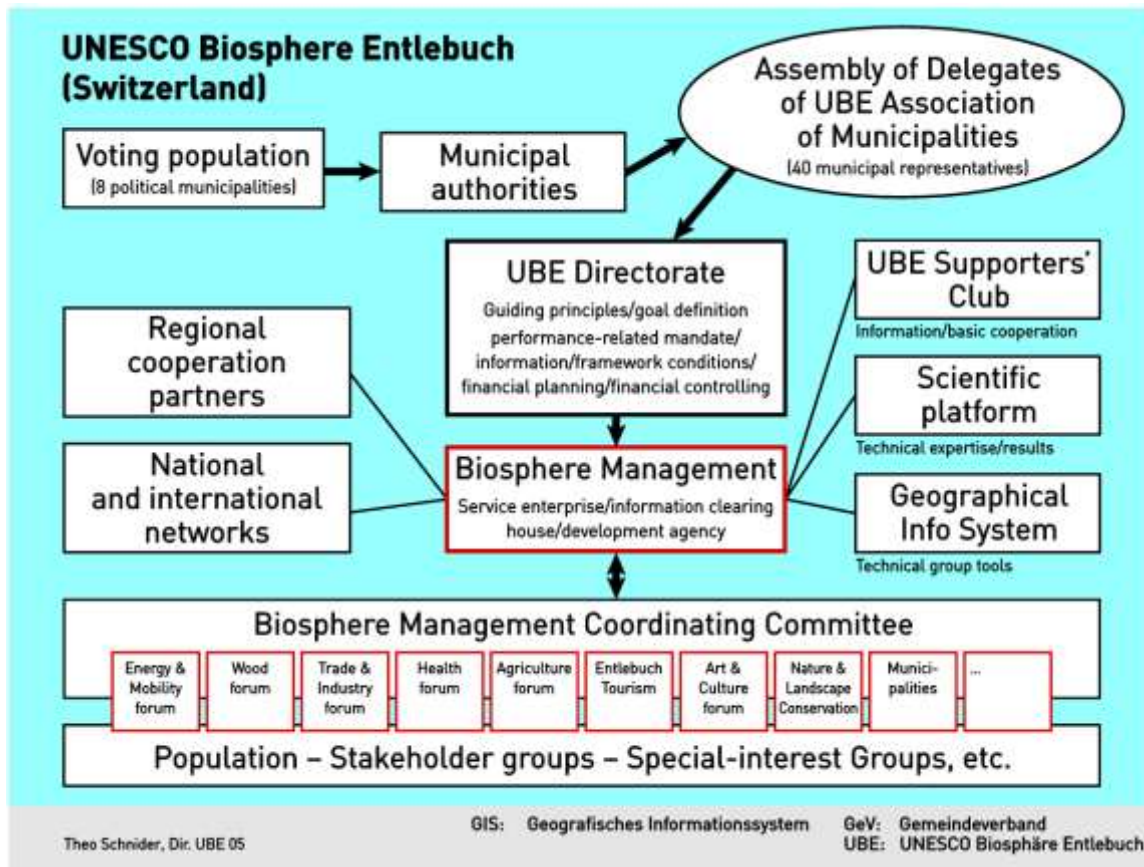
There are two key elements: the Assembly of Delegates and the Biosphere Management. The Assembly allows the population of the area to exert their influence in a concerted way, and through the Directorate to determine the strategy of the BR. The Biosphere Management is the operational unit that runs the BR on a day to day basis, including the Biosphere Centre, training courses, and research. It also maintains communication links with specialist advisers, and with government agencies at regional, national, and international levels. Finally, it facilitates the working of specialist stakeholder groups – tourism, agriculture, nature conservation, etc.





**Figure 3 - Governance at Entlebuch BR**

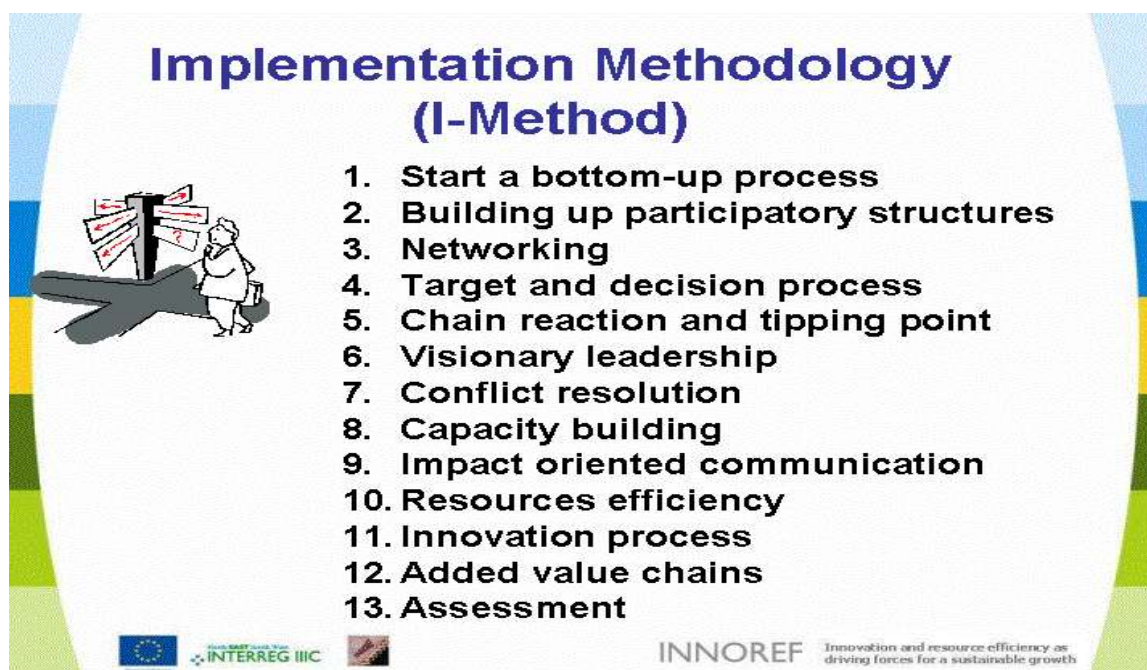
**(UNESCO)**



This arrangement is the culmination of more than a decade of development, and is key to Entlebuch BR's success. Equally, the development process that was followed during that time was also important. The key elements of it have been described as follows (Figure 4):

**Figure 4 - Development process at Entlebuch BR**  
**(Hambrey Consulting 2007)**

**(Hambrey Consulting 2007)**





## 4. 11 Do the public and private sectors work together?

The original stimulus for the development of the BR, in the form of the identification of protected moorland areas, was driven by the public sector in response to a national political decision. It did not involve the private sector. The response at local level, however, has been to bring together private sector interests and government agencies. The private sector is active both through the specialist stakeholder groups and also through the assembly of delegates, where business owners and employees have a voice as individual voters.

In practice, the development of branding and other projects illustrates that public and private sectors have worked well together to deliver tangible projects resulting in community benefit.

## 4. 12 Possibilities for the future



- Widening Echt Entlebuch brand recognition
- Building up existing schemes and processes
- Education is becoming increasingly important, particularly on sustainability etc.
- Improved land management (e.g. bogs and fens) for biodiversity

## 4. 13 Poverty, and how the benefits are distributed

At the outset the area suffered from low incomes, yet contributed disproportionately in taxation. Detailed information is not available, but the broad range of developments is likely to have benefited a wide range of local inhabitants. More research is required to determine whether any particular groups of people who suffer economic stress have failed to benefit so far.

The view from BR staff (Florian, pers. comm.) is that incomes have increased, particularly from tourism, and that farms have been made more economically sustainable. In general, local jobs have been protected. Saving farming jobs is a critical issue though it is difficult to address. In Switzerland people with low incomes are covered by social security so this aspect of poverty reduction is less relevant to the BR. Instead, the BR plays more of a role in increasing education opportunities and encouraging sustainable communities. Some quantitative evidence is available as in 1990 the population of the area was declining and stood at 16000, but since 2002 it has stabilised at about 16500.

## 4. 14 Will it last, and is the system costly to administer?

UNESCO do not contribute to the costs of a Biosphere Reserve. In 2007 the costs of the Biosphere Management unit were 1.8m CHF (1.1m€), composed of contributions from the Canton (0.3m CHF, 0.2m€), the Federal Government (0.5m CHF, 0.33m€), local municipalities and organisations, and other sponsors and grant giving bodies. About 12 people are directly employed as a result. Other funding for land management (PES) is also received from the Canton level of government. Administration costs of these funds is not included in the figures given here.

This level of funding is not excessive given the land area, population, and the benefits provided for other Swiss citizens. For the future, the most encouraging thing is the high level of participation by local residents and businesses. This is a good omen for the long term success of the system.

## **4. 15 Conclusions and questions**

- The stimulus for action arose from concerns over the new Swiss law to protect moorland – which was perceived as a shock
- An individual provided leadership to get discussions started; this subsequently led to full community participation, in the Swiss tradition
- Product development and local branding have been successful
- The primary (land use), secondary (processing) and tertiary (tourism/retail) sectors work together in an integrated way to achieve added local value
- The Biosphere Reserve Management Unit acted as a facilitator to allow stakeholders to develop their ideas

## **4. 16 Acknowledgements**

The staff of Entlebuch Biosphere Reserve provided additional information for this case study. We would particularly like to thank Knaus Florian for his advice and help.



## 5. THE CEVENNES NATIONAL PARK AND BIOSPHERE RESERVE



### 5. 1 Summary

The Cévennes area has been important to tourism for over 100 years and to French culture for 400 years. The National Park has existed for 40 years. Grazing animals are critical to the maintenance of the open pastures but agriculture and other land-based activities have been declining for many decades, along with the human population. A range of payments for environmental services has been introduced to support agriculture and now forms a large share of farm income. Payments are available under a range of programmes and from a variety of sources, which are not well co-ordinated. Local products that contribute to environmental and cultural heritage have been developed by linking production, processing, and retail. The National Park Authority has played an important role in supporting cross-sectoral activity; other institutions are less well adapted to local needs.

**Figure 5 - Cévennes National Park (from (Espace Cévennes 2009))**



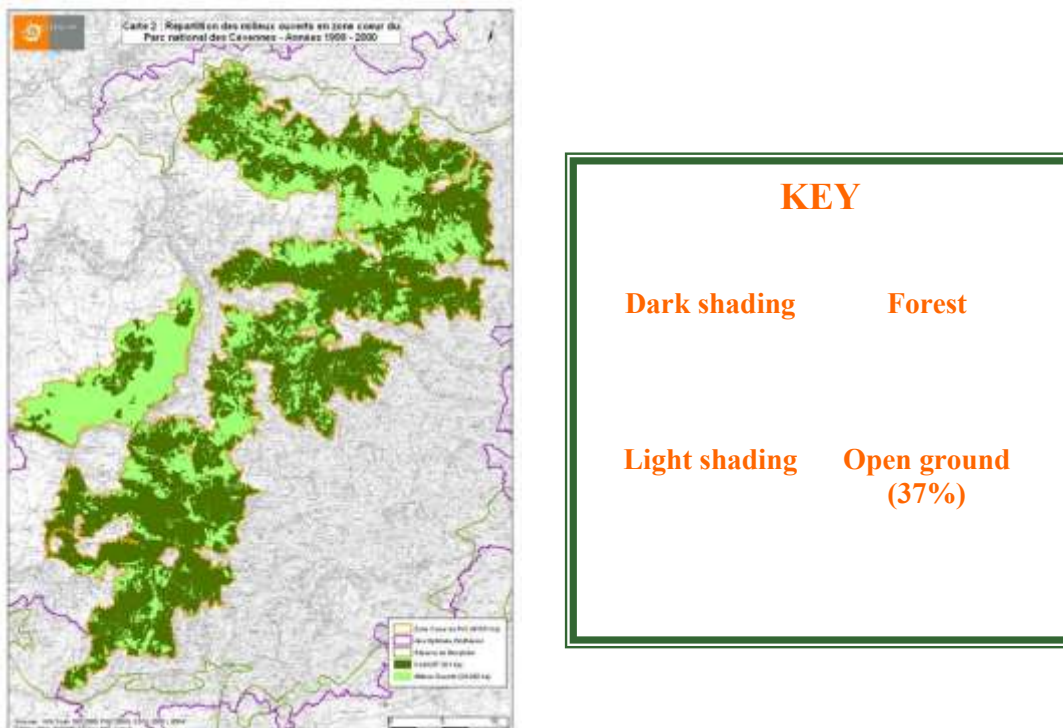


## 5. 2 Introduction

(Collin 1990; Chassany, Rulleau et al. 2004; Tourism-site 2006; Parcs Nationaux de France 2009)

The Parc National des Cévennes (PNC) lies on the south-east side of the Massif Central in southern France. The Park was created in 1970 and is unique amongst French National Parks because the whole of it is inhabited, with 600 people living in the core area and another 41000 in the surrounding parts. For this reason the entire Park is also a Biosphere Reserve, in order to achieve the political aim of combining development with protection.

**Figure 6 - Land cover in the core area of PNC**



The land lies between 380 and 1700 metres and is composed of mountains (Aigoual and Mont Lozère) and plateaux of varying rock types, cut into by river gorges. The climatic range, from Mediterranean on the lower slopes to the wetter and colder plateaux, has led to a rich cultural tradition based on land use. Cultural heritage and landscapes result from a balanced interaction between men and nature: causses meadows, high parts of Mont Lozère, terrace fields and chestnuts fields. The world famous Roquefort sheep's cheese is perhaps the best known product in the vicinity, produced just outside the Park. Lamb and beef, Chestnuts (*Castanea sativa*), herbs and spices, apples and sweet onions, and other cheeses are all traditional. Based on these the area supported its highest population in the decades around 1800. Since 1850 the area has lost more and more people, resulting in abandonment of land, houses, and whole communities,

A National Park was suggested as long ago as 1913 by the Club Cévenol, which started off as a group of speleologists (cavers) concerned with protecting the area's heritage and landscapes, after the Tarn Gorges were widely damaged by the construction of a road. The first idea was to combine development of tourism with protection of landscape. It was only in the 1960s that the project was raised again to counter the declining communities – accelerated by the First World War and the loss of silk and chestnuts industry. The resulting changes threatened the cultural landscapes, and after difficult discussions led to the creation of the Park in 1970. The Club Cévenol has now developed into a broad community-based group that aims to safeguard cultural and natural heritage, to encourage activities that allow people to remain in the area, and to support appropriate tourism.

## *Mountain Development based on cultural and environmental assets*

Today, the National Park and Biosphere Reserve work with local communities and businesses, as well as with other national and regional government agencies, to support tradition combined with innovation: traditions that maintain agricultural activity in the difficult conditions of the high plateaux, for example, and innovation such as the development of late-season tourism based on the early traveller's story "Travels with a donkey in the Cévennes" (Stevenson 1879) and the related Stevenson Hiking trail.

### **5.3 A picture of the region**

The Park covers about 320,000ha and about 120 communes, in 5 geographical areas: the plateaux of Méjean (limestone), Lozère (granite), Bougès, and Aiguoual and Lingas (granite and schist), and the Gardons valleys.

In the hills, farming involves sheep and beef production, including a tradition of transhumance<sup>1</sup> that has been declining for some time. In the past animal grazing maintained the open pastures of the high ground which had been cleared of stones by previous generations of farmers. This type of farming became less profitable and attractive as time went on, so people left the villages, the average age of farmers increased, and trees and bushes encroached on the high grassland.

Even in the lower and more hospitable areas people gave up traditional land management activities and moved away. Chestnut production, and various associated food products, also declined, partly from disease and partly from tree felling. Another special feature of the area is terraced fields, built to retain water and soil on steep valley slopes, and they too were left to fall down and were colonised with trees as people left the area.

For many generations the Cévennes have had an important place in French culture and heritage. Originally this was linked to the fact that Protestants in the XVIIth century (Camisards), and later the WWII Maquis (resistance), found the area suitable to hide in and operate from. Tourism, which first developed in the Tarn Gorges and then grew with creation of the Park, is now a mainstay of the local economy. Although this brings with it the social issues of second-home ownership and incoming residents who raise property prices, tourism is nevertheless an important economic activity - the environment and cultural heritage of the Cévennes are a natural match with tourism. Apart from the direct economic benefits for the tourism sector (accommodation and hospitality), positive links also exist with both built and natural heritage management, and with quality production and marketing.

### **5.4 What are the non-market assets and services?**

#### **5.4.1 Biodiversity**

For the Biosphere Reserve, UNESCO (UNESCO 2008a) lists broadleaved forest such as beech (*Fagus sylvatica*), silver birch (*Betula pendula*), oak (*Quercus pubescens* and *Q. ilex*) and sweet chestnut (*Castanea sativa*), and coniferous forests with Pine (*Pinus* spp.), Fir (*Abies alba*). Heather (*Calluna vulgaris*) moorland and various types of open grassland, bogs with Sphagnum mosses, rocks and cliffs, and watercourses complete the picture. These habitats attract a wide range of wildlife, the most spectacular of which includes 3 species of Vulture (*Aegypius*, *Gyps*, and *Neophron* spp.), and Eagle Owl (*Bubo bubo*). The diversity of wildlife is illustrated by the presence of 20 species of fish and 30 species of reptiles (Collin 1990). The whole of the core area of the PNC is part of the Natura 2000 network: it includes several sites of EU community importance and is also registered as a special protection area under the Birds directive.

Some of the most precious sites are natural unmanaged areas (peat-bog, rivers, old forest), while others are used for land management which is closely linked with grazing practices or chestnut management.

#### **5.4.2 Cultural Heritage**

The economy of the area has always been strongly rooted in agriculture, together with wood and other forest products. Textiles (based on local silk and wool production) have been important at certain times and have contributed to traditional habitat quality. Vernacular buildings, using all the varieties of local stone, reflect this history. Older fortifications provide links with the religious wars of the 17th century. The terraced field systems found in some parts of the area are particular-

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<sup>1</sup> *Movement of people and their animals from low altitude winter quarters to high altitude pastures in summer.*



ly unusual. The built environment is the most obvious, “concrete”, aspect of the Cévennes’ cultural heritage, and includes houses, field walls, bread ovens and terraced fields. There are also living traditions continued by the farmers, hunters, and other land users, as well as by other inhabitants whose ancestry and ways of life are rooted in the area (Collin 1990; Anon 2009). Three ecomuseums have been developed to introduce visitors to links between cultural and natural heritage.

### **5. 4. 3 Ecosystem services**

The Cévennes have an extreme climate – hot dry and Mediterranean in some respects, cold wet and windswept in others. Two particular natural hazards result, in the form of floods and fire. Agricultural management of open grassland and active woodland management reduce the risks of fire, while the terraced fields are thought to help reduce flooding by slowing runoff after extreme storms (Crosnier 2006). In addition, the peat-bog on Mont Lozère plays a key role in the provision and supply of clean water. So the area is identified as a site of national importance and is included in the corresponding national action plan for humid areas and the local framework scheme for water management in the Adour-Garonne watershed.

### **5. 4. 4 Recreation**

Walking, cycling, caving, climbing, horse riding and donkey trekking, and canoeing are the main types of recreation available, either as organised trips or as informal self-organised activities (Site Officiel du Tourisme en Cévennes 2008). Landscapes in Cévennes are both natural and cultural. They are beautiful and diversified, with distant horizons, and they contain a variety of colours - linked to the balance between open land and coniferous and deciduous trees, to stone (natural or buildings), and to the special Mediterranean light. Open space is critical to these landscapes, and without it the views would not exist. The landscapes also have an identity and spiritual dimension

## **5. 5 Who is involved, and how?**

Here, we use two terms that describe people who create positive externalities (providers), and people who use them (beneficiaries).

In the Cévennes the main emphasis is on farmers as providers: they maintain the open pasture of the meadows and moorlands by grazing them with cattle, sheep and goats. This prevents bushes and trees growing on the grassland and eventually replacing it, which would lead to the loss of open ground species of plants and animals and major changes to the historical landscape. Woodland managers (who may also be farmers) are providers when they maintain Chestnut woods and sustainably manage other types of woodland. By doing so they ensure the woods continue to support their special biodiversity, reduce the risks of fire, and enhance the experience of tourists and other walkers. Both farmers and woodland managers may also help to maintain footpaths such as the Grandes Randonnées. Finally, the owners and managers who renovate and maintain terraced field systems provide externalities in the form of flood and erosion control, as well as contributing to the cultural heritage.

The 180,000ha of the core zone of the Park are exploited today by 372 farmers, including 87 actually based in the core area and 233 from outside who use land for stock breeding. 51 farmers pursue other activities (bees, medicinal plants, chestnuts) and 57 bring animals in for transhumance. Figures regarding numbers of farmers in the total Biosphere Reserve are unfortunately not available.

The largest group of beneficiaries are the 800,000 visitors estimated to visit the area each year. 25% of these stay for an average of 13 days and the remainder stay for only 2 or 3 nights (Stevens 2002). They all enjoy the benefits of the non-market assets and services listed above; for many of them it is the main reason they visit the Cévennes.

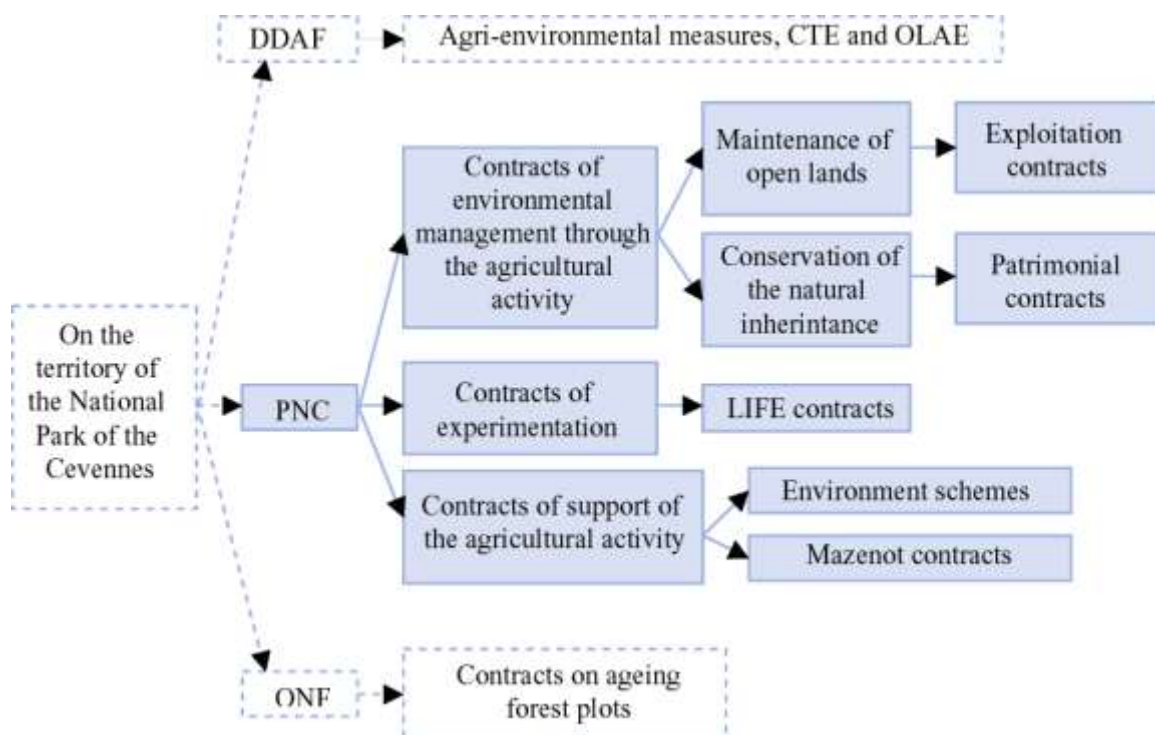
Local people are also important beneficiaries though. Residents particularly benefit from fire and flood alleviation through good land management. In addition, the continuation of the living culture of the area, linked to farming and forestry, is likely to encourage people to remain in the area and not to move away. This helps to reduce the impact of depopulation and demographic change.

## 5. 6 Making a living

Local people obtain additional income from a variety of activities based on cultural and environmental assets, including Chestnut production, nature-based tourism, activity tourism, and cultural tourism. This section concentrates on some of the ways farmers get additional income. An example of the relative importance of public and market payments is available from the Causses de Lozère, where milk producers obtained 30% of their income from public funds and the rest from sales of raw products, tourism, and processing. In contrast, 43% of meat producers' income came from public funds (LeCotty 2007).

### 5. 6. 1 PES

A wide range of payments for environmental services is available to farmers. Some are organised by the Direction Départementale de l'Agriculture et de la Forêt (DDAF) on behalf of the national authorities (national and EU funding), some are provided by the Parc National des Cévennes (PNC) with its own funding or jointly with national and EU schemes, and some are provided through the Office National des Forêts (ONF). The following table outlines the arrangements in 2003:



**Figure 7 - Payments for Environmental Services in the Cévennes National Park (from Chassany, Rulleau et al.(2004))**

### △ CAP Payments

Payments coming from the EU CAP and administered by the DDAF are an important source of revenue and significantly impacted on agricultural practices and farmers' revenues. The most important payments in terms of impact on revenue are PHAE (Agri-environmental grassland premia) and payments linked to the Less Favoured Areas schemes, which have been argued to be partly related to environmental benefits.

The PHAE is a national scheme decided at Departmental level, providing contracts through which farmers commit to reaching a certain level of vegetation control through specific grazing practices and a given stock density (0.05 to 1.4 LSU

## Mountain Development based on cultural and environmental assets

/ha (Bosc 2007)). Depending on the environment concerned and the commitments made, payments in Lozère for example can be from 36 to 113€/ha/year. Every year farmers have to declare to DDAF which areas are eligible.

Under LFA, parts of Lozère, for example, are eligible for payments in the range 136-150€/ha/y (and 182-200€ in extreme areas) up to a maximum of 50ha (Chambre d'Agriculture de Lozère 2009), with conditions on stock density.

Typical farm incomes from this scheme and the national grazing programme (PHAE) have been quoted as 10 000€ and 8 000€ per year (Bosc 2007). More specifically, on the Causse Méjean, public aid from the CAP represented more than a 30% of farmers turnover and 98% of their available income in 2001. Measures related to PES represented half of the public funding received on average by these Causse Méjean breeders (average amount for PHAE, LFA and agri-environment was slightly over 20 000€/farm/year (Lhuillier 2003)).

Under the second pillar of the CAP, farmers may also make contracts for Agri-environmental measures (MAE). Several schemes have been used in recent years (OLAE 1995-2000, CTE 2000-2002 and then Contrat d'Agriculture Durable CAD 2002-2007). Although different MAEs are available today, we will focus here on a scheme called "Territorial agri-environmental measures – Park Core area" (MAEt) implemented since 2007, in the core area only, managed jointly by the DDAF, the PNC and the Chamber of Agriculture.

These MAEt are targeted at specific locations with prime environmental sites (Natura 2000). The Park territory has been split into 4 geographical areas which are coherent in terms of habitats and for which a prior assessment of environmental sites has been conducted, based on EU legislation, including the habitats and birds directives, Natura 2000 prescriptions, strategic documents and other local priorities. Prior to establishing the MAEt contract for a farm, the Park conducts a (free) environmental diagnosis. The chamber of agriculture conducts a technical/economic diagnosis of the farm and results are combined to establish the exact actions that should be contracted and remunerated for the following 5 years. The table below reports on the number of contracts signed (2007-2008) or programmed for 2009, and the associated costs (although it seems that budget restrictions will allow only 30% of the total projected for 2009 to be implemented).

**Table 2 - Targeted agri-environment payments in PNC (2007-8)**

	Mont Lozère	Aigoual	Vallées Cévenoles	Causse Méjean	Total
2007	7	1	0	0	8
	519,500 €	38,977 €			558,477 €
2008	7	4	2	2	17
	499,700 €	398,400 €	100,715 €	84,377 €	1,083,192 €
2009	13	5	7	7	32
	750,000 €	185,000 €	425,000 €	600,000 €	1,960,000 €
Total	27	10	9	9	57
	1,769,200 €	622,377 €	525,715 €	684,377 €	3,601,669 €

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Despite the considerable amount of time necessary for all actors to agree on a common framework, and the complexity of the resulting framework, the Park considers this type of project to be a good way to enhance collaboration between DDAF, the chamber of agriculture, and the PNC. It helps to achieve a coherent approach to the support provided to farmers for environmental services within the CAP and also raises awareness on specific habitat priorities.

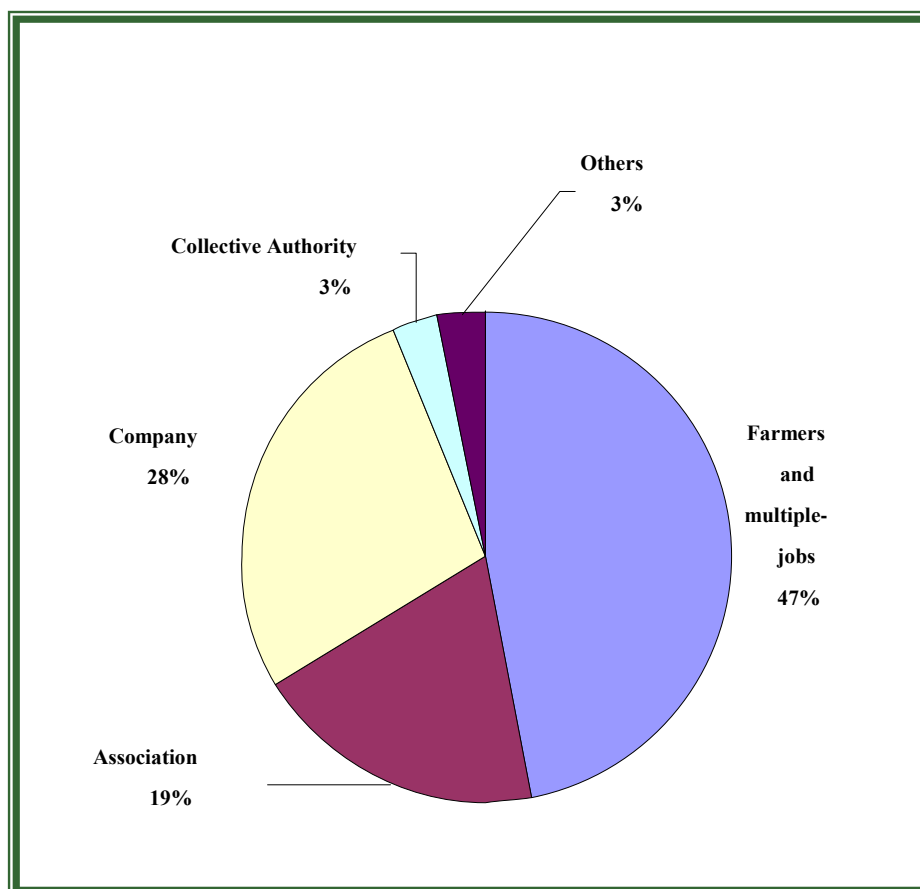
### Other payments

Outside the CAP framework, the Park has developed a variety of targeted measures that aim to support specific actions that fulfil the park's objectives for landscape and habitat conservation. The most relevant sites in the Park require conservation of peat-bog, meadows and moorlands, which can be managed best through extensive grazing, preferably by sheep. So the Park mainly supports sheep breeding and transhumance, together with organic production, some forms of diversification such as horse breeding, and young farmers' measures.

The park has developed some other measures that it manages and funds from its own budget. Some examples help to explain what farmers are paid to do in practice:

Mazenot contracts: An early form of support (initiated in 1971 and named after the Sous-préfet of Florac who invented it) to fight depopulation and fund upkeep of infrastructure such as paths, walls, irrigation canals, and natural sites. In the period 2003-2006, 17 000€ to 30 000€/year in total was paid to 30 to 50 people (contracts from less than 80€ to 16,500€/ 3 years), including only 35 to 52% of farmers. These contracts were initially targeted at farmers and were to be financed at up to 3 million €/year. Reduced funding compared with the initial plans and changes in agricultural structures have reduced the attractiveness of such contracts for farmers. Other individuals, associations or companies have replaced them as signatories. Figure 8 below shows the distribution of beneficiaries in the previous 2000-2002 period (62 contracts, 118,000€).

**Figure 8 - Mazenot contract beneficiaries in the period 2000-2002**





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Patrimonial contracts: Similar to agri-environmental contracts, these are only available for conservation of exceptional species, habitats, or landscapes. 29 contracts (from 60 to 6600€) have been signed between 2000 and 2006 with individuals or municipalities for a total amount of 43,688€. For example, a 5 year contract with a total payment of 2,420€ has been made to a farmer who manages 1ha of pasture in order to specifically protect orchids

The Park has also developed projects and contract schemes funded through other programmes, for example LIFE contracts, funded from environmental management projects directly approved by the European Commission. In the PNC these are used to support sheep farming by transhumance, related stock breeding, and removal of tree growth from pasture (6-year contracts, 11 contracts signed in 2000 for 116,047€).

In addition, the Park implements a variety of actions including:

- owning land and renting it to farmers under specific conditions
- supporting associations aiming to rationalise the use of land by coordinating relations between owners and farmers
- investing in transhumance infrastructures
- supporting pastoralism groups

All these actions reduce costs and improve working conditions for farmers, and indirectly contribute to improved incomes. Table 3 below summarizes the different schemes available and their management and source of funding.

**Table 3 - Agricultural funds and the agencies responsible**

		Source of funding		
		MAP credits	EU credits	Parc credits
Responsibilities	DDAF	PHAE, LFA (EARDF)		
	Joint (DDAF: instruction Parc: project)	MAEt (EARDF)		
	Parc		LIFE Mont Lozère (LIFE)	Mazenot Exploitation Patrimonial

### 5. 6. 2 Quality products



A number of quality products are produced, including chestnuts, onions (associated with terraced fields), “Easter beef”, and free range lamb (Lecuyer 2000; Blanc and Rouéb 2005; Crosnier 2006). To promote agricultural practices considered to be beneficial to the environment and which are being progressively replaced by intensive methods, the PNC has decided to develop a Park label “Les authentiques du Parc” that would allow farmers who produce quality products with high environmental credentials to benefit from the Park’s image. The idea has so far been applied to two products: Easter beef (1995) and Free-range lamb (1997). The following section focuses on lamb, with around 74 producers potentially concerned in the core area.

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In the last 2 decades indoor rearing of lamb has developed widely, for economical reasons, leading to increased cultivation of most productive land and abandonment of less productive meadows and moorlands. Some breeders, though less than 1/3 of sheep breeders within the Park, and especially in the more difficult and mountainous areas, continue to produce **more traditional “Agneaux de parcours”** - free range lamb - based on lambs born from February to April and which remain with their mothers on extensive grassland. At the end of the summer they can be slaughtered or sent to low ground for the winter. This production system is better than indoor rearing at ensuring that the meadows and moorland continue to be grazed and it helps to avoid land abandonment.

Free range lamb has certain characteristics that distinguish it from indoor lamb:



- it is lighter in colour at the beginning of the season, and darker at the end
- the lambs are small and thin at first, but heavy and fatter later
- the taste and texture of the meat tend to vary through the season
- it becomes available half way through the tourist season and continues until after most tourists have left.

So in various respects free-range lamb is difficult to sell these days, with many customers used to homogenous industrial products. However in the hands of effective salesmen, able to explain how and why quantity, colour and quality vary through the season, it can be a prized product – and for this reason butchers have become a crucial part of the marketing process, at the same time allowing them to profit from a premium product.

An association has been founded to manage the initiative. It groups 10 farmers together with 4 butchers and 5 restaurants, and the Park participates as an observer. Product specifications have been developed and include 90 days on outdoor pasture as a key element. The association is strongly orientated towards local selling and marketing, in coherence with the environmental concern of mainly producers. Unfortunately, as the local demand and the production calendar do not overlap well enough, and as the number of producers meeting the criteria remains small, sales of Agneaux de Parcours are quite restricted (only 800 sold every year, plus 70 young lambs and 30 ewes). Producers minimize the resources used for production, and therefore the costs, but they spend a lot of time organising the supply of this particular product. In return, they get 0.30€/kg price premium for their product, half of which goes as a fee to the association.

It is important to note that the producers have considered both organic certification and PDO/PGI status but have decided the administration costs and production constraints would be too great for such a low volume. Instead they have developed their own criteria for production, which they monitor, and market as their own private label (Blanc and Rouéb 2005). But even with this minimal scheme, the number of producers and production volumes are too small to allow profitability. The association earns only 2710€/year from membership fees (55€/year for butchers, restaurants and breeders of more than 200 ewes, 35€/year for breeders of less than 200 ewes) and 2000€ from events. To properly coordinate activities, they would need a ¼ time employee costing 6200€/year. In addition, investment in control processes cost 11500€ (publicly funded at 50%) and the annual control costs now amount to approximately 650€/year. If farmers had to pay these costs they would totally outweigh the small additional profits. Personal commitment is therefore the main reason that producers continue to participate.

However it is important to stress that, according to the butchers involved, the brand Agneaux de Parcours is a premium product that appeals to consumers and enhances sales of other products as well, so it plays an indirect part in helping to maintain population in the area.

In conclusion, the initiative is limited by two constraints. First, the small number of producers does not allow economies of scale. Second, the combination of production, protection of the environment and local marketing may be too difficult to

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achieve. Some breeders have already started to develop their own marketing initiatives in the nearby Montpellier (through two associations Terroir Direct and Biojour) or even Paris markets. This sounds promising but it endangers the collective initiatives and may undermine local marketing of products.

Quality products sold within the Park also include cheeses, especially Pélardon PDO, which was originally a traditional cheese produced from goats reared on dry meadows in south Cévennes. During a period of overproduction and low prices in the 1980s a private brand was created by the Languedoc-Roussillon Region to promote this cheese. The scheme was applied directly to all producers within the region, expanding from the original Cévennes area. The success of the initiative led several companies outside the area to use the name as well, leading to a common initiative launched in the 90s to **seek a Protected Denomination of Origin (PDO) under EU legislation. Pelardon is one of the PDO's with the largest population of small-size producers (63% out of about 400 producers) but also includes some important large-scale producers.** Specifications for the PDO were the subject of long negotiations that resulted in a compromise between the different farming practices, excluding no-one. So outdoor rearing criteria are not very strict but the criteria do include some traditional elements such as use of raw milk, “moulage à la louche” and prohibition of freezing “caillé”.

Several articles (e.g. Bouttonnet, Napoléone et al. (2005)) suggest that production of positive externalities is not a prerequisite for a PDO and that most small farms using pastoral resources do not use the PDO to market their own product. On the other hand, they do obtain added value from local sales of their cheese based on its traditional image. At the same time, marketing strategies based on distant markets is seen as a possible way to increase revenue, even for small scale producers. The brand recognition developed by marketing of larger volumes of PDO Pelardon at national level could be an advantage for further development, but so far revenues of breeders are considered to have remained stable and have not increased as a result of the PDO. This could also be considered as a success, as revenues might have decreased due to competition with other areas if the protection had not been set-up.

A significant proportion of farmers using the core area also transform products at the farm (41 in the core area, 11%) getting additional revenues from there. Some supply chains and specialised shops have been supported by the Park <sup>1</sup>.

### 5. 6. 3 Agri-tourism

Although no micro-economic study has been done to measure the importance of agri-tourism for farmers revenues, some economists (Lhuillier pers. comm.) in the area believe that for a significant proportion of farmers it is of higher economic importance than quality products. This especially applies to those situated in the least productive areas.

Two national networks (Bienvenue à la Ferme and Accueil Paysan) offer a framework for development of agri-tourism. According to their map <sup>2</sup>, 93 farms are registered in the total Park area under Bienvenue à la ferme (BAF) and according to the PNC statistics 8 farms are considered to get revenues mainly from agro-tourism in the core area. The agri-tourism officer of the Chamber of agriculture indicated that the proportion of agri-tourism farms is significantly higher within the Park area although exact figures are not available.

Farmers can receive support for project development in the same way as any agri-tourism farm in France. The BAF network, managed by Chambers of agriculture, provides guidance with an initial survey, help to develop the project, access to a common national brand and logo, and a publicity and reservation portal. In both networks, farmers have to respect **national standards and a “values charter” that includes preservation and respect for the environment, and authenticity of the site.** As these frameworks are national they do not specifically target remuneration of externalities at the local level, but the success and density of agri-tourism farms in the Park can be linked with the quality of landscape, the links between man and nature (especially farming), and the culture and recreation activities available.

## 5. 7 The people who made it happen

The National Park administration has existed for nearly 40 years, and has 100 employees and a 8 000 000€ yearly budget (state funding, at least two thirds of which finance the Park staff and infrastructures). It has the powers and funding to initiate and support local projects in tourism, agriculture, built heritage, natural environment, and social development (2.5m€ in 1997-99). It has been described as a “classic French centralised approach” (Stevens 2002) although it was

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<sup>1</sup> See [http://www.mescevennes.com/terroir\\_artisans/](http://www.mescevennes.com/terroir_artisans/)  
<sup>2</sup> <http://www.bienvenue-a-la-ferme.com/recherche>

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created mainly following pressure from local associations and local officials who promoted the initiative in Paris, and as a result of Club Cévenol activities.

**The Park's development was made possible by partnership with local elected representatives and 3 or 4 people who would be recognised to have played a decisive role:** Paul Flayol, farmer and former president of SAFER of Lozère, François Brager, former Director of the SAFER, mayor and then president of the General Council of the Gard, the historian Daniel Travier, also a local company manager, and André Molines, farmer. So on one hand, the activity of local representatives was required to promote the idea, whilst on the other the participation of the state was necessary to bring funding to these poor municipalities divided by religious issues.

The Club Cévenol has an even longer pedigree and now provides an important grassroots tourism and heritage network across many of the Cévennes communities (Le Club Cévenol 2009). Other tourism associations also exist within the Départements that include parts of the Cévennes, some publicly funded and some as business associations.

The local offices of the Ministry of Agriculture and the Chambers of Agriculture also play a very important role in coordinating planning and delivery of RPE schemes in the area, mostly from CAP payments, working as closely as possible with the Park administration to achieve coherence.

The production, labelling, and marketing of free-range lamb is largely the responsibility of the group of farmers who form **Agneaux de Parcours**. The farmers' one-to-one links with butchers who sell the final product are essential to making the system as viable as possible and supporting their personal motivation, which is crucial to the survival of the initiative.

Finally, different local associations such as ALAFAR <sup>1</sup>, ASTAF <sup>2</sup> (both land use associations), or COPAGE <sup>3</sup>(implementation of agri-environment plan), play an important role in analysis and implementation of the schemes.

## **5. 8 What help was needed?**

In the case of Agneaux de Parcours the National Park administration played a key role at the start of the process. They initiated discussions with farmers about ways of obtaining more profit from extensively grazed grasslands, and, once the farmers were involved, the Park funded feasibility studies and helped further contacts with butchers and restaurants. When the initiative was well developed the Park administration took a step back. It now plays a facilitating role while the farmers themselves control the management of the brand and its future direction (Blanc and Rouéb 2005). The PNC also supported the association to develop direct sales in Montpellier (Terroir Direct).

In the case of agri-tourism, the national networks such as Bienvenue à la Ferme are an important help for farmers willing to develop a project, both in the development phase and as a co-funder for promoting the offer and marketing their accommodation. There too the Park has played a key role in initiating the dynamics of agri-tourism. Subsidies were given in the first years to invest in rural "gîtes" (rental houses), imposing respect for local style and providing architectural help.

## **5. 9 Is it "joined up" (cross-sectoral)?**

The National Park is itself cross-sectoral because of the broad range of its responsibilities. This has allowed it to develop product marketing schemes that assist farmers to carry out the necessary environmental management. At the same time the Park has provided PES through various land management support schemes, and these link in well with product marketing and branding. **In addition the Park's responsibility for tourism and social development complete the picture.**

However sectoral divisions remain between other public agencies, and there is potential for overlap between them and the park. The Direction Départementale of Agriculture and Forestry (DDAF) and National Office for Forests (ONF) overlap with one another and with some but not all of the National Park's responsibilities. This is potentially confusing and may not be "joined up". Some subsidies can be given for example to enhance plantation of trees when the Park is supporting measures to protect open land.

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<sup>1</sup> Association location d'animation foncière et d'aménagement rural

<sup>2</sup> Association syndicale de travaux d'amélioration foncière

<sup>3</sup> Comité pour la mise en oeuvre du plan agri-environmental et la gestion de l'espace



## 5. 10 How it is organised

The responsibilities for implementation of CAP lie with the standard institutions (Local and regional administrations in charge of agriculture and the Chambers of Agriculture). Decisions on agri-environmental measures are submitted to the Departmental Commission for Orientation of Agriculture (CDOA), which mainly involves the departmental administration and the agricultural profession and is managed by the Departmental level of government. The Park participates, with limited powers, in these commissions in the two Departments (Lozère, Gard).

The National Park is a state body with regulatory powers within the core area. The budget is decided locally by the executive committee, and decisions of the Park are implemented through legal acts, approved by ad hoc committees (agriculture, tourism, architecture...) comprising local administrators.

The initial project was centred around the link between protection of nature and landscape and human activities. The agreement of 50% of the communes within the total Park area was necessary to create the park, and the Ministry of agriculture, responsible for National Parks at that time, conducted the works and succeeded in establishing strong links with agricultural actors as well as creating Mazenot contracts.

Now under the supervision of the Ministry of Environment, the Park is today mainly oriented towards conservation of heritage and environment. Farmers in these areas are more and more concerned with optimizing agricultural revenue and production so relations between the Park and agricultural organisations have become uneasy. However collaboration is promoted, particularly through regular meetings with the chambers of agriculture and several associations managing land use, transhumance or valorisation of products. Dialogue between farmers and the Park also takes place within the PNC's agriculture and forestry committee. Both parties tend to believe that solutions can be found. The MAET project is promising in this respect, though agri-environmental measures are widely considered by farmers to be too complicated.

The Park plays a key role in local development, alongside stakeholder groups. This appears to be successful, and the Park administration puts considerable emphasis on the importance of bringing local skills and knowledge to bear. The Park's role has become one of "mediating between actors..in..the elaboration of a collective project based on nature" (Crosnier 2006).

Recent changes to National Park legislation have led to a stronger representation from locally elected officials. Recent controversy about whether PNC officials have become too technical, and insufficiently rooted in local culture, poses questions about whether an appropriate mix of experience and knowledge is being achieved, and how it could be improved (Bosc 2007). This could be linked to a change in recruitment of the Park's staff. Formerly recruited locally under authority of the Director and administration council, people are now recruited through a national exam based on environmental experience. They may therefore lack essential knowledge of the local culture.

It is also important to highlight the difference in management between the core area and the peripheral area. The Park has regulatory powers, a task manager for agriculture and an agricultural policy in the core area, but none in the peripheral area. Extension of the Park's policy to the peripheral area could bring more impact but the funding for such an extension is not available.

## 5. 11 Do the public and private sectors work together?

Both through PES and through quality product development and marketing, in some cases the public and private sectors work together. In the early years of the Park the local agricultural associations sought to dominate, but in time a more positive relationship developed, although relations can still be difficult. In the last few years the agricultural community has begun to realise that a mixture of public support and quality labelling and marketing can work together to achieve more than public funding can do alone (Bosc 2007). The Park considers that since 2000 its strategy of establishing contracts with farmers is shifting relationships with the agricultural profession towards better understanding and trust.

## 5. 12 Possibilities for the future

This section is largely based on Bosc (2007). The complex range of PES contracts offered by the Park and through national programmes is both confusing and contradictory. Different schemes cannot be combined so farmers have to choose the

## Mountain Development based on cultural and environmental assets

one they prefer, and in some cases the land management prescriptions are different so locally tailored environmental schemes can be undermined by standard national programmes. This may even lead to problems with national commitments to achieving Natura 2000 (EU biodiversity) objectives. The PNC has recently been given increased responsibilities and additional funding for local PES (and other rural development) schemes, but the advantages this could bring will continue to be undermined as long as the conflicts with national programmes continue. These conflicts will have to be addressed in the future.



The progress towards contracts for agri-environment has to some extent resulted in better targeting of PES funding. A further step would be to tie funding to environmental performance, using simple indicators, rather than to agricultural activity through contracts. This may be attractive to farmers, as it would allow them more flexibility in achieving the required results. The results are also clear for all to see so the justification for PES is stronger (and can easily be linked to marketing). Suitable indicators have been developed and agreed elsewhere, though the process is likely to take some time.

Finally, one obvious area for development is to remedy the lack of coherence and the confused definitions of PES schemes. Most importantly the objectives of PES schemes in the Cévennes is unclear, both from agricultural and environmental points of view. In addition, the terminology that defines the PES measures is vague and subject to interpretation, which results in contracts that are unclear to the farmer and would be difficult to defend in law. The PNC could take a lead in trying to resolve these problems, in partnership with national agencies and the local agricultural community. The question of the contract length (5 years) which is shorter than the time necessary to obtain real results – and to assess policy relevance of the schemes - should also be addressed.

For quality products, farmers organisations would be keen to continue the “authentiques du parc” initiative with other products, like apples or chestnuts. However the PNC doubts that this could be successful, mainly because of the difficulty of reaching sufficient critical mass to make it profitable. The Park is now willing to look more closely at certification of farms according to environmental criteria. Another possibility could be to extend the use of the Brand “agneaux de parcours” outside of the core area of the Park to increase quantities.

## 5. 13 Poverty, and how the benefits are distributed

Although no detailed information is really available on these aspects at the Park scale, the description of RPE schemes show that farmers are the biggest economic beneficiaries of the measures implemented, together with actors involved in the tourism activity who indirectly benefit from the maintenance of agricultural activity and landscape management. As a result, at least in the core area of the park, agriculture has declined less than elsewhere and more new farmers are now being established in the core area than elsewhere.

## 5. 14 Will it last, and is the system costly to administer?

Although complete figures are difficult to compile, some indicators of the cost of PES are available. In 2003 the Lozère received payments of 12m€, for 2500 farmers, under the national PHAE (environmental grazing) programme. At least as much again is likely to have been spent under the less-favoured areas programme (Bosc 2007). In contrast research by Quetier (2005) suggests that changes in the Roquefort cheese production rules have at times had considerable influence on extensive grassland management. During the 1990s, milk prices and limits to the production season led to a greater reliance on grazing and less use of forage and concentrates, whereas when the production season was lengthened in 2000 and summer milk prices increased there was a move away from grazing. When the system encouraged grazing it was more effective at maintaining open pasture than agri-environment payments were at that time. This illustrates that the cost effectiveness of different approaches may need to be considered in the future.

In comparison to PES, the costs of running the park are smaller (<5.5m€/year), but costs do not only fall on the public sector. Farmers are also subject to the cost of negotiating and implementing PES contracts, and in some cases this has led them to seek cheaper ways of obtaining public support. In particular the PHAE programme is simpler to enter than more targeted contracts and relatively easy to comply with; in contrast some land management contracts offered by the Park are more complex and demanding. Not surprisingly, farmers adopt PHAE in preference.

The cost of the administering the PNC must take account of its role in facilitating and animating activity such as tourism and quality production, and not just its role in PES. The reports available suggest it is an effective agent in rural and territorial development. Some of its initiatives for the core area were reproduced in the peripheral area without subsidies and this is seen as a sign of the success of its strategy.

## 5. 15 Discussion

The Cévennes case is very informative in many ways. Its long story and wide experience of RPE schemes that started as early as 1971 with Mazenot contracts, provides many examples of successes and failures and many questions most of which have been detailed above.

On environmental services, hard negotiations between the park and the agricultural profession show how difficult it is to find the right balance between output based contracts with very strict criteria established according to very local environmental priorities, that will concern a limited number of farmers but with high environmental relevance, and easier - yet already complicated - agri-environmental measures accessible to most farmers, allowing a greater economic impact but with less quantifiable environmental benefits.

Some big questions remain:

- Δ Is the maintenance of population considered to be an expected output of RPE schemes and to what extent?
- Δ Is cultivation of land in larger fields and using fertilizer preferable to land abandonment or should RPE schemes be targeted at strictly defined production systems, in terms of biodiversity and environmental, regardless of the risk of agricultural decline?

Solving these questions requires considerable local consultation and negotiations, building confidence, mutual knowledge, **and increasing awareness of different actors' concerns and of the long-term impacts of the different strategies.**

The results achieved through marketing of quality products also raise several questions that should be carefully analysed before setting-up such initiatives in other areas:

- Δ How strict should the specifications be?
- Δ How tight to a specific territory should a marketing scheme be?

**The “Authentiques du Parc” project shows that setting-up a brand within a limited geographical area where production quantities are limited, and adding environmental criteria, leads to supply chains with insufficient critical mass to cover structural costs. The only way to keep these initiatives running is to fund control and structural costs, meaning producers can never be independent. On the other hand, looser geographical criteria and flexible production criteria applied for the Pelardon PDO provide nation-wide recognition and viable quantities, but a weaker link to the territory, unclear environmental benefit, and confused marketing of the product. Producers certainly benefit from the protection procured by the PDO, but their revenues have not increased.**

The Park would tend to conclude that the major problem is also that the consumer is not yet willing to pay a sufficient price premium for these products. Different solutions may be available:

- Δ increase the efficiency of these production and marketing schemes through extension of the area eligible for the label, and/or better organization, in order to reduce structural costs,
- Δ **increase consumers' awareness of the role they have to play in sustainable development and try to develop their willingness to pay for these services.**

Otherwise, and in the meantime, remuneration of environmental services will have to be covered by public authorities through contract schemes and agri-environmental measures.

## 5. 16 Conclusions

- PES
  - Payments for environmental services (PES) and Less Favoured Area payments are a major contributor to farm incomes
  - Multiple, poorly co-ordinated, PES lead to confusion and inconsistency
  - PES objectives and rules are often weakly defined and do not always achieve the intended environmental objectives
  - Tightly defined PES with clear environmental criteria are not taken up by farmers as much as looser structural support for farming
  - There is still controversy about the whether PES should aim to maintain the rural population and farming in general, or whether the aims should be more precise environmental outcomes.
- Local products
  - Local added value products are difficult to sustain and market because of the administration costs and small volumes of sales
  - Wider scale PDO or other brands are more likely to be economically viable but are weakly linked to local positive externalities (culture and environment).
  - Successful local product development has been based on bottom-up initiatives that cross sectors.
  - Given the problems with creating economically successful brands and PDOs, PES will continue to be the most important way of remunerating positive externalities.
  - Local branding has been found to be more feasible than adopting more widely known brands and standards
- National, regional and local agencies are not well co-ordinated
- The PNC has existed for many decades and this has allowed it to adapt and become more effective
- The Cévennes National Park Authority plays a key role in providing a cross-sectoral perspective and in working with stakeholders

## 5. 17 Acknowledgements

Alexia Rouby contributed additional text to this case study, following discussions with mainly Françoise Sarrazin (PNC) that we thank a lot for her contribution, and also Céline Bonnel (PNC), Guillaume Benoît (Former director of the PNC), and Claude Lhuillier (Centre for rural economy of Lozère).



## 6. TRIGLAV NATIONAL PARK AND THE JULIAN ALPS BIOSPHERE



### 6. 1 Summary

This Biosphere Reserve and National Park is a typical Alpine area, with cave systems, high mountains, alpine pastures and forests. Traditional agriculture is declining but tourism is flourishing. Various relevant government institutions and policies **existed before Slovenia's transition to an independent non-communist state**, and since then there has been greater local participation. The National Park Authority is a key player in providing services and supporting communities and private sector initiatives. Tourism groups are particularly active and successful.

**Figure 9 - Location of Triglav National Park**



## 6. 2 Introduction

The Julian Alps Biosphere Reserve includes the Triglav National Park and runs along the border between Slovenia and Italy. It consists mainly of alpine limestone mountains and their associated valleys, lakes, pastures and forest. Altitude ranges from 170 to 2900m. 2000 people live in the high mountains with another 34000 in the rest of the area (UNESCO 2005). The transition zone of the Biosphere Reserve is outside the National Park boundary.

The National Park has a long history, with discussions starting in 1908 and some land leased to a local NGO in 1924. **The park reached its current size in 1981 and the larger Biosphere Reserve was designated in 2003 (Rodela and Udovč 2008).** The park includes 25 settlements which lie within parts of 6 municipalities, in 2 Slovenian Regions. About 2 million visitors per year come to the park.

**The park extends to 85000ha, about 4.1% of Slovenia's land area. As a whole the country is very mountainous, with forests covering 56% of the land, and 65% of the agricultural land being pasture. Around 15% of Slovenia's agricultural area is no longer used. In 1997 6.6% of total national employment was in agriculture and forestry, and GDP/head was 68% of the EU average (Markes 2002).**

The effects of transition from communism were rather unusual in Slovenia, which already had a high level of devolved government within the former Yugoslavia. Laws for the protection of nature existed though they were implemented weakly. There was a specialised bureau for nature conservation, and local administration of government had considerable influence in this field. So, unlike several other CEECs, Slovenia inherited existing governance and institutions and did not have to start from scratch.

After independence the Slovenian government was strongly committed to a legislative approach to environmental issues but this was not successful in practice. As socio-economic issues became more of a priority the policy emphasis has changed. At the same time local administration has developed from being an arm of central government to being even **more locally specific, and to representing local peoples' views (Elliott and Udovc 2005; Rodela and Udovč 2008).**

The most recent example of this shift has been the debate about the legal status of Triglav National Park. A move by central government to reform the park with the intention of reducing environmental protection and increasing exploitation of resources was resisted by local institutions and actors, who gained access to the legal drafting process. This increase in local participation is consistent with the general trend of governance in post-transition countries associated with the EU.

## 6. 3 A picture of the region



The Julian Alps are composed mainly of limestone, which has become eroded by rain to form high altitude karst geology including extensive cave systems. The cultural landscape is typically Alpine, with communities and land management systems that have adapted over centuries to the mountain conditions. Triglav National Park is closely associated with the Alpine heritage of countries lying further to the west (Triglav National Park 2009d).

Within the Park, employment is based around agriculture and food, forestry and wood, tourism, and the iron industry. In particular agriculture is seen as essential to the economic and social well-being of the park's communities, and the **starting point for conservation of the cultural landscape and nature.** Although there are jobs within the park, Verša (2004) estimated that in 2000 75% of the resident population travelled outside the park to work.

## 6. 4 What are the non-market assets and services?

(Triglav National Park 2009c)

The area has typical Alpine biodiversity including dramatic birds such as golden eagle (*Aquila chrysaetos*), black grouse (*Tetrao tetrix*), capercaillie (*Tetrao urogallus*), and griffon vulture (*Gyps fulvus*), and mammals including ibex (*Capra ibex*), chamoix (*Rupicapra rupicapra*), and Alpine marmot (*Marmota marmota*). Lower altitude hay meadows, the dry limestone of the high karst geology, valley bogs, and many intermediate habitats all have typical and rare plant communities. Two-thirds of the land area is covered by forest: hornbeam (*Carpinus betulus*) and ash (*Fraxinus excelsior*) in the southern park, beech (*Fagus sylvatica*) at higher altitude, and spruces (*Picea* spp.) and larch (*Larix decidua*) up to the treeline at 1800m. 1000ha of trees are left unmanaged to allow natural forest processes to continue.

The park contains 300 registered cultural buildings including houses, memorials, churches, and archaeology. Many are related to traditional agriculture, such as grain pantries, stables, hayracks and haylofts, while others are derived from other industries, for example sawmills and Roman and medieval iron foundries. This historic cultural legacy blends in with the living culture of agriculture, which includes food products such as local cheeses, traditional breeds of sheep goats and cows, and alpine pasture management.

## 6. 5 Who is involved, and how?

Here, we use two terms that describe people who create positive externalities (**providers**), and people who use them (**beneficiaries**).



As with previous case studies, the main **providers** of positive externalities are farmers and foresters. In addition, the administrative authority for Triglav National Park plays a direct role by providing a ranger service that supports recreational activities, other tourism, education, and contributes to land management and environmental monitoring.

The residents of the area are involved in **providing** cultural externalities including the maintenance of cultural buildings, the cultural landscape more widely, and the traditional alpine activities. All of these can be considered positive externalities.

A very important group of **beneficiaries** are the 2 million or so tourists that visit the park every year. Their primary purpose is the enjoyment of cultural and environmental assets. In addition, residents within the park and close to it are also **beneficiaries**, enjoying the same assets as tourists but on a day-to-day basis.

## 6. 6 Making a living

An analysis of employment in and around the park in 2000 identified the working age population (15-64y old) resident in the park as 1481, with an unemployment rate of 7% (compared with the Slovenian average of 12%) and an activity rate of 60%. 41 people were directly employed by the Park Administration, and another 17-19 FTE jobs arose from agri-environment work and other environmental contracts funded by the Park. Finally, between 284 and 312 jobs in the park area were thought to be created in the tourism sector (Verša 2004). These figures suggest that roughly 35% of the working population in the park could have jobs that can be attributed to the park's cultural and environmental positive externalities. In practice, of course, some jobs in the park will be filled by people commuting in from neighbouring areas. At the same time the relatively low activity rate in the park may be associated with an ageing population, in which case the park may still be subject to depopulation because of inadequate economic opportunities.



△ Agriculture



Within the Park there are 518 farms. The Park itself does not offer payments to farmers but the Slovenian Rural Development Plan now provides funding for national agricultural schemes, through the EU CAP Rural Development Regulation. Both Less Favoured Area payments and specific agri-environment measures are available from this source.

**Table 4 – Examples of Slovenian agricultural support measures and payment rates**

National agricultural measure	Payment
Organic Farming	227.55€/ha/y meadow or pasture
Grazing upland pastures – with shepherd	72.57€/ha/y
Grazing upland pastures – without shepherd	61.09€/ha/y
Mowing steep meadows	90-142€/ha/y
Keeping indigenous breeds of stock	89.38€/cow/y; 13€/sheep or goat/y
Sustainable breeding of domestic animals	84.46€/animal/y
Maintaining use of extensive meadows	48.38€/ha/y
Maintaining water protection areas (meadows)	31.57€/ha/y

From 2002 additional funding within the Park boosted the payment levels to farmers adopting agricultural schemes by 20%, under 5y contracts. These are now ending and there is some doubt about whether farmers will sign up for the new RDP based schemes, which are seen as too difficult to operate with the current agricultural systems. This is a national issue, not one specific to the Park, and may relate to a general lack of communication about the reasons for agricultural schemes and what the requirements are. Firm data on the schemes' take-up is not available yet.

Land abandonment has been a long-term concern for the National Park although the recent agricultural schemes are thought to have slowed this trend in the last 5 years. If the new schemes are not taken up there is a possibility that the trend will accelerate again.



## 6. 7 The people who made it happen

The Park and Biosphere Reserve have been managed through a mainly top-down process that focussed on the Park Authority's **legal responsibilities for nature protection**. **This primary responsibility has sometimes led to conflict about economic development.**

Although there is a legal requirement for a Park management plan to be agreed, in fact this process has never been completed. The long debate about new laws for National Parks has also confused the issue. Once a management plan is in place it should provide a good basis for pursuing environmental protection and economic and social development in a co-ordinated way.

Tourism organisations have been self-motivated and have been successful in identifying economic opportunities based on **Triglav's natural and cultural resources**. **Some of the ideas have been sympathetic to the sustainable management of the area**, though potentially damaging proposals for large hotels and ski developments have also been put forward by tourism interests.

The Agricultural Chambers of Commerce have good links with the Park Authority and the two have worked together on local products, with the Park providing assistance on the development of products of designated origin (PDO). Other agricultural NGOs such as sheep and goat breeding associations have also worked closely with the Park Authority.

## 6. 8 What help was needed?

The National Park authority has a key role in facilitating local development and public participation. It is also important as a direct employer and it provides funding and contracts for environmental services. People from the area are involved in a range of partnership projects, particularly through the EU funded INTERREG programme, as well as through the UNESCO Man and Biosphere Programme. The Triglav National Park Authority was responsible for establishing these links.

Amongst other things the Park Authority has established a research institute that carries out some research itself and also stimulates other individuals and institutions to do research work in the park (Udovc and Perpar 2007). The Authority runs two information centres in the Park and a farm museum, and has supported several educational projects such as the Junior Rangers Program. This allows 13-14 year old young people to learn about the Park, the work of the Park Rangers, and other protected areas in the Europarc network. It prepares them to become volunteer rangers at Triglav when they are older (Triglav National Park 2009b). The linked research and educational roles of the Park Authority are important factors in the long term success of the Park and encourage full participation by local stakeholders.

## 6. 9 Is it “joined up” (cross-sectoral)?

The Park Authority plays an important role in bringing together tourism and land-based industries, and supports community participation. It provides advice to farmers through its own extension service. It also works closely with tourism operators **and tourism organisations, helping to ensure that the Park's own facilities in the form of trails, information centres, and mountain huts, are integrated with private sector tourism.**

Other arms of national government operate in the Park, including Ministries with responsibilities for water, transport, forestry etc. In the absence of a Park Management Plan there is no overall strategy to co-ordinate what they and the National Park Authority do. Similarly, 7 Municipalities cover parts of the Park, though none of them are wholly within it, and their activities are not always well co-ordinated with the Park Authority.

**At present the Park Authority comments on each Ministry's national plan and proposes nature conservation guidelines for their activities in the Park, which the Ministries should follow.** This works to some extent, but it is far from a fully joined up cross-sectoral system of government.

At the same time there is pressure for strong nature conservation policies in the park from a coalition of 27 NGOs, who argue for significant areas of the park to be left unmanaged as wilderness. This is another sectoral view that must be taken into account in a future Management Plan.

## 6. 10 How it is organised ?

The Ministry of Agriculture works directly with the Agricultural Chambers on national agricultural schemes, and the Park Authority has relatively little involvement. It has closer links with the Environment Ministry, which has nature conservation and other environmental responsibilities.

The 7 municipalities have full responsibilities for development planning, based on local plans. In general the Municipalities express strong support for the Park and its objectives. However the local plans are subject to frequent changes, particularly when proposals for new developments are made, and Municipalities tend to support local developments regardless of environmental impacts. This creates tension with the Park Authority, which must pursue its legal responsibility for nature protection. Once again, the absence of an overarching management plan leaves the stakeholders in a position of uncertainty and (often) conflict.

The Park Authority itself has 22 members, one third of which are Municipality appointees (7), with the remaining members equally shared between State appointees and National Park Authority staff.

Overall, Triglav Park Authority has a very limited budget and must achieve many of its aims by facilitating the work of other government and non-governmental actors. At the same time, groups in the Park do turn to the Park Authority for help when problems arise. This suggests that it is seen as being successful in its work.

The National Park Authority does not have a remit for work outside the park so it cannot contribute to sustainable development in the transitional zone of the Biosphere Reserve, even though that is the zone's purpose. Any action here is done by national government departments and Municipalities, in the normal way.

## 6. 11 Do the public and private sectors work together?

Collaboration is most evident in tourism and agriculture. The Park Authority does not only provide information centres, trails, and ranger-led walks, but also has a number of mountain huts that allow visitors to undertake longer, more adventurous, routes through the mountains (Triglav National Park 2009a). The Park's tourism services allow private sector operators to link in with complementary offers of accommodation, tours in less remote areas, nature-based tourism, and transport. Private sector tourism groups are also able to co-ordinate special events that promote less well known areas and attract tourists out of the high season. The Bohinj Hiking Festival (Turizem Bohinj 2007) and the Wildflower Festival (Turizem Bohinj 2009) are good examples.

Another example of collaboration is the ecological village at Čadrg (CIPRA 2007), where the traditional dairy was badly damaged in the 1998 earthquake. The Park Authority has worked with this remote community and other local authorities to rebuild the dairy, focus production on ecological cheese-making, and develop new tourism enterprises. Public funding of 83 300€ was contributed by Tolmin municipality, with a further 10 500€ coming from a Henry Ford Foundation prize. The National Park Authority played an important role by providing agricultural advice and assisting the community to apply for the Henry Ford prize.

As earlier sections have described, the Park Authority works with the private sector through a range of Chambers of Commerce and similar NGO groups, particularly in agriculture and tourism.

## 6. 12 Possibilities for the future



The main possibilities depend partly on resolving the uncertainty arising from 8 years of discussion about a new law for National Parks. Agreement of a Park Management Plan, and its effective implementation by all the responsible government bodies, is likely to be the cornerstone of sustainable development in the Park in the future.

The extent to which the sustainable development objectives of the Biosphere Reserve's transitional zone are achieved may remain a difficult issue, even when a Park Management Plan is

in place.

Although there are strong interdependencies between the Park and the transition zone, in terms of economy and community, there does not at present appear to be a way of linking them effectively. Improved governance that allows agencies and other actors to take the interdependencies into account when making decisions and developing initiatives (in both areas) would be an advantage.



## 6. 13 Poverty, and how the benefits are distributed

(Rodela and Udovč 2008) reported on a 2007 survey that investigated residents' views about their participation in Triglav National Park's activities. The results showed an increase in people's contact with the park after 1997, which may have resulted from the 1998 earthquake and to changes in the park administration around that time. 50% of those surveyed reported that they now had contact with Triglav Park Authority. While this is quite a high proportion compared with studies elsewhere, it still indicates that half the population had no contact, and there was a general wish to know more about the Park and its activities. 10% of the sample reported that they received payments for park management activities, but there were complaints that procedures were complex and bureaucratic while the sums of money available were very limited.

The general view of the participation process that the Park Authority initiated was that it allowed an important opportunity for local people to express their views on issues about the Park and its management. When questioned about local institutions' and NGOs' roles in rural development, the Park Authority was thought to be slightly more positive than national and regional agencies (Park 3.6-4.0 on a scale of 1-7, others 2.6-4.0), and views about NGOs such as the tourism and mountaineering associations were considerably more positive still (4.6-5.1). Respondents also favoured developments such as bio-agriculture, tourism, and family/small enterprises rather than conventional agriculture, industry, and large enterprises. These views are similar to the Park's policies.

Although the results do not identify whether any social groups (such as the poorest) are excluded from participating and benefiting from the Park, they do suggest a reasonably high overall level of satisfaction.

One example of the Park Authority's role in addressing need is the Park information centre in Trenta valley. This was built 15 years ago and is in a remote and underdeveloped area. The Park Authority could have achieved greater visitor numbers (perhaps 100 000 per year) by locating it in a local town, instead of which Trenta was chosen because of the acute development problems there. The 20 000 visitors who use the centre support 8 jobs directly, and the Park employs another 4 rangers locally. With a total population in the valley of only 300, this is a major contributor to community sustainability and poverty reduction.

## 6. 14 Will it last, and is the system costly to administer?

The Park Authority has a long term track record and has established initiatives for research education and training that will have long term benefits. The introduction of an EU Rural Development Programme for Slovenia could encourage appropriate forms of development, so long as locally appropriate measures and payments are adopted and farmers are attracted to the schemes. The EU policies underlying this programme are likely to be stable in the medium term. The development of participatory processes, particularly in recent years, should also contribute to the long term sustainability of the governance process locally.

The main uncertainties concern the proposed new law for National Parks and the need for a National Park Management Plan. The long term success of the Park, in environmental, social and economic terms, depends on whether these result in government institutions collaborating in the future, and whether they encourage stakeholder participation to continue to

## 6. 15 Conclusions and questions

- The National Park Authority plays an important role in helping to raise funds and supporting development
- It also undertakes direct action to manage the environment and provide tourism advice, activities and accommodation
- **The tourism industry builds on these services and delivers innovative products related to the park's assets**
- Integrated village development has been possible, in one case linked to a shock arising from earthquake damage
- The National Park Authority is well thought of by local people
- Local NGOs are strongly supported by local people
- A Management Plan is needed to co-ordinate the actions of different sectors of government
- The links between the Park and the transition zone of the Biosphere Reserve need to be developed

## 6. 16 Acknowledgements



Davorin Koren, Martin Solar and Marija Markes provided information and advice on this case study, for which we are very



## 7. THE CARPATHIAN AND BALKAN REGIONS RESERVE



Southern Carpathians, Romania



Central Balkan Mountains



This section provides a general background to the current mountain development situation in these regions and also highlights examples of more specific evidence about local conditions and initiatives.

### 7.1 General issues

Although there are some broad similarities between the conditions across both regions there are also many differences between countries. Some of the main issues are as follows.



Hoverla, Ukraine



A view from Kom Peak, western Bulgaria



Western Carpathians, High Tatras, Poland

**Table 5 - Comparison of general issues for mountain development across countries in the Balkan and Carpathian Regions**

Similarities	Differences
<b>Agriculture/ Forestry</b>	
Low intensity farming Significant proportion of subsistence farming Post-transition from state ownership of land	Degree to which EU policies and programmes have been adopted, and extent that EU funding is available Proportions of land in co-operative, family, and business ownership
<b>Economy</b>	
Distance to wider markets Poor transport and other infrastructure links	Strength of domestic markets and their accessibility
<b>Social</b>	
Low incomes High unemployment/ low employment rates Limited skills and restricted training opportunities Depopulation/ outward migration/ remittance economy	Proportion of employment in primary sector Strength of national economy
<b>Governance</b>	
Uncertain compliance with planning and other legislation In the process of evolving from centralist and sectoral institutions	Varied inheritance of institutions, laws and traditions from communist era At different stages of evolving governance Stage of EU convergence

Any pilot projects designed to improve the social and economic benefits of positive externalities must be planned in the light both of experience elsewhere and the extent to which that is relevant to the pilot area concerned. A single model for pilot projects is unlikely to be successful everywhere. At the same time some broad objectives could be established for all pilot projects in the light of the similarities listed above.

## 7. 2 Balkans - country level pictures

This section summarises material from Balkan Foundation for Sustainable Development (2008).



### 7. 2. 1 Agriculture

In Bulgaria the transition to private ownership has left 98% of agricultural land in private ownership, though the state has retained control of about 70% of grass land and pasture. 70% of the agricultural land is managed by organisations including co-operatives, with an average unit size of 290ha. However the role of co-operatives is declining and their share of agricultural land dropped by 24% between 2003 and 2005. The remaining land is farmed by individuals, 99% of whose holdings are less than 5ha. This is largely subsistence farming, with very little produce being sold in the market. The number of people involved in agriculture is falling rapidly, particularly for younger age groups: one third of agricultural labour under 35 years of age left the industry between 2003-5. The statistics for FYR Macedonia are rather different: Individual farmers own 80% of the land with the state retaining the other 20% and leasing it to agricultural businesses. Almost all the pastureland is owned by the state and managed by public enterprises. Individual farms are mainly involved in livestock production for home consumption, while the pattern of livestock production for the market is shifting from large-scale specialist production (previously state farms) to commercial family farms.

In Albania farming is still the main rural activity though the transition to a market system is not complete, and the many small producers mix subsistence farming with some sales to market. Yields are low, production systems are basic, and the sales, marketing and distribution process is not yet well developed.



### 7. 2. 2 Forest

About 34% of the land area of Bulgaria is forest (compared with 48% under agriculture), all of which was nationalised. Forests that were originally privately owned have now been restored to their former owners, amounting to 10% of the area. The remainder is owned by the state (77%), municipalities (12%), and other organisations (2%). **Two-thirds of the nation's forest is in the mountains, and forests play a disproportionate role in maintaining biodiversity: 80% of protected plant species and 60% of priority plant species and habitats are associated with forest.**

The area of forest in FYR Macedonia is very similar at 37% of mountain land cover, with the state owning 92% of this. Forest biodiversity is important in the same way as in Bulgaria. Significant problems of forest fire and illegal logging exist. In Albania the proportion of forest is also very similar, at 36% of land cover.





### 7. 2. 3 Rural Development

In Albania rural poverty has shown a rapid decline recently but is still high, with an absolute poverty rate of 28% (2005) in rural mountain areas, and an overall extreme poverty rate of 5% (2002) across all rural areas. This is linked partly to an almost complete lack of non-farm activity, and partly to the extent of subsistence farming, which offers little additional employment. One survey found that remittances accounted for 31% of farm household income, agriculture contributed 37%, and other sources only 16%. In the poorest parts, remittances can contribute twice as much as in this survey. One important associated result is the declining levels of rural skills as young people leave rural areas.

The most mountainous areas of Bulgaria have little or no population, with settlements more towards the foothills and lowlands. Rural skills and educational levels are poorer than in urban areas, employment levels are very low at 42%, and poverty levels are four times those in the cities. There is some rural tourism development, though the most extensive is ski tourism in the Pirin area and this creates conflicts with environmental policy objectives. Other forms of tourism, such as farm tourism and eco-tourism are not widespread though some villages around national parks are beginning to explore the possibilities. This type of development is hampered by lack of training and a lack of strategies for planning and marketing tourism products, but rural communities are enthusiastic about tourism: 80% of rural municipalities listed tourism development as a priority for 2007-13.

In FYR Macedonia 40% of the population are rural dwellers but depopulation and losses of young and more educated people are extensive. 121 villages have been abandoned, and a further 360 (20% of Macedonian villages) have less than 50 inhabitants. As in neighbouring countries, subsistence agriculture is widespread with 40% of the rural population obtaining no income at all from it and another 36% dissatisfied with farming income. At the same time non-farm opportunities are limited or non-existent, with only 10% of Macedonian businesses registered in rural areas. Rural business development is hampered by the availability of skills, costs of inputs and distribution of products, and unresolved uncertainties about land rights. In addition local institutions are weak and unable to play their part in development.

### 7. 2. 4 Policies and Institutions

Albania has adopted a rural development strategy very closely based on the EU regulation 1689/2005 – the rural development regulation (European Commission 2005). It includes measures for environmental protection in the form of payments to land managers, amounting to 10% of the total budget. As with EU rural development programmes in member states, it also includes financial support for improving agricultural competitiveness, investment in non-farm activities, and support and participation of stakeholders.

A Mountainous Area Development Agency was established in 2000, funded by the Albanian government and international donors, and operates in 16 mountainous areas. It provides technical financial and management assistance, and coordinates a development programme, some elements of which are implemented directly by the agency (vet services, pasture development, extension service, small infrastructure). A transport strategy is being implemented and 4000km of rural roads are being funded, and the Albanian Development Fund is supporting a wide range of projects, mainly for road and water development.

Bulgaria implemented a pre-accession rural development plan with EU SAPARD funding from 2000-6, and as an EU member state now has a Rural Development Plan under regulation 1689/2005. This includes agri-environment payments, less favoured area payments, and investment in agricultural competitiveness, non-agricultural diversification including tourism, and local participation (LEADER). There are also national strategies for eco-tourism, forestry, organic farming, environment, biodiversity, water conservation, and urban wastewater. Under the EU Structural Funds there is a national strategy and national and regional investment programmes. Municipal development plans provide a bottom-up component to this process and provide national and EU funding for municipality-wide initiatives.



## Mountain Development based on cultural and environmental assets

As with Albania and other candidate EU members, FYR Macedonia has adopted policies and programmes modelled on those of the EU, including a rural development programme linked to EU Regulation 1689/2005. This is implemented by the Ministry for Agriculture Forestry and Water Economy, and includes specific measures for hilly-mountainous areas. Considerable emphasis will be placed on rural diversification and improving rural services. A Bureau for Economically Underdeveloped Regions also exists though it has limited funding, and the Ministry of Environment and Physical Planning, which is responsible for environmental policy, has the same problem. Outside the government, a key NGO working on mountain development is MAKMONTANA. Two government agencies undertake agricultural research and provide an agricultural extension service.

### 7. 2. 5 The Dinaric Arc <sup>1</sup> Initiative

Since 2004 countries, international bodies and NGOs have collaborated in this initiative with the following objectives (WWF 2004):

- The preservation of the wealth and integrity of the Dinaric Arc through the establishment of networks of protected areas and ecological corridors, and support to initiatives for the conservation of its biological diversity and the sustainable management of its resources
- The preservation and valorisation of the cultural diversity and the cultural heritage of the Dinaric Arc
- The promotion of intercultural dialogue, transboundary collaboration and scientific cooperation among the countries of the region
- The empowerment of local societies to foster local community development through rural development measures based on the valorisation of the natural and cultural heritage, without overexploiting the capital of natural resources
- The integration of environmental policies across all the relevant sectoral initiatives.

The initiative is still in its early stages so it is not yet possible to report on its results, but partners intend to undertake a range of policy and practical development projects as well as supporting education and capacity development with relevant stakeholders.

## 7. 3 Carpathians - country level pictures

This section summarises material from Ruffini, Hoffmann et al. (2008).

### 7. 3. 1 Agriculture and Forestry

The proportion of agricultural land in the Carpathian region ranges from 59% of land area in Hungary to only 21% in Ukraine, with a mean country value of 40%. A relatively high proportion of this land is permanent grassland, mostly in the range 35-65%, but up to 77% in Romania, and with lower figures in the Czech Republic and Hungary. The remaining area is arable, though in Czech Republic, Hungary and Republic of Serbia orchards and vineyards form around 7%.

Forests cover around 35-50% of the region in most countries, but 66% in Ukraine and only 14% in Poland.



**Table 6 - Land cover in Carpathian region of each country <sup>1</sup> (Ruffini, Hoffmann et al. 2008)**

Country	% Forest	% Agriculture	% of agricultural land which is permanent grassland
CR	33.4	53.9	20.4
HU	34.8	59.0	13.6
PL	14.1	42.4	40.7
RO	55.5	37.6	77.4
RS	43.5	56.0	37.6
SR	50.8	41.2	57.5
UA	65.5	21.3	62.0

Agricultural employment as a share of total employment varies widely: in Ukraine and Romania local statistics show the minimum figure is just below 25% and the maximum is close to 50%, whereas in the other countries it is always below about 5%. The total number of employees in the Ukraine and Romanian Carpathians greatly exceeds the combined total for the other countries, so total agricultural employment is also much greater there.

### 7. 3. 2 Policies and Institutions

Romania is the only country with a specific legal instrument to promote the sustainable development of mountain regions, though some other countries are considering whether to follow suit. There is much more consistency, however, in the adoption of rural development policies and programmes modelled on the EU Rural Development Regulation, and only Ukraine is following a different national policy. Serbia is at an early stage of convergence with EU countries and has not yet followed the EU model as closely as its Carpathian neighbours.

The EU regulation provides scope for investment in the competitiveness of agriculture, agri-environment, non-farm diversification, and community participation (LEADER). Except for Ukraine, measures of this type are available in all countries, though at a detailed level the impacts may not yet match the objectives. Ukraine does not yet have an agri-environment programme. So although the rural development programmes provide great opportunities to support sustainable mountain development they often neglect certain aspects, or mountain areas in general.

Biodiversity and Forestry policies exist in all the states, though their effectiveness is in question. Very limited funds are available to implement biodiversity policies, and implementation of forestry policies may not be precise enough to address the most pressing forest management issues.

In all Carpathian countries except Ukraine the development of EU related policies and programmes has led to strong agricultural ministries, and alongside them environment ministries. In both cases the process of adaptation to EU procedures continues, and it will be some time before programme systems operate smoothly. Sustainable development in Carpathian countries depends on both types of ministry working well together, but in practice there is often little co-ordination and there may be conflicts between them. There are examples of agri-environment programmes where programme design and implementation, or problems with the availability and delivery of funds, result in a failure to assist mountain areas. At the same time, there are some examples where support for local producer groups and their products, or funding for high nature value farming and for NATURA 2000, is delivering much needed investment and support.

Local institutions and NGOs are also key players in sustainable development. Across the region there is wide variability in the extent to which they are successfully brought in to the process.

## 7.4 Local examples

### 7.4.1 White Carpathians

Studies in this protected landscape area of the Czech Republic (Ratinger and Křůmalová 2002; Křůmalová and Bäckman 2003; Ratinger, Křůmalová et al. 2004) have documented the relationships between environmental quality, land management, and governance.

#### △ Environment

The White Carpathians are typical of the region's habitats, with deciduous forest and species-rich grassland as the most important components. Of these the grassland is most threatened, as it depends on traditional low levels of grazing to maintain it. Both abandonment of agriculture and increased intensity of agricultural management are threats to the biodiversity of the grasslands. For this reason part of the area was designated as a UNESCO Biosphere reserve in 1996 (UNESCO 2007).

#### △ Farming

The protected area imposes restrictions on farming practices, such as fertiliser use and time of grass-mowing, and offers farmers incentives in the form of area payments.

In the sample of farms surveyed in 1999, family farms had a median area of 41ha compared with 1257ha for company farms, and the average grazing densities on grassland were 0.20 and 0.28 LU/ha respectively. In fact 0.2% of the farms cover nearly 50% of the area, while 99% of farms are less than 10ha and cover only a third of the area. Within the family farms there were differences between organic and conventional types.

Organic farms had the lowest stocking density on grassland and company farms had the highest. Organic farms had the lowest arable area and a greater proportion of protected grassland, while their production costs were highest. These differences appeared to be driven by the incentives available: organic agriculture is most compatible with the land management restrictions.

Although organic production should in theory command higher prices most of the organic products were in fact being sold via conventional marketing pathways. In fact the incentives were inadequate to maintain the target stocking densities required for environmental management and so higher rates of payment were introduced in 2002.

#### △ Governance Issues

- Land reform following legislation in 1991 resulted in some disputed ownership, but most importantly it led to fragmented ownership of land because of inheritance and to inactive ownership by people no longer resident in the area. This has increased land abandonment, and leads to bureaucratic confusion because the number of apparent owners is much greater than the number of active land managers.
- The habitat protection mechanisms (land management rules) were defined by the agency responsible for the protected area, and did not take sufficient account of the realities of farming.
- Less Favoured Area (LFA) payments were introduced by the Ministry of Agriculture in 2001 but to qualify for them a farmer must own some livestock, even though some grassland managers did not keep livestock themselves.
- Other land management payments have been made by the protected area agency, though their funds are inadequate. This funding and the LFA payments have not been co-ordinated well, and tensions existed between the agriculture ministry and the protected area agency.

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- Not all recipients of land management funding obeyed the rules, and monitoring and control of cheating (relating to 20% of the area at one point) were inadequate.
- Farmers recognised that traditionally farmed grassland creates environmental benefits for society. They were not clear about precisely who the beneficiaries were, however.
- In particular, local communities had very little involvement in the process: individual negotiations take place between land managers and public agencies, despite the fact that local people have an interest in the management of the land and the use of the products derived from it.
- Several NGOs are involved in the process, and one in particular developed a respected position through **finding solutions that met farmers' needs at the same time as delivering environmental objectives**. One such initiative led to the creation of a production and marketing group for locally labelled products. Even in that case it was hard to find local markets, as tourism in underdeveloped and local consumers were not supportive, so more distant urban markets have been targeted. The NGO has played an important intermediary role between farmers and government agencies.
- The following improvements were suggested (Ratinger, Křůmalová et al. 2004):
  - As a first step, increase the co-operation between environmental and agricultural arms of government at the local level. At the same time integrate national agricultural measures with local environmental contracts.
  - Secondly, develop local partnerships that include non-farmers, which will ensure that local beneficiaries of environment services, and local business people who can develop products linked to environmental quality, can influence local programmes. The local partnerships should include representatives of the government agencies, which should implement the agreed programmes. While this would entail administrative costs in programme planning it should also reduce implementation costs because of greater participation, compliance and self-monitoring.

### 7. 4. 2 Local food production in Romania



Adding value to farm products through small-scale processing and retail sales is traditional in mountain areas. It generates revenue from the environmental and cultural values in a locality and feeds the profits directly back to those closely associated with maintaining the environmental and cultural resources.

New and prospective members of the EU face difficulties in continuing traditional production and marketing, however, because of the need to implement EU food hygiene regulations. If local farmers and other businesses were to respond by ending this type of trade it would lead to the loss of local added value. Indirectly, it would reduce the incentive to continue to maintain environmental and cultural services. On the other hand, compliance with EU rules can potentially open up new markets throughout the EU.

The Romanian Government has worked with the ADEPT foundation, in association with WW-DCP Romania, the Milvus Group, and the European Commission, to produce advice for small producers about what they should do to comply with the new rules (ADEPT 2008).

- The advice demystifies the rules, making it clear that small producers are exempt from some of the rules that apply to large producers, and that the rules will be implemented flexibly in the light of traditional practices and local conditions



- Local producers are clearly told that they must register to sell products
- Hygiene and traceability are highlighted as the essential issues
- The limits to small scale production are defined (e.g. <1000l milk per week, eggs from farms with <50 chickens)
- The distinction between primary products (such as uncut meat, unpasteurised milk and fruit) and secondary products (cheese, jam, butchered or cooked meat) is explained
- Exemptions for home consumption and sale at farm gate are explained
- The details of how to register and rules for specific products are described
- The role of government agencies in administering and monitoring the system, and in providing funding for investment, is described. Other local sources of advice are identified.

### 7. 4. 3 Pastoralism in Romania



The European Forum on Nature Conservation and Pastoralism (2009) provides detailed information about the relationship between agriculture and environment on smallholdings at Moeciu de Sus in the Romanian Carpathians. The community is located at 1000m and comprises 230 smallholdings that between them cover 700ha of steep hay meadows, which rise to 1300m. The low levels of nutrient input and traditional hand mowing for hay have led to high levels of biodiversity, particularly for plants and invertebrates such as butterflies. Many of the species are rare at the European level.

The farms are mainly subsistence, producing milk products and cheese for home consumption. About 2000 sheep and 450 cows belong to the village farmers, which exceeds the capacity of the local grazing so some animals are sent to lower altitude communities over the summer. The remaining animals are grazed on communal or rented pasture, allocated to certain of the shepherds by a vote of the community each spring. These shepherds charge other stock owners a fee for looking after the animals and for collecting and processing the milk, returning an agreed amount of cheese to each owner. The leaseholding shepherds also sub-contract other shepherds to help manage the animals.

Animals are moved to the summer pastures (local upland pastures at up to 2000m and lowland pastures elsewhere) in the spring, and hay cutting begins on the meadows in July. Once dry, the hay is moved into buildings. In the autumn the cattle are moved back to the village where they graze the hay meadows after cutting, and the sheep are sent to graze on lowland arable stubble. When the snow comes the cattle go indoors, moving around the area from barn to barn as the hay is consumed. The cows calve in March, and are put onto the hay meadows for a time after snowmelt. Milk and cheese production is highest at this point, and surplus calves are slaughtered and consumed at home. Lambs are slaughtered over the summer.

This system depends on high labour inputs at certain times of year, to which several generations of the family contribute. Shepherds on the high pastures control the animals and protect them from predators including wolves and bears, and this means enduring harsh conditions, even though it is summer. Less and less people are willing to do so, and some shepherds are leaving for better paid work in the Italian mountains.

Smallholdings have not provided all the household needs for many decades, even since before the communist era, and at least one family member has tended to take paid work elsewhere. After the collapse of communism these jobs declined and for a spell households became more dependent on their smallholdings. Moeciu de Sus is relatively close to Bucharest

so tourism is now becoming more important and providing job opportunities. There is also scope to sell farm products in more urban markets. At the same time, tourism has increased development pressure, with houses being built on lower lying meadows. The possibility of paid employment reduces the incentive to continue with hard farm work.

The changing economic and social conditions suggest that the smallholding system will not survive much longer. Meadows are being abandoned and traditional labour-intensive farm products are in decline. If the agricultural system becomes history, so too will the rich flora and fauna, along with this traditional Romanian mountain culture.

## 7. 5 Key points

- The mountains of the Carpathian and Balkan regions are of very high environmental and cultural value within Europe. These are largely non-market services that benefit people within the regions as well as in the rest of Europe.
- Radical social and economic changes since the collapse of communism are resulting in the progressive loss of land management traditions and mountain communities. Without the people, the environmental and cultural services will also decline.
- The current state of governance and capacity of institutions varies from country to country, but there are some general problems:
  - a lack of cross-sectoral co-ordination
  - limited scope for participation by communities and other stakeholders
  - problems arising from new land ownership patterns and disputes
- The state of economic development and the poor availability of services such as transport limit the scope to develop market opportunities for tourism or local food products.
- Accession to the EU is providing the regions with new policies and programmes, particularly under the EU Rural Development Regulation 1689/2005. This can:
  - Provide payments to farmers for environmental services (agri-environment)
  - Provide general support to farmers in Less Favoured Areas
  - Support farm based diversification and product development
  - Support non-farm diversification including tourism
  - Assist the participation of wider rural communities in rural development
- Although these instruments are now available in most countries, mountain areas do not always benefit as much as they could. There is considerable scope for institutional development and better governance that would result in more targeted and more effective support: both funding and facilitation of stakeholder participation.

## 8. SOME POSSIBLE OBJECTIVES AND MECHANISMS FOR PILOT

Pilot projects can be useful ways of exploring new approaches in specific local conditions. The case studies presented here are, in many ways, pilot projects themselves: they illustrate approaches to mountain rural development that are very specific and often new in the countries from which they come. They have also been widely analysed and reported on in order to inform national and wider policies. For the same reasons pilot projects in the Carpathian and Balkan regions are likely to be useful ways of exploring effective approaches to sustainable mountain development, taking into account the European policy context as well as the specific circumstances in the pilot areas.

At the same time, the case studies described here cannot be exact models, either for their own countries or for others. The case studies illustrate some failures as well as some successes, and they are valuable because they highlight certain general points as well as showing local variation and the need to adapt to it. This chapter of the report identifies how experience in the case study areas could inform the development of new pilot projects in the Carpathians and Balkans:

- △ First, a range of features for pilot projects are suggested
- △ Then, some possible objectives for pilot projects are outlined
- △ Finally, issues of timescale are discussed and short, medium, and long-term activities and goals are proposed. Some possible objectives and mechanisms for pilot projects

### 8. 1 Features recommended for pilot projects

#### 8. 1. 1 Policies

Existing instruments	<p>EU and national policies and instruments relevant to these mountain issues already exist. Some, such as Less Favoured Area payments, are likely to be consistent with pilot project objectives and can be incorporated.</p> <p>Others may not be suited to local conditions, so they may be irrelevant or negative in their effects, as in Cévennes. Pilot projects provide a way of exploring how these types of national measure could be implemented better, and can also help to inform and influence policies at the EU level. Additional or more highly tuned PES that are consistent with the EU RDR could be tested, for example.</p> <p>The case studies also illustrate the role of structural instruments, such as LFA payments, alongside targeted PES instruments. Both appear to be needed if agricultural abandonment is to be avoided and specific environmental and cultural services are to be delivered. Pilot projects could explore how this combination works best in different local situations, and what institutional arrangements are most effective.</p> <p>Pilot projects in non-EU countries could explore the same issues within the limits of national policies and programmes.</p>
Land ownership and occupation	<p>The case studies do not identify this as a particular issue but it is clear from the regional analysis that in post-transition countries land ownership patterns do cause problems. In the short-term it may be difficult to resolve so pilot projects will have to work around it. In the longer term pilot projects may seek to reduce the problems.</p>

## 8. 1. 2 Institutions

Capacity	The type of innovation required to achieve the objectives discussed here rarely happens without structured support. The capacity of institutions to work together and with communities, and the capacity of communities to take the initiative, usually needs to be developed. NGOs also need to be encouraged. In every case study described here a public agency has played a strong facilitating role, and it is hard to imagine how a pilot project could succeed without this and without a supporting policy environment.
Top-down administration	The Rhon case study illustrates why bottom-up processes alone are likely to be insufficient. Pilot projects are likely to have to co-ordinate different levels of government administration and different sectoral responsibilities. In doing so they can seek more efficient ways of delivering support and funding. They could also seek a consistent and positive link between environmental legislation (development planning, NATURA 2000) and environmental incentives such as PES.

## 8. 1. 3 Processes

Shocks	Sudden changes inspire people to reappraise their situation and to consider new ways of doing things. They can be harnessed in pilot projects to promote change. The Triglav earthquake and the Entlebuch response to the Swiss land law are examples.
Leadership	Both individual leadership, as shown in Entlebuch, and institutional leadership, as shown in the Cevennes, are important spurs to action. Pilot projects should create institutional leadership, and they should seek out individual leaders at various geographical levels.
Participation	Leadership is only the first stage however; it should be followed with participation by as many stakeholders as possible. This applies both to institutional stakeholders and to community stakeholders. The Rhon and Entlebuch cases are good examples of the former, and all the cases have good examples of the latter. All the cases also show how NGOs can play an important role.
Duration	Another feature common to all the case studies is their longevity. Building capacity cannot be done overnight, and once the process has been started it cannot be abandoned without putting all the results at risk. Pilot projects should be seen as medium to long term initiatives, not short-term projects.
Integration	Where the case studies have been most successful they have managed to work across sectors, such as in the Rhön. Where they have been least successful they have not been integrated, such as in Triglav. Integration across sectors (and across sectoral institutions) should be a key objective for pilot projects.
Clusters	The case studies highlight the value of linking tourism and recreation with landscape management and local food products. This is consistent with the idea that certain clusters of activities are compatible and work in synergy (Ploeg and Renting 2000). Pilot projects could identify what these clusters are in a locality and seek ways of supporting them through cross-sectoral integration.
Research and monitoring	The Rhön and several other case studies put considerable emphasis on research, partly because it underpins learning. It is particularly important locally because it provides a rational basis for local flexibility and implementation. Monitoring a pilot <b>project's progress is also important for building confidence and improving performance</b> . Finally, monitoring experimental schemes is essential to ensure a consistent and equitable approach and to ensure free-riders are not tolerated.



## 8. 1. 4 Other issues

### Products

The case studies show that internal and external markets are critical to local product development and branding. Every locality varies in this respect so pilot projects will have to do market research to identify where the real opportunities lie. The experiences reported in the case studies (Rhöngold milk for example, and in Cévennes the preference for a local standard rather than a national brand) illustrate the importance of this.

Communication and advertising are important elements of market development.

## 8. 2 Objectives

A number of common issues are associated with obtaining economic remuneration from mountain environment and culture (RPE). Some common issues exist across countries in the target regions. Pilot projects could use these common issues to identify their core objectives. Each pilot project could also have some specific local objectives, which would be defined in relation to local opportunities and needs.

### 8. 2. 1 General Objectives

- To ensure that the people who provide cultural and environmental externalities in the pilot area are rewarded for their efforts through direct payments <sup>1</sup>, improved product prices, and added value products.
- To ensure that the people who benefit from non-market products and services understand how they are produced, and that they must be paid for.
- To increase the participation of producers, particularly land managers, other private sector interests, local communities, and other stakeholders, in the local development process.
- To ensure horizontal (cross-sectoral) and vertical (top to bottom) co-ordination and co-operation between relevant institutions in the pilot area.
- To utilise existing financial instruments such as LFA and agri-environment payments where possible, and to supplement them with new local measures where necessary.
- To achieve these actions through a long-term commitment to local facilitation, learning, research, and capacity building.

### 8. 2. 2 Local Objectives

Each pilot project should also include local objectives defined in consultation with local stakeholders.

<sup>1</sup> Although direct payments are often made by the state they may also be paid from other sources such as local or international NGOs, or even by contract between individual businesses (see Robinson 2007).

## **8. 3 Timescale**

Each project should define short, medium and long-term activities and objectives and monitor their achievement. This will provide focus, increase stakeholder confidence in the project, and generate feedback that can be used to modify plans.

### **8. 3. 1 Short-term activities (1-2 years)**

- Establish a facilitation and leadership unit at local level
- Establish a participation and capacity building programme for local stakeholders (community, private sector, public sector)
- Ensure existing PES schemes are utilised as fully and effectively as possible
- Identify institutional interdependencies (horizontal and vertical) and begin an integration process
- Explore product processing and marketing opportunities and begin small scale projects
- Establish baseline information for research and monitoring

### **8. 3. 2 Medium-term activities (3-5 years)**

- Introduce experimental PES schemes that are more closely tailored to local needs
- Establish new ways of working between institutions to achieve integrated support for sustainable mountain development
- Develop action learning for project participants and local residents
- Support the development and marketing of the most promising local products
- Report with interim conclusions and use them to influence national and EU policy and programmes

### **8. 3. 3 Long-term activities (5-10 years)**

- Resolve land tenure and land use conflicts
- Establish efficient and sustainable local institutions that will continue after the project formally ends
- Create a suite of quality products that contribute to local identity and confidence
- Establish an efficient and effective system of PES, based on national and EU schemes
- Devolve decision making to a confident and well-trained local stakeholder body
- Promote the findings of the pilot project and influence policy at national and EU level



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